



Pact for Skills: Analysing of up- and reskilling policy initiatives and identifying best practices

Final Report

EISMEA/2022/OP/0004

PACT FOR SKILLS: ANALYSING OF UP- AND RESKILLING POLICY
INITIATIVES AND IDENTIFYING BEST PRACTICES

European Innovation Council and SMEs Executive Agency (EISMEA)
Single Market Programme (SMP) - SME pillar

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Table of Contents

Executive Summary	10
1. Introduction	18
1.1. Building the skills economy in Europe.....	18
1.1.1. European Skills Agenda	18
1.1.2. Pact for Skills	19
1.2. General and specific objectives of this contract.....	20
1.2.2. General objective	20
1.2.3. Specific objectives.....	20
1.2.4. Geographical scope	21
1.2.5. Study results	21
1.2.6. Project design	22
1.3. Benchmarking framework and key concepts	23
1.3.1. Key performance metrics.....	24
1.3.2. Key performance drivers	27
1.3.3. Overall benchmarking framework	29
1.4. Report structure.....	31
2. Global analysis of up- and reskilling policy landscape	32
2.1. Skills as a high priority on national policy agendas	32
2.2. Market-driven policy approaches	36
2.3. High diversity of target groups	37
2.4. Varying role of the private sector	38
2.5. Key challenges in up- and reskilling policies	39
3. Benchmarking of up- and reskilling initiatives.....	41
3.1. Sample of initiatives for benchmarking and analysis.....	41
3.2. Benchmarking of initiatives based on Total Average Key Performance Metrics	48
3.3. Benchmarking of initiatives based on Average Key Performance Metrics: Dimension I Individual.....	50
3.4. Benchmarking of initiatives based on Average Key Performance Metrics: Dimension II Company	51
3.5. Benchmarking of initiatives based on Average Key Performance Metrics: Dimension III Economy	53
3.6. Benchmarking of initiatives based on Total Average Key Performance Drivers	55

3.7.	Average Key Performance Drivers vs. Average Key Performance Metrics	56
4.	Key success factors for up- and reskilling initiatives	57
4.1.	Co-dependency analysis	57
4.2.	Quantitative analysis of causal impact of Drivers on Metrics	60
4.3.	In-depth analysis of Key Performance Drivers	65
4.3.1.	Dimension A: Stakeholders	65
4.3.2.	Dimension B: Learners	72
4.3.3.	Dimension C: Funding	77
4.3.4.	Dimension D: Regulatory Framework	81
5.	In-depth feasibility assessment for the EU context	88
5.1.	Feasibility assessment for Dimension A: Stakeholders	88
5.2.	Feasibility assessment for Dimension B: Learners	95
5.3.	Feasibility assessment for Dimension C: Funding	99
5.4.	Feasibility assessment for Dimension D: Regulatory Framework	103
6.	Policy recommendations	106
6.1.	Prioritisation of the identified best practices	106
6.2.	Recommendations on Key Performance Drivers	110
6.1.1.	Recommendation A1: Continuous upskilling of policy makers engaged in up- and reskilling policies	110
6.1.2.	Recommendation A2: Stimulating the involvement of private sector in up- and reskilling initiatives in different forms	111
6.1.3.	Recommendation A3: Stimulating the engagement of all key stakeholder groups in the design and implementation of up- and reskilling policies	112
6.1.4.	Recommendation A4: Establishing a framework for collaboration in up- and reskilling	112
6.1.5.	Recommendation B1: Simplifying and accelerating the accreditation process by leveraging technology	113
6.1.6.	Recommendation C1: Increasing the role of private funding in up- and reskilling initiatives	114
6.1.7.	Recommendation C2: Diversifying funding types for up- and reskilling initiatives	114
6.1.8.	Recommendation D1: Including 'green' components in up- and reskilling initiatives	114
6.3.	Recommendations on Key Performance Metrics	115
7.	Methodology and practical considerations	117
7.1.	Task 1: Structured collection of information and analysis	117
7.1.1.	Task 1 design	117
7.1.2.	Sub-task 1.1: Identifying relevant initiatives	118
7.1.3.	Sub-task 1.2: Collecting data per policy initiative	121
7.1.4.	Sub-task 1.3: Analysis and reporting	122

7.2.	Task 2: Developing the benchmarking tool, analysis of best practices and proposing recommendations Indicators (KPIs)	123
7.2.1.	Task 2 design	123
7.2.2.	Sub-task 2.1: Developing benchmarking methodology	123
7.2.3.	Sub-task 2.2: Collecting data for benchmarking	124
7.2.4.	Sub-task 2.3: In-depth assessment of best practices	125
7.2.5.	Sub-task 2.4: Developing recommendations	128
7.3.	Task 3: Organising workshops	129
7.3.1.	Task 3 design	129
7.3.2.	Sub-task 3.1: Workshop preparation	130
7.3.3.	Sub-task 3.2: Workshop implementation	131
7.3.4.	Sub-task 3.3: Post-workshop activities	132
	Annex A: Status quo country summaries	133
	Annex B: Policy Profiles	150
	Policy profile B1 Austria 1: Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security	152
	Policy profile B2 Austria 2: fit4internet	153
	Policy profile B3 Belgium: Le Plan de relance pour la Wallonie / Recovery Plan - axis 6	155
	Policy profile B4 Bulgaria: Digital Skills for Bulgarian SMEs	156
	Policy profile B5 Croatia: Grow Croatia with Google	157
	Policy profile B6 Cyprus: Grow Digital CY	158
	Policy profile B7 Czech Republic: Czechitas New Generation	159
	Policy profile B8 Denmark 1: Green Skills	160
	Policy profile B9 Denmark 2: Omstillingsfonden (“Transition Fund”)	161
	Policy profile B10 Estonia: kood/Jõhvi	162
	Policy profile B11 Finland: Virittämö Employment Service (Digital Helsinki)	164
	Policy profile B12 France: Training Aid // FNE-Formation	165
	Policy profile B13 Germany: NETWORK Q 4.0	166
	Policy profile B14 Greece: Upskilling and reskilling in In-Demand Industries with a focus on Digital and Green Skills	167
	Policy profile B15 Hungary: InnoEnergy Skills Institute	168
	Policy profile B16 Ireland: Skillnet Ireland	169

Policy profile B17 Italy 1: Patto per il Lavoro	171
Policy profile B18 Italy 2: House of emerging technologies - 5G Emerging Technologies Support Program.....	172
Policy profile B19 Latvia: Grow Latvia with Google	173
Policy profile B20 Lithuania 1: Upskilling programs, organised by Lithuanian Public Employment Service (PES).....	174
Policy profile B21 Lithuania 2: Modularisation of formal VET curriculum	175
Policy profile B22 Luxemburg: Future Skills Initiative	176
Policy profile B23 Malta: Jobplus courses (1990), Training Pays Scheme (2017 - July 2023), Work Exposure Scheme (2016 - July 2023), Trade Testing (1990), VASTE (2016) 177	177
Policy profile B24 The Netherlands 1: The STAP-budget	180
Policy profile B25 The Netherlands 2: SLIM: The Subsidy Incentive Scheme for Learning and Development in SMEs	181
Policy profile B26 Poland: Competences for sectors - offer for entrepreneurs [Kompetencje dla sektorów - oferta dla przedsiębiorców].....	182
Policy profile B27 Portugal: Emprego + Digital 2025 More Digital Jobs 2025	183
Policy profile B28 Romania: Transilvania IT Cluster	184
Policy profile B29 Slovakia: Women Academies (Aj Ty v IT- Projects for adult women)....	186
Policy profile B30 Slovenia 1: Digital Knowledge for the Jobs of the Future	187
Policy profile B31 Slovenia 2: Slovene digital coalition - Digitalna Slovenija	188
Policy profile B32 Spain: Digitalízate	189
Policy profile B33 Sweden: Ingenjör4.0	190
Policy profile B34 United Kingdom: Institute of Coding	191
Policy profile B35 Canada 1: Quick Train Canada - Microcredentials.....	192
Policy profile B36 Canada 2: Polytechnics Canada.....	193
Policy profile B37 Canada 3: Future Skills Centre	194
Policy profile B38 United States 1: US TAA - Trade Adjustment Assistance for Workers ...	195

Policy profile B39 United States 2: Online Learning from Your DOL: NY State	196
Policy profile B40 United States 3: US California = High Road Training Partnership ...	197
Policy profile B41 China: Guangdong Social Security Integration and Rural Worker Training Project.....	198
Policy profile B42 India 1: Futureskills Prime	200
Policy profile B43 India 2: HIMACHAL PRADESH SKILL DEVELOPMENT POLICY	201
Policy profile B44 Japan: Hiroshima Prefecture Reskilling Initiative.....	202
Policy profile B45 Singapore: SkillsFuture Movement driven by SkillsFuture Singapore (SSG)	203
Policy profile B46 South Korea: Partnership between K-MOOC, the National Institute for Lifelong Education and Coursera	205
Policy profile B47 South Africa: Technogirl	206
Annex C: Online questionnaire sub-tasks 1.2 and 2.2	207
Annex D: List of consulted stakeholders.....	222
Annex E: Workshops 1 and 2 : Summaries and participants.....	225
E-1: Workshop 1 summary and participants	225
E-2: Workshop 2 summary and participants	233

Executive Summary

This document represents the Final Report for “Pact for Skills: Analysing up- and reskilling policy initiatives and identifying best practices” (EISMEA/2022/OP/0004), prepared for the European Innovation Council and SMEs Executive Agency (hereafter “EISMEA”) by PwC EU Services (hereafter “PwC” including PwC NL, PwC LU, PwC DE, and PwC PL) together with CONSULTORES DE AUTOMATIZACIÓN Y ROBÓTICA S.A. (hereafter “CARSA”). The Report presents the final results of the study that had an overall duration of twelve months (December 2022 – December 2023).

Treating up- and reskilling activities as a top priority is paramount for the EU. By addressing technological advancements, driving economic growth, achieving sustainability goals, mitigating social disparities, and anticipating future challenges, the EU can position itself as a global leader in the 21st century. It is through these strategic investments in human capital that the EU can pave the way for sustainable future. Specifically, skills partnerships under the Pact for Skills bring together stakeholders to implement concrete up- and reskilling actions.

The current study supports the overall ambition of the Commission to build the skills economy in Europe. For this purpose, there is a need to better understand how up- and reskilling policy actions function and what creates their success or failure, in particular those actions where businesses, including SMEs, play an active role. As stated by the European Skills Agenda, skills policies and actions are shared between many actors and there is a strong potential in boosting joint action to maximise the impact of skills investment¹. To this end, the current study implied conducting a global analysis of up- and reskilling initiatives and identify best practices in order to draw key lessons learned and propose recommendations for policy decision makers and stakeholders on developing and implementing efficient up – and reskilling initiatives in the future.

The overall study design consisted of three technical tasks (Tasks 1-3). Task 1 aimed to provide an overview of up- and reskilling initiatives for the workforce, involving businesses as active stakeholders, in the specified geographical areas. Task 2 implied developing a benchmarking framework consisting of indicators that allow for objective comparison and identification of best practices. The indicators were used for a benchmarking tool that was developed as part of this Task, to test the different practices and help identify the best traits of success. Within Task 3, in order to further facilitate the participation of relevant stakeholders in the project, two workshops were organised. Workshop 1 (W1) aimed to engage the relevant stakeholders in co-designing/validating the KPIs to be included in the benchmarking framework. Workshop 2 (W2) aimed to engage the stakeholders in validating the results of the preliminary analysis including the global benchmarking exercise, the key success factors, and the corresponding policy recommendations. Both workshops were aimed at the representatives of all the key stakeholder groups actively involved in up- and reskilling, and specifically at the EU and national policy makers, businesses, supporting structures (e.g., industry associations, trade unions, round tables, network organisations, etc.), academia, and vocational and educational training providers. The workshops took place in a hybrid form and engaged both the EU and non-EU participants (including the representatives from North America, Asia, and Middle East).

The core analysis of the study (as presented in *Chapters 3-5*, followed by *Chapter 6* on Policy recommendations) is organised around the roles of *all key stakeholder groups*, including policy makers, large companies and SMEs, education and training providers, social partners, and learners. This approach acknowledges the importance of all key

¹ <https://ec.europa.eu/social/main.jsp?catId=1223&langId=en>

stakeholder groups in developing, implementing, and evaluating the up- and reskilling initiatives, and addresses both the successes and the vulnerabilities of the latter.

Status quo analysis of up- and reskilling initiatives in 39 countries (Chapter 2)

The status quo analysis explicitly addressed the policy landscape and the corresponding activities of policy makers in the respective countries. Governments from all over the world actively engage in tackling up- and reskilling challenges in their respective countries in a wide variety of ways, often experimenting and building on the experience of the most advanced skills economies. Up- and reskilling initiatives can be organised and funded in different ways, depending on the context and objectives. Nevertheless, some common patterns across the initiatives can also be identified.

In general, for all the analysed countries, the topic of up- and reskilling has secured its place on the policy agenda. However, the level of priority given to up- and reskilling by governments, and the corresponding efforts vary per country. The same holds for the ambitions, with some countries setting considerably more ambitious targets (e.g., Denmark, India, and Singapore) than others. Some of the analysed countries have a long history of tackling up- and reskilling challenges (e.g., France, Luxembourg, Japan). For some of the countries (e.g., Romania), the foundations of the up- and reskilling approaches are just being laid. Several countries introduced additional up- and reskilling initiatives in recent years specifically to tackle the consequences of COVID-19 (e.g., Finland, Australia).

For the majority of the analysed countries, the presence of a dedicated national skills strategy was identified, developed by governments, and setting out up- and reskilling targets and key areas of development. These overall national skills strategies are then typically split into specific operational up- and reskilling initiatives. This approach has been identified in, for example, Belgium, Portugal, Italy, Cyprus, Malta, Bulgaria, Denmark, Germany, Slovenia, Slovakia, Poland, as well as in China, Canada, the UAE, India, Singapore, and Japan. Furthermore, in some of the analysed countries, the national skills strategies are then further split into specific initiatives at the regional level, as, for example, is the case in France, Belgium, Germany, China, and the United States. As a general trend, the development of specific up- and reskilling initiatives typically happens based on a thorough analysis of the market demand. This demand-/market-driven approach was particularly emphasised in case of Estonia, Luxembourg, Sweden, China, Singapore, and Canada.

In many countries, the specific up- and reskilling strategies and initiatives explicitly aim at tackling digital skills challenges, as, for example, in Bulgaria, Denmark, Estonia, Hungary, Latvia, Lithuania, Portugal, Slovenia, Spain, as well as Brazil, Canada, and Singapore. In some of the analysed countries, the explicit focus of up- and reskilling strategies on lifelong learning has been identified, such as, for example, in Estonia, Greece, Hungary, Italy, Malta, Slovakia, as well as Japan, South Korea and Singapore. Some of the analysed countries explicitly focus their up- and reskilling approaches on the unemployed or people with the risk of unemployment, for example, Greece, Latvia, South Africa, and Brazil. Many of the identified up- and reskilling initiatives focus on particular ethnic or social groups, such as women (Slovakia, Australia), aboriginal people (Australia), migrants (Australia), disadvantaged groups (United States), girls in ICT (Slovakia), seniors (Finland), young population (Estonia, Finland, India, South Africa, Romania). Many of the identified up- and reskilling initiatives focus on specific sectors and occupations. The role of the private sector in up- and reskilling initiatives varies per country, with a relatively active role identified in Czech Republic, Greece, Estonia, and Brazil.

Key global trends in up- and reskilling policies (Chapter 2)

The key global trends in up- and reskilling policies that were identified in the course of the analysis include the following.

- **Trend #1 Focus on lifelong learning:** many countries recognise the importance of lifelong learning as a means to adapt to the changing demands of the labour market. This trend acknowledges that individuals need to acquire new skills and knowledge to remain competitive and agile in a rapidly evolving job market.
- **Trend #2 Emphasis on digital skills and/or digital tools and approaches:** many up- and reskilling policies place a strong emphasis on developing digital skills and/or applying digital tools and approaches. The overall goal is to equip individuals with the skills needed to thrive in a technology-driven economy and to bridge the digital divide.
- **Trend #3 Collaboration between public and private sectors:** this collaboration often involves the co-creation of training programs, work-based learning opportunities, internships, and apprenticeships. By involving employers in the process, policy makers can better understand the skills gaps and design targeted interventions.
- **Trend #4 Recognition of non-formal and informal learning:** policy makers start acknowledging the value of non-formal and informal learning, which includes online courses, microcredentials, and experiential learning. Efforts are being made to create mechanisms for recognising and validating these learning experiences, such as through the development of frameworks for assessing and accrediting prior learning.
- **Trend #5 Inclusion and equality:** policy makers aim to address barriers to access, such as gender disparities, socio-economic inequalities, and geographic limitations. Many current up- and reskilling strategies aim to provide equal opportunities for individuals from diverse backgrounds to participate in up- and reskilling programs.
- **Trend #6 Green skills:** by equipping individuals with green skills, countries can effectively tackle environmental issues, promote renewable energy, reduce greenhouse gas emissions, and improve resource management. Various countries have already adopted different approaches to integrate green skills into their up- and reskilling policies.
- **Trend #7 Continuous monitoring and evaluation:** this involves tracking the outcomes of training programs, assessing the impact on employability and career progression, and making necessary adjustments based on feedback and data-driven insights. Continuous monitoring and evaluation help policy makers understand what works and what needs improvement, allowing for evidence-based decision-making and the refinement of up- and reskilling initiatives.

Benchmarking of up- and reskilling initiatives (Chapter 3)

For 47 initiatives from 36² countries (both EU and non-EU), a benchmarking exercise was performed in order to identify ‘the best of the best’ for further extraction of lessons learned and the development of policy recommendations. The benchmarking exercise aimed to address the questions of how the analysed initiatives compare with each other in terms of their overall performance at the individual, company, and economy levels, as well as to compare their overall performance vs. the presence of the key enabling factors, as specified in detail in the benchmarking framework.

² The total coverage of the analysis at the country level included 39 countries, while at the level of individual initiatives the analysis covers 36 countries. 3 additional countries such as Australia, Brazil, and the United Arab Emirates (UAE) were not part of the compulsory sample as defined in the Tender Specifications, and those were only included in the analysis at the country level.

The key focus of the analysis was on the national initiatives (with a few exceptions for countries where also regional/state focus needed to be included). At the same time, in many countries, the presence of cross-national up- and reskilling initiatives was also identified, implying the presence of joint multi-country efforts and/or the initiation of activities at the international level, for example, in Austria, Cyprus, Denmark and Latvia. The study sample is highly diversified, containing initiatives of different maturity levels and duration, different types of managing authorities, aiming at different target groups and industry sectors. Most of the analysed initiatives are still ongoing. The analysed sample is dominated by the up- and reskilling initiatives having a cross-sectoral orientation, implying a broad focus covering multiple sectors. A few of the analysed initiatives have an explicit focus on ICT and/or digital skills. The current analysis therefore does not explicitly focus on digitally oriented up- and reskilling initiatives and has a broader orientation.

In total, five benchmarking exercises were performed that allowed to identify ‘the best of the best’ in specific categories. The initiatives that often appeared in TOP 5 across different categories included, among others, Skillnet Ireland (Ireland), Digitalízate (Spain), FutureSkills Prime (India), High Road Training Partnership (United States), and SkillsFuture Movement by SkillsFuture Singapore (SSG) (Singapore).

Key success factors for up- and reskilling initiatives (Chapter 4)

The main focus of the study implied the analysis of the key success factors, and specifically identifying which key factors have the highest impact on the performance of up- and reskilling initiatives, which (combinations of) building blocks allow for creating the most impactful up- and reskilling initiatives, and what the roles of specific stakeholder groups are in maximising the success of up- and reskilling initiatives. This analysis was conducted in both quantitative and qualitative ways. The in-depth analysis was structured around the four key dimensions of the Key Performance Drivers of the benchmarking framework, namely (A) Stakeholders, (B) Learners, (C) Funding, and (D) Regulatory Framework. The analysis also aimed to uncover the vulnerabilities of the analysed best practice examples, which were then further addressed in the *Chapter 6 ‘Policy recommendations’*.

The key common patterns within **Dimension A Stakeholders** across the analysed best practice initiatives include the following:

- *Policy makers* typically play a central role, representing a linking pin bringing all key stakeholder groups together; policy makers have a role of stimulating the private sector to invest financial and other resources into further up- and reskilling of the workforce, as well as to mobilise all key stakeholder groups for a joint action;
- *Large companies* typically have an indirect influence on the design, implementation, and evaluation of the initiatives; they often serve as a source of information about labour market trends; in some cases, they also support the initiatives financially, as well as co-design the curriculum; large companies serve as intermediaries and multipliers for further reach out to the SMEs;
- *SMEs* often are funding recipients; many cannot afford up- and reskilling on their own; participation in up- and reskilling initiatives allows SMEs to directly communicate their needs to policy makers and large companies; they also allow for filling in the information gaps left after consultations with large companies.
- *Education and training providers* typically have a role of developing and providing training courses tailored to the needs of the target group; they have a role of maintaining trust in curricula and ensuring a high quality of the training courses;

- *Social partners and other labour market organisations* (i.e., industry associations, trade unions and employment agencies) have a role of catalysts of the up- and reskilling actions, allowing to expand the reach of the specific initiatives to a broader audience; they act as industry intermediaries and can reach out directly to the workforce and companies; they promote projects via diverse channels (i.e., social media, websites, events etc.) and maintain contacts with leading professionals (e.g. vocational trainers).
- *Interconnections within a learning eco-system* (including systematic communication with each other, having a joint interaction platform, as well as a joint vision and objectives) play a crucial role. The engagement of all key stakeholder groups at all stages of an initiative suggests being highly beneficial for its performance.

The key common patterns within **Dimension B Learners** across the analysed best practice initiatives include the following:

- In many cases, the training programmes were reported to be highly flexible, based on modules, where learners have a high degree of freedom in how they put the programme together.
- Some up- and reskilling programs, especially those of long-term orientation, are open directly to individual learners. There is no requirement for direct employer involvement. For short-term initiatives, the learning paths for specific programs often are determined based on industry/employer input, with less flexibility for the end user.
- For multiple initiatives, learners were reported to work one on one with dedicated career counsellors to select from multiple opportunities and pathways to reach their specific goals and interests.
- The use of learning infrastructure depends on the type of training implemented. Both analogue classroom format and e-learning courses are offered by multiple successful initiatives. Most of the analysed programmes, however, are provided either in hybrid or digitally.
- The analysed initiatives operate alongside both formal and informal education and training systems. Not every upskilling/reskilling program results in "credit" towards a larger credential, but those are still recognised in a way appropriate to the learning.

The key common patterns within **Dimension C Funding** across the analysed best practice initiatives include the following:

- The role of funding is reported to be particularly fundamental for SMEs, as engagement in up- and reskilling activities for them is often associated with financial challenges.
- The analysed initiatives are highly dependent on public funding. Several initiatives were reported to be 100% publicly funded.
- Private funding was in many cases reported as being highly desirable and crucial for the feasibility of specific initiatives. This approach allows for securing company buy-in and increasing their motivation to organise dedicated training activities.

- The majority of the analysed initiatives do not practice co-funding by learners (which is sensitive for people in less-advantaged situations). In some cases, learners may be paid themselves to further facilitate their engagement in an up- and reskilling initiative. In some cases, co-funding is used specifically to increase learner engagement.
- Diversity in the funding types was often mentioned as key to ensure sustainability of up- and reskilling initiatives. 100% publicly funded initiatives are reported to be particularly vulnerable, and the need to attract private funding was emphasised.

The key common patterns within **Dimension D Regulatory Framework** across the analysed best practice initiatives include the following:

- A major part of the analysed initiatives reports to be well embedded into the overall skills strategy/agenda at the national level.
- The analysed initiatives may not always be directly integrated into a digital strategy of a country, but they still contribute to the digitalisation of economy by employing digital tools and approaches for training other types of skills.
- For many of the analysed initiatives, while those may not be directly integrated into the overall green strategies of their countries, they still contribute to the preparation of specialists for the greenification of the economy.
- For the new initiatives, there is often a need for full-scale promotional campaigns to make sure the target audience is properly reached. For more mature initiatives that are well-known to the target audience and that are already highly popular, the required promotional efforts are usually significantly smaller.
- In general, the analysed initiatives were reported to have a high availability of learning infrastructures.

In-depth feasibility assessment for the EU context (Chapter 5)

The Report also outlines the results of the feasibility assessment for specific best practices related to the Key Performance Drivers for the EU context. Special attention was paid to the potential challenges associated with the analysed best practices when it comes to applying them in the EU Member States. The estimated feasibility levels are presented as “High”, “Medium”, and “Low”. High feasibility means that no serious challenges were identified in the EU context for applying a specific best practice in the EU, and typically this is already a good practice in the EU context. Medium feasibility means that some challenges were identified; however, those can potentially be solved, and then a best practice can still be applied. Finally, low feasibility implies fundamental challenges in the EU context making the applicability of an identified best practice highly unlikely.

The feasibility assessment of best practices was structured around the four dimensions of the Key Performance Drivers. In general, the feasibility of most of the identified best practices was ranked as “High”. Several practices received “Medium” level of assessment and none of the best practices was assigned “Low” feasibility.

Policy recommendations (Chapter 6)

The policy recommendations are based on the findings of the study and aimed primarily at the EU and national policy makers and have an objective of providing practical suggestions on how to advance up- and reskilling-related policy development and implementation. Due to a large number of the identified best practices, prioritisation first needed to be performed in order to extract and further develop the key recommendations.

With regard to the Key Performance Drivers, the following eight recommendations were developed:

- **Recommendation A1: Continuous upskilling of policy makers engaged in up- and reskilling policies:** it can be achieved through various means, such as consulting skills-related intelligence sources including relevant publications and online portals, attending relevant training programs, participating in workshops and conferences, and engaging with experts and practitioners. This continuous learning process equips policy makers with the knowledge and skills needed to understand the challenges faced by external stakeholders, identify effective solutions, and provide valuable guidance and support.
- **Recommendation A2: Stimulating the involvement of private sector in up- and reskilling initiatives in different forms:** it can be done by policy makers through providing financial incentives to companies that actively participate in up- and reskilling initiatives; facilitating public-private partnerships to jointly develop and implement up- and reskilling initiatives; introducing co-funding mechanisms where the private sector contributes a portion of the funding; as well as providing recognition and certification of companies that actively engage in up- and reskilling initiatives. Other relevant approaches include creating an enabling policy environment that supports private sector engagement; facilitating knowledge sharing and the exchange of best practices among companies; and collaborating with industry associations and other social partners and labour market organisations to promote up- and reskilling initiatives within their sectors.
- **Recommendation A3: Stimulating the engagement of all key stakeholder groups in the design and implementation of up- and reskilling policies:** It can be done by means of establishing collaborative platforms or working groups that bring together representatives from all key stakeholder groups; conducting regular consultations and needs assessments with all key stakeholder groups to understand their specific needs, challenges, and priorities; promoting a co-creation approach where all key stakeholder groups actively participate in the design and development of up- and reskilling policies; and encouraging resource sharing and collaboration among key stakeholder groups. Other relevant strategies include ensuring clear communication and transparency throughout the design and implementation of up- and reskilling policies and establishing a robust monitoring and evaluation framework to assess the effectiveness and impact of up- and reskilling policies.
- **Recommendation A4: Establishing a framework for collaboration in up- and reskilling:** it implies establishing mechanisms for coordination, regular communication, and conflict resolution. Clear guidelines, incentives, and support mechanisms from policy makers are highly useful. Regulatory framework that addresses the specific concerns and risks associated with collaboration in up- and reskilling can also help engage companies. Dedicated knowledge exchange platforms can facilitate the sharing of best practices, lessons learned, and success stories from collaboration.
- **Recommendation B1: Simplifying and accelerating the skills accreditation process by leveraging technology:** leveraging technology and digital platforms could help simplify and accelerate the skills accreditation process. Online assessment tools, digital portfolios, and blockchain technology could be utilised to verify and validate learning outcomes, ensuring transparency and security in the recognition process. These technological advancements could also facilitate the recognition of non-traditional forms of learning, such as online courses and microcredentials.

- **Recommendation C1: Increasing the role of private funding in up- and reskilling initiatives:** relevant strategies here include raising awareness and enhancing information about the benefits and opportunities of investing in up- and reskilling initiatives among companies; recognising and rewarding actively involved companies that demonstrate a commitment to up- and reskilling initiatives, as part of their corporate social responsibility (CSR) efforts, as well as streamlining regulatory processes and reducing administrative burdens for companies that invest in up- and reskilling initiatives.
- **Recommendation C2: Diversifying funding types for up- and reskilling initiatives:** there is a need to diversify the funding types to ensure sustainability (i.e., continuity) of up- and reskilling initiatives. The recommendations above already presented strategies on how to stimulate the engagement of private funding in up- and reskilling initiatives. In addition, in some cases, co-funding by learners could also be considered.
- **Recommendation D1: Including 'green' components in up- and reskilling initiatives:** relevant strategies here include developing Green Skills Frameworks that define the knowledge, competencies, and qualifications required for green jobs; establishing partnerships with green industries to ensure the inclusion of green skills in up- and reskilling initiatives; integrating green skills in formal education systems; as well as offering financial incentives to companies and individuals to encourage the inclusion of green skills in up- and reskilling initiatives. Other strategies refer to raising awareness about the importance of green skills and providing information on available up- and reskilling opportunities and evaluating and monitoring the impact of including green skills in up- and reskilling initiatives.

In addition, when setting objectives and developing Key Performance Indicators (KPIs) for up- and reskilling initiatives, it is highly advisable to go beyond the explicit (traditional) focus on Economy dimension and include also other crucial dimensions such as Individual and Company. While economy-related indicators provide valuable insights into the overall impact of up- and reskilling initiatives, it is equally important to consider the perspectives and outcomes for learners and companies. The analysis and benchmarking framework applied in the current study demonstrated the use of the abovementioned approach in practice.

1. Introduction

The current chapter addresses the context and the objectives of the study and presents its structure and key concepts.

1.1. Building the skills economy in Europe

To effectively drive the twin transitions (i.e., digitalisation and greenification) and to ensure resilience to face shocks such as the COVID-19 pandemic, **the EU needs a paradigm shift on skills**. Only with the right skills can Europe strengthen its position in global competition and have a sustained economic and socially inclusive prosperity. It specifically means delivering on the European Green Deal, which is the EU's growth strategy, and in the strategic sectors and ecosystems identified in the EU's new Industrial Strategy³.

Skills thus represent one of the key priorities for tackling the current and upcoming challenges for businesses in the EU, and those are expected to stay at the high priority level for years to come. For this reason, the EU has developed a comprehensive framework for skills policies in the EU, the European Skills Agenda, and proclaimed the European Year of Skills, lasting from May 2023 to May 2024.

1.1.1. European Skills Agenda

In order to build the skills economy in Europe, the European Skills Agenda was launched in July 2020. Building on the Skills Agenda adopted in 2016 and unlocking the potential of the Recovery Plan for Europe, the European Skills Agenda covers four key building blocks, namely⁴:

- A call to **join forces** in a collective action;
- Actions to ensure that people have the **right skills for jobs**;
- Tools and initiatives to **support people** in their lifelong learning pathways;
- A framework to **unlock investments** in skills.

The abovementioned building blocks are structured around 12 specific action points. The European Skills Agenda sets objectives to be achieved by 2025, based on established quantitative indicators. These indicators are considered milestones in the broader Action Plan for the European Pillar of Social Rights⁵, proposed by the European Commission.

It relates with other initiatives that support the lifelong learning approach. The ambition is for it to be followed by further initiatives providing a new impetus in the field of education, in particular an initiative making the European Education Area a reality by 2025 through bringing down barriers across the Union to learning and promoting innovative and inclusive education and training for all. The European Research Area also promotes up- and reskilling of talent, especially in academia.

³ COM(2020)274 Communication on a European Skills Agenda for sustainable competitiveness, social fairness and resilience

⁴

<https://ec.europa.eu/social/main.jsp?catId=1223#:~:text=The%20European%20Skills%20Agenda%20is,in%20the%20European%20Green%20Deal>

⁵ <https://ec.europa.eu/social/main.jsp?catId=1607&langId=en>

Together, **these initiatives aim to support the development of a culture of lifelong learning in Europe, foster a demand-led approach to strengthening cooperation with industry and boost the employability of citizens**⁶.

1.1.2. Pact for Skills

The Pact for Skills is the first of the flagship actions under the European Skills Agenda. It aims to mobilise and incentivise private and public stakeholders to take concrete actions for the upskilling and reskilling of people of working age, and, when relevant, pool efforts in the partnerships, addressing the needs of the labour, supporting green and digital transitions as well as local and regional growth strategies⁷.

All members of the Pact sign up to the Charter and its key principles, which include promoting a culture of lifelong learning for all, building strong skills partnerships, monitoring skills supply and demand, and anticipating skills needs, and working against discrimination and for gender equality and equal opportunities⁸.

Skills partnerships under the Pact for Skills bring together stakeholders to implement concrete up- and reskilling actions. Partnerships are shaped by the members and can get tailored support services provided by the Commission. Since the start of the Pact for Skills in November 2020, 20 large-scale skills partnerships (LSPs) have been launched in the 14 industrial ecosystems of the EU Industry Strategy. The Pact for Skills also promotes the establishment of **skills partnerships at the regional level**. Regional skills partnerships are multi-stakeholder collaborations in a region, also including at local level, in Macro regions or collaborations between regions in multiple EU member states with a shared geographical or economic proximity or relationship. As of December 2023, over **1,500 individual organisations** from all Member States and all ecosystems have pledged to the Pact Charter.

From 2021, the Commission supports the signatories of the Pact through dedicated services⁹:

1. **Networking hub**, including support in finding partners and first meetings of the partnerships; linking with existing EU tools, e.g., Europass¹⁰, Skills Panorama¹¹, EURES¹² and European Network of Public Employment Services¹³; promotion of the activities of the Pact members.
2. **Knowledge hub**, including webinars, seminars peer learning activities; updates on EU policies and instruments; information on projects, tools instruments and best practices.
3. **Guidance and resources hub**, including access to information on relevant EU funding; guidance to identify financial possibilities; facilitation of exchange between the Pact members and national/regional authorities.

In 2021, the Commission launched the **Pact for Skills Support Services** contract (contract nr EMPL/2021/OP/0007 (VT/2021/014)). The purpose of that contract is to support the European Commission services (DG EMPL in the lead, supported by DG GROW and other relevant services) with high-quality policy implementation by providing policy support and technical assistance for upskilling and reskilling actions by signatories of the Pact for Skills. The aim of that particular contract (which represents another project)

⁶ COM(2020)274 Communication on a European Skills Agenda for sustainable competitiveness, social fairness and resilience

⁷ Tender Specifications for Pact for Skills Support Services (contract nr EMPL/2021/OP/0007 (VT/2021/014))

⁸ <https://ec.europa.eu/social/main.jsp?catId=1517&langId=en>

⁹ *Ibid.*

¹⁰ <https://europa.eu/europass/en>

¹¹ <https://www.cedefop.europa.eu/en/tools/skills-intelligence>

¹² <https://ec.europa.eu/eures/public/select-language?destination=/node/11>

¹³ <https://ec.europa.eu/social/main.jsp?catId=1100&langId=en>

is to provide assistance to the Commission in supporting stakeholders' development of and wide participation in upskilling and reskilling initiatives designed for the EU working age population¹⁴. The project team of the current contract is grateful to the Commission/EISMEA for facilitating the collaboration between the project teams of the two contracts.

1.2. General and specific objectives of this contract

To support the various developments and initiatives described above, there is a need to understand how reskilling and upskilling policy actions function and what creates their success or failure, in particular those actions where businesses, including SMEs, play an active role¹⁵.

To this end, the current contract implied conducting a study aimed at analysing up- and reskilling initiatives implemented under the Pact for Skills initiative and identifying best practices. Below we address the general and specific objectives, geographical scope, and project design.

1.2.2. General objective

The general objective of this contract is **to understand what the building blocks or constitutive elements of a successful reskilling and upskilling policy action are, and which building blocks can enable achievement of envisaged result in up- and reskilling**. It was also necessary to obtain knowledge on the most relevant stakeholders and on the most efficient way regarding resources and time¹⁶.

During the kick-off meeting, it was pointed out that the current study focuses on the reskilling and upskilling initiatives for the working population. The initiatives focusing on the unemployed people could be included in the analysis, but those do not constitute the primary focus of the analysis. The focus of this study is mainly on initiatives that involve businesses and deliver measurable results.

1.2.3. Specific objectives

The specific objectives of this contract include the following¹⁷:

- **To analyse the up- and reskilling initiatives** involving businesses, as active stakeholders, in all EU Member States, at European level (EU initiatives) in the United States (at both the federal level and in specific states, e.g. California, Texas, New York, and Florida), UK, Canada, China, Singapore, Japan, South Korea, India and South Africa (geographical scope of the study¹⁸);
- **To develop a benchmarking tool**, to acquire a deep understanding of the success and failure factors of these actions and to allow objective measurement and comparison;
- **To propose recommendations** for policy decision makers on developing and implementing efficient up – and reskilling initiatives.

¹⁴ Tender Specifications for Pact for Skills Support Services (contract nr EMPL/2021/OP/0007 (VT/2021/014))

¹⁵ Tender Specifications for "Pact for Skills: analysing of up- and reskilling initiatives and identifying best practices", EISMEA/2022/OP/0004

¹⁶ Tender Specifications for "Pact for Skills: analysing of up- and reskilling initiatives and identifying best practices", EISMEA/2022/OP/0004

¹⁷ *Ibid.*

¹⁸ Three additional countries were proposed by the project team and will be included in the sample, namely Brazil, Australia and United Arab Emirates (UAE)

This work needed to be done considering the specific current circumstances setting the EU agenda, such as the pandemic situation and the need for increased resilience, the digitalisation and greenification of the European economy, among others. It also required coordination with other, complementary ongoing Commission actions, in particular the support measures for the Pact for Skills¹⁹.

1.2.4. Geographical scope

Table 1-1 outlines the geographical scope of the study. In total, 39 countries were covered by the analysis, distributed across different world regions, namely Europe (EU and the United Kingdom) (28), North America (2), Asia (5) and other countries (4). Besides the countries outlined in the original Tender Specifications, three additional countries were included in the global status quo analysis, namely: Australia, Brazil, and the United Arab Emirates (UAE). The country skills spotlight analyses by Coursera²⁰ for each of these three countries demonstrated that all of them show substantial increases in skills rankings since the previous reporting period. The latter could be linked to the implementation of the corresponding skills policies/initiatives in these countries, which could, in turn, be highly relevant for exploration in the context of this study. To this end, these three countries were also added to the analysis.

Table 1-1: Geographical scope of the study

World region	Countries to be covered by this study
• Europe (EU and the United Kingdom)	<ul style="list-style-type: none"> • Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden • United Kingdom
• North America	<ul style="list-style-type: none"> • Canada • United States
• Asia	<ul style="list-style-type: none"> • China • India • Japan • Singapore • South Korea
• Other countries	<ul style="list-style-type: none"> • Australia (in addition; status quo analysis only) • Brazil (in addition; status quo analysis only) • South Africa • United Arab Emirates (UAE) (in addition; status quo analysis only)

1.2.5. Study results

The abovementioned analysis aimed to lead to **a good understanding of the building blocks of successful reskilling and upskilling policy actions**. It specifically implied generating intelligence on which elements (or building blocks) of such actions are most useful or not, and how to combine them to fulfil a specific reskilling purpose in the most efficient way, taking into account the regulatory framework, the announced initiatives, the specificities of the respective industrial ecosystem at play, the stakeholder type (business, social partner, academia/training provider, etc.), the stakeholder size when relevant etc. It also aimed to generate knowledge on the most relevant stakeholders and on the most efficient way(s) regarding resources and time needed to implement these actions²¹.

Specifically, **the results of the analysis are aimed to be used both by policy makers to design future actions, and by the participating stakeholders themselves (businesses, social partners, other labour market organisations etc.) to better**

¹⁹ <https://ec.europa.eu/social/main.jsp?catId=1517&langId=en>

²⁰ <https://www.coursera.org/skills-reports/global>

²¹ Tender Specifications for "Pact for Skills: analysing of up- and reskilling initiatives and identifying best practices", EISMEA/2022/OP/0004

estimate the costs, benefits, and timeframes needed for implementing such actions²².

1.2.6. Project design

The project design consisted of the three technical tasks (Tasks 1-3) and one project management task (Task 0), as depicted in Figure 1-1. Below we briefly summarise the essence of each Task.

Task 0: Project management

Task 0 aimed to ensure a coordinated, organised, and swift management of all tasks and agile interactions between them. It implied effectively coordinating all project activities, organising project meetings, maintaining continuous contact with the EISMEA/Commission, quality assurance of deliverables and preparing a handover file.

Task 1: Collection and analysis of information, data and interviews

Task 1 aimed to provide an overview of up- and reskilling initiatives for the workforce involving businesses as active stakeholder(s), in the specified geographical areas. This Task specifically implied conducting desk-research activities on the international/national/local upskilling and reskilling policies; conducting surveys for employment offices, a sample of companies and other key stakeholders; as well as conducting in-depth interviews for collecting additional relevant information on the analysed policies. This Task aimed to result into a detailed overview of up- and reskilling initiatives in the specified geographical areas, accompanied by the analysis of the status quo of global up- and reskilling policy landscape.

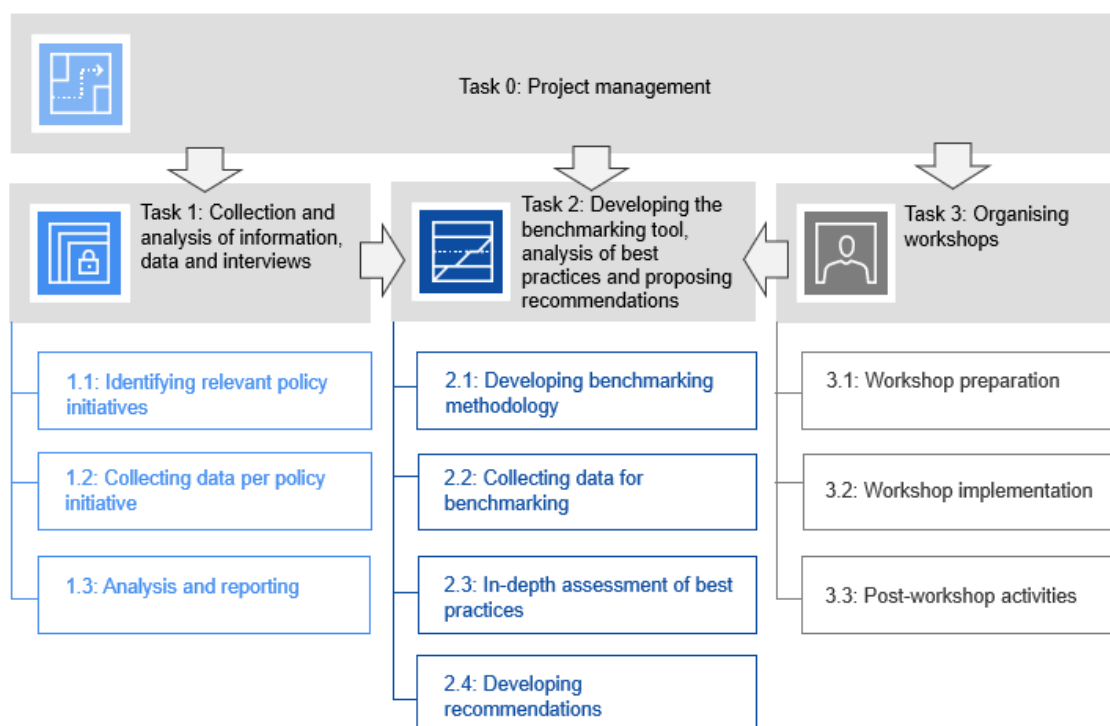


Figure 1-1: Project design

²²

Tender Specifications for “Pact for Skills: analysing of up- and reskilling initiatives and identifying best practices”, EISMEA/2022/OP/0004

Task 2: Developing the benchmarking tool, analysis of best practices and proposing recommendations

Task 2 implied developing a benchmarking framework consisting of indicators that allow for objective comparison and identification of best practices. The indicators were then used for the benchmarking tool developed as part of this Task, to test the different practices and help identify the best traits of success. The aim of the tool was to acquire a deep understanding of the success and failure factors or constitutive elements of these actions and to allow objective measurement and comparison. It allowed for understanding which elements are required or not and how to combine them to fulfil a specific reskilling purpose in the most efficient way.

The above conclusions, as well as the outcomes of research done during implementation of Task 1 and results of workshops implemented in Task 3, served as the base for drafting recommendations for stakeholders and policy decision makers. They also considered the foreseen greenification and digitalisation, as well as regulatory and policy frameworks planned for the upcoming initiatives. The recommendations aim to help in designing policies and initiatives for re- and upskilling in the future.

Task 3: Organising workshops

To facilitate participation of relevant stakeholders and policy makers in the project, two workshops needed to be organised. The workshops firstly served to refine the process of design/test KPIs, and secondly to identify/test the best practices. Each workshop needed to be organised for different audience, i.e., one workshop for the stakeholders (businesses, social partners and other labour market organisations, national organisations, academia, vocational and educational training providers, etc.), and another workshop for policy makers. The detailed summaries of both workshops, as well as the lists of participants are provided in *Annex E* of this Report.

1.3. Benchmarking framework and key concepts

The data collection and analysis activities of this study were organised around the dedicated benchmarking framework that was designed to serve the key study objectives.

First of all, the benchmarking framework needed to serve as a basis for comparing the analysed up- and reskilling initiatives to each other, specifically when it comes to their *performance*. Another key objective was to identify the success (and failure) factors having a direct impact on their performance, and particularly *factors driving the performance*. Furthermore, the benchmarking framework had to allow for a sufficient degree of flexibility to be able to accommodate the diversity of contexts of the analysed initiatives. The abovementioned analysis aimed to form a basis for deriving recommendations for future policy making.

When selecting the relevant KPIs for benchmarking, it was thus crucial to distinguish between key performance metrics and key performance drivers. **Key performance metrics** refer to the actual performance of initiatives (i.e., the impact that has been created). **Key performance drivers**, in turn, refer to the factors that determine/influence this performance (key success factors in case they have a positive impact and key failure factors in case their impact is negative). Key performance metrics represent dependent variables, and key performance drivers represent independent variables for the analysis. The benchmarking framework needed to contain both sets of variables with an objective to explore their relationship, thus allowing to extract the necessary conclusions. Below, we address our approach towards developing each of the abovementioned sets of indicators, and then summarise the approach towards developing an overall benchmarking framework.

1.3.1. Key performance metrics

The identification of the key performance metrics for re- and upskilling initiatives was performed by means of:

- Extensive desk-research for methodologies and comparable analyses in policy reports, scientific studies, specialist blogs etc.; *and*
- Active stakeholder engagement in co-creation and validation of the selected indicators by means of an interactive workshop (W1) held on 14 March 2023 in Brussels (Task 3).

Table 1-2 presents a fine-tuned list of indicators for the key performance metrics including the corresponding data type sources. The suggested indicators focus on achieving the *sustainable nature of the skills economy*. The latter implies a long-term orientation/continuity of up- and reskilling activities, a mentality shift (i.e., a shift towards a lifelong learning culture), and synergies between all levels including individual, company and economy.

Table 1-2: Fine-tuned list of key performance metrics for re- and upskilling initiatives (inputs *in blue* have been added based on the outcomes of W1 of 14 March 2023)

Nr	Metric/indicator	Data type	Source		
			Desk-research	Survey	Interviews
Performance metrics Dimension I: Individual					
i.1	Level of mastery of specific skills (e.g., entrepreneurial, digital, green etc.)	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
i.2	Attractiveness for the labour market (i.e., ability to find a job, job security and job promotion opportunities)	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
i.3	Motivation to work and to continue learning (lifelong learning)	Qualitative/ranges (Likert scale 1-5)		✓	✓
Performance metrics Dimension II: Company					
ii.1	Development of a long-term vision for up- and reskilling	Qualitative/ranges (Likert scale 1-5)		✓	✓
ii.2	Development of a learning culture (i.e., promotion of lifelong learning at the workplace)	Qualitative/ranges (Likert scale 1-5)		✓	✓
ii.3	Attractiveness on the labour market (i.e., employee retention rate and company's ability to find new employees)	Qualitative/ranges (Likert scale 1-5)		✓	✓
Performance metrics Dimension III: Economy					
iii.1	Closing the skills supply and demand gap (i.e., scale of matching supply and demand such as nr of people trained and (re)integrated into the labour market)	Quantitative/ranges (Likert scale 1-5)	✓	✓	✓
iii.2	Contribution to the digitalisation of the economy	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
iii.3	Contribution to the greenification of the economy	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓

The suggested key performance metrics were thus grouped into three broader dimensions, namely (I) Individual, (II) Company and (III) Economy, corresponding to the three key groups of beneficiaries of the up- and reskilling initiatives.

The **Individual dimension** refers to the indicators that focus on *the desired impact of up- and reskilling initiatives specifically for individuals*, i.e., learners, as the latter have the

central role in the process of up- and reskilling. During the first stakeholder workshop (W1), an extensive list of individual-related indicators was identified. The project team needed to prioritise and to combine the relevant indicators to meet the associated data collection and processing requirements. As a result of this exercise, three composite indicators were developed for this dimension.

The *first indicator (i.1)* refers to the overall increase in the level of mastery of specific skills of the individuals engaged in a specific policy initiative. This indicator has an explicit focus on the *quality* of the acquired skills relevant for the labour market. It refers to a broad range of skills needed at the individual level including, among others, entrepreneurial, digital, and green skills. During W1, the entrepreneurial skills (defined in a broader sense in line with the competences of the EntreComp Framework²³) were suggested to be crucial for the ability of individuals to be successful on the labour market. Those refer to a broad set of skills including, among others, creativity and vision, spotting opportunities, ethical and sustainable thinking, taking action, and mobilising resources. This indicator thus aims to capture the short-term/immediate impact of a specific policy initiative on the overall mastery of skills of individuals, which, in turn, increases the attractiveness of those on the labour market.

The *second indicator (i.2)* is closely linked to i.1, and it aims to *directly* capture the increase in the overall attractiveness of individuals for the labour market after engaging in the activities of a specific up- and reskilling policy initiative. This attractiveness for the labour market can be operationalised into the individual's ability to find a job, the level of job security (i.e., how certain the individual can be that he/she will be able to keep the job), and job promotion opportunities. This indicator captures the short-term/immediate impact of the up- and reskilling initiatives on individuals.

The *third indicator (i.3)* within this dimension refers to the motivation to work and to continue learning (i.e., lifelong learning mentality). This indicator also captures the long-term impact of the up- and reskilling initiatives on individuals.

The **Company dimension** refers to the indicators that focus on *the desired impact of up- and reskilling initiatives specifically for companies*. Rather than focussing on 'traditional' short-term quantitative indicators such as, for example, an increase in the economic performance of companies (which often is difficult to explicitly attribute to the specific initiatives), the current framework focusses on the *qualitative* indicators aiming to capture the long-term sustainable impact of the up- and reskilling policies.

The *first indicator* within this dimension (*ii.1*) refers to a long-term vision for up- and reskilling within the engaged companies, and specifically the impact of a specific policy initiative on the development of such a vision. The *second indicator (ii.2)* is closely related to ii.1, and it aims to capture the impact of a specific policy initiative on the development of a learning culture (including the promotion of lifelong learning at the workplace) within the engaged companies. Both ii.1 and ii.2 measure the impact of initiatives on the so-called 'mentality shift' within companies, which is crucial for building the sustainable skills economy at the company level. The *third indicator (ii.3)* addresses the impact of a policy initiative on the overall attractiveness of the engaged companies on the labour market. The latter can be operationalised into the employee retention rate and company's ability to find new employees.

The **Economy dimension** refers to the indicators that focus on *the desired impact of up- and reskilling initiatives for the whole economies at the regional, national, and international (EU) levels*. The first indicator (iii.1) addresses the impact of a specific policy initiative on closing the skills gap at the level of the analysed economy, i.e., the scale of matching skills supply and demand, while being the key purpose of up- and reskilling initiatives. It can be captured by, for example, the number of people trained and (re-)integrated into the labour market as a result of a specific policy initiative.

²³ <https://ec.europa.eu/social/main.jsp?catId=1317&langId=en>

The second (iii.2) and the third (iii.3) indicators within this dimension refer to the other key priorities of policy makers at the level of the whole economies, namely the contribution to the digitalisation of the economy and the contribution to the greenification of the economy respectively. These indicators are included into the framework to take into account the key priorities of the European Commission and the corresponding requirements of the contract to take into account the foreseen greenification²⁴ and digitalisation²⁵ agendas of the European Union.

Specifically, the contribution to the digitalisation of the economy can be measured by capturing the level of importance assigned to the development of the digital skills in the context of a specific policy initiative. Digital skills here refer to a broader framework of digital competences in line with the *DigComp Framework 2.2*²⁶ of the European Commission. Those specifically include skills related to the overall information and data literacy (i.e., the ability to search, filter and evaluate data, and to manage digital content; communication and collaboration skills (i.e., interacting and sharing data through digital technologies and managing digital identity); digital content creation, digital safety (i.e., protecting personal data and privacy, protecting health, protecting devices, and protecting the environment), and problem-solving using digital technologies. The current indicator aims to capture the extent to what the development of these competences is covered by a specific policy initiative.

Similarly, the contribution to the greenification of the economy can be measured by capturing the level of importance assigned to the development of the 'green' skills in the context of a specific policy initiative. Green skills here refer to a broader framework of skills needed to facilitate the transition to a climate-neutral economy, in line with the *GreenComp: The European Sustainability Competence Framework*²⁷. GreenComp is a reference framework for sustainability competences providing a common ground to learners and guidance to educators, offering a consensual definition of what sustainability as a competence entails. It is designed to support education and training programmes for lifelong learning²⁸. GreenComp consists of twelve competences organised into the four areas, namely embodying sustainability values (i.e., valuing sustainability, supporting fairness, promoting nature); embracing complexity in sustainability (i.e., systems thinking, critical thinking, problem framing); envisioning sustainable futures (i.e., futures literacy, adaptability, exploratory thinking), as well as acting for sustainability (i.e., political agency, collective action, individual initiative). Similarly to iii.2, the current indicator aims to capture the extent to what the development of these competences is covered by a specific policy initiative.

The framework implies using three indicators for each of the three dimensions. For the standardisation purposes, the collected data at the level of specific initiatives was transformed into ranges and acquired using Likert scales with the corresponding point categories (1-5) applied to either quantitative ranges or qualitative categories. This approach allows for data comparability and facilitate the analysis process. The complete questionnaire is provided in *Annex C* of this Report.

The abovementioned indicators are directly linked to the actual performance of the analysed initiatives. This does not only allow to have a more accurate performance assessment of the specific initiatives, but also allows for exploring the relationship between their performance and success factors (performance drivers). To this end, the project team did not recommend using broader macroeconomic indicators (i.e., indicators

²⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

²⁵ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/shaping-europe-digital-future_en and https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en

²⁶ https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en

²⁷ <https://publications.jrc.ec.europa.eu/repository/handle/JRC128040>

²⁸ Bianchi, G., Pisiotis, U. and Cabrera Giraldez, M., *GreenComp: The European sustainability competence framework*, Punie, Y. and Bacigalupo, M. editor(s), EUR 30955 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-46485-3, doi:10.2760/13286, JRC128040

linked to the whole economy, such as GDP, overall employment growth, unemployment level etc.) for this purpose.

1.3.2. Key performance drivers

Similarly to the key performance metrics, the identification of the key performance *drivers* for re- and upskilling initiatives was done by means of:

- Extensive desk-research for methodologies and comparable analyses in policy reports, scientific studies, specialist blogs etc.; and
- Active stakeholder engagement in co-creation and validation of the selected indicators by means of an interactive workshop (W1) held on 14 March 2023 in Brussels (Task 3).

The key performance drivers refer to the factors that determine/influence the performance of the analysed initiatives (i.e., key success factors in case they have a positive impact and key failure factors in case their impact is negative). Table 1-3 presents a list of indicators for the key performance drivers including the corresponding data type sources. Also here, the project team had to prioritise and, whenever needed, develop composite indicators, to best accommodate the needs of the data collection and analysis processes.

The key performance drivers can be grouped into the four dimensions: (A) Stakeholders; (B) Learners; (C) Funding, and (D) Regulatory framework, all representing the key anticipated enablers of success for up- and reskilling initiatives.

The **Stakeholders** dimension aimed to capture the role of all key stakeholder groups in the learning ecosystem, namely policy makers (a.1), large companies (a.2), SMEs (Small and Medium-sized Enterprises) (a.3), education and training providers (a.4), and employment agencies, employer organisations, trade unions and other supporting structures (a.5). These indicators aimed to explore the level of involvement of each of the key stakeholder groups into a specific policy initiative, and then to determine how this level of involvement influences the impact of that policy initiative. Additionally, the sixth indicator (a.6) addresses the interconnections within the learning ecosystem, i.e., how different stakeholder groups are connected to each other and work together to create learning experiences within a specific up- and reskilling policy initiative. The importance of this indicator was highlighted during W1.

Table 1-3: Fine-tuned list of key performance drivers for re- and upskilling initiatives (inputs *in blue* have been added based on the outcomes of W1 of 14 March 2023)

Nr	Metric/indicator	Data type	Source		
			Desk-research	Survey	Interviews
Performance drivers Dimension A: Stakeholders					
a.1	Role of policy makers	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
a.2	Role of large companies	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
a.3	Role of SMEs	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
a.4	Role of education and training providers	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
a.5	Role of employment agencies, employer organisations, trade unions and other supporting structures	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
a.6	Interconnections within the learning ecosystem	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
Performance drivers Dimension B: Learners					
b.1	Opportunity to determine own learning path, including milestones for performance	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓

Nr	Metric/indicator	Data type	Source		
			Desk-research	Survey	Interviews
	measurement ²⁹				
b.2	Career guidance and assistance with learning (including self-assessment opportunities ³⁰)	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
b.3	Access to (digital) learning infrastructures including tools and trainers	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
b.4	Recognition of learning	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
Performance drivers Dimension C: Funding					
c.1	Availability of funding to support SMEs	Quantitative/ranges (Likert scale 1-5)	✓	✓	✓
c.2	Role of public funding ³¹ (including micro-funding for learners)	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
c.3	Role of private funding	Quantitative/ranges (Likert scale 1-5)	✓	✓	✓
c.4	(Co-)funding by learners	Quantitative/ranges (Likert scale 1-5)	✓	✓	✓
c.5	Sustainability of funding and alignment of different funding types	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
Performance drivers Dimension D: Regulatory framework					
d.1	Integration into the overall skills strategy/agenda of the country/EU	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
d.2	Integration into the digital regulatory framework	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
d.3	Integration into the green regulatory framework	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
d.4	Awareness raising (i.e., promotion activities including dedicated marketing budgets) about the up- and reskilling policy initiative	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓
d.5	Availability of learning infrastructures including tools and trainers	Qualitative/ranges (Likert scale 1-5)	✓	✓	✓

The **Learners** dimension covers a set of indicators explicitly addressing learners, and the enabling factors that are expected to make an up- and reskilling policy initiative more attractive for learners. It consists of the four specific indicators. The first indicator (b.1) refers to the opportunity to determine own learning path, including setting milestones for performance measurement. The presence of this enabling factor was expected to increase the sense of ownership among learners, contributing to higher commitment, motivation, and the corresponding impact of that initiative. The second indicator (b.2) implies the presence of career guidance and assistance with learning (including self-assessment opportunities). It measures the level of help that is provided to learners during and after up- and reskilling. The third indicator (b.3) refers to the access of learners to (digital) learning infrastructures including tools and trainers, which is also expected to be a crucial enabling factor for participating in the up- and reskilling policy initiative. Finally, the fourth indicator (b.4) captures the recognition of acquired learning, including the use of microcredentials. It relies on the assumption that building recognition systems is paramount to increase the appeal to learning and the resilience of participants, and that recognition is likely to be one of the key factors driving the motivation of learners to engage in up- and reskilling. This indicator was added based on the outcome of W1.

²⁹ <https://hbr.org/2022/01/how-to-build-a-successful-upskilling-program>

³⁰ <https://hbr.org/2022/01/how-to-build-a-successful-upskilling-program>

³¹ <https://www.educationdevelopmenttrust.com/EducationDevelopmentTrust/files/b9/b94f7c82-d2c2-427d-badc-fde4612a2aa0.pdf>

The **Funding** dimension refers to the indicators that capturing the role of funding in the context of specific initiatives. The availability of different funding types was also mentioned as a key success factor during W1. The first indicator (c.1) refers to the availability of funding to support SMEs (Small and Medium-sized Enterprises). Smaller firms often cannot afford sending employees to an external training or inviting a specialised trainer due to financial limitations. This indicator thus is expected to serve as a key enabler specifically for the initiatives that involve SMEs. The second indicator (c.2) addresses the role of public funding in the implementation of the policy initiative. It potentially includes micro-funding for learners, implying issuing smaller amounts of money for training and mentoring. The third indicator (c.3) refers to the role of private funding and thus explicitly focusses on the funding provided by companies (typically large employers). Co-funding by learners (c.4) was suggested to increase the motivation for learners to finish the training course, and it therefore included as the fourth indicator. Finally, different funding types need to be aligned to increase their effectiveness, and the sustainability³² of funding, was mentioned as being particularly crucial. That has been translated into the final indicator (c.5).

Finally, the **Regulatory Framework** dimension covers a set of indicators addressing the overall regulatory and policy context of the analysed initiatives. The first indicator (d.1) refers to the integration of the analysed up- and reskilling initiatives into the overall skills strategy/agenda of the country. This indicator specifically captures the existence of a broader systematic national approach towards tackling up- and reskilling challenges, and the level of embeddedness of an analysed initiative into this approach. The integration into the digital (d.2) and green (d.3) regulatory frameworks also needs to be monitored, as digital and green skills become increasingly relevant, and their role is expected to grow even further in the years to come. At the same time, there was a need to first identify the specific green and digital skills needed for each industrial sector, then to identify the professional profiles and to develop sector-specific training courses. The respective references for the operationalisation of the green and digital skills were provided above in the context of the key performance metrics. During W1, the awareness raising activities (i.e., promotion activities including dedicated marketing budgets) about the up- and reskilling initiatives were suggested to be crucial for their success. It was translated into the fourth indicator within this dimension (d.4). Finally, (digital) learning infrastructures including the tools and trainers with sufficient skills are needed to facilitate transferability and increase learning and professional opportunities, were suggested to be highly important during W1. This includes, for example, modernising work environments that prioritise performance data and incorporating augmented reality and embedded intelligence in some workplaces to allow for upskilling while working. It was therefore translated into the fifth indicator (d.5) within this dimension.

Also here, the selected indicators are directly linked to the actual performance of the analysed initiatives, and *not* to broader macroeconomic indicators (i.e., indicators linked to the whole economy). This approach allows for a direct targeted analysis of the research questions posed in the current study.

In total, we thus defined four dimensions of the Key Performance Drivers, namely: Stakeholders Learners, Funding, and Regulatory Framework. Each of these dimensions was further operationalised into specific qualitative and quantitative indicators that was then transformed into Likert scales, to facilitate further analysis.

1.3.3. Overall benchmarking framework

The abovementioned indicators were then integrated into the overall benchmarking framework that served as a guide for data collection and an in-depth analysis. The

³² The sustainability of funding here was defined as continuity of funding in time implying consistent availability of funding for an extensive period of time (i.e., multiple years) for a specific activity / policy initiative.

framework was designed in a way that allows testing different practices and helps identify the best traits of success. The aim of the benchmarking tool was to acquire a deep understanding of the success and failure factors or constitutive elements of these actions and to allow objective measurement and comparison. It aimed to allow for understanding which elements are required or do not play a crucial role and how to combine them to fulfil a specific reskilling purpose in the most efficient way.

The framework presents the major constructs, blocks of variables, and individual indicators that were used in the analysis. It is a hypothesised model that identified the proposed critical success factors under investigation. It outlined the dependent and independent variables and the relationships that needed to be explored during the analysis.

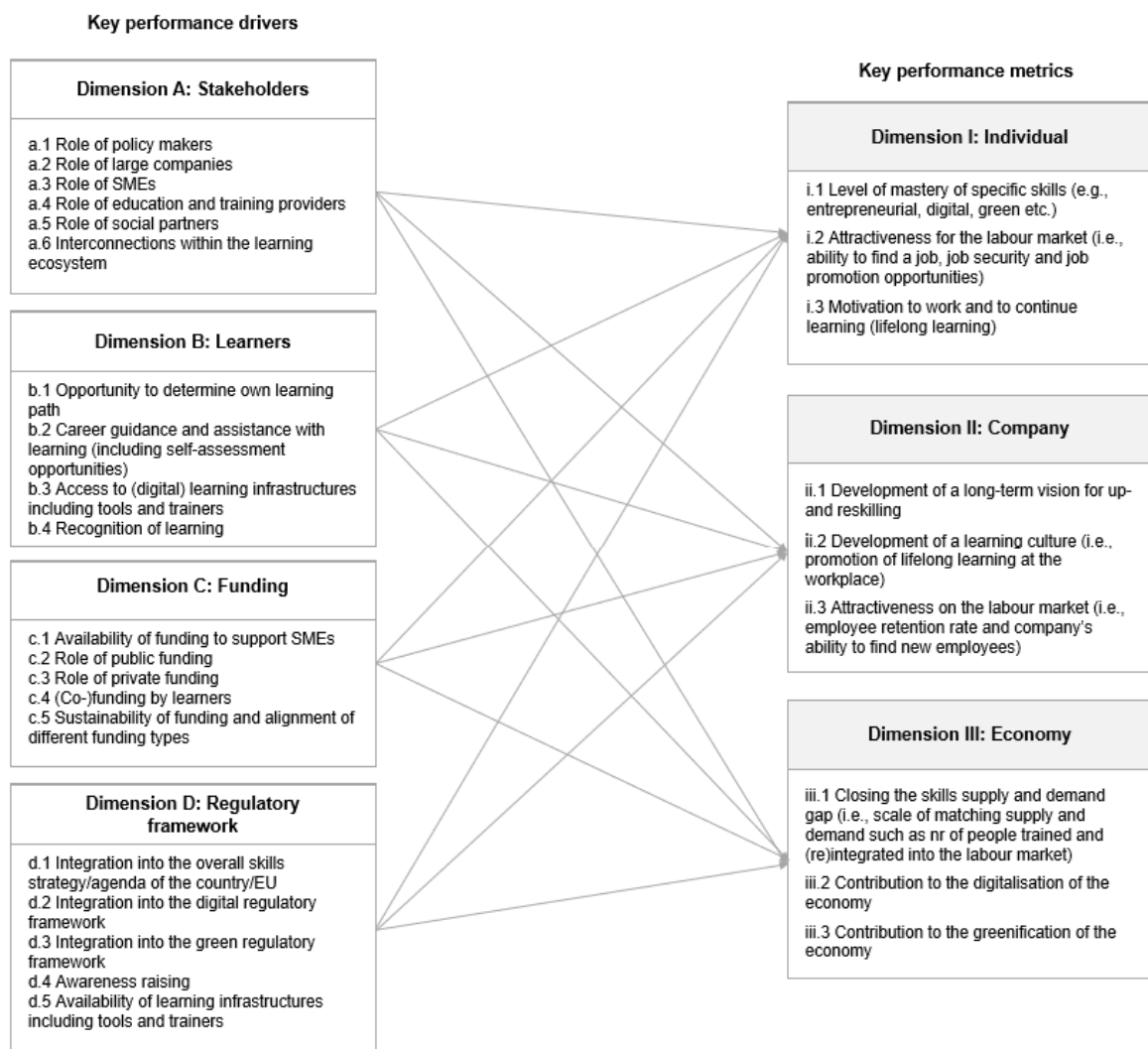


Figure 1-2: Fine-tuned benchmarking framework at the level of specific policies

This framework formed the essence of the benchmarking tool aiming to allow for objective comparison of the diverse up- and reskilling initiatives assessed in the analysis and to derive recommendations for future policy making.

1.4. Report structure

The current chapter aimed to provide the key insights into the context, objectives, and structure of the study. The remainder of this Report is organised as follows. *Chapter 2* presents the results of the global analysis of up- and reskilling policy landscape. *Chapter 3* contains the results of the benchmarking exercise for the analysed up- and reskilling initiatives. *Chapter 4* addresses the analysis of the key success factors, and specifically how the analysed up- and reskilling initiatives compare with each other in terms of their performance, what key factors are influencing the impact of up- and reskilling initiatives, and what the roles of specific stakeholder groups are in maximising the success of up- and reskilling initiatives. *Chapter 5* offers an in-depth feasibility assessment of the identified key success factors for the EU. It contains an assessment report of possible best practices touching on the feasibility of their implementation in EU Member States and industrial ecosystems. *Chapter 6* provides detailed policy recommendations for future up- and reskilling initiatives for policy makers with regard to both the Key Performance Drivers and Key Performance Metrics. Finally, *Chapter 7* summarises the methodological approach and key practical considerations. The Report also contains multiple Annexes with additional detailed information about the analysis including status quo country summaries for all the analysed countries (*Annex A*), concise policy profiles for all the analysed initiatives (*Annex B*), a complete online/interview questionnaire (*Annex C*), a list of consulted stakeholders (*Annex D*), and the summaries and participant lists of both workshops (*Annex E*).

2. Global analysis of up- and reskilling policy landscape

The current chapter presents the key highlights from the global analysis of up- and reskilling policy landscape. This analysis is based on the quick scans of the policy landscape in all 39 countries covered by the current study (as mentioned in section 1.2.3), with an objective to understand the context and to identify the overall up- and reskilling trends across the world. The key focus of this study is on individual initiatives, while the analysis presented in this Chapter was conducted at the *country* level. It aims to provide additional background information to facilitate further analysis. In this chapter, we present the overall findings across all the analysed countries. The detailed individual status quo country summaries can be found in *Annex A* of the Report.

The analysis presented in this Chapter explicitly addresses the *policy landscape* and the corresponding activities of *policy makers* in the respective countries. We specifically outline the identified trends and challenges in the up- and reskilling policies across the world, with a particular focus on the role of policy makers. The remainder of this Report including the core analysis of the study, however, is organised around the roles of *all key stakeholder groups*, including (besides policy makers) large companies and SMEs, education and training providers, social partners and other labour market organisations, and learners. This approach acknowledges the importance of all key stakeholder groups in developing, implementing and evaluating the up- and reskilling initiatives. The outcomes of this analysis can be found in *Chapters 3-5*, followed by *Chapter 6* on Policy Recommendations.

2.1. Skills as a high priority on national policy agendas

In general, **for all the analysed countries, the topic of up- and reskilling has secured its place on the policy agenda.** However, the level of priority given to up- and reskilling by governments, and the corresponding efforts vary per country. The same holds for the ambitions, with some countries setting considerably more ambitious targets than others. For example, India aims to become the “Skills Capital of the World”, as proclaimed by the Confederation of Indian Industry (CII)³³. With its Digital Growth Strategy 2025, Denmark aims to secure its position as a leading country in the digital skills area. Luxembourg, in turn, prioritises up- and reskilling programmes, particularly in future and digital skills, to maintain its competitive edge in the region and facilitate the diversification of the economy. Unlike some countries, Luxembourg views these programmes as a means of maintaining competitiveness rather than solely for social progression. Finally, Singapore has consistently been in the top 3 countries of the Global Talent Competitiveness Index due to its holistic developmental approach. A key feature of Singapore is its whole-of-government approach to national talent development. Skills development is not just a focus area for the ministries of Education and Manpower. It is also the focus of all ministries, within the scope of a comprehensive Smart Nation Strategy³⁴.

Some of the analysed countries have a long history of tackling up- and reskilling challenges, for example, France with its Lifelong Learning/Training programme (Formation tout au long de la vie) launched in 1971. Similarly, the Lifelong Learning Programme of Luxembourg, which also started in 1971, has since been transformed through regular methodology, partnerships, and objectives updates. In Japan, the lifelong

³³

<https://www.cii.in/PolicyAdvocacyDetails.aspx?enc=TMfg/R8QnXek+i/Hdn5x4OSZpzfvK0etlkox5aDpKJeCS/EKUJrv+T7MUqhR6PIE>

³⁴ <https://www.worldgovernmentsummit.org/docs/default-source/publication/2022/unleashing-the-skills---en.pdf>

learning strategy was formalised by the 1990 Lifelong Learning Promotion Law and was operationalised into several ongoing initiatives. The government of Ireland has also been focussing on workforce training for more than two decades now. The Expert Group on Future Skills Needs (EGFSN) was set up in 1997 by the Irish government.

For some of the countries, such as Romania, for example, the foundations of the up- and reskilling approaches are just being laid. Several countries introduced additional up- and reskilling initiatives in recent years specifically to tackle the consequences of the COVID-19 pandemic. For example, Australia recently started investing in up- and reskilling of employees to resolve the skills shortages in regional areas. Also, in case of Finland, a large number of up- and reskilling programmes was developed to tackle COVID-19 consequences for workers. This has led to the creation of cross-sectoral, public- and private-led programmes for training basic digital skills.

For the majority of the analysed countries, the presence of a dedicated national skills strategy was identified, developed by governments, and setting out up- and reskilling targets and key areas of development. These overall national skills strategies are then typically split into specific operational up- and reskilling initiatives. This approach has been identified in, for example, Belgium, Portugal, Italy, Cyprus, Malta, Bulgaria, Denmark, Germany, Slovenia, Slovakia, Poland, as well as in China, Canada, the UAE, India, Singapore, and Japan. Furthermore, in some of the analysed countries, the national skills strategies are then further split into specific initiatives at the regional level, as, for example, is the case in France, Belgium, Germany, China, and the United States.

Figure 2-1 provides a world map of up- and reskilling policies, specifying the focus of those policies in each of the analysed countries. As mentioned above, the individual status quo country summaries containing detailed descriptions of up- and reskilling policies per country can be found in *Annex A* of the Report.

Below we summarise the **key global trends** in up- and reskilling policies that were identified in the course of the analysis.

Trend #1: Focus on lifelong learning

Many countries recognise the importance of lifelong learning as a means to adapt to the changing demands of the labour market. Rather than viewing education and training as something that ends after formal schooling, there is a shift in up- and reskilling policies towards promoting continuous learning throughout one's career. This trend acknowledges that individuals need to acquire new skills and knowledge to remain competitive and agile in a rapidly evolving job market.

Trend #2: Emphasis on digital skills and/or digital tools and approaches

The digital revolution has transformed the nature of work and created a demand for new skill sets. As a result, up- and reskilling policies place a strong emphasis on developing digital skills and/or applying digital tools and approaches. Governments invest in programs that provide training in areas such as coding, data analysis, Artificial Intelligence, and cybersecurity. The overall goal is to equip individuals with the skills needed to thrive in a technology-driven economy and to bridge the digital divide.

Trend #3: Collaboration between public and private sectors

Policy makers across the world recognise the importance of collaboration between the public and private sectors in designing effective up- and reskilling policies. By working together, governments and businesses can ensure that the skills being taught align with industry needs. This collaboration often involves the co-creation of training programs, work-based learning opportunities, internships, and apprenticeships. By involving

employers in the process, policy makers can better understand the skills gaps and design targeted interventions.

Trend #4: Recognition of non-formal and informal learning

Traditional education pathways are no longer the sole focus of up- and reskilling policies. Policy makers start acknowledging the value of non-formal and informal learning³⁵, which includes online courses, microcredentials, and experiential learning. These alternative forms of learning provide flexibility and accessibility, allowing individuals to acquire new skills outside of traditional educational institutions. Efforts are being made to create mechanisms for recognising and validating these learning experiences, such as through the development of frameworks for assessing and accrediting prior learning.

³⁵ Non-formal learning refers to structured learning experiences that take place outside the formal education system. It is intentional and planned, with specific learning objectives in mind. Non-formal learning activities are often organised by educational institutions, community organisations, or employers. Informal learning, on the other hand, is spontaneous and unplanned. It occurs naturally in everyday life, often outside the structured learning environment. Informal learning is driven by personal interests, curiosity, and practical experiences.

World map of up- and reskilling policies

Based on the analysis of 39 countries

North America

Canada: focus on lifelong learning, recognition of foreign credentials, industry collaboration, focus on digital skills, and commitment to supporting individuals throughout their careers

United States: emphasis on lifelong learning, private sector involvement, and support for entrepreneurship

Asia

China: focus on emerging industries, collaboration between stakeholders, support for entrepreneurship and innovation, and commitment to international cooperation

India: aims to become the “skills capital of the world”, promoting vocational training, entrepreneurship, and digital literacy

Japan: focus on VET, lifelong learning, work ethic, and internationalisation

Singapore: focus on world-class skills development, lifelong learning, industry collaboration, digital skills, and career guidance

South Korea: focus on TVET, entrepreneurship, industry-academia collaboration, internationalisation, and lifelong learning

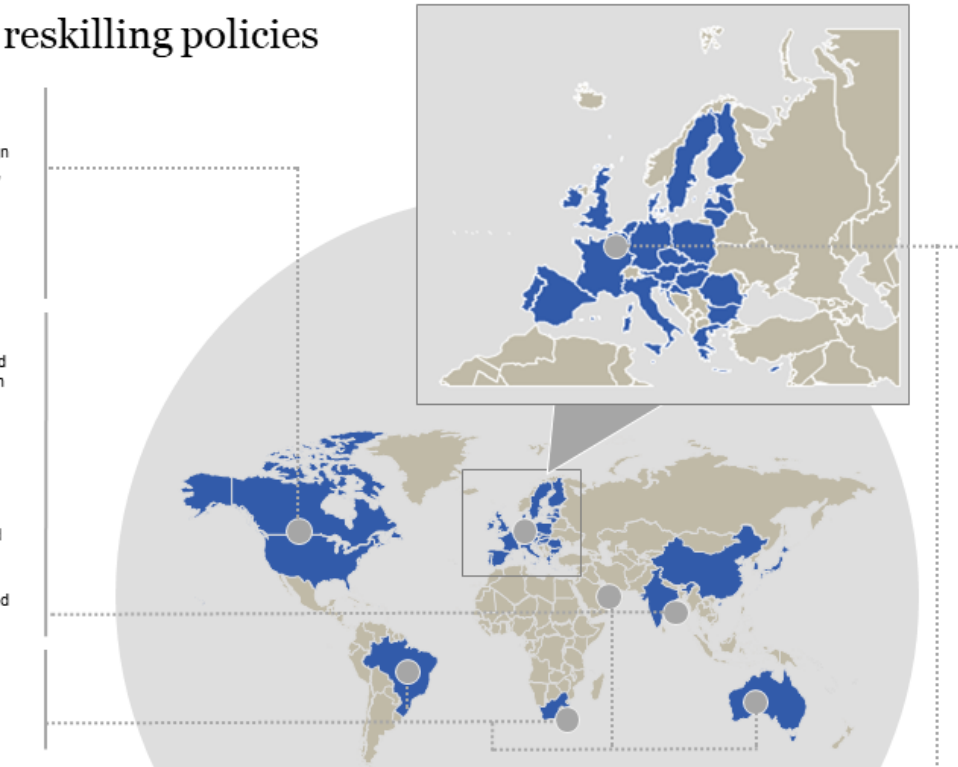
Other countries

Australia: focus on industry collaboration, emphasis on VET, and international focus

Brazil: focus on VET, recognition of informal learning, emphasis on entrepreneurship, and commitment to developing digital skills

South Africa: focus on inclusivity, recognition of prior learning, industry collaboration, emphasis on digital skills, and commitment to addressing historical inequalities

United Arab Emirates (UAE): focus on diversification, STEM education, innovation, international collaboration, and Emiratisation



Europe (EU and the United Kingdom)

Luxemburg: focus on digital skills, international mobility, and sustainability

Malta: focus on lifelong learning, digital skills development, and industry-education collaboration

The Netherlands: focus on vocational education, lifelong learning, and collaboration between stakeholders

Poland: focus on vocational education, entrepreneurship, and international cooperation

Portugal: focus on a knowledge-based economy, promotion of entrepreneurship and innovation, emphasis on internationalisation, and commitment to lifelong learning

Romania: emphasis on vocational training, entrepreneurship, innovation, and the recognition of skills

Slovakia: focus on dual education, industry alignment, and lifelong learning

Slovenia: focus on lifelong learning, digital skills, industry collaboration, and social inclusion

Spain: focus on dual vocational training, digital skills, entrepreneurship, and international cooperation

Sweden: focus on lifelong learning, gender equality, sustainability, digital skills, and industry collaboration

United Kingdom: emphasis on apprenticeships, employer engagement, and digital skills

Europe (EU)

Austria: emphasis on apprenticeship and dual VET systems, collaboration between stakeholders, and commitment to social inclusion

Belgium: regional approach, focus on lifelong learning, and recognition of prior learning

Bulgaria: focus on improving the quality and relevance of VET, emphasis on digital skills and entrepreneurship, and commitment to social inclusion

Croatia: focus on lifelong learning, recognition of non-formal learning, industry collaboration, emphasis on digital skills, and commitment to continuous skills development

Cyprus: focus on VET, recognition of prior learning, emphasis on entrepreneurship, and commitment to developing digital skills

Czech Republic: focus on VET, lifelong learning, digital skills, and regional cooperation

Denmark: aims to become a leading country in the digital skills area, focus on lifelong learning, collaboration between stakeholders, and commitment to social inclusion

Estonia: focus on digital skills, recognition of non-formal learning, emphasis on entrepreneurship, and commitment to lifelong learning

Finland: focus on high-quality education, learner-centred approach, and investment in teacher development

France: focus on vocational training, strong employer partnerships, and promotion of apprenticeships as a pathway to employment

Germany: focus on dual VET system, strong collaboration between stakeholders, and recognition of non-formal and informal learning

Greece: focus on VET, apprenticeships, lifelong learning, and digital skills

Hungary: focus on dual VET, recognition of prior learning, lifelong learning, and digital skills

Ireland: focus on lifelong learning, emphasis on entrepreneurship and innovation, and recognition of the value of international talent

Italy: focus on lifelong learning, university-industry collaboration, and support for entrepreneurship and innovation

Latvia: focus on entrepreneurship, digital skills, and lifelong learning

Lithuania: focus on aligning education with the labour market, recognition of prior learning, lifelong learning, and digital skills

Figure 2-1: A world map of up- and reskilling policies based on the analysis of 39 countries

Trend #5: Inclusion and equality

Ensuring that up- and reskilling policies are inclusive and equitable is a key priority for many countries. Policy makers aim to address barriers to access, such as gender disparities, socio-economic inequalities, and geographic limitations. Efforts are being made to provide equal opportunities for individuals from diverse backgrounds to participate in up- and reskilling programs. Special attention is given to vulnerable populations, including individuals in low-skilled jobs or those at risk of job displacement, to ensure that they are not left behind in the rapidly changing labour market.

Trend #6: Green skills

In recent years, there has been a growing global recognition of the need to address environmental challenges and transition towards a more sustainable future. As part of this transition, governments and other stakeholder groups around the world are increasingly focusing on up- and reskilling policies that prioritise the development of green skills. Green skills here refer to the knowledge, abilities, and competencies required to work in sectors that contribute to environmental sustainability. By equipping individuals with green skills, countries can effectively tackle environmental issues, promote renewable energy, reduce greenhouse gas emissions, and improve resource management.

Various countries have adopted different approaches to integrate green skills into their up- and reskilling policies. Some have already established dedicated training programs and institutions that offer specialised courses in green skills. Others have incorporated green skills development into existing vocational education and training programs. Additionally, partnerships between governments, educational institutions, and industry stakeholders have been formed to ensure the relevance and effectiveness of green skills training.

Trend #7: Continuous monitoring and evaluation

Policy makers recognise the importance of monitoring and evaluating the effectiveness of up- and reskilling policies. This involves tracking the outcomes of training programs, assessing the impact on employability and career progression, and making necessary adjustments based on feedback and data-driven insights. Continuous monitoring and evaluation help policy makers understand what works and what needs improvement, allowing for evidence-based decision-making and the refinement of up- and reskilling initiatives.

2.2. Market-driven policy approaches

As a general trend, **the development of specific up- and reskilling initiatives typically happens based on a thorough analysis of the market demand**. This demand-/market-driven approach was particularly emphasised in case of Estonia, Luxembourg, Sweden, China, Singapore, and Canada.

- For example, in Luxembourg, the Future Skills programme uses national and sectoral studies to determine future skill needs. Similarly, in Estonia, most of the existing initiatives are focussing on building skills and readiness for the constantly changing labour market from an early age.
- The Employees Retraining Board (ERB) in Hong Kong (China) advises on the design of existing courses and the development of new courses to ensure that the training portfolio timely accommodates the market requirements.
- In Singapore, in turn, tripartite Sector Skills Councils (SSCs) help specific industry sectors define and close their skills gaps. These groups typically collaborate with

relevant government bodies to provide representatives from employer and worker organisations with information about new critical skills. Specifically, the SkillsFuture initiative in Singapore, which supports the Smart Nation vision, uses business information to map the skills that industries will need in the future³⁶.

In many countries, the specific up- and reskilling strategies and initiatives explicitly aim at tackling digital skills challenges, as, for example, the Digital Workforce Program in Hungary, eSkills Partnership in Latvia, the Digital Bulgaria 2025 Program and the Digital National Alliance in Bulgaria, the National Digital Skills and Jobs coalition in Denmark, Digit NOO and Digital Knowledge for the Jobs of the Future in Slovenia, National Digital Strategy of Estonia 2030, ‘Portugal Digital’ in Portugal, Digitalízate plan in Spain, ‘Connected Lithuania’ in Lithuania etc. Furthermore, in some of the countries, we identified up- and reskilling programmes that explicitly focus on sustainability, for example, in Estonia and Italy. Specifically, in Italy, ‘Istituti Tecnici Superiori’ mainly focusses on vocational training for the employed workforce in specific technology areas like energy efficiency or sustainable mobility.

In some of the analysed countries, the explicit focus of up- and reskilling strategies on lifelong learning has been identified. Besides the abovementioned examples of France and Luxembourg, Slovakia introduced the Lifelong Learning and Counselling Strategy for 2021–2030, with the main objective to make sure that every citizen has access to opportunities for lifelong learning, skill development, and civic engagement at every stage of life.

- Slovakia was reported to have low rates when it comes to lifelong learning culture, similar to Romania, Hungary, Lithuania, Greece, Poland and Croatia, and this strategy was identified as the government’s response to this challenge.
- Sweden, in turn, introduced ‘Funding for retraining and lifelong learning’.
- The lifelong learning culture has been specifically emphasised in the case of Japan. Being an ageing society and a highly technologised country, Japan has a lifelong learning culture that has been established for many years, and a workforce that accumulates a lot of overtime. The Japanese government has been trying over the last few years to promote the continuous education of the unemployed, as lifelong learning for employed population proves to be a considerable challenge. Many Japanese people are reported not to consider employment-based learning as an aspect of lifelong learning, but rather focus on personal development and spiritual growth instead.
- Similar to Japan, South Korea is also facing the problem of a strongly ageing society and is also interested in ensuring that the potential of the population is used in the best possible way and for as long as possible. Lifelong learning is organised through the Lifelong Learning Promotion Plan.

2.3. High diversity of target groups

Some of the analysed countries explicitly focus their up- and reskilling approaches on the unemployed or people with the risk of unemployment, for example, Latvia, South Africa, Brazil, Greece, and Sweden. In case of South Africa, many initiatives aim to improve the situation for the unemployed youth but do not necessarily focus on up- or re-skilling the working population. In Brazil, these initiatives primarily target underprivileged communities, indicating that Brazil views upskilling as a tool for promoting upward social mobility. The abovementioned ‘Funding for retraining and lifelong learning’ of Sweden is aimed at both employed and unemployed people.

³⁶ <https://www.worldgovernmentsummit.org/docs/default-source/publication/2022/unleashing-the-skills---en.pdf>

Many of the identified up- and reskilling initiatives focus on ethnic, or social groups, such as women (Slovakia, Australia), aboriginal people (Australia), migrants (Australia), disadvantaged groups (United States, Finland), girls in ICT (Slovakia), seniors (Finland), young population (Estonia, Finland, India, South Africa, Romania).

- For example, with India being a 'young' country due to a substantial part of working-age population, the development of a skilled and educated workforce plays a significant role in enhancing its overall economy and fighting poverty. Hence, Indian initiatives predominantly focus on up-skilling the young segment of the population in various business segments.
- In Finland, among the supported programmes are also those targeting young employees willing to share their experience and learn from more experienced workers in their field through workshops, mentoring platforms, short programs led by universities, training programs from one stakeholder etc.
- In Czech Republic, a range of initiatives were implemented to increase the involvement and overall impact of women in different industry sectors. Furthermore, a significant attention is given to disabled people and their ability to meet the requirements of a labour market and for surrounding people.
- France's successful upskilling/reskilling programmes are also characterised by their targeted approach. In case of Romania, the government is reported to invest more in vocational training for young people than in further education for well-educated adults. This can be seen from the fact that there are hardly any specific programmes for adult training, but instead there are programmes for young people, such as the DALIVET³⁷ programme, which promotes dual training for the young population.

Many of the identified up- and reskilling initiatives focus on specific sectors and occupations. For example, in Poland, the re/upskilling initiatives are often on a small scale (dedicated to a group of several dozen or several hundred people). Actions of this kind are often sectoral, aiming, for example at teachers or nurses, and thus their impact is limited to the targeted occupations. In Germany, there was a joint effort by industry and government to support up- and reskilling initiatives in the field of microelectronics (METIS) and maritime technology. In Sweden, the initiatives like 'Ingenjör 4.0'³⁸ and 'Expertkompetens'³⁹ focus on highly specific targets like industry workers or working professionals in the areas of AI and autonomous systems.

2.4. Varying role of the private sector

The role of the private sector in up- and reskilling initiatives varies per country. In some countries, the role of private sector was reported to be high.

- For example, in Czech Republic, the representatives of the private sector are reported to play a key role in driving the digitalisation of the country. When the government is increasing the funding for research in the field, companies invest in the NGOs and small enterprises, and jointly create programs, workshops, and seminars for the workers.
- In Estonia, special attention is given to IT schools, i.e., academies that are focusing on the existing gap of software engineers at the national level. Those are suitable for both career changers and workers wanting to improve their value on

³⁷ <http://www.proiectdalivet.ro/>

³⁸ Ingenjör4.0 - Upskilling for future manufacturing (ingenjor40.se): <https://www.ingenjor40.se/>

³⁹ Expertkompetens - Sweden | Digital Skills and Jobs Platform (europa.eu): <https://digital-skills-jobs.europa.eu/en/inspiration/good-practices/expertkompetens-sweden>

the labour market. Many IT schools are founded and/or financed by companies. In Austria, a high degree of company involvement was reported for, for example, Training Network Digital competences & IT security initiative.

- The private sector starts playing an increasingly important role in Brazil, where businesses are reported to be jumping on board, offering specialised programmes like 'Escola do Trabalhador 4.0', a partnership between Microsoft and the Federal Ministry of Education.
- Similarly in Greece, some programmes are led by private companies, as exemplified by the 'Upskilling and Certification in Cloud Microsoft Services' programme.
- At the same time, in India, an active involvement or participation of business stakeholders was not confirmed for most of the analysed initiatives, and much of the re- and upskilling is done by education centres without further business involvement.

2.5. Key challenges in up- and reskilling policies

Below we address the key challenges faced by the policy makers that we identified in the course of the analysis.

Balancing short-term and long-term priorities

Policy makers often face the challenge of balancing short-term labour market demands with long-term skill development. They need to respond to immediate skills gaps and job market needs, while also considering the skills required for future economic growth. Striking the right balance is crucial to ensure that up- and reskilling policies are both responsive to current needs and forward-looking.

Engaging stakeholders and building consensus

Coordinating up- and reskilling policies requires engaging and building consensus among diverse stakeholders, including government agencies, educational institutions, industry representatives, and labour unions. Policy makers need to navigate differing perspectives, interests, and priorities to ensure that all stakeholders are aligned and committed to the success of the policies. Building consensus can be time-consuming and challenging, requiring effective communication and negotiation skills.

Adapting to technological disruptions

Technological disruptions can pose challenges for policy makers in terms of understanding the implications for the workforce and designing appropriate up- and reskilling policies. Rapid advancements in automation and Artificial Intelligence can lead to job displacement and the need for new skill sets. Policy makers need to stay informed about emerging technologies and their impact on the labour market to develop timely and relevant policies.

Addressing skills gaps and mismatches

Identifying and addressing skills gaps and mismatches is another challenge for policy makers. They need to accurately assess the skills demanded by employers and ensure that up- and reskilling programs provide individuals with the necessary skills. Failure to address skills gaps and mismatches can result in unemployment, underemployment, and a lack of competitiveness in the global economy.

Adapting to changing labour market dynamics

The labour market is constantly evolving, influenced by factors such as globalisation, demographic changes, and economic shifts. Policy makers need to adapt to these changing dynamics and anticipate future trends to design effective up- and reskilling policies. This requires a deep understanding of the labour market and the ability to predict future skill requirements.

Overcoming resistance to change

Implementing up- and reskilling policies often requires significant changes to existing education and training systems. Policy makers may face resistance from various stakeholders who are resistant to change or who have vested interests in maintaining the status quo. Overcoming this resistance and driving meaningful reforms can represent a considerable challenge for policy makers.

To summarise, as presented in this Chapter, our analysis suggests that governments from all over the world actively engage in tackling up- and reskilling challenges in their respective countries in a wide variety of ways, often experimenting and building on the experience of the most advanced skills economies. Up- and reskilling initiatives can be organised and funded in different ways, depending on the context and objectives. Nevertheless, some common patterns across the initiatives can also be identified, as well as common challenges that policy makers involved in up- and reskilling initiatives face across the world.

3. Benchmarking of up- and reskilling initiatives

As a result of multiple methodological steps, as presented in detail in *Chapter 7* of this Report, the project team identified a sample of 47 up- and reskilling initiatives spread across 36⁴⁰ countries. All the analysed initiatives represent good practice examples in the field of up- and reskilling. For these initiatives, a benchmarking exercise has been performed in order to identify ‘the best of the best’ for further extraction of lessons learned and the development of policy recommendations, as presented in *Chapters 4* and *6* of this Report.

The current chapter presents the results of the benchmarking exercise. We first address the structure of the sample, and then zoom into the specific results of the benchmarking exercise with an objective to answer the following questions:

- How do the analysed initiatives compare with each other in terms of their overall performance at the individual, company, and economy levels?
- How do the analysed initiatives compare with each other in terms of their performance at the *individual* level?
- How do the analysed initiatives compare with each other in terms of their performance at the *company* level?
- How do the analysed initiatives compare with each other in terms of their performance at the *economy* level?
- How do the analysed initiatives compare with each other in terms of their overall performance at the individual, company, and economy levels vs. their overall drivers?

The benchmarking exercise aimed to perform the comparisons of the analysed initiatives at the level of their overall performance, as well as specific dimensions of their performance (i.e., individual, company and economy), as presented in the overall benchmarking framework in section 1.3.3. of this Report.

3.1. Sample of initiatives for benchmarking and analysis

Table 3-1 provides an overview of all the up- and reskilling initiatives (47) included in the final study sample. The pre-selection step of the methodology (as outlined in detail in *Chapter 7*) has led to a high diversity of initiatives in the pool in terms of scale, target groups, duration, types of activities, initiators etc. The key focus of the analysis was on the national initiatives (with a few exceptions for countries where also regional/state focus needed to be included). At the same time, in many countries, the presence of cross-national up- and reskilling initiatives was also identified, implying the presence of joint multi-country efforts and/or the initiation of activities at the international level, for example, in Austria, Cyprus, Denmark and Latvia.

As can be seen from the Table, the study sample is highly diversified, containing initiatives of different maturity levels and duration, different types of managing authorities, aiming at different target groups and industry sectors. This diversity of initiatives reflects the actual reality of the global up- and reskilling policy landscape, as addressed in *Chapter 2* of this

⁴⁰ The total coverage of the analysis at the country level included 39 countries, while at the level of individual initiatives the analysis covers 36 countries. 3 additional countries such as Australia, Brazil and the United Arab Emirates (UAE) were not part of the compulsory sample as defined in the Tender Specifications, and those were only included in the analysis at the country level.

Report, namely representing a high diversity in focus, scope, size, maturity, duration, and a wide range of other factors.

Most of the analysed initiatives (42 out of 47) are still ongoing, as this proved to be an important pre-condition for the feasibility of stakeholder participation in the current study. 7 of the analysed initiatives were launched in 2020 and another 7 in 2021. The sample also contains 6 initiatives that started in 2017 and another 6 in 2018. 5 of the analysed initiatives were launched before 2013, with some of them dating back to as early as 1963 (Training Aid // FNE-Formation, France) and 1974 (Trade Adjustment Assistance for Workers, the United States).

The analysed sample is dominated (40 out of 47) by the up- and reskilling initiatives having a cross-sectoral orientation, implying a broad focus covering multiple sectors. Some of the analysed initiatives (13 out of 47) have an explicit focus on ICT and/or digital skills. The current analysis therefore does not explicitly focus on digitally oriented up- and reskilling initiatives and has a broader orientation.

Table 3-1: Study sample at the level of specific initiatives

No.	Policy title	Country	Launch year	Completion year	Managing Authority	Target Group	Industry Sector
1	Czechitas New Generation	Czech Republic	2014	Ongoing	Czechitas z.ú.	Girls, female students, adult women.	ICT
2	Skillnet Ireland	Ireland	1999	Ongoing	Department of Further and Higher Education, Research, Innovation and Science	Businesses and their workforce.	Cross-sectoral
3	Emprego Mais Digital (More digital employment)	Portugal	2020	Ongoing	IEFP, I.P. - Institute of Employment and Vocational Training, Public Institute	Employees in companies and social economy entities	Cross-sectoral, Digital
4	GUANGDONG SOCIAL SECURITY INTEGRATION AND RURAL WORKER TRAINING PROJECT	China	2013	2020	Department of Human Resources and Social Security	Urban and rural workers in Guangdong	Cross-sectoral
5	Futureskills Prime	India (National)	2020	Ongoing	Ministry of Electronics and Information Technology, Government of India	Students through mid-level careerists in the IT sector.	Cross-sectoral
6	HIMACHAL PRADESH SKILL DEVELOPMENT POLICY	India (Regional)	2015	Ongoing	HIMACHAL PRADESH KAUSHAL VIKAS NIGAM, DEPARTMENT OF TECHNICAL EDUCATION- HIMACHAL PRADESH	Youth population	Cross-sectoral
7	Quick Train Canada	Canada 1	2022	Ongoing	Canadian Colleges for a Resilient Recovery (C2R2)	Canadian workers.	Cross-sectoral
8	Canada Polytechnic	Canada 2	2003	Ongoing	Polytechnics Canada	Canadian employees - Most upskilling/reskilling programs are open to individual learners.	Cross-sectoral
9	Future Skills Center	Canada 3	2019	Ongoing	Employment and Social Development Canada	Working-age adults in Canada.	Cross-sectoral
10	TechnoGirl	South Africa	2004	Ongoing	TechnoGirl Trust	(Unemployed) young women	Cross-sectoral
11	Grow Croatia with Google	Croatia	2020	2022	Ministry of Labour, Pension System, Family and Social Policy, Croatian Employment Service, Google, Algebra.	Entrepreneurs starting their own businesses – users of the self-employment active labour market measure and later expanded to employed and unemployed persons.	Cross-sectoral, Digital skills

PACT FOR SKILLS ANALYSIS FINAL REPORT

No.	Policy title	Country	Launch year	Completion year	Managing Authority	Target Group	Industry Sector
12	Grow Digital CY (Digital Skills and Jobs Coalition Cyprus)	Cyprus	2015	2020	Permanent Secretary of the Deputy Ministry of Research Innovation and Digital Policy and Digital Champion of Cyprus (Current Title). When the Coalition Cyprus was implemented in 2015 he was the Permanent Secretary of Ministry of Energy, Commerce and Industry and Digital Champion of Cyprus)	Workforce (government and private sector), students, soldiers, people with disabilities etc.	Cross-sectoral, Digital skills
13	kood/Jõhvi	Estonia	2021	Ongoing	MTÜ (NGO) Tuleviku Tehnoloogiaharidus	Adults looking for self-development or retraining chances.	ICT - coding
14	Upskilling and reskilling in In-Demand Industries with a focus on Digital and Green Skills	Greece	2022	Ongoing	Greek Public Employment Service (DYPA)	Unemployed, employees	Cross-sectoral
15	InnoEnergy Skills Institute	Hungary	2021	Ongoing	EIT InnoEnergy	The main focus of this initiative is on companies, but it also includes B2B and B2C.	Sustainable energy sector
16	Grow Latvia with Google	Latvia	2021	Ongoing	Ministry of Economics and LIAA	Small and medium-sized businesses in Latvia	Cross-sectoral: export, e-commerce, digital marketing
17	Upskilling programs, organised by Lithuanian Public Employment Service (voucher system)	Lithuania 1	2017	Ongoing	Ministry of Social security and Labour	Registered jobseekers.	Cross-sectoral
18	Modularisation of formal VET curriculum	Lithuania 2	2018	Ongoing	Qualifications and VET Development Centre (KPMPC)	Young learners and adults.	Cross-sectoral
19	Jobsplus training services	Malta	2016	Ongoing	Jobsplus - Public Employment Services	Jobseekers and job changers.	Cross-sectoral

PACT FOR SKILLS ANALYSIS FINAL REPORT

No.	Policy title	Country	Launch year	Completion year	Managing Authority	Target Group	Industry Sector
20	TRANSILVANIA IT CLUSTER	Romania	2013	Ongoing	Independent Cluster organised as an association (Relevant Institutions: EC/Romanian Authority for Digitalisation/MCID Ministry of Research Innovation and Digitalisation/Municipality of Cluj Napoca/Regional Development Authorities)	Originally aimed to support employees of member companies in the acquisition process of technical and soft skills, as well as offer a platform of knowledge and training for the implementation of collaborative projects. While this continues to remain an important focus, Transilvania IT Cluster further developed to match the sector development in Cluj - Napoca.	Cross-sectoral
21	Aj Ty v IT	Slovakia	2017	Ongoing	Aj Ty v IT	Girls, female students, adults women	ICT
22	Institute of Coding	United Kingdom	2018	Ongoing	University of Bath	Employed and unemployed citizens.	Cross-sectoral, Digital skills
23	Trade Adjustment Assistance for Workers	United States (National)	1974	Ongoing	United States Department of Labor	Any member of a worker group certified by the Department may be eligible.	Cross-sectoral
24	Online Learning from Your DOL: NY State	United States (New York)	2020	Ongoing	New York State Department of Labor (NYS DOL)	When the NYS Department of Labor launched Coursera, it was only available to dislocated workers. In 2022, NYD DOL expanded this policy to allow individuals in the Adult, Dislocated Worker, Youth and Underemployed individuals further increasing the number of learners on the platform.	Cross-sectoral
25	High Road Training Partnership	United States (California)	2016	Ongoing	California Workforce Development Board	California's "high road" employers.	Cross-sectoral
26	Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security	Austria 1	2017	Ongoing	Arbeitsmarktservice Oberösterreich (public employment service), Amt der Oö. Landesregierung (provincial government)	Small and medium sized enterprises	Cross-sectoral
27	fit4internet	Austria 2	2018	Ongoing	Federal Ministry of digital and economic affairs (BMDW until 2022), Federal Ministry of Finance (2022ff), Association fit4internet (NGO 2018ff until today)	Austrian society: primarily targeting young people, the labour force, jobseekers and older people.	Cross-sectoral

PACT FOR SKILLS ANALYSIS FINAL REPORT

No.	Policy title	Country	Launch year	Completion year	Managing Authority	Target Group	Industry Sector
28	Le Plan de relance pour la Wallonie / Recovery Plan - axis 6 (Supporting the (re)construction and resilience of devastated areas) - Projet 315 : Des solutions à la pénurie de main d'œuvre dans le secteur de la construction (prime à la formation)	Belgium	2021	Ongoing	Walloon Government	Construction, timber and electricity sectors.	Construction, timber and electricity sectors
29	Digital Skills for Bulgarian SMEs	Bulgaria	2017	2018	Global Libraries Bulgaria - Foundation	Labour force in Bulgaria, with a focus on SME employees.	Cross-sectoral, Digital skills
30	Green Skills	Denmark 1	2021	Ongoing	Esbjerg Municipality	Employed and unemployed workforce.	Cross-sectoral
31	Omstillingsfonden ("Transition Fund")	Denmark 2	2018	Ongoing	Ministry of Higher Education and Science, Agency for Higher Education and Science	Omstillingsfonden does not target specific qualifications, but labour market relevant courses at levels 5-6 for people with vocational training (primarily) who are employed.	Cross-sectoral
32	Virittäjä Employment Service (Digital Helsinki)	Finland	2017	Ongoing	City of Helsinki, Helsinki Vocational College and Adult Institute	Unemployed, marginalised people, all people	Cross-sectoral
33	Training Aid // FNE-Formation	France	1963	Ongoing	Ministry of Labour	Employees	Cross-sectoral
34	NETWORK Q 4.0 - Network for the training of vocational training staff in the digital transformation	Germany	2019	Ongoing	German Economic Institute in cooperation with various local educational institutions (Bildungswerke der Wirtschaft)	Small and medium sized enterprises	Cross-sectoral
35	DEVELOP DIGITAL SKILLS	Italy 1	2023	Ongoing	Municipality of Milan	The project aims to increase the level of mastery of digital skills of the general population of the City of Milan. In particular, the first courses have target groups at a higher risk of digital marginalization: 1) citizens over 60 years of age. 2) Foreign cities living in the Metropolitan city of Milan.	Cross-sectoral, Digital skills
36	Emergencies House of Technologies	Italy 2	2021	Ongoing	Ministry of Enterprise and Made in Italy	Municipalities in which there is an ultrabroadband network in 5G mobile technology.	Cross-sectoral
37	Future Skills Initiative	Luxembourg	2020	Ongoing	Agence pour le développement de l'emploi (ADEM)	Unemployed, employees	Cross-sectoral

PACT FOR SKILLS ANALYSIS FINAL REPORT

No.	Policy title	Country	Launch year	Completion year	Managing Authority	Target Group	Industry Sector
38	The STAP-budget	The Netherlands 1	2022	Ongoing	Dutch Ministry of Social Affairs and Employment	Adults 18 years and older who don't receive public retirement benefits (AOW). Employed as well as unemployed	Cross-sectoral
39	SLIM: The Subsidy Incentive Scheme for Learning and Development in SMEs	The Netherlands 2	2020	Ongoing	Dutch Ministry of Social Affairs and Employment	Small- and Medium-Sized Enterprises	Agricultural sector, hospitality sector, recreation sector
40	Competences for sectors - offer for entrepreneurs [Kompetencje dla sektorów - oferta dla przedsiębiorców]	Poland	2018	Ongoing	Polish Agency for Enterprise Development	Micro, small, medium, and large enterprises.	Cross-sectoral
41	Digital Knowledge for the Jobs of the Future	Slovenia 1	2019	Ongoing	Digital innovation Hub Slovenia	Students, jobseekers and employees in the public and private sectors, who need to acquire additional knowledge and skills in order to be able to make the most of all the advantages of modern technologies.	Cross-sectoral, Digital skills
42	Slovene digital coalition - Digitalna Slovenija	Slovenia 2	2017	Ongoing	It is a coalition of key stakeholders in the country, signed also by the government	Digital skills for the labour force and Digital skills for ICT.	Cross-sectoral, Digital skills, ICT
43	Digitalizate	Spain	2019	Ongoing	Fundación Estatal para la Formación en el Empleo (Fundae) and Servicio Público de Empleo Estatal (SEPE)	The whole Spanish population including its workforce.	Cross-sectoral, Digital skills
44	Ingenjör4.0	Sweden	2020	Ongoing	Halmstad University, Sweden	The program targets professionals with an engineering background, but also other professionals such as operators, technicians, management etc. with an interest in smart and connected production.	ICT, Manufacturing
45	Hiroshima Prefecture Reskilling Initiative	Japan	2022	Ongoing	Hiroshima Prefecture Government	SMEs and their employees.	Cross-sectoral
46	SkillsFuture	Singapore	2014	Ongoing	SkillsFuture Singapore, a statutory board under the Ministry of Education (MOE)	Unemployed, employees	Cross-sectoral
47	Partnership between K-MOOC, the National Institute for Lifelong Education and Coursera	South Korea	2022	Ongoing	Ministry of Education, National Institute for Lifelong Education	The initiative will help over 200,000 adult learners develop the high-demand digital skills needed to advance their education and careers in the new economy and embrace lifelong learning amid rapid transformation.	Cross-sectoral

For each of the analysed initiatives, a dedicated policy profile was developed based on the data from desk-research, the online survey, and accompanying interviews (based on the methodology outlined in *Chapter 7* of the Report). These policy profiles are provided in *Annex B* of this Report.

In the remainder of *Chapter 3*, we report on the results of the benchmarking exercise. In each of the subsequent sections, we will report on the “best of the best” of the analysed initiatives in each of the benchmarking categories, based on the collected scores. As mentioned above, **all the initiatives included in the analysis can be considered as good practice examples. The objective of the benchmarking exercise was to identify the very best from the sample, to extract lessons learned and inputs for policy recommendations.** The subsequent chapters of the Report build on the analysis of the whole sample (47) of initiatives.

While the project team aimed to present TOP 5 in each of the categories, it was not always possible to keep the top at the level of maximum five initiatives, as will be demonstrated below. In some cases, multiple initiatives ended up with the same scores and thereby had to be included in the top in larger numbers. As emphasised above, the initiatives that did not make it to the TOP 5 in the respective categories should still be considered as good practices. **It was by no means the intention of the project team to ‘blame and shame’ any of the analysed initiatives, as all of them represent inspiring examples to learn from. The initiatives that appear as the lowest scoring in the TOP 5 can still be considered as ‘the best of the best’, as the differences in the (average) total scores of the TOP 5 initiatives in the respective categories proved to be relatively minor.**

The project team deliberately applied no weighting to the specific dimensions of the Key Performance Metrics (see section 1.3.1. for more information on specific indicators and dimensions). The project team considered an option of assigning different weights to different performance dimensions based on the priorities of the national (and regional/state) policies. However, it was concluded that the arbitrary nature of such weighting could pose additional risks for the extraction and interpretation of results. It was therefore chosen to treat all dimensions on an equal basis.

3.2. Benchmarking of initiatives based on Total Average Key Performance Metrics

The current section presents the results of the benchmarking exercise based on the Total Average Key Performance Metrics, building on the total scores collected for each of the indicators and dimensions related to the performance of the analysed initiatives. Table 3-2 presents the TOP 5 initiatives with the highest scores in this category. The Table contains seven initiatives in total, as two initiatives had to share the third and the fourth positions in the top.

Table 3-2: Benchmarking results based on Total Average Key Performance Metrics

TOP initiatives with the 5 highest scores in this category	Country	Score (max. 5 points)	Policy profile nr (see Annex B)
Skillnet Ireland	Ireland	5	B16
Digitalízate	Spain	4,89	B32
FutureSkills Prime	India	4,67	B42
High Road Training Partnership	United States (California)	4,67	B40
SkillsFuture Movement by SkillsFuture Singapore (SSG)	Singapore	4,56	B45
Digital Skills for Bulgarian SMEs	Bulgaria	4,56	B4

TOP initiatives with the 5 highest scores in this category	Country	Score (max. 5 points)	Policy profile nr (see Annex B)
Upskilling programs, organised by Lithuanian Public Employment Service (voucher system)	Lithuania	4,33	B20

The text boxes below present illustrative examples from some of the abovementioned initiatives.

Text Box 3-1: Extensive online training resources by Digitalízate, Spain (Policy profile B32)

Nearly 1,500 online training resources, openly available free of charge and at all levels, encourage workers' interest in training. Among the content offered in digital skills, the following stand out: Big Data, 5G, Internet of Things, Digital Marketing, Digital Language and Programming, Blockchain, Cybersecurity, Power BI, Cloud and Cognitive Computing, Machine Learning, Video Game Design, and App Development. In addition, access to other content is provided, in order to extend innovation and digital transformation of companies and workers and training in other skills related to the 2030 Agenda, Sustainable Development Goals, open, social, green, and digital economy, boosting internalisation, resources for disadvantaged groups, etc., as well as special resources in specific sectors (construction, railways). More than 6,700,000 people have visited the Digitalízate space.

Text Box 3-2: SkillsFuture Movement by SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

In 2022, about 560,000 individuals participated in and benefitted from SSG-supported programmes, with more than 32,000 individuals attending SkillsFuture Series courses. SkillsFuture Series courses focus on priority and emerging skills in areas such as data analytics, tech-enabled services and urban solutions and are available across three levels - Basic, Intermediate and Advanced.

SSG has improved the attractiveness of learners for the labour market, with 97% of about 58,000 surveyed trainees indicating that they were able to perform better at work after undergoing SSG-supported training. Further, the number of employer-sponsored training places with funding support from SSG has seen a general uptrend, with positive returns to firms from sponsoring workers for training.

The SkillsFuture Career Transition Programme (SCTP) supports mid-career individuals in acquiring industry-relevant skills to improve employability and pivot to new sectors or job roles. The SkillsFuture Advice is a one-to-many advisory workshop targeted at helping individuals navigate the wide range of training options and SSG programmes and resources that individuals can tap on for career development and upgrading needs. In addition, SSG's digital touchpoints provide information on jobs and skills trends and insights for growth sectors and publish all SSG-funded courses and structured programmes.

The MySkillsFuture Portal is a one-stop portal for Singaporeans to upskill in their lifelong learning journey. Individuals can claim their SkillsFuture Credit, learn more about the growth sectors and latest skills in demand, access self-assessment tools and search for courses that meet their skills development needs from more than 20,000 SkillsFuture Credit Eligible courses on the Course Directory.

3.3. Benchmarking of initiatives based on Average Key Performance Metrics: Dimension I Individual

The current section presents the results of the benchmarking exercise based on the Average Key Performance Metrics for Dimension I: Individual. It builds on the scores collected for all of the indicators within this dimension, and specifically:

- the level of mastery of specific skills (e.g., digital, green, entrepreneurial, technical etc.) that the initiative was targeting in learners (*indicator i.1*);
- the attractiveness of learners for the labour market (i.e., the ability to find a job, job security and job promotion opportunities) (*indicator i.2*);
- the motivation of learners to work and to continue learning (lifelong learning) (*indicator i.3*).

Table 3-3 presents ten initiatives, all having the highest score (5) in this category. Within this category, it was therefore not possible to develop a TOP 5 of the best scoring initiatives.

Table 3-3: Benchmarking results based on Average Key Performance Metrics: Dimension I Individual

TOP initiatives with score 5	Country	Policy profile nr (see Annex B)
Skillnet Ireland	Ireland	B16
Digitalízate	Spain	B32
FutureSkills Prime	India	B42
High Road Training Partnership	United States (California)	B40
Digital Skills for Bulgarian SMEs	Bulgaria	B4
TechnoGirl	South Africa	B47
kood/Jõhvi	Estonia	B10
Ingenjör4.0	Sweden	B33
Hiroshima Prefecture Reskilling Initiative	Japan	B44
Women Academies (Aj Ty v IT- Projects for adult women)	Slovakia	B29

The text boxes below present illustrative examples from some of the abovementioned initiatives, with a particular focus on their performance in Dimension I: Individual.

Text Box 3-3: Improved the attractiveness of learners for the labour market by Skillnet Ireland, Ireland (Policy profile B16)

Skillnet Ireland was reported to enhance the general competency and employability of learners, leading to increased career mobility and greater life opportunities. Skillnet Ireland is committed to supporting learners of all levels in the workforce. Learners employed within the private sector or commercial semi-state can access Skillnet Ireland training through their company. Jobseekers can also develop new skills to increase their employability and employment progression opportunities through training programmes and work placement through Skills Connect programme⁴¹ (previously Employment Activation Programme). It is a dedicated programme designed for unemployed people which aims to support learners to move into quality employment. The 2019 – 2020 Independent Evaluation found that 78%

⁴¹ <https://www.skillnetireland.ie/skills-connect/>

of the programme participants 2020 were in employment at the time of the data collection (2021)⁴².

Text Box 3-4: Facilitating talent-industry connections by FutureSkills Prime, India (Policy Profile B42)

FutureSkills Prime facilitates talent-industry connections through a two-pronged approach - through digital interventions via the Talent Connect Portal, and on-the-ground efforts with the Prime Career Fairs. Through the Talent Connect Portal, certified candidates can upload their resumes and companies can pick the appropriate candidates. Employers get AI-driven skill-based candidate recommendations to ensure a seamless fit. For applicants, it provides exposure to over 30,000 job opportunities. The platform also suggests courses tailored to job requisites. Real-time monitoring provides applicants the ability to closely monitor the status of their applications, while personalised emails and WhatsApp notifications guarantee they never miss an interview.

Text Box 3-5: Faster entry to the labour market by kood/Jõhvi, Estonia (Policy profile B10)

kood/Jõhvi is a modern and international coding school in Estonia, created for adults of any age searching for self-development or retraining opportunities. It is an up to two-year full-time program, that provides learners with skills needed to enter the labour market. As a general outcome, the learners are able to enter the labour market faster than after regular university programmes. Until August 2023, 500 students were enrolled to the program, and another 500 will be enrolled in a new school year.

3.4. Benchmarking of initiatives based on Average Key Performance Metrics: Dimension II Company

The current section presents the results of the benchmarking exercise based on the Average Key Performance Metrics for Dimension II: Company. It builds on the scores collected for all of the indicators within this dimension, and specifically:

- Contribution to the development of a long-term vision for up- and reskilling for the (directly or indirectly) involved companies (*indicator ii.1*);
- Contribution to the development of a learning culture (i.e., promotion of lifelong learning at the workplace) for the (directly or indirectly) involved companies (*indicator ii.2*);
- Contribution to the attractiveness on the labour market (i.e., employee retention rate and company’s ability to find new employees) for the (directly or indirectly) involved companies (*indicator ii.3*).

Table 3-4 presents six initiatives, all having the highest score (5) in this category.

⁴² <https://www.skillnetireland.ie/wp-content/uploads/2023/03/Evaluation-of-Skillnet-Ireland-in-2019-20-Indecon-Report-March-2023.pdf>

Table 3-4: Benchmarking results based on Average Key Performance Metrics: Dimension II Company

TOP initiatives with score 5	Country	Policy profile nr (see Annex B)
Skillnet Ireland	Ireland	B16
Digitalízate	Spain	B32
High Road Training Partnership	United States (California)	B40
SkillsFuture Movement driven by SkillsFuture Singapore (SSG)	Singapore	B45
Digital Skills for Bulgarian SMEs	Bulgaria	B4
TechnoGirl	South Africa	B47

The text boxes below present illustrative examples from some of the abovementioned initiatives, with a particular focus on their performance in Dimension II: Company.

Text Box 3-6: Increasing company participation by Skillnet Ireland, Ireland (Policy profile B16)

The primary objective of Skillnet Ireland is to increase participation in enterprise training by companies. The 2019 – 2020 Independent Evaluation reported that businesses engaged in Skillnet Ireland reported that they were adequately supported with their talent development needs, and that this support was relevant to the companies’ industry. A large majority of member companies strongly agreed or agreed that networks met their talent development needs⁴³. Specifically in case of the ICT Skillnet, a substantial focus is on emerging skill needs (AI, Blockchain, Quantum Computing) which not only allows for organisations to map these pathways to their future business strategies, but also allows state agencies like the IDA to signpost the availability of these emerging learning pathways funded by Skillnet Ireland to potentially inbound foreign direct investment companies into Ireland.

Text Box 3-7: Increasing the attractiveness of companies on the labour market by SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

SSG was reported to have increased the attractiveness on the labour market through employee retention rate and a companies’ ability to find new employees. SSG has also developed work-study programmes, which bridge learning in classrooms and in the workplace through meaningful work assignments and industry exposure. A range of work-study programmes were developed covering Diploma to Degree and Certificate-level programmes. The aim is to increase capacity of such programmes to be a mainstream pathway. This is reported to facilitate a stronger linkage between the curriculum taught in school and the needs of the workplace and industry, thereby increasing the companies’ ability to find new employees. In 2022, about 20,000 enterprises participated in and benefitted from SkillsFuture Singapore (SSG)-supported programmes.

⁴³ <https://www.skillnetireland.ie/wp-content/uploads/2023/03/Evaluation-of-Skillnet-Ireland-in-2019-20-Indecon-Report-March-2023.pdf>

3.5. Benchmarking of initiatives based on Average Key Performance Metrics: Dimension III Economy

The current section presents the results of the benchmarking exercise based on the Average Key Performance Metrics for Dimension III: Economy. It builds on the scores collected for all of the indicators within this dimension, and specifically:

- The total number of people trained and (re)integrated into the labour market in the context of a policy initiative since its launch date (*indicator iii.1*);
- Contribution to the digitalisation of the economy (i.e., the initiative had an explicit focus on the digitalisation of work, it implied training digital skills and/or promoted the use of digital technologies at the workplace) (*indicator iii.2*);
- Contribution to the greenification of the economy (i.e., the initiative had an explicit focus on the ‘greenification’ of work, it implied training green skills and reducing negative impact on climate at the workplace) (*indicator iii.3*).

Table 3-5 presents TOP 5 of the initiatives with the highest scores in this dimension. As can be seen from the Table, two initiatives share the third position, three initiatives share the fourth position, and five initiatives share the fifth position in the top.

Table 3-5: Benchmarking results based on Average Key Performance Metrics: Dimension III Economy

TOP initiatives with score 5	Country	Policy profile nr (see Annex B)
Skillnet Ireland	Ireland	B16
Digitalízate	Spain	B32
FutureSkills Prime	India	B42
Training Aid // FNE-Formation	France	B12
High Road Training Partnership	United States (California)	B40
SkillsFuture Movement driven by SkillsFuture Singapore (SSG)	Singapore	B45
Institute of Coding	United Kingdom	B34
Digital Skills for Bulgarian SMEs	Bulgaria	B4
Upskilling programs, organised by Lithuanian Public Employment Service (voucher system)	Lithuania	B20
Polytechnics Canada	Canada	B36
Upskilling and reskilling programs in In-Demand Industries with a focus on Digital and Green Skills	Greece	B14
Trade Adjustment Assistance for Workers	United States (National)	B38

The text boxes below present illustrative examples from some of the abovementioned initiatives, with a particular focus on their performance in Dimension III: Economy.

Text Box 3-8: Contribution to the digitalisation of the economy by Skillnet Ireland, Ireland (Policy profile B16)

Digitalisation is a key objective of all 70 networks of Skillnet Ireland with most businesses relying on digital technology regardless of their sector. Skillnet Ireland delivered digital skills programmes to over 12,000 workers across multiple sectors in 2021 with a two-pronged focus on specialised talent for new or emerging technologies, and in enabling digital transformation within the SME sector.

Skillnet Ireland and its technology networks have developed a wide range of new academic programmes in partnership with companies over the years. For example, an industry-driven PhD in Data Science emerged from a multi-stakeholder collaboration between Skillnet Ireland, Science Foundation Ireland, University of Limerick, Maynooth University,

University College Dublin, together with industry partners and companies.

Skillnet Ireland and Technology Ireland ICT Skillnet are leading the industry engagement component, aiming to ensure Ireland is a world leader in the field of data science. Skillnet Ireland and Technology Ireland ICT Skillnet have also developed a series of industry-led Masters in AI, Blockchain and Internet of Things through partnerships with the university sector and Ireland's tech industry.

Text Box 3-9: Contribution to the digitalisation of the economy by SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

The SkillsFuture for Digital Workplace (SFDW) is a training programme that focuses on four key areas - Data Analytics, Cybersecurity Risk, In-demand Digital Tools, and Automation. It aims to help Singaporeans and enterprises be better prepared for the rapidly evolving digital economy. The initiative was first launched in 2017 to equip Singaporeans with basic digital skills at the workplace. The relaunched SFDW 2.0 will focus on delivering training that is relevant and up to date with the latest digital trends. SSG has also worked with the appointed programme partners to develop customised training programmes for six sectors – namely Built Environment, Food Services, Manufacturing, Retail, Tourism and Transportation. Employers in other sectors who wish to customise the training programme can also approach SSG's appointed programme partners to do so. The SFDW 2.0 programme, with a duration of up to 2 days, aims to build awareness and knowledge, equip all levels of Singaporean adults (including those planning to return to the workforce) with digital literacy skills and competencies needed in the future economy. Funding support is available for employers who sponsor employees for training.

Text Box 3-10: Contribution to the greenification of the economy by Skillnet Ireland, Ireland (Policy profile B16)

Climate Action and sustainable business form a Strategic Pillar of the Skillnet Ireland-Statement of Strategy. It implies supporting the talent demands for building a low-carbon and sustainable economy through the enterprise-driven climate action upskilling initiative. In 2021, Skillnet Ireland launched Climate Ready⁴⁴ – a national upskilling initiative designed to accelerate Ireland’s capacity to transition to a low carbon and sustainable economy. This is a long-term initiative to assist industry on their sustainability transformation journey. Leveraging the expertise of specialist Skillnet Business Networks, the Climate Ready Cluster is designed to transform innovative ideas into practical circular economy upskilling business solutions. Key areas currently being addressed include renewable energy, water management, circular economy, biodiversity, off-shore wind and sustainable finance. Climate Ready supports all sectors including biopharma, financial services, construction, advanced manufacturing, and food production. Similarly, Skillnet Ireland’s three climate focused networks, Sustainable Finance Skillnet⁴⁵, Green Tech Skillnet⁴⁶, and Lean & Green Skillnet⁴⁷, continue to increase the number of companies supported year on year. Finally, in 2022, Skillnet Ireland, in partnership with the University of Limerick, launched a suite of Stackable microcredits for its Energy Leaders, Transport Leaders and Waste & Circularity Leaders programmes as part of the Climate Ready Academy. This is the first industry-led stackable microcredits programme in the area of climate action in Ireland.

3.6. Benchmarking of initiatives based on Total Average Key Performance Drivers

The current section presents the results of the benchmarking exercise based on the Total Average Key Performance Drivers (or factors enabling the performance), building on the total scores collected for each of the indicators and dimensions related to the drivers of the analysed initiatives. For a detailed overview of the relevant indicators the reader is advised to consult section 1.3.2. of the Report.

Table 3-6 presents the TOP 5 initiatives with the highest scores in this category.

Table 3-6: Benchmarking results based on Total Average Key Performance Drivers

TOP initiatives with the 5 highest scores in this category	Country	Score (max. 5 points)	Policy profile nr (see Annex B)
FutureSkills Prime	India	4,39	B42
SkillsFuture Movement driven by SkillsFuture Singapore (SSG)	Singapore	4,37	B45
Hiroshima Prefecture Reskilling Initiative	Japan	4,33	B44
Skillnet Ireland	Ireland	4,29	B16
High Road Training Partnership	United States (California)	4,16	B40

When comparing this top with TOP 5 initiatives based on the Total Average Key Performance Metrics (as presented in section 3.2. of this Report), it is possible to observe a strong resemblance in the lists, as four initiatives appear on both lists, namely: Skillnet Ireland (Ireland); SkillsFuture Movement driven by SkillsFuture Singapore (SSG) (Singapore); FutureSkills Prime (India), and High Road Training Partnership (United States). This observation indicates that the initiatives having the highest scores for their

⁴⁴ <https://www.climatereadyacademy.ie/>

⁴⁵ <https://sfskillnet.sustainablefinance.ie/>

⁴⁶ <https://www.greentechskillnet.com/>

⁴⁷ <https://leangreenskillnet.com/>

performance typically also have the highest scores for the enabling factors (drivers), suggesting a strong predictive power of the benchmarking model. The latter will be explored in more detail in the next sub-section, as well as in *Chapter 4*.

The illustrative examples of the Key Performance Drivers in specific initiatives will be presented in *Chapter 4*, when addressing the overall in-depth analysis of the key success factors for up- and reskilling policies. *Chapter 4* provides detailed descriptions of the key lessons learned from the analysed best practices, including both successes and vulnerabilities of initiatives, and covering the roles of all key stakeholder groups.

3.7. Average Key Performance Drivers vs. Average Key Performance Metrics

When plotting the Average Key Performance Drivers (X) versus the Average Key Performance Metrics (Y), as depicted in Figure 3-1, it can be seen that there is a strong positive linear relationship between drivers and metrics, with a correlation coefficient of 0,74. While strong correlation does not yet guarantee the causality, it still signifies the presence of a strong relationship between the two groups of indicators of the benchmarking framework. The causal relationships will be explored in *Chapter 4* of the Report.

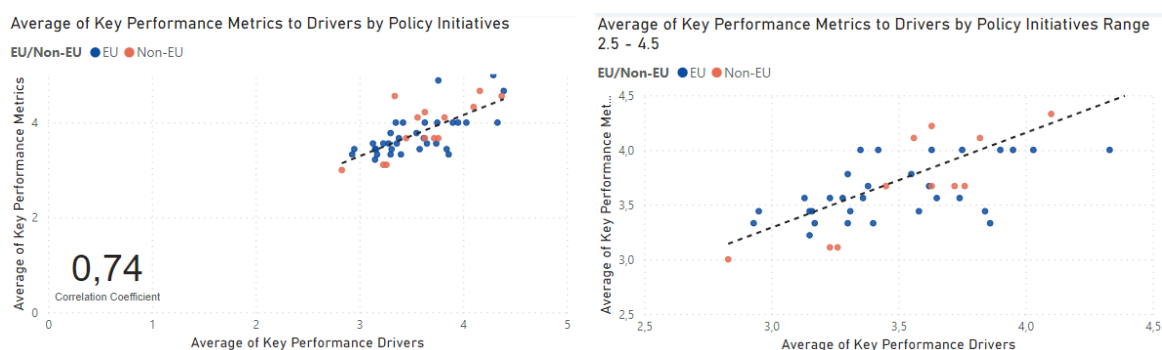


Figure 3-1: Average Key Performance Drivers vs. Average Key Performance Metrics (left) scale 0-5; (right) a zoomed in version

4. Key success factors for up- and reskilling initiatives

Chapter 4 addresses the analysis of the key success factors, and specifically which key factors have the highest impact on the performance of up- and reskilling initiatives, which (combinations of) building blocks allow for creating the most initiatives, and what the roles of specific stakeholder groups are in maximising the success of up- and reskilling initiatives. The analysis also aimed to uncover the vulnerabilities of the analysed best practice examples, which were then further addressed in *Chapter 6* 'Policy recommendations'.

The analysis was conducted on a dataset of survey responses collected from 47 initiatives focused on the up-and reskilling of the workforce across 36⁴⁸ different countries globally. The analysis was conducted in **both quantitative and qualitative** ways.

The survey included one quantitative question per individual driver or metric, as shown in *Annex C*. These 29 questions asked respondents to indicate the extent to which they agreed with a statement on a 5-point Likert-scale ranging from "1, Strongly disagree" to "5, Strongly agree". These inputs were used for performing a quantitative data analysis, as presented in section 4.2. The complete dataset consisted of a total of $47 \times 29 = 1,363$ data points. However, due to a small sample size, most of the quantitative analysis was conducted at an aggregated level, considering only the averages across initiatives per driver, metric or dimension, or the averages across drivers, metrics, or dimensions per policy initiative. Generalisations had to be made with caution, and the depth of this analysis was limited. Nevertheless, the quantitative analysis proved to be useful for confirming the key hypotheses and identifying further directions for an in-depth exploration in a qualitative way.

Section 4.3 of the Report presents detailed qualitative findings for each of the analysed key success factors. These findings were developed based on the extensive inputs collected via the online survey and complemented by in-depth interviews with the respective stakeholders for each of the analysed 47 initiatives. The findings are accompanied by illustrative examples. The analysis allowed to extract the key lessons learned and inputs for policy recommendations, as presented in *Chapter 6*.

4.1. Co-dependency analysis

Before analysing the impact of the performance drivers on the performance metrics, we first conducted a co-dependency analysis based on correlations, in order to examine the presence of co-dependency at the level of dimensions, as well as indicators. The purpose of this analysis was to explore the reliability and validity of the employed framework. This analysis, however, does *not* serve the purpose of identifying the actual impact of the drivers on metrics. The latter will be addressed in a separate analysis (namely PLS Regression analysis), as presented later in this Chapter.

Figure 4-1 depicts the drivers and metrics at the dimension level, where the labels "1: Individual", "2: Company", and "3: Economy" refer to the three metric dimensions and the labels "A: Stakeholders", "B: Learners", "C: Funding", and "D: Regulatory Framework" refer to the driver dimensions. As shown below, there is little correlation between the metric dimensions. Similarly, there is also little correlation between the driver dimensions. Only the driver dimensions "B: Learners" and "D: Regulatory Framework" have a

⁴⁸ The total coverage of the analysis at the country level included 39 countries, while at the level of individual initiatives the analysis covers 36 countries. 3 additional countries such as Australia, Brazil and the United Arab Emirates (UAE) were not part of the compulsory sample as defined in the Tender Specifications, and those were only included in the analysis at the country level.

moderate strength correlation coefficient of 0.5854. However, since only correlation coefficients above 0.7000 are indicative of collinearity, it is possible to conclude that there is limited co-dependency between variables at the dimension level for drivers and metrics. The correlation coefficients between drivers and metrics should not be taken into account here, and the relationship between drivers and metrics will be explored below.

	1. Individual	2. Company	3. Economy	A. Stakeholders	B. Learners	C. Funding	D. Regulatory Framework
1. Individual	1.000000	0.381897	0.121640	0.292962	0.706065	0.157171	0.530890
2. Company	0.381897	1.000000	0.335868	0.295187	0.266013	0.255333	0.435746
3. Economy	0.121640	0.335868	1.000000	0.362958	0.256319	0.027604	0.515098
A. Stakeholders	0.292962	0.295187	0.362958	1.000000	0.076307	0.270622	0.313473
B. Learners	0.706065	0.266013	0.256319	0.076307	1.000000	0.036694	0.585383
C. Funding	0.157171	0.255333	0.027604	0.270622	0.036694	1.000000	0.280823
D. Regulatory Framework	0.530890	0.435746	0.515098	0.313473	0.585383	0.280823	1.000000

Figure 4-1: Correlation matrix of driver and metric dimensions

In Figure 4-2 and Figure 4-3, the correlation coefficients between individual metric and driver indicators are shown, respectively. Similar to what was shown at the dimension level, there are few individual metrics and drivers that are strongly correlated to other metrics and drivers, respectively. This suggests that at an individual level, there is no indication of collinearity between either the metrics or drivers. This means that there is no strong co-dependency between variables at the individual level, indicating that the model does *not* measure the same aspects in different ways (i.e., there is no duplication).

	i.1	i.2	i.3	ii.1	ii.2	ii.3	iii.1	iii.2	iii.3
i.1	1.000000	0.513964	0.328261	0.307991	0.108210	0.404017	0.184294	0.254196	0.120827
i.2	0.513964	1.000000	0.470625	0.140826	0.285517	0.393317	0.176500	0.055995	-0.222058
i.3	0.328261	0.470625	1.000000	0.099476	0.298184	0.243398	0.021073	0.178270	-0.128423
ii.1	0.307991	0.140826	0.099476	1.000000	0.567159	0.462763	0.169719	0.465514	0.240964
ii.2	0.108210	0.285517	0.298184	0.567159	1.000000	0.502568	0.068156	0.234587	-0.000553
ii.3	0.404017	0.393317	0.243398	0.462763	0.502568	1.000000	0.148085	0.289421	0.250287
iii.1	0.184294	0.176500	0.021073	0.169719	0.068156	0.148085	1.000000	0.094781	0.212510
iii.2	0.254196	0.055995	0.178270	0.465514	0.234587	0.289421	0.094781	1.000000	0.449095
iii.3	0.120827	-0.222058	-0.128423	0.240964	-0.000553	0.250287	0.212510	0.449095	1.000000

Figure 4-2: Correlation matrix of individual metrics

	a.1	a.2	a.3	a.4	a.5	a.6	b.1	b.2	b.3	b.4	c.1	c.2	c.3	c.4	c.5	d.1	d.2	d.3	d.4	d.5
a.1	1.000000	-0.155610	0.110456	0.102376	0.278585	0.443371	0.038296	0.127091	-0.107614	0.060472	0.081626	0.454505	-0.414356	-0.081002	0.214409	0.445848	0.088086	-0.070927	0.044218	-0.062414
a.2	-0.155610	1.000000	0.424117	0.333592	0.159031	0.300826	0.182918	-0.050527	-0.022150	0.112437	0.016619	-0.406308	0.324489	-0.019682	0.074392	-0.038511	0.238166	-0.013761	0.359006	0.243008
a.3	0.110456	0.424117	1.000000	0.092593	0.111737	0.312160	0.025997	-0.139680	-0.020476	-0.169290	0.378522	-0.018692	-0.014124	-0.172703	0.112966	0.041467	0.154344	-0.081653	0.214034	0.095467
a.4	0.102376	0.333592	0.092593	1.000000	0.069016	0.268102	0.220705	0.039193	0.063119	0.415185	0.082782	-0.049656	-0.136574	0.071405	0.360670	0.391893	0.340805	0.129358	0.073362	0.365720
a.5	0.278585	0.159031	0.111737	0.069016	1.000000	0.472116	-0.179365	0.091104	-0.123030	-0.186782	0.189955	-0.013667	0.077070	-0.057531	0.151025	0.036066	-0.137846	-0.063973	-0.130038	-0.021411
a.6	0.443371	0.300826	0.312160	0.268102	0.472116	1.000000	0.174305	0.103825	0.049119	-0.055676	0.202799	0.215790	-0.146220	-0.049321	0.242582	0.281160	0.192978	-0.073136	0.266327	0.092144
b.1	0.038296	0.182918	0.025997	0.220705	-0.179365	0.174305	1.000000	0.362806	0.284236	0.509957	-0.116788	0.046657	-0.184533	-0.030195	0.070304	0.334426	0.383228	0.105925	0.039269	0.498014
b.2	0.127091	-0.050527	-0.139680	0.039193	0.091104	0.103825	0.362806	1.000000	0.164259	0.177169	-0.225775	0.142341	0.021214	0.121604	0.302723	0.245041	0.402103	0.048803	0.080786	0.134247
b.3	-0.107614	-0.022150	-0.020476	0.063119	-0.123030	0.049119	0.284236	0.164259	1.000000	0.344225	0.130150	-0.009435	-0.035052	-0.186622	0.053657	0.085572	0.233007	-0.022259	0.283494	0.471828
b.4	0.060472	0.112437	-0.169290	0.415185	-0.186782	-0.055676	0.509957	0.177169	0.344225	1.000000	-0.142039	-0.002446	-0.090455	0.070369	0.162902	0.425464	0.241023	0.051690	0.170755	0.630532
c.1	0.081626	0.016619	0.378522	0.082782	0.189955	0.202799	-0.116788	-0.225775	0.130150	-0.142039	1.000000	0.105658	-0.054239	0.109763	0.277852	0.072126	0.152947	0.264811	-0.036584	-0.002153
c.2	0.454505	-0.406308	-0.018692	-0.049656	-0.013667	0.215790	0.046657	0.142341	-0.009435	-0.002446	0.105658	1.000000	-0.627726	-0.156330	-0.075094	0.211164	-0.004321	-0.054928	-0.136200	-0.084684
c.3	-0.414356	0.324489	-0.014124	-0.136574	0.077070	-0.146220	-0.184533	0.021214	-0.035052	-0.090455	-0.054239	-0.627726	1.000000	0.259566	-0.034657	-0.311681	-0.034021	0.072434	0.174678	0.022985
c.4	-0.081002	-0.019682	-0.172703	0.071405	-0.057531	-0.049321	-0.030195	0.121604	-0.186622	0.070369	0.109763	-0.156330	0.259566	1.000000	0.222186	0.009109	-0.125061	0.228923	0.144147	0.013293
c.5	0.214409	0.074392	0.112966	0.360670	0.151025	0.242582	0.070304	0.302723	0.053657	0.162902	0.277852	-0.075094	-0.034657	0.222186	1.000000	0.441125	0.289712	0.029711	0.172556	0.185468
d.1	0.445848	-0.038511	0.041467	0.391893	0.036066	0.281160	0.334426	0.245041	0.085572	0.425464	0.072126	0.211164	-0.311681	0.009109	0.441125	1.000000	0.465703	0.162132	0.030982	0.265033
d.2	0.088086	0.238166	0.154344	0.340805	-0.137846	0.192978	0.383228	0.402103	0.233007	0.241023	0.152947	-0.004321	-0.034021	-0.125061	0.289712	0.465703	1.000000	0.409975	-0.019240	0.200742
d.3	-0.070927	-0.013761	-0.081653	0.129358	-0.063973	-0.073136	0.105925	0.048803	-0.022259	0.051690	0.264811	-0.054928	0.072434	0.228923	0.029711	0.162132	0.409975	1.000000	-0.050146	-0.115514
d.4	0.044218	0.359006	0.214034	0.073362	-0.130038	0.266327	0.039269	0.080786	0.283494	0.170755	-0.038584	-0.138200	0.174678	0.144147	0.172556	0.030982	-0.019240	-0.050146	1.000000	0.272896
d.5	-0.062414	0.243008	0.095467	0.365720	-0.021411	0.092144	0.498014	0.134247	0.471828	0.630532	-0.002153	-0.084684	0.022985	0.013293	0.185468	0.265033	0.200742	-0.115514	0.272896	1.000000

Figure 4-3: Correlation matrix of individual drivers

The correlation analysis provides more than an indication of collinearity. By comparing the correlation coefficients between drivers and metrics, an initial impression can be made of the strength of the linear relationship between them.

As shown in Figure 4-1, the driver dimension “D: Regulatory Framework” has a low-moderate to moderate strong linear correlation with each of the three metric dimensions. The correlations between driver dimension “D: Regulatory Framework” and metric dimensions “1: Individual” and “3: Economy” of 0.5309 and 0.5151, respectively, are of note, as they suggest a moderately strong relationship between this driver dimension and these metric dimensions.

There is also a strong linear correlation of 0.7061 between the driver dimension “B: Learners” and metric dimension “1: Individual”. The driver dimension “B: Learners” is an aggregate score of Likert-scale responses regarding opportunities provided to learners to determine their own learning path; receive career guidance and assistance with learning; access (digital) learning infrastructures; and recognition of their learning efforts. The metric dimension “1: Individual” is an aggregate score of Likert-scale responses regarding the increased the level of mastery of specific learners’ skills; improved the attractiveness of learners for the labour market; and the motivation of learners to work and to continue learning. This strong linear correlation therefore suggests that there is a clear relationship between creating the appropriate conditions for learners and their performance in learning.

	i.1	i.2	i.3	ii.1	ii.2	ii.3	iii.1	iii.2	iii.3
a.1	-0.117359	-0.038459	0.066401	0.053784	0.245535	0.088924	0.279841	0.131495	0.177891
a.2	0.226808	0.327242	0.303768	0.212797	0.335671	0.216153	0.230845	0.270153	-0.058887
a.3	0.161418	0.172962	0.178356	0.288928	0.201083	0.118235	0.081917	0.256618	0.089391
a.4	0.476444	0.188266	0.134939	0.025282	0.059253	0.215118	0.245745	-0.013123	0.152835
a.5	-0.019130	0.169090	-0.166937	-0.025772	-0.052250	-0.039912	0.236573	-0.052923	-0.047430
a.6	0.119013	0.245188	0.165322	0.286623	0.291071	0.149670	0.294824	0.222453	0.086744
b.1	0.475743	0.458341	0.562880	0.068745	0.229554	0.206256	0.277417	0.157433	0.150988
b.2	0.327302	0.368763	0.286056	0.296008	0.156379	0.243579	0.307645	0.164382	0.017935
b.3	0.460925	0.240184	0.182283	0.220388	0.148960	0.035166	0.030054	0.126197	-0.061872
b.4	0.479400	0.300371	0.490863	-0.063744	0.111240	0.139220	0.166739	-0.061854	0.018112
c.1	0.166456	-0.060883	-0.084152	0.363665	0.221566	0.162355	-0.141416	0.092512	0.249923
c.2	-0.184258	-0.301401	-0.058435	-0.177900	-0.098725	-0.250810	0.020838	-0.126082	-0.040571
c.3	0.009226	0.225711	0.100346	0.109431	0.080396	0.033165	-0.292829	0.114901	-0.201692
c.4	0.084147	0.057853	-0.046872	0.117571	-0.029241	0.233816	0.073251	-0.242909	0.161257
c.5	0.512411	0.280201	0.241069	0.337155	0.091903	0.297771	0.256335	0.111181	0.114144
d.1	0.309648	0.185190	0.315257	0.002739	0.231934	0.303328	0.276914	0.081443	0.119127
d.2	0.491464	0.212505	0.337461	0.416621	0.306445	0.458843	0.216058	0.515300	0.178185
d.3	0.064728	-0.201150	-0.075302	0.153342	-0.014063	0.220988	0.165744	0.340380	0.702239
d.4	0.282599	0.332498	0.234201	0.230112	0.366877	0.220518	0.112023	0.132602	0.105047
d.5	0.568310	0.435772	0.454693	-0.063105	0.097438	0.252136	0.168170	0.007399	-0.075704

Figure 4-4: Correlation matrix between driver and metric indicators

At the level of specific indicators, as shown in Figure 4-4, there are moderately strong (above 0.5000, below 0.7000) linear correlations between metric “i.1” and driver “d.5”, metric “i.3” and driver “b.1”, and metric “iii.2” and driver “d.2”. The moderately strong linear correlations between these drivers and metrics therefore suggest that there is a respective linear relationship between d.5 (access to learning infrastructure including tools and trainers) and i.1 (level of mastery of specific skills that it was targeting in learners); b.1 (an opportunity to determine their own learning path measurement) and i.3 (motivation of learners to work and to continue learning); and d.2 (integration of a policy initiative into the overall digital strategy of a country) and iii.2 (a contribution to the digitalisation of the economy).

There is only one strong correlation evident in Figure 4-4, namely between metric “iii.3” (contribution to the greenification of the economy) and driver “d.3” (integration into the green regulatory framework).

The interpretation of the abovementioned correlations should, however, be done with great caution, and it was deliberately not included in this analysis. As the main focus of the analysis is on causal relationships (which cannot be guaranteed by correlations), the interpretations are provided in the next part of the analysis, based on the results of the PLS Regression.

4.2. Quantitative analysis of causal impact of Drivers on Metrics

As emphasised above, while a correlation analysis is indicative of potential relationships that may exist between metrics and drivers, no inferences can be made about the causal impact of a driver on a metric. To analyse the causality, a PLS Regression analysis was conducted. For a detailed description of the methodology, the reader is advised to consult

Chapter 7 (and specifically section 7.2.4.) of this Report. The following three PLS Regression models were computed:

- Aggregated Model 1 (four aggregated Drivers, single aggregated Metric);
- Aggregated Model 2 (all Drivers, single aggregated Metric);
- Aggregated Model 3 (four aggregated Drivers, three aggregated Metrics).

A full model (all drivers and metrics) was not computed, as the number of observations (47) was not sufficient to provide statistically significant results at that specific level of analysis. In addition, it must be noted that only Aggregated Model 1 provides *statistically significant* insights. As mentioned in Chapter 7, the sample size used in a PLS Regression should be roughly ten times the number of parameters modelled. In both Aggregated Model 2 and 3, a respective 20 and 12 parameters are modelled using only 47 observations. As such, the ratio between these is far from the minimum of 1:10 required. Therefore, the results of Models 2 and 3 only give preliminary insights but are not statistically significant enough for making fundamental conclusions.

Aggregated Model 1

The results of Aggregated Model 1 are shown in Figure 4-5 below. In this model, each PLS Regression coefficient shows the impact of increasing the average score of a given driver dimension by one point on the aggregated score of all three metric dimensions. This can be summarised by the following model equation, whereby 3.78 is the intercept, or starting aggregated score of all three metric dimensions when the driver dimension scores are zero:

$$\begin{aligned} & \text{Average Score across Key Performance Metrics} \\ & = 3.78 + 0.14 * A: Stakeholders + 0.12 * B: Learners - 0.013 * C: Funding \\ & + 0.22 * D: Regulatory Framework \end{aligned}$$

The coefficients in Figure 4-5 suggest that when the average score of the driver dimension “C: Funding” increases by one point, the aggregated score of all three metric dimensions drops by 0.013 points. This minimal impact suggests that the driver dimension “C: Funding” has an insignificant impact on the aggregated score of the three metric dimensions. The driver dimension “D: Regulatory Framework” has the greatest relative impact on the aggregated score of the three metric dimensions, increasing it by 0.22 points for every single point increase in the driver dimension.

Given the individual drivers that make up the driver dimension, the model therefore suggests that the integration of specific initiatives into the overall skills agenda and regulatory frameworks and raising awareness around and making these initiatives available to learners, positively impacts the performance of up- and reskilling initiatives at the individual, company and economy levels.

The Funding dimension shows a slight negative impact. However, this is related to the type of data that was collected. Specifically, when analysing funding, the focus of the analysis was not on funding volumes, but rather on the types of funding or funding sources. It is therefore possible to conclude that **the type of funding does not play a significant role in the overall performance of the initiatives**. It by no means diminishes the role of funding, and the latter remains among the key enablers. Section 4.3 of the Report explores the role of *specific* funding types (i.e., public, private, and co-funding by learners) in more detail in a qualitative way.

	Model coefficient (PLS, $N_c=4$)
A. Stakeholders	0.138585
B. Learners	0.115823
C. Funding	-0.013174
D. Regulatory Framework	0.218541

Figure 4-5: PLS Regression coefficients of Aggregated Model 1

Aggregated Model 2

In Figure 4-6, the impact of each *individual* driver on the aggregated score of the three metric dimensions is depicted allowing the aforementioned relationships to be examined in more detail. The results of this Aggregated Model 2 can be summarised by the following model equation, whereby 3.78 is the intercept, or starting aggregated score of all three metric dimensions when the driver dimension scores are zero:

Average Score across Key Performance Metrics

$$= 3.78 + 0.047 * a.1 + 0.077 * a.2 + 0.069 * a.3 + \dots + 0.098 * d.3 + 0.086 * d.4 + 0.004 * d.5$$

Like the results shown in Figure 4-5, most individual drivers prove to have a limited impact on the aggregated score of the three metric dimensions. On an individual driver level, the drivers associated with driver dimension “D: Regulatory Framework” do not have as great of an impact on the aggregated three metric dimensions as they do collectively. Amongst the five drivers that make up this dimension, driver “d.2” (integration into the digital regulatory framework) has the greatest impact of 0.11 points. The model therefore suggests that the integration of a policy initiative into the overall digital strategy of the country is most impactful for a high performance of this initiative at the Individual, Company and Economy levels. In addition, it is important to highlight that the study sample does not explicitly focus on digital skills. However, the ‘digital’ component often proves to be an essential part of the current up- and reskilling initiatives, even the ones not explicitly focussed on ICT.

Model coefficient (PLS, $N_c=2$)	
a.1	0.046784
a.2	0.077293
a.3	0.068858
a.4	-0.014854
a.5	-0.007776
a.6	0.061323
b.1	0.087388
b.2	0.095867
b.3	0.017428
b.4	-0.004667
c.1	0.031171
c.2	-0.094811
c.3	-0.000199
c.4	0.018350
c.5	0.063696
d.1	0.010836
d.2	0.114836
d.3	0.098090
d.4	0.086355
d.5	0.003697

Figure 4-6: PLS Regression coefficients of Aggregated Model 2

The negative impact of driver dimension “C: Funding” noted in Figure 4-5, seems to be largely the result of the individual driver, “c.2”, which reduces the aggregated score of the three metric dimensions by 0.09 points. Given the individual drivers that make up the driver dimension, the model therefore suggests that the role of public funding negatively affects the performance of initiatives. However, additional regression analysis between the individual “c.2” driver and aggregated metric dimensions, suggests this impact is negligible, with the slope amounting to -0.07 (see Figure 4-7).

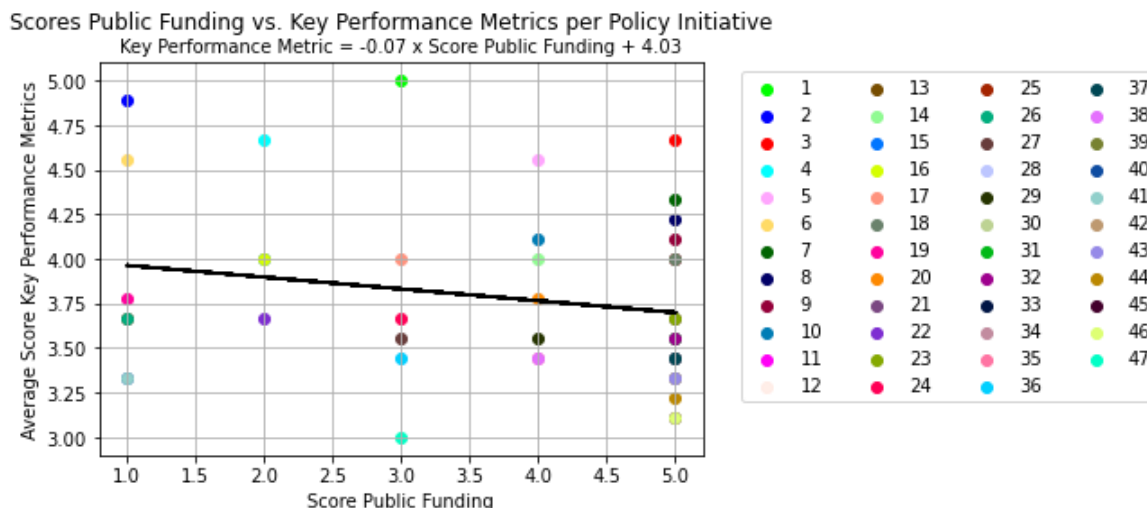


Figure 4-7: Score per policy initiative across c.2: Role of public funding and aggregated metric dimension

Aggregated Model 3

The PLS Regression coefficients of Aggregated Model 3, depicted in Figure 4-8 provides insight into the impact of the driver dimensions on each of the three metric dimensions, *individually*. The results of this model cannot be summarised in a regression formula, as the result is a matrix of four drivers times three metrics.

The largest positive impacts are between the driver dimensions “A: Stakeholders”, “B: Learners” and “D: Regulatory Framework” on the metric dimensions “3. Economy”, “1. Individual”, and “3. Economy”, respectively. Given the individual drivers that make up the driver dimension, the model therefore suggests that the role of policy makers, large companies, SMEs, education and training providers, and social partners and other labour market organisations, as well as the interconnection between these parties within the learning ecosystem has a positive the impact on the performance of initiatives at the Economy level. Similarly, opportunities, career guidance and access to learning infrastructures have a positive impact on the performance of initiatives at the Individual level. Finally, the model suggests that the integration of initiatives into a country’s regulatory framework has a positive impact on the performance of initiatives at the level of the Economy.

Based on the outcomes of Aggregated Model 2, the driver dimension “C: Funding” has a negative impact. However, from this more detailed model, this negative impact in Aggregated Model 2 proves to be explained largely due to the negative impact on the metric dimension “3: Economy”. The driver dimensions “C: Funding” has a negligible impact on the metric dimensions “1: Individual” and “2: Company”. This suggests that the type of funding of a policy initiative only plays a notable role in the impact at the level of the Economy.

	1. Individual	2. Company	3. Economy
A. Stakeholders	0.043487	0.126398	0.239178
B. Learners	0.304850	0.060990	-0.023301
C. Funding	0.039801	0.074032	-0.152584
D. Regulatory Framework	0.122449	0.166698	0.374400

Figure 4-8: PLS Regression coefficients of Aggregated Model 3

4.3. In-depth analysis of Key Performance Drivers

In this section, we present the outcomes of the in-depth analysis of the Key Performance Drivers, based on insights from the online survey and the accompanying stakeholder interviews. The objective of this analysis was to extract additional findings that would allow for better understanding of the role of the specific drivers and their underlying relationships with the metrics. This section is organised around the driver-related dimensions and the indicators of the benchmarking framework, as was outlined in section 1.3.2. of the Report.

4.3.1. Dimension A: Stakeholders

Within the “Stakeholders” dimension, the roles of all key stakeholder groups were explored including policy makers, large companies and SMEs, education, and training providers, as well as social partners and other labour market organisations. Special attention was paid to examining the interconnections between different stakeholder groups within the learning ecosystem. The Figure below provides a summary of the key insights per indicator. We then address each of the indicators in detail.

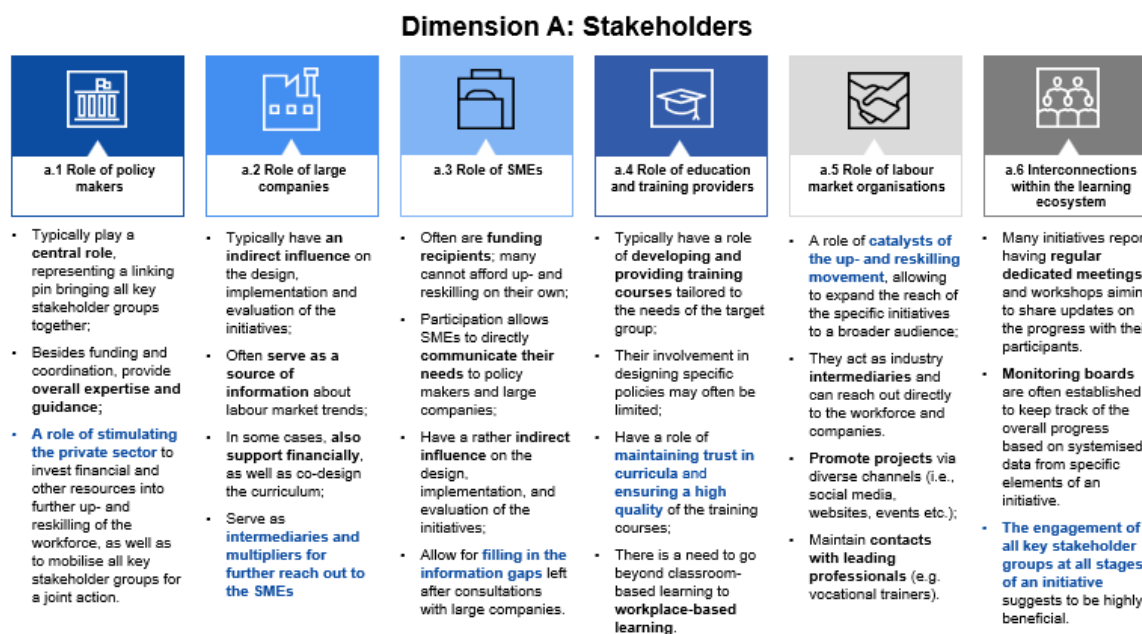


Figure 4-9: Key insights per indicator within Dimension A “Stakeholders”

a.1 Role of policy makers

For the absolute majority of the analysed initiatives (87% or 41 out of 47 initiatives), policy makers played an active role in design, implementation, and evaluation. Specifically, for 36 % (17 out of 47 initiatives), policy makers had a leading role, i.e., they were the initiators and the coordinators of the initiative. For 19% (9 out of 47 initiatives), policy makers had a highly active involvement, but were not leading. Finally, for 32 % (15 out of 47 initiatives), the involvement of policy makers was still active. Only for 4% (2 out of 47 initiatives), there was no involvement of policy makers in any way.

The actual role of policy makers besides **funding and coordination** often implied providing **overall expertise and guidance** for the actual implementation of an initiative, and making sure it stays relevant for and visible to the target group, in line with any

related changes in employment policies. Another important role of policy makers refers to **stimulating the private sector to invest** financial and other resources into further up- and reskilling of the workforce, as well as to mobilise all key stakeholder groups for a joint action. In the analysed sample, policy makers played a **central role**, representing a linking pin bringing all key stakeholder groups together. Below we elaborate on these aspects in more detail.

Our analysis showed that policy makers play a crucial role in coordinating up- and reskilling initiatives, as they bring together all key stakeholder groups involved in the process. By taking the leading role, policy makers have the **ability to create a unified and strategic approach** towards addressing the skills gap and ensuring a successful transition to a future-ready workforce.

One of the key benefits of policy makers being in the leading role is their **ability to provide a holistic and comprehensive perspective** on up- and reskilling of the workforce. They have the authority and expertise to identify the main directions for action, and with the support of other key stakeholder groups, to identify the current and future needs of the labour market, while aligning these with the educational and training programs. This coordination ensures that the skills being developed are in line with the demands of industries, thereby increasing employability of learners.

Moreover, policy makers have the **power to mobilise resources and allocate funding** towards specific up- and reskilling initiatives. By having a central role, they can establish partnerships with various stakeholders, including large companies and SMEs, educational institutions and training providers, industry associations and other labour market organisations. This collaboration enables the pooling of resources, knowledge, and expertise, resulting in more effective and efficient up- and reskilling programs.

Policy makers also have **the authority to set standards and regulations** for up- and reskilling initiatives. They can establish quality assurance mechanisms, ensuring that the training programs meet the required standards and deliver the desired outcomes. This regulation provides a sense of credibility and trust in the up- and reskilling initiatives, attracting both individuals seeking to enhance their skills and employers looking for a skilled workforce.

Furthermore, policy makers have the unique ability **to stimulate the private sector to invest financial resources in up- and reskilling initiatives**. The central vision set by the government, along with the overall support and commitment from policy makers, serves as a powerful signal to companies that investing in up- and reskilling is not only beneficial for their own growth but is also aligned with the broader national agenda. This vision and overall guidance and support provides companies with a long-term perspective. Policy makers also actively engage with the private sector, seeking their input and involvement in the design and implementation of up- and reskilling initiatives. By fostering collaboration and dialogue, policy makers can better understand the specific needs and challenges faced by companies, tailoring the initiatives to address these needs. This partnership approach not only encourages private sector investment but also ensures that the up- and reskilling programs are relevant and effective in meeting the demands of the labour market.

To summarise, policy makers play a central role in coordinating up- and reskilling initiatives by bringing together key stakeholders, providing a comprehensive perspective, mobilising resources, and setting standards. Their leadership and involvement in these initiatives are crucial for addressing the skills gaps, promoting economic growth, and creating a future-ready workforce.

a.2 Role of large companies

The role of large companies was in general active for the majority of the analysed initiatives (62% or 29 out of 47 initiatives). Specifically, for 6% (3 out of 47 initiatives), large

companies played a leading role. For 26% (12 out of 47 initiatives), large companies had a highly active, but not a leading role. Finally, for 30% (14 out of 47 initiatives), the role of large companies was reported to be active. For 11% (5 out of 47 initiatives), large companies were not involved in any way.

Large companies were often reported to have an indirect influence on the design, implementation, and evaluation of the initiatives (e.g. via Program Advisory Committees). They often serve as a **source of information** about labour market trends and/or the current/anticipated demands in different fields, and specifically their own employment-related needs.

In some cases, large companies also **support the initiatives financially**, as well as **co-design the curricula** to ensure an optimal alignment with their needs (and those of future employers). Large companies thus also ensure the **practical relevance** of provided training. With their extensive industry knowledge and experience, large companies have a deep understanding of the skills and competencies required in the current and future job market.

By investing in up- and reskilling programs, large companies can get several **benefits**. Firstly, it allows them to address the skills gap within their organisations, ensuring that their workforce remains competitive and adaptable to changing market demands. This, in turn, enhances productivity and innovation, leading to improved business performance and profitability. Additionally, investing in their own workforce demonstrates a commitment to employee development and well-being, fostering a positive work environment and increasing employee loyalty and retention. Furthermore, up- and reskilling initiatives can help employers attract top talent, as prospective employees are increasingly seeking opportunities for growth and development. Finally, as mentioned above, large companies can also advance their surrounding networks of SMEs, thereby increasing the quality and productivity of their collaborations.

Large companies are also reported to serve as **intermediaries and multipliers for further reach out to the SMEs**, to conduct the training needs analysis based on the SMEs' business strategies, and to curate/provide courses on relevant in-demand and priority skills. Large companies possess industry expertise, knowledge, and best practices, and are often prepared to go beyond their core mandate and provide guidance to other companies, especially SMEs in their skills development needs. They can co-create up- and reskilling solutions, such as training and workplace learning, and build on their networks to grow enterprise capabilities and further facilitate enterprise transformation of SMEs.

When SMEs have access to up- and reskilling opportunities, they can acquire new skills and knowledge that improve their ability to deliver high-quality products and services. This, in turn, **strengthens the value chain and overall competitiveness of the collaboration between large companies and SMEs**. Furthermore, up- and reskilling initiatives enable SMEs to keep pace with technological advancements and industry trends, allowing them to offer innovative solutions and adapt to changing market demands. By investing in the up- and reskilling of SMEs, large companies can foster a network of capable and skilled partners, leading to more efficient and effective collaborations that drive mutual growth and success.

a.3 Role of SMEs

The current indicator examined the role of small and medium-sized enterprises or SMEs. For 40% (19 out of 47 initiatives), SMEs were reported to have an active involvement. 17% (8 out of 47 initiatives) reported to have a highly active SME role. Interestingly, 9% (4 out of 47 initiatives) reported to be led by SMEs. 2% of the analysed initiatives (1 out of 47 initiatives) reported not to have any SME involvement at all.

SMEs often are **funding recipients** (target group/beneficiaries), and their involvement in specific initiatives may be a precondition by the initiative owner/coordinator. Participation in up- and reskilling initiatives allows SMEs to directly **communicate their needs to policy makers and large companies**, as well as enables the advancement of skills that often can only be feasible due to their participation in that specific initiative. SMEs were also reported to generally be faster and more open-minded when it comes to piloting and testing new ideas, new training and up- and reskilling processes.

SMEs were sometimes reported to have a rather indirect influence on the design, implementation, and the evaluation of the initiatives (e.g., by answering a satisfaction survey at the end of the term/initiative). SMEs may sometimes be engaged in Program Advisory Committees. The information on their specific needs and requirements is often collected by means of **direct or in-direct consultations** in the beginning of an initiative and throughout its duration. Sometimes SMEs may be involved in co-creation of the curriculum, and they allow for filling in the information gaps left after consultations with large companies.

Text Box 4-1: Supporting SMEs by SLIM, Netherlands (Policy profile B25)

SME employers often struggle with securing sufficient training for their employees due to lack of time and financial resources. Supporting SME employers would be particularly important, to make sure the training needs of smaller companies are well met. The SLIM initiative implies providing this type of support, by covering part of the training costs, depending on the company size, namely 80% for small enterprises and 60% for medium enterprises. In the absence of this subsidy, many SMEs might not have had the resources or motivation to invest in extensive employee development. Also in this case, the demand for this initiative is reported to significantly exceed its budget, and it can thus accommodate only a limited part of the overall demand. It was also suggested that, in general, the support for SMEs may need to be more short-term-oriented, in line with the context and way of working of most SMEs, with higher levels of flexibility and targets for the near future.

a.4 Role of education and training providers

38% (18 out of 47 initiatives) reported to have a highly active involvement of education and training providers, but not in the lead. 26% (or 12 out of 47 initiatives) reported active involvement of education and training providers. For 21% (10 out of 47 initiatives), education and training providers played a leading role. Finally, for 6% (3 out of 47 initiatives), no engagement of education and training providers was reported.

Education and training providers typically have a role of **developing and providing training courses** tailored to the needs of the target group. Education and training providers often play a significant role in delivering the training programs and ensuring the effective achievement of policy objectives. At the same time, their involvement in designing specific policies may often be limited. Their expertise and experience remain essential in realising the desired outcomes of the training projects.

Local education and training providers allow for incorporating their local expertise and enable the practical execution scaling up the training potential to reach large numbers of learners in short timeframes. Their role is also suggested to include **maintaining trust in curricula** and providing a channel to deliver regular knowledge updates. Specifically, the involvement of universities was suggested to ensure a high quality of the training courses. They have a wealth of knowledge in curriculum development, instructional design, and pedagogical approaches that enable them to design and deliver high-quality training programs.

Education and training providers have **robust quality assurance mechanisms** in place to ensure the delivery of high-quality training courses. They employ qualified instructors who possess both academic knowledge and practical experience in their respective fields. These instructors are equipped with the pedagogical skills necessary to effectively transfer knowledge and facilitate learning. Additionally, education and training providers conduct regular assessments and evaluations to measure the effectiveness of their training programs and identify areas for improvement. This commitment to quality ensures that learners receive training of the highest standard, instilling confidence in both individuals and employers.

Participating in up- and reskilling initiatives allows universities to **modularise training packages** (i.e., to split longer courses into smaller modules). This approach allows for research/science results to be deployed in education and in industry in a shorter time frame than usually. A standard course at a university may take 1-2 years to launch, while shorter dedicated training modules/courses can be prepared and launched in a few months.

It was also suggested by the consulted stakeholders that training providers need to look for ways to expand their training approaches, including going beyond classroom-based learning to workplace-based learning. It implies developing **an integrated high-quality system** of education and training that responds to constantly evolving needs, tapping on the skills insights, engaging industry to design industry-relevant courses, and regularly measuring its outcomes.

a.5 Role of social partners and other labour market organisations

The current indicator examined the role of, employer organisations, trade unions, as well as of employment agencies, and other labour market organisations in the design, implementation, and evaluation of initiatives. 30% (14 out of 47 initiatives) reported to have an active involvement of these stakeholders. The leading role of labour market organisations was reported by 23% (11 out of 47) of the analysed initiatives. 15% (7 out of 47 initiatives) reported having a highly active involvement of labour market organisations, but not in a leading role. Finally, 6% (3 out of 47) did not have an engagement of these stakeholders in any form.

Some initiatives report having labour market organisations like employment agencies, employer organisations and trade unions in a role of **catalysts of the up- and reskilling actions**, allowing to expand the reach of the specific initiatives to a broader audience. They act as industry intermediaries and can reach out directly to the workforce and companies. It allows for identifying skill needs more rapidly; linking skills development with ongoing enterprise transformation and job redesign within the sectors; and helping companies better recognise employees' skills acquisition and skills mastery. These organisations can thus be important sources of labour market information. They are able to aggregate data to inform in-demand skills and occupations, allowing institutions to tailor their programs accordingly.

In some cases, the initiatives explicitly **support the capacity building within** labour market organisations by means of structured training programmes such as bootcamps, masterclasses and personnel exchanges. This approach helps equipping labour market organisations with the know-how in skills analytics, skills research methodologies and data tools to extract skills insights for the workforce and companies.

The employer associations were mentioned to support the initiatives in two ways. First, professionals from employer associations **promote the projects** using newsletters, associated journals and also mention the projects during fitting workshops and lectures. Second, they **mediate contacts with leading professionals**, for example vocational trainers, that have long-term experience with a specific skill/domain. Additionally, it was explicitly suggested that the employment agencies should be engaged to increase effectiveness and advise the workers seeking to be re/upskilled to find the right resources

(trainings and employers). Employer organisations and trade unions are often reported to be members of sectoral professional committees which strategically discuss the need for the new qualifications and emerging competences.

Text Box 4-2: Jobs-Skills Integrator (JSIT) initiative by SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

In 2023, SSG launched the Jobs-Skills Integrator (JSIT) initiative. JSITs are intermediaries who work with industry, training and employment facilitation partners to optimise training provision and job matching services for companies and individuals. The appointment of JSITs is a structural intervention to augment existing jobs and skills initiatives for selected sectors. JSITs will perform three key roles: to (1) aggregate manpower and skills demand, (2) activate supply of training, and (3) help match skilled workers to jobs. The JSIT initiative is piloted in the Precision Engineering, Retail and Wholesale Trade sectors.

a.6 Interconnections within the learning ecosystem

The current indicator explored to what extent different stakeholder groups are interconnected (i.e., systematically communicate with each other; have a joint interaction platform; have a joint vision and objectives) within the learning ecosystem in the context of specific initiatives. 32% (15 out of 47 initiatives) reported to be highly connected and act as a system (i.e., having a joint vision, objectives, and actions). 28% (13 out of 47 initiatives) reported to be well connected (i.e., communication happens regularly). 21% (10 out of 47 initiatives) reported to be highly connected, but do not act as a system (communication happens frequently, but no joint vision, objectives, and actions). For 19% (9 out of 47 initiatives), communication happens occasionally, and they are loosely connected. None of the analysed initiatives reported being not connected at all.

Stakeholder connectivity in learning ecosystems implies a **systematic approach** where stakeholders communicate with each other, have a joint interaction platform, and share a common vision and objectives. This connectivity is essential for several reasons:

- **Collaboration and knowledge exchange:** when stakeholders are connected, they can collaborate and exchange knowledge, experiences, and best practices. This collaboration enables the identification of emerging skills needs, the development of innovative training methods, and the sharing of resources and expertise. It fosters a culture of continuous learning and improvement within the ecosystem.
- **Alignment of efforts:** stakeholder connectivity ensures that all actors involved in up- and reskilling efforts are aligned towards a common vision and objectives. This alignment prevents duplication of efforts, promotes synergy, and maximises the impact of interventions. It allows for the efficient allocation of resources and the development of comprehensive strategies that address the diverse needs of learners and the labour market.
- **Holistic approach:** well-connected learning ecosystems enable a holistic approach to up- and reskilling.

The engagement of all key stakeholder groups is reported to be crucial for the success of up- and reskilling initiatives, as each group has its own specific and fundamental role, as outlined in the sub-sections above. Joining forces allows for building on the strengths of each of the stakeholder groups, and thereby for ensuring the appropriate organisation of the efforts leading to the achievement of the objectives set. By involving stakeholders such as government agencies, educational institutions, employers, trade unions (and other support structures), and learners themselves, a comprehensive and inclusive approach can be adopted. This ensures that initiatives are designed to meet the specific

requirements of different industries and regions, while also considering the specific needs of learners. Stakeholder engagement fosters collaboration, allowing for better identification of skills gaps, the development of optimal training programs, and the provision of necessary resources. Moreover, involving key stakeholder groups promotes ownership and buy-in, increasing the likelihood of successful implementation and long-term sustainability of up- and reskilling policies.

Text Box 4-3: Engagement of all key stakeholder groups in More Digital Jobs 2025, Portugal (Policy profile B27)

One of the key success factors of this initiative is a strong public-private partnership including all key stakeholder groups. This initiative includes cooperation between Institute of Employment and Vocational Training, Public Institute, the Portugal Digital Mission Structure and the Portuguese Entrepreneurial Organisation and the Portuguese Confederation of Commerce and Services (with a large number of enterprises being members of the confederation). With such a combination of organisations, the initiative attracted 27,000 of employees conducting the vocational training programme on the digital subjects. The initiative was reported to demonstrate strong stakeholder engagement which provides a good representation of the Portuguese stakeholder landscape.

Some of the analysed initiatives demonstrated the presence of **collaboration among companies**. The latter offers numerous benefits. By working together, companies can pool their resources, knowledge, and expertise to address common challenges related to workforce development. This collaboration allows companies to share best practices, innovative approaches, and industry-specific insights, enabling them to collectively develop more effective and tailored training programs. By participating in these initiatives, companies can also gain access to a larger talent pool with the necessary skills, reducing recruitment and training costs. Furthermore, collaboration enhances the overall competitiveness of the industry by fostering a skilled workforce, driving innovation, and promoting industry-wide standards. By investing in up- and reskilling initiatives collectively, companies can ensure a sustainable talent pipeline, adapt to technological advancements, and remain agile in a rapidly changing business environment.

Text Box 4-4: Collaboration on joint learning activities by Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security, Austria (Policy profile B1)

Companies, with some of them being competitors, and the state of upper Austria created a network/community with an objective to support the development of training for their employees. This collaboration effort is fully publicly funded, with the resulting training being shared across the whole network. For the actual participation in training activities, 50% of the amount is covered by public funds, with the rest being covered by the participating companies. This approach is reported to create a sense of community and belonging, where potential competitors are ready to join forces for the common benefit. Companies here, however, act as funding recipients not involved in the development and design of the initiative. The fundamental idea of the Qualifizierungsverbund is to support SMEs with the access to promotions and networks. The trainings and courses are tailored to the needs of companies and are developed and designed by training providers.

Our analysis shows that there are various communication channels that can be applied to connect stakeholders in learning ecosystems. These channels can be used in combination These include:

- **Regular meetings and forums** where stakeholders can come together to discuss and exchange ideas, share progress updates, and address any challenges or concerns;

- **Online platforms and portals** where stakeholders can access information, resources, and collaborate virtually. These platforms can facilitate discussions, document sharing, and provide a central hub for communication.
- **Working groups and task forces** comprised of representatives from different stakeholder groups can focus on specific areas, allowing for in-depth collaboration and problem-solving.
- **Surveys and feedback mechanisms** allow to gather input and insights from stakeholders. This can help identify areas for improvement, gather feedback on policy effectiveness, and ensure continuous engagement.
- **Partnerships and collaborations on specific projects** can foster closer relationships, enhance communication, and further promote shared goals and outcomes.

In some cases, the stakeholders are connected through the **local workforce development boards** which meet on a regular basis throughout the year. They develop multi-year local strategic and operational plans. Many initiatives report having regular dedicated meetings and workshops aiming to share updates on the progress with their participants. **Monitoring boards** are often established to keep track of the overall progress based on systemised data from specific elements of an initiative.

Text Box 4-5: Co-designing the initiative with all key stakeholder groups by SLIM, Netherlands (Policy profile B25)

The case of SLIM demonstrates active stakeholder involvement in the design, implementation, and evaluation of the initiative. During the design phase, panels with SMEs were organised to determine if the ideas of the policy makers were relevant and feasible. There was also an extensive contact with employers' organisations, further ensuring the initiative's relevance for its intended beneficiaries. Overall, policy decisions were made while consulting key relevant organisations. Active stakeholder engagement at all stages of initiatives thus suggests being another crucial factor enabling their success

4.3.2. Dimension B: Learners

Within the "Learners" dimension, special attention was paid to the factors that are expected to create favourable conditions for learners to engage in up- and reskilling activities. We specifically looked at the opportunity for learners to determine their own learning path, career guidance and assistance with learning, as well as access to learning infrastructures and the recognition of learning. The Figure below provides a summary of the key insights per indicator. We then address each of the indicators in detail.

Dimension B: Learners

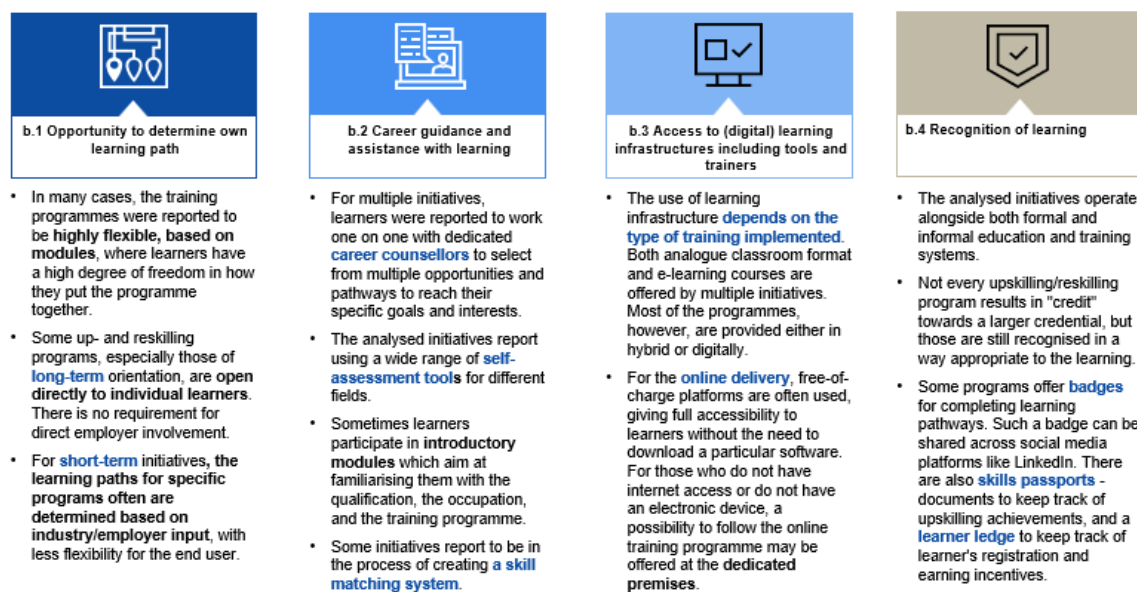


Figure 4-10: Key insights per indicator within Dimension B "Learners"

b.1 Opportunity to determine own learning path

The current indicator examined to what extent the up- and/or reskilling activities in the context of a specific policy initiative offer the learners an opportunity to determine their own learning path, including milestones for performance measurement. 49% (23 out of 47 initiatives) reported to agree that such opportunities are offered by their respective initiatives. 28% (13 out of 47) reported to strongly agree with the above. 6% (3 out of 47 initiatives) disagreed, with none of the initiatives being associated with strongly disagreeing with the statement. Interestingly, 17% (8 out of 47 initiatives) could not either agree or disagree.

Although courses are typically recommended to learners to best match the desired career pathway, learners are often welcome to take any of the available courses and develop their own learning path. In many cases, the training programmes were reported to be **highly flexible, based on modules**, where learners have a high degree of freedom in how they put the programme together.

Some up- and reskilling programs, especially those of long-term orientation, are **open directly to individual learners**. There is no requirement for direct employer involvement in terms of identifying the program or skills in which a learner must engage. By ensuring that programs are connected to skills gaps within industry, a learner can take those skills back to their workplace or choose to pursue another job. An assessment-first approach allows the learner to understand their skill gaps and focus only on what they have yet to learn. At the same time, **for short-term initiatives, the learning paths for specific programs often are determined based on industry/employer input**, and those typically do not provide flexibility to the end user to determine their own learning paths.

Text Box 4-6: Supporting freedom of choice for learners by STAP-budget, Netherlands (Policy profile B24)

The initiative offers a high degree of freedom when it comes to the choice of individual learners regarding what training to follow and when. The initiative does not involve employers and allows both the employed and unemployed learners to choose their own ways of learning. The initiative is meant for a broad audience with a wide diversity of training that could potentially qualify for support. It aims to stimulate personal growth and development of learners and implies full coverage of the training costs via public funding, within a certain maximum amount per year. For many participants (40%), this initiative was reported to be the only way how to follow the desired training. With this approach, the demand for this initiative significantly exceeds its budget, and it can accommodate only a limited part of the overall demand.

Many initiatives explicitly encourage the provision of **feedback by learners**. Many of the courses include evaluation of the content learned. Based on the collected inputs, the decisions can be made on subsequent changes in the courses/programme, if needed. Negative learner feedback may sometimes lead to the elimination of a certain course/training provider from the initiative.

Text Box 4-7: Career guidance by Virittämö Employment Service (Digital Helsinki), Finland (Policy profile B11)

Every participant is reported to grow to a certain role during their working period. The approach is holistic and needs-based. Virittämö's seven-month programme includes upskilling through everyday tasks, real projects, formal courses and peer-to-peer learning. An important part is that the participants are coached to their coming role in the open job market through career guidance & job search skills training. Supporting functional capacity and work ability is also part of the package for those who need it. The idea is to create an individual path for every participant based on individual needs and requirements of the job market.

b.2 Career guidance and assistance with learning

The current indicator examined to what extent the initiatives offer the learners career guidance and assistance with learning, including self-assessment opportunities. 47% (22 out of 47 initiatives) agreed with the presence of the above, while 28% (13 out of 47 initiatives) strongly agreed with it. 15% (7 out of 47 initiatives) could not either agree or disagree. 9% (4 out of 47 initiatives) disagreed and thus were not able to confirm the presence of career guidance and assistance with learning in their respective initiatives. For one initiative, a response of "strongly disagree" was received.

For multiple initiatives, learners were reported to work one on one with dedicated **career counsellors** to select from multiple opportunities and pathways to reach their specific goals and interests. Counsellors can help learners explore their interests, complete assessments, and continue supporting learners in their pathways. Some initiatives reported having a **dedicated mentor** on every course whose aim is to help the students through the course, and also to provide guidance on career opportunities. Mentors enrich courses with the examples from their career and motivate learners to progress in their learning and give advice on finding the job that fits them best. It is reported to be a valuable service for many young people looking to enter the labour market and for mature learners looking to transition to a new career or sector. In addition, the analysed initiatives report using a wide range of **self-assessment tools** for different fields.

Text Box 4-8: Upskilling programs organised by the Lithuanian Public Employment Service (PES), Lithuania (Policy profile B20)

Comprehensive assistance is provided when helping PES client to choose the profession that fits personal interests as well as labour market needs. A list of priority professions and competencies is prepared and used in cases when advising the clients about the professions demanded in the labour market. Career guidance is provided by PES career counsellors who apply various tools and self-assessment tests.

Sometimes learners participate in **introductory modules** which aim at familiarising them with the qualification, the occupation, and the training programme. These modules are competence-based and are oriented towards a combination of competencies from standards, thus learners are better aware of concrete learning outcomes which they can expect to reach. Some initiatives report to be in the process of creating a **skill matching system**. They are testing different approaches, including AI-based, for matching individual skill needs with available course modules. In parallel, traditional matching and advice systems are still used.

In some cases, however, career guidance and assistance with learning are not the primary focus of the initiative. For example, sometimes, participants within the courses already have an established career, and trainers may not be from the same industrial sectors as their participants. However, trainings then still offer moments of thinking about the progress learners made. Some also include opportunities for learners to specify medium and long-term goals concerning implementing strategies based upon the new knowledge.

b.3 Access to (digital) learning infrastructures including tools and trainers

The current indicator explores to what extent the up- and/or reskilling activities in the context of a specific policy initiative offer the learners access to the learning infrastructures including tools and trainers. The learning infrastructures here primarily refer to the digital infrastructures including, among others, electronic devices, communication applications and internet accessibility for learners. However, we also address the broader scope of learning infrastructures where relevant.

Most of the analysed initiatives, namely 51% (24 out of 47 initiatives) reported to strongly agree with the presence of the relevant infrastructures. 45% (21 out of 47) agree with the above. None of the analysed initiatives reported to disagree or strongly disagree with the statement. The use of learning infrastructures **depends on the type of training implemented**. Both analogue classroom format and e-learning courses are offered by multiple initiatives. Most of the programmes, however, are provided either partially (hybrid) or fully digitally/online.

Text Box 4-9: Access to digital learning infrastructure by kood/Jõhvi, Estonia (Policy profile B10)

The learners get full support in getting the digital learning infrastructure, as they are provided with a laptop and overall learning environment. Additionally, there is a possibility to work on-site in a school building located in Jõhvi, Estonia. The five-story school building is equipped with study floors, meeting rooms, dormitory floor, kitchens, and other facilities.

For the **online delivery**, free-of-charge platforms are often used, giving full accessibility to learners without the need to download a particular software. For those who do not have internet access or do not have an electronic device, a possibility to follow the online training programme may be offered at the **dedicated premises**. Through the online

platforms, learners can chat with the trainers, so that the queries they might have can be addressed. Similarly, they may approach the training coordinator, who will offer further support depending on the learners' query.

Offering training in a digital way is often associated with high attractiveness for learners. While there is 'no one best way to do things' and the best solution always depends on a specific context, in general, however, it was reported that offering training in a digital way considerably increases the feasibility for potential participants to engage in it. Digital up- and reskilling activities provide an opportunity to learn when and where the learners prefer to do it themselves. The associated benefits include, among others, better reach, high scalability, 24-hour access, and enhanced learner engagement. Digital delivery methods allow for having individual consultations with trainers, which is an effective way of receiving feedback and information from people with experience in the relevant fields. These factors proved to be particularly beneficial during COVID-19.

Text Box 4-10: Online and hybrid delivery methods by Canadian Polytechnics, Canada (Policy profile B36)

The prevalence of online and hybrid delivery methods increased significantly in response to the Covid-19 pandemic. Institutions have held on to this infrastructure and are now capable of offering nearly the whole spectrum of programming online. Though learners have largely returned to campus, the digital infrastructure accumulated over the pandemic now allows for a quick pivot to e-learning when necessary. Access is provided to all necessary software, learning infrastructure and tools to learners. Over 500 software programs can be made available to learners including the Microsoft suite, Adobe Suite, AutoCAD Suite, Accounting software and many more. The trainers are available whether the course is offered online in synchronous or asynchronous mode, in a hybrid format, or in Flex Mode (allows the students to select from class to class if they are participating in-person, online synchronously or online asynchronously).

b.4 Recognition of learning

The current indicator analyses to what extent the up- and/or reskilling activities in the context of specific initiatives offer the learners appropriate recognition of their learning efforts (e.g., certificate, diploma, digital badge etc.). Most of the analysed initiatives, namely 57% (27 out of 47 initiatives) strongly agree with the above. 32% (15 out of 47 initiatives) reported to agree with the statement. 2% (1 out of 47 initiatives) reported to disagree and another 2% (1 out of 47 initiatives) to strongly disagree with the posed statement, thereby signalling no presence of the recognition of learning in the respective initiatives.

The analysed initiatives operate alongside both formal and informal education and training systems. Not every upskilling/reskilling program results in "credit" towards a larger credential, but those are still recognised in a way appropriate to the learning. Some programs offer **badges** for completing learning pathways. Such a badge can be shared across social media platforms like LinkedIn. There are also **skills passports** - documents to keep track of upskilling achievements, and a **learner ledge** to keep track of learner's registration and earning incentives.

Text Box 4-11: Singapore Workforce Skills Qualifications (WSQ) by SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

SSG had introduced the Singapore Workforce Skills Qualifications (WSQ) which is a national credential system that trains, develops, assesses and certifies skills and competencies for the workforce. WSQ-accredited courses take reference from the skills developed under the Skills Frameworks. The Skills Framework provides key information on

the job roles and skills that an individual needs to perform in various job tasks and to stay transferable. WSQ is underpinned by a quality assurance framework. From developing Technical Skills and Competencies and Critical Core Skills, to approving training providers and awarding WSQ qualifications, dedicated criteria are applied to ensure the necessary standards and delivery. This system has been established to help build a strong training infrastructure that supports Singapore's workforce development.

Some of the initiatives reported that even though it is not a direct objective of the funding, companies sometimes take the initiative to develop various forms of **certificates** in relation to the programmes that they start with the funding. There are also collaborations starting to validate these certifications. Learners receive certificates upon concluding certain level of a learning journey. However, it was suggested that **accreditation** would be preferable in certain cases on a national/EU level. At the same time, it was reported to be a lengthy and complicated process, which may not be suitable for curricula that are rapidly changing based on external environment.

Text Box 4-12: Microcredentials by Canadian Polytechnics, Canada (Policy profile B36)

There is an increased focus on the "stackability" of microcredentials. This refers to the concept of learners being able to stack multiple "bite-sized" credentials and apply them towards the attainment of a more "macro-level" credential like a degree, diploma, or certificate. Individual courses will provide the learners with recognition within their transcripts that they have completed them. Workshops and other short-burst learning may be recognised with Certificates of Participation or Certificates of Completion. For lengthier programs, Certificates, Graduate Certificates, Diplomas, Advanced Diplomas and Degrees are provided.

Content is widely accessible in this digital age. However, authentic assessment and credentials to reliably demonstrate competency to employers can be ensured mainly only by post-secondary institutions. Yet, this is being challenged through recognisable companies offering their own badges for learning (including Google and Microsoft). That is why polytechnics need to continually meet industry's needs for just-in-time learning or they risk being left behind.

4.3.3. Dimension C: Funding

Within the "Funding" dimension, we addressed the availability of funding to support SMEs, as well as the roles of specific types of funding including public funding, private funding, and co-funding by learners. We aimed to explore how the funding of up- and reskilling initiatives is typically organised, and whether the specific sources of funding have impact on the performance of these initiatives. The analysis is thus explicitly focused on the sources of funding rather than volumes. Finally, we also address the sustainability of funding and the alignment of different funding types. The Figure below provides a summary of the key insights per indicator. We then address each of the indicators in detail.

Dimension C: Funding

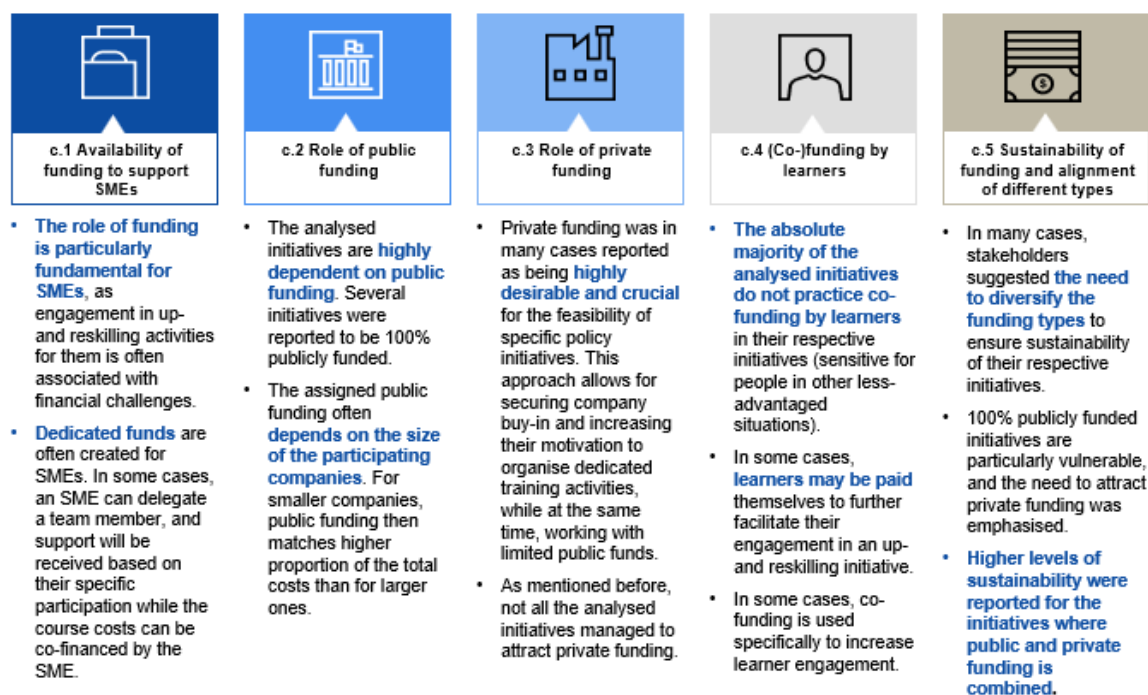


Figure 4-11: Key insights per indicator within Dimension C "Funding"

c.1 Availability of funding to support SMEs

The current indicator addressed the role of funding of specific initiatives in supporting SMEs (small and medium-sized enterprises) with their up- and reskilling policy activities. 45% (21 out of 47 initiatives) reported this role to be highly important in their respective initiatives. 19% (9 out of 47 initiatives) indicated that their respective initiatives still played an important role in supporting SMEs. For 23% (11 out of 47), no explicit focus on supporting SMEs was reported, while for 13% (6 out of 47 initiatives), it was reported to be not applicable to the context of those particular initiatives.

Text Box 4-13: Enhanced Training Support for SMEs (ETSS) by SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

To make learning affordable and easily accessible, and to encourage SMEs to upskill and reskill their employees, enhanced course fee subsidies of up to 70% - 90% are made available to SMEs for SSG-supported courses under the Enhanced Training Support for SMEs (ETSS). Absentee Payroll funding is also made available to encourage employers and help them to defray manpower costs incurred when they send their employees for certifiable skills training.

It was confirmed by the analysis that **the role of funding is particularly fundamental for SMEs**, as engagement in up- and reskilling activities for them is often associated with financial challenges. **Dedicated funds** are often created to remove a financial barrier for SMEs willing to send their employees on up- and reskilling programmes. In some cases, an SME can delegate a team member, and support will be received based on their specific participation while the course costs can be co-financed by the SME.

Text Box 4-14: Work Exposure Scheme by Jobsplus, Malta (Policy profile B23)

The fact that Jobsplus offers its courses for free and that Jobsplus offers the flexibility to tailor make the training for their needs is highly beneficial for the small and medium enterprises. Through the Work Exposure Scheme, where the majority of employers are micro, small and medium, employers are given an opportunity to evaluate the trainees' abilities without adding to the company's financial burden. If they retain the trainee after the end of the scheme, employers have the possibility of seeking further financial assistance to recruit the trainee through the Access to Employment Scheme also administered by Jobsplus, in case they fulfil the eligibility criteria.

c.2 Role of public funding

The current indicator examined the role of public funding (including micro-funding for learners) in the context of specific initiatives. 49% (23 out of 47 initiatives) reported this role to be highly important and are thus driven by public funding (more than 75% of the total funding of an initiative refers to public funding). For 15% (7 out of 47 initiatives), the role of public funding is between 50% and 75% of the total funding. For 13% (6 out of 47 initiatives), the role of public funding is between 25% and 50%. For 15% (7 out of 47 initiatives), less than 5% of the total funding comes from public funding. As can be seen from this division, for most of the analysed initiatives, public funding represents the main funding source (i.e., above 50%).

The analysed initiatives are **highly dependent on public funding**. Several initiatives were reported to be 100% publicly funded. In some cases, however, public co-financing was not permitted by the respective initiatives. The assigned public funding often **depends on the size of the participating companies**. For smaller companies, public funding then matches higher proportion of the total costs than for larger ones. If a worker is placed in a work-based learning opportunity with an employer, the employer typically must pay a portion of that cost of training.

Text Box 4-15: Public funding for Skillnet Ireland, Ireland (Policy profile B16)

In 2021, Skillnet Ireland invested approximately EUR 60.2 million to support talent development in Ireland. This investment included EUR 37.7 million channelled from the National Training Fund managed by the Department of Further and Higher Education, Research, Innovation and Science. It also included enterprise contributions for a total of EUR 22.5 million. This amounts to approximately 40% of private investment.

c.3 Role of private funding

The current indicator explored the role of private funding (i.e., funding coming from the private sector) in the context of the analysed initiatives. For a large part of the sample, namely 34% (16 out of 47 initiatives), private funding accounted for less than 5% of the total funding. For 30% (14 out of 47 initiatives), the share of private funding was between 5 and 25%. For 23% (11 out of 47 initiatives), the share of private funding was between 25 and 50%. Only 9% (4 out of 47 initiatives) reported a share of public funding to be higher than 75% of the total funding.

Private funding was in many cases reported as being **highly desirable and crucial** for the feasibility of specific initiatives. This approach allows for securing company buy-in and increasing their motivation to organise dedicated training activities, while at the same time, working with limited public funds. The involved companies are of different sizes, with larger companies typically providing higher contributions. Private companies get engaged in up- and reskilling initiatives, including providing the financial support, as they

acknowledge the benefits associated with their participation, namely getting opportunities to advance their current workforce and/or get access to the qualified additional workforce to match their skills gaps. As mentioned before, not all the analysed initiatives managed to attract private funding. In those cases, stakeholders often expressed a clear need to consider engaging companies in the future, as that would make the initiatives more sustainable, strengthen the link to the industry and is likely to increase the engagement of private sector also in other aspects of the initiatives (e.g., focus, content etc.).

c.4 (Co-)funding by learners

The current indicator examines the role of (co-)funding by learners, i.e., financial contributions by the learners themselves for the opportunity to engage in up- and reskilling, in the context of the analysed initiatives. For most of the initiatives from the sample, namely 79% (37 out of 47 initiatives), co-funding by learners accounted for less than 5% of the total funding. For 17% (8 out of 47 initiatives), it was between 5% and 25% of the total funding. None of initiatives from the sample reported having a share of co-funding by learners higher than 75% of the total funding.

As outlined above, **the absolute majority of the analysed initiatives do not practice co-funding by learners** in their respective initiatives. This approach may be particularly sensitive for unemployed people and people in other less-advantaged situations. The requirement to co-fund their learning could jeopardise the feasibility of their participation. In many of the analysed cases, learner participation is therefore free of charge. In some cases, the costs need to be (partially) paid by their employers. In other cases, **learners may be paid** themselves to further facilitate their engagement in an up- and reskilling initiative.

Text Box 4-16: 'Pocket money' for learners by Jobsplus, Malta (Policy profile B23)

The case of Jobsplus training initiatives in Malta illustrates that learners can sometimes be paid for engaging in learning activities. For people with low income, learning activities, even the ones for which the costs are fully covered by public funds, can still be unaffordable, as they often need to use their time to work to earn their living. For those people, a concept of 'pocket money' was introduced implying financial support to cover the time spent on learning activities (which otherwise would need to be spent on work). Jobsplus offers a wide diversity of courses ranging from basic literacy skills to soft skills and to more technical courses.

In some cases, however, co-funding by learners could represent a favourable option, as it typically makes learners more dedicated to the learning activities they follow and further stimulates them to finish the course. This observation is supported by the monitoring statistics of the initiatives, often showing **better participation and engagement rates when learners need to financially contribute themselves**. The prices/co-funding shares by learners, however, need to remain affordable, as otherwise it would jeopardise the feasibility of their participation. In some cases, learners are offered an opportunity to get their costs reimbursed upon the completion of courses. Co-funding by learners is thus often used specifically to increase learner engagement rather than to explicitly secure additional funding for an initiative. This option can only be applied to target audiences that are capable of paying the training fee, e.g., currently employed individuals.

Text Box 4-17: Reimbursement on completion by Futureskills prime, India (Policy profile B42)

In addition to courses, tools and trainers, Digital Skilling is made Affordable for all as learners can upskill in 10 of the most in-demand technologies and earn incentives up to 14,500 rupees. The program covers Foundation, Bridge and Deep Skilling courses across technologies, including AI, IoT, Big Data Analytics, Cloud Computing, Cybersecurity etc. The government now directly 'funds the ambitions' of eligible learners enabling them to navigate careers in these fascinating technology domains. While the platform offers numerous industry-handpicked courses and pathways, many of them free of cost, the incentive program helps candidates upskill in the paid technical courses while earning reimbursement on completion.

c.5 Sustainability of funding and alignment of different funding types

The current indicator examined whether the funding available for the analysed initiatives can be considered sustainable (i.e., if there is certainly regarding its continuity in time, with different funding types well aligned). 32% (15 out of 47 initiatives) agreed and 30% (14 out of 47 initiatives) strongly agreed with the statement above. At the same time, 11% (5 out of 47 initiatives) disagreed, and another 11% (5 out of 47 initiatives) strongly disagreed with the presence of the sustainability of funding and the alignment of different funding types in their respective initiatives.

In many cases, stakeholders suggested **the need to diversify the funding types** to ensure sustainability of their respective initiatives. 100% publicly funded initiatives are particularly vulnerable, and the need to attract private funding was emphasised. **Higher levels of sustainability were reported for the initiatives where public and private funding is combined** in comparable proportions (e.g., 50/50 or 60/40). The continuous alignment of public and private funding efforts increases trust and motivation of the engaged parties. The engagement of the public sector sends a clear signal of support and (often long-term) commitment at the policy level to the private sector. At the same time, the engagement of the private sector (and particularly private funding) confirms a high practical relevance of the initiative in question. In addition, whenever relevant (since it is not applicable to all target groups), the concept of co-funding by learners could be considered to maximise the commitment of learners themselves, as was outlined above.

Text Box 4-18: Public funding for Skillnet Ireland, Ireland (Policy profile B16)

Skillnet Ireland has been operating since 1999. It is co-funded from the National Training Fund through the Department of Further and Higher Education, Research, Innovation and Science. The funding is available for Skillnet Ireland through the National Training Fund. The 2019-2020 Evaluation found that Skillnet Ireland model is highly sustainable. The provision continues to be of high relevance with a large proportion of firms reporting that they would experience difficulty in accessing training of a similar quality elsewhere. There is a high level of long-term engagement of member companies, and continuously high level of demand.

4.3.4. Dimension D: Regulatory Framework

The "Regulatory Framework" dimension addresses the level of integration of specific initiatives into the overall skills strategy of a country (or the EU), as well as their integration into the digital and green regulatory frameworks, awareness raising, and the overall availability of learning infrastructures including tools and trainers. The Figure below provides a summary of the key insights per indicator. We then address each of the indicators in detail.

Dimension D: Regulatory Framework



Figure 4-12: Key insights per indicator within Dimension D "Regulatory Framework"

d.1 Integration into the overall skills strategy/agenda of the country/EU

The current indicator explores to what extent the analysed initiatives are well integrated into the overall skills strategy of a country (and for the EU initiatives, with the overall skills strategy of the EU). 41% (19 out of 47 initiatives) report to strongly agree and 30% (14 out of 47 initiatives) to agree with the above. 9% (4 out of 47 initiatives) report to disagree, while 2% (1 out of 47 initiatives) to strongly disagree with the presence of the integration. A major part of the analysed initiatives thus report to be **well embedded into the overall skills strategy/agenda** at the national and (for the EU initiatives) the EU levels. An overview of specific national strategies and their scopes is provided in section 2.2. of this Report.

A national (and EU-wide) up- and reskilling vision and strategy, developed by policy makers, is reported to play a crucial role in **uniting stakeholders and fostering collaborative efforts** in the up- and reskilling landscape. By providing a shared framework and direction, it enables governments, private sector entities, education and training providers, social partners and other labour market organisations, and learners to align their efforts towards a common goal. It facilitates knowledge sharing, resource pooling, and the development of innovative solutions to address the challenges of a rapidly changing labour market.

Furthermore, a well-defined up- and reskilling strategy demonstrates **the commitment and long-term orientation of the government** towards supporting the workforce and the economy. It signals to the private sector that the government recognises the importance of investing in human capital development and is dedicated to creating an environment conducive to up- and reskilling initiatives. This commitment, in turn, is suggested to foster trust and confidence among companies, encouraging them to actively participate in up- and reskilling efforts, collaborate with educational institutions, and invest in the continuous development of their employees.

The **benefits** of a national (and EU-wide) up- and reskilling vision and strategy extend to various stakeholders. For the private sector, it provides a clear roadmap for identifying and addressing skill gaps within their organisations. By aligning their up- and reskilling initiatives with the national strategy, businesses can ensure that their workforce possesses the necessary skills to remain competitive in the new age.

Education and training providers also benefit from a coordinated up- and reskilling strategy. It allows them to align their programs and offerings with the identified skills needs, ensuring that learners receive relevant and high-quality education and training. Additionally, a national strategy enables providers to collaborate with other institutions, share best practices, and optimise resource allocation. Such collaboration is more likely to lead to the development of comprehensive and effective up- and reskilling programs that meet the evolving demands of the labour market.

For learners, a national (and EU-wide) up- and reskilling vision and strategy also provides numerous advantages. It typically ensures that learners have better access to a wide range of up- and reskilling opportunities that are aligned with industry needs. This empowers individuals to acquire new skills, enhance their employability, and adapt to changing job requirements. Moreover, the presence of a coordinated strategy often ensures that up- and reskilling programs are made affordable, accessible, and of high quality, enabling learners to make informed choices and pursue learning pathways that align with their career aspirations.

Text Box 4-19: SkillsFuture movement by SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

SkillsFuture Singapore (SSG) drives and coordinates the implementation of the national SkillsFuture movement. It promotes a culture and holistic system of lifelong learning through the pursuit of skills mastery and strengthens the ecosystem of quality education and training in Singapore. Its mission is to enable individuals to learn for life, pursue skills mastery and develop fulfilling careers, for a future-ready Singapore. The SkillsFuture initiative operates at a national level and complements other sectoral level programmes.

d.2 Integration into the digital regulatory framework

The current indicator examines to what extent the policy initiative is integrated specifically into the overall *digital* strategy of a country (and in some cases, of a region). 36% (17 out of 47 initiatives) reported to agree and 28% (13 out of 47 initiatives) reported to strongly agree with the above, together comprising the majority of the analysed initiatives. The analysed initiatives, therefore, in most cases are reported to be **well integrated into broader digital regulatory frameworks**. Another 28% (13 out of 47 initiatives) could not either agree or disagree. 6% (3 out of 47 initiatives) disagreed and 2% (1 out of 47 initiatives) strongly disagreed, suggesting a lack of integration into the overall digital regulatory framework for their respective initiatives.

As mentioned before, the analysis did not explicitly aim to cover the initiatives focussing on digital skills, and the sample is diversified, including focus on digital and a wide variety of other types of skills. Nevertheless, digital aspects often prove to be highly embedded in up- and reskilling activities, even if those are not directly related to the ICT domain. The analysed initiatives **may not always be directly integrated into a digital strategy of a country**, but they **still contribute to the digitalisation of economy** by employing digital tools and approaches for training other types of skills.

Text Box 4-20: Regional labour strategy and Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security, Austria (Policy profile B1)

This initiative was launched as part of the digitisation initiative of the province of Upper Austria in connection with an existing funding model. It is currently an existing measure of the Pact for Work and Qualification in Upper Austria. The regional skilled labour strategy Workplace Upper Austria 2030 serves as the strategic framework.

Text Box 4-21: National digital strategy and SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

SSG is reported to be well integrated into the overall digital strategy of the country. An initiative of SkillsFuture, TechSkills Accelerator (TeSA) aims to build and develop a skilled Information and Communications Technology (ICT) workforce for Singapore's digital economy. TeSA is driven by the Infocomm Media Development Authority (IMDA) and in collaboration with the industry, SkillsFuture Singapore, Workforce Singapore and the National Trades Union Congress. The integration of SSG into the overall digital strategy of the country is also exemplified through the Industry Digital Plans (IDPs), where SSG-funded training programmes required to equip employees with the right skillsets at each stage of their digitalisation journey. The IDPs are roadmaps that ensure that SMEs are provided with a step-by-step guide to identify digital solutions and training programmes to equip employees with the right skillsets at each stage of their digitalisation journey.

d.3 Integration into the green regulatory framework

The current indicator explored to what extent the initiatives are well integrated into the overall green strategy of a country (and in some cases, of a region). 23% (11 out of 47 initiatives) reported to agree and 13% (6 out of 47 initiatives) to strongly agree with the above, thereby suggesting the presence of good integration into the overall green regulatory framework in their respective initiatives. 47% (22 out of 47 initiatives) could not either agree or disagree, which could be explained by a lack of explicit focus of many of the analysed initiatives on green skills. 11% (5 out of 47 initiatives) disagreed and 6% (3 out of 47 initiatives) strongly disagreed with the above, suggesting the absence of such integration.

Green skills refer to the knowledge, abilities, and competencies required to address environmental challenges and contribute to the development of a low-carbon and resource-efficient economy. The EU has recognised the importance of green skills, and it increasingly becomes a high priority in up- and reskilling programs. However, this trend is not exclusive to the EU. Other parts of the world, such as North America, Asia and Australia witness a similar trend.

Text Box 4-22: National strategy for green transition and Green Skills, Denmark (Policy profile B8)

In Denmark, there is an ambitious national strategy for the green transition, and a clear national strategy to provide more skilled workers. There is also a national policy-level recognition that these two are closely related. There is a consensus about a lack of skilled labour, and that upskilling and reskilling are key to obtain the labour that companies demand, especially for the green transition. The Green Skills initiative is well integrated into the national strategy, and it has provided several best practices for evaluations about upskilling.

Text Box 4-23: National green strategy and SkillsFuture Singapore (SSG), Singapore (Policy profile B45)

To support Singapore enterprises in developing new capabilities in sustainability, SSG partnered Enterprise Singapore (EnterpriseSG) and Singapore Business Federation (SBF) to jointly launch a foundational sustainability playbook titled "Sustainability Playbook for Enterprises: Embarking on your Environment, Social and Governance (ESG) journey". This step-by-step resource provides enterprises with insights into sustainability concepts and trends. It also compiles a list of relevant resources including (a) self-help guides, (b) assessment tools, (c) training course and programmes, and (d) grants and loans. Enterprises can use the Playbook to assess the organisation's ESG readiness and sustainability performance and take action to embark on the sustainability journey.

Furthermore, to bring together industry partners and training providers to develop green skills in the local workforce that are relevant to industry needs, a Green Skills Committee was set up by the Ministry of Trade and Industry, in partnership with SkillsFuture Singapore (SSG). For a start, the Committee will focus on immediate needs such as training workers to conduct sustainability reporting and equipping them with the skills to operate in new growth areas in the energy sector, such as renewable energy and energy storage systems. It would continue to work closely with the industry to identify new demand areas for green skills as this platform grows.

For many of the analysed initiatives, while those **may not be directly integrated** into the overall green strategies of their countries, they **still contribute** to the preparation of specialists for the greenification of the economy.

Text Box 4-24: NETWORK Q 4.0, Germany (Policy profile B13)

While green content was not an explicit objective of the initiative, its courses turned out to be highly successful also for the greenification of the economy. Vocational trainers participating in the initiative are explicitly looking for green skills to train their apprentices to succeed within the green transformation. The growing focus on green transformation in policy and society, especially related to energy and technology, makes the Network Q 4.0 courses relevant to fill also this gap.

Text Box 4-25: Thought leader for green transition, Future Skills Centre (FSC), Canada (Policy profile B37)

While there is no single "green strategy" in Canada, FSC was reported to become a recognised leader in thinking about the skills and workforce development aspects of the shift toward a net-zero carbon economy. This includes participating in and leading with government partners key discussions on green building, and skill and workforce scenarios as Canada moves to net zero in the years ahead.

d.4 Awareness raising

The current indicator examines to what extent the initiatives pay sufficient attention to the awareness raising activities (i.e., promotion activities including dedicated marketing budgets) to inform the target audience about the opportunities they offer. 55% (26 out of 47 initiatives) reported to agree and 32% (15 out of 47 initiatives) to strongly agree with the above. 4% (2 out of 47 initiatives) reported to disagree, suggesting only limited efforts directed towards awareness raising.

For some initiatives, particularly the new ones, there is often a need for **full-scale promotional campaigns** to make sure the target audience is properly reached. Some

initiatives organise dedicated kick-off events, roadshows, and press conferences to maximise their visibility. Besides websites, some initiatives have active social media channels that are used not only for promotional purposes, but also for general communication with the target group and feedback collection. Furthermore, training providers also raise awareness about the respective initiatives where relevant.

Text Box 4-26: National platform by Jobsplus, Malta (Policy profile B23)

Last year, Jobsplus has re-visited its website and now courses have been given more visibility on the website. Besides promoting its own courses, Jobsplus also promotes other courses run by private service providers. This idea is for Jobsplus' website to be the national platform where learners may access all local training opportunities. Further promotion and advertising on all measures is also being undertaken.

Text Box 4-27: Multiple communication channels by fit4internet, Austria (Policy profile B2)

fit4internet uses different channels to raise awareness: own TV formats, online digitisation breakfasts, online fireside chats with top decision-makers, Women4Digital initiative, the Digital Skills Barometer survey for different target groups, newsletters, streamed panel discussions, social media, etc.

For some initiatives, however, **no major promotional efforts are required**. Usually those are more **mature**, well-known to the target audience and already highly popular.

Text Box 4-28: High demand for STAP-budget, Netherlands (Policy profile B24)

The case of STAP-budget initiative shows that if the demand for a specific initiative significantly exceeds the supply, there may not be a need to promote the initiative. For STAP-budget, even with limited awareness raising and promotion activities, the demand still by far exceeds the available budget, which often results in a negative publicity for the initiative. The initiative gets compared with winning a lottery. That, in turn, raises the debate of equal chances for everybody and signals a more advantageous position for more (digitally) skilled & equipped people for getting the subsidy. While the coordinating authorities may not have extensive promotion campaigns for the initiative, it still often gets into the headlines, which, in turn, ensures broad awareness raising, but in an alternative way.

d.5 Availability of learning infrastructures including tools and trainers

The current indicator explored to what extent the initiatives provide access to learners to the appropriate learning infrastructure including tools and trainers. 49% (23 out of 47 initiatives) reported to strongly agree and 43% to agree with the above, together comprising a major part of the analysed initiatives. 2% (1 out of 47 initiatives) reported to strongly disagree with the statement. In general, the analysed initiatives thus were reported to provide to have a high availability of learning infrastructures.

These infrastructures are essential for providing learners with the necessary resources and support to acquire new skills and knowledge. In **physical** training, learning infrastructures encompass well-equipped training centers, classrooms, and laboratories that offer hands-on experiences and practical learning opportunities. These physical spaces provide a conducive environment for learners to engage in interactive activities, collaborate with peers, and receive guidance from trainers. On the other hand, **digital** training relies on virtual learning platforms, online resources, and digital tools to deliver

training content remotely. These digital infrastructures enable learners to access learning materials anytime and anywhere, fostering flexibility and accessibility. Moreover, digital training platforms often incorporate interactive elements, such as simulations and gamification, to enhance engagement and facilitate self-paced learning.

Regardless of the mode of training, the role of **trainers** is paramount. Trainers serve as facilitators, mentors, and subject matter experts, guiding learners through the learning process and providing personalised support. Therefore, investing in robust learning infrastructures, both physical and digital, and ensuring the availability of competent trainers is essential for the effectiveness of up- and reskilling initiatives.

Text Box 4-29: Learning infrastructures at Canadian Polytechnics, Canada (Policy profile B36)

Learners are reported to be exposed to the most up-to-date, industry-grade equipment, technologies, and materials. This ensures that graduates are prepared to work with industry standard tools and equipment upon completion of their studies. Instructors generally come with significant experience working in their industry of expertise, with smaller class sizes and cohorts allowing for more consistent interactions with trainers. There are continuous investments in capital infrastructure, modern facilities and tools including various labs: robotics, mechatronics, cabin simulator, King Air B200 Simulator, Nursing labs, Animation labs, Camera, TV, Computers, etc. Furthermore, students are supported through the Learning Management System and get access to over 500 software programs.

5. In-depth feasibility assessment for the EU context

Chapter 5 presents the outcomes of the in-depth feasibility assessment for the EU context, implying an assessment of the identified best practices within each of the analysed dimensions in terms of the feasibility of their implementation in the EU Member States and industrial ecosystems.

As was emphasised in *Chapter 4*, the analysed Key Performance Drivers all prove to be relevant for the success of up- and reskilling initiatives. Chapter 4 presented an illustrative overview of the specific **best practices** with regard to how the Key Performance Drivers can be organised to ensure a high performance of an initiative. However, they may not all have an equal priority, which will be addressed in *Chapter 6* when presenting specific policy recommendations.

The current section outlines the results of the feasibility assessment for specific best practices related to the Key Performance Drivers for the EU context. Special attention is thus paid to the potential challenges associated with the analysed best practices when it comes to applying them in the EU Member States. The estimated feasibility levels are presented in the Tables below as “High”, “Medium”, and “Low”. High feasibility means that no serious challenges were identified in the EU context for applying a specific best practice in the EU, and typically this is already a good practice in the EU context. Medium feasibility means that some challenges were identified; however, those can potentially be solved, and then a best practice can still be applied. Finally, low feasibility implies fundamental challenges in the EU context making the applicability of an identified best practice highly unlikely.

The assessment of best practices is structured around the four dimensions of the Key Performance Drivers.

5.1. Feasibility assessment for Dimension A: Stakeholders

Table 5-1 provides the results of the feasibility assessment for the best practices identified within Dimension A: Stakeholders. As can be seen from the Table, almost all of the identified best practices within this dimension can be considered as being highly feasible in the EU context.

Table 5-1: Feasibility assessment of best practices for Dimension A: Stakeholders

Nr	Key Performance Driver	Best practice description (based on section 4.3.1. of the Report)	Feasibility assessment in the EU	Feasibility level
5-1-1	a.1 Role of policy makers	<p>Central role of policy makers:</p> <ul style="list-style-type: none"> Policy makers typically play a central role in organising and coordinating the up- and reskilling initiatives (especially the ones that are of a large scale), representing a linking pin bringing all key stakeholder groups together. Policy makers provide a comprehensive perspective, mobilise resources, and set standards. Their leadership and involvement in up- and reskilling initiatives proves to be crucial for addressing the skills gaps, promoting economic growth, and creating a future-ready workforce. 	<ul style="list-style-type: none"> Having policy makers in the leading role for up- and reskilling initiatives in the EU is not only feasible but also a typical practice (although, there are also initiatives where policy makers do not play a leading role). Across the EU, policy makers have been actively involved in shaping and implementing up- and reskilling initiatives. While the level of engagement may vary among countries, policy makers in the EU have in general recognised the importance of up- and reskilling and have taken steps to prioritise these initiatives. Some countries have demonstrated a higher level of engagement, with policy makers actively leading and driving the up- and reskilling agenda. This level of commitment proves to be crucial for the successful implementation of up- and reskilling policies and the achievement of desired outcomes. Moreover, the practice of having policy makers in the leading role for up- and reskilling policies is not unique to the EU. Many countries around the world have adopted a similar approach, recognising the central role of policy makers in coordinating and driving up- and reskilling initiatives. 	High
5-1-2	a.1 Role of policy makers	<p>Providing expertise and guidance:</p> <ul style="list-style-type: none"> Policy makers often provide overall expertise and guidance for the actual implementation of up- and reskilling initiatives, to make sure those stay relevant for and visible to the target groups, in line with any related changes in employment policies. 	<ul style="list-style-type: none"> The rapidly evolving nature of the labour market and technological and socio-economic developments necessitate that policy makers stay updated and knowledgeable about the latest trends and best practices in up- and reskilling. This enables them to make informed decisions, develop effective policies, and provide strategic direction. While some EU countries have extensive experience and expertise in up- and reskilling initiatives, the level of experience varies across countries. It is crucial for policy makers to continuously upskill themselves to bridge any knowledge gaps and ensure they possess the necessary expertise to effectively address the skills gaps and guide external stakeholders. 	High

Nr	Key Performance Driver	Best practice description (based on section 4.3.1. of the Report)	Feasibility assessment in the EU	Feasibility level
5-1-3	a.1 Role of policy makers	<p>Stimulating private sector to engage:</p> <ul style="list-style-type: none"> Policy makers have a role of stimulating the private sector to invest financial and other resources into further up- and reskilling of the workforce. The central vision set by the government, along with the overall support and commitment from policy makers, serves as a powerful signal to companies that investing in up- and reskilling is not only beneficial for their own growth but is also aligned with the broader national agenda. 	<ul style="list-style-type: none"> Policy makers need to reassure the private sector that up- and reskilling policies will be consistent and long-term oriented. This consistency is crucial for private investors to have confidence in making substantial investments in up- and reskilling initiatives, as they require a significant commitment of resources and time. By providing a stable and predictable policy framework, policy makers can incentivise private investors to actively participate in up- and reskilling initiatives, fostering a collaborative approach towards addressing the skills gaps. The analysis showed that for the EU up- and reskilling initiatives, in most cases, large companies are already actively engaged and provide different forms of support. 	High
5-1-4	a.2 Role of large companies	<p>Serving as a source of information about labour market trends:</p> <ul style="list-style-type: none"> Large companies often serve as a source of information about the current/ anticipated demands in different fields, and specifically their own employment-related needs. 	<ul style="list-style-type: none"> Large companies can provide valuable insights into emerging job roles, technological advancements, and changing skill requirements. This information is essential for designing effective up- and reskilling programs that align with the evolving needs of the labour market. The analysis showed that for the EU up- and reskilling initiatives, in most cases, large companies are already actively engaged in this role. 	High
5-1-5	a.2 Role of large companies	<p>Co-designing the curricula:</p> <ul style="list-style-type: none"> Large companies play a crucial role in co-designing curricula for up- and reskilling initiatives, providing valuable insights into the skill needs of the workforce. 	<ul style="list-style-type: none"> With their extensive industry knowledge and experience, large companies have a deep understanding of the skills and competencies required in the current and future job market. By actively participating in the co-design process, large companies can contribute their expertise to shape the content and structure of training programs. The analysis showed that for the EU up- and reskilling initiatives, in most cases, large companies are already actively engaged in this role. 	High
5-1-6	a.2 Role of large companies	<p>Serving as intermediaries for SMEs:</p> <ul style="list-style-type: none"> Large companies are also reported to serve as intermediaries and multipliers 	<ul style="list-style-type: none"> Large companies possess industry expertise, knowledge and best practices, and are often prepared to go beyond their core mandate and provide guidance to other companies, especially SMEs in their skills development needs. The analysis showed that for the EU up- 	High

Nr	Key Performance Driver	Best practice description (based on section 4.3.1. of the Report)	Feasibility assessment in the EU	Feasibility level
		<p>for further reach out to the SMEs, to conduct the training needs analysis based on the SMEs' business strategies, and to curate/provide courses on relevant in-demand and priority skills.</p>	<p>and reskilling initiatives, in most cases, large companies are already actively engaged in this role.</p>	
5-1-7	a.3 Role of SMEs	<p>Communication of needs:</p> <ul style="list-style-type: none"> Participation in up- and reskilling initiatives allows SMEs to directly communicate their needs to policy makers and large companies. 	<ul style="list-style-type: none"> The analysis showed that for the EU up- and reskilling initiatives, in most cases, SMEs were actively engaged and consulted. The information on their specific needs and requirements was often collected by means of direct or in-direct consultations in the beginning of initiatives and throughout their duration. Sometimes SMEs were involved in co-creation of the curricula, and they allowed for filling in the information gaps left after consultations with large companies. 	High
5-1-8	a.4 Role of education and training providers	<p>Serving as a guarantee for a high quality of training:</p> <ul style="list-style-type: none"> Education and training providers have a role of maintaining trust in curricula and ensuring a high quality of the training courses. 	<ul style="list-style-type: none"> The analysis showed that for most of the addressed EU upskilling and reskilling initiatives, education and training providers played a highly active or a leading role. Education and training providers have established networks and partnerships with employers, industry associations, and experts in various fields. This enables them to gather valuable insights and feedback on the skills and competencies that are required in the workplace. By actively involving employers in the curriculum development process and seeking their input, education and training providers can ensure that their training courses align with real-world needs and prepare individuals for the specific demands of different industries. 	High
5-1-9	a.5 Role of social partners and other labour market organisations	<p>Serving as catalysts of the up- and reskilling actions:</p> <ul style="list-style-type: none"> Allowing to expand the reach of the specific initiatives to a broader audience; Acting as industry intermediaries and having an ability to reach out directly to 	<ul style="list-style-type: none"> Social partners and other labour market organisations, including employment agencies, employer organisations, and trade unions, have a significant role to play in up- and reskilling initiatives in the EU. Their ability to reach out directly to the workforce and companies allows for the expansion of the reach of these initiatives to a broader audience. The analysis showed that this is a regular practice in up- and reskilling initiatives in the EU. 	High

Nr	Key Performance Driver	Best practice description (based on section 4.3.1. of the Report)	Feasibility assessment in the EU	Feasibility level
		the workforce and companies.		
5-1-10	a.5 Role of social partners and other labour market organisations	<p>Promoting projects via diverse channels (i.e., social media, websites, events etc.):</p> <ul style="list-style-type: none"> Social partners (employment agencies, employer organisations, trade unions) possess extensive networks and communication platforms that can effectively disseminate information and raise awareness about up- and reskilling opportunities, ensuring that a wide range of individuals and companies are reached. 	<ul style="list-style-type: none"> Social partners and other labour market organisations can leverage their websites, social media platforms, and newsletters to inform workers about available training programs, eligibility criteria, and the potential career benefits of upskilling and reskilling. They can also organise workshops, seminars, and conferences to educate workers about the importance of continuous learning and provide guidance on accessing up- and reskilling opportunities. The analysis showed that this is a regular practice in up- and reskilling initiatives in the EU. 	High
5-1-11	a.5 Role of social partners and other labour market organisations	<p>Maintaining contacts with leading professionals (e.g. vocational trainers):</p> <ul style="list-style-type: none"> By leveraging their networks, social partners and other labour market organisations can tap into the knowledge and insights of leading professionals, engage them into specific up- and reskilling initiatives to make sure the initiatives are effective and responsive to the changing demands of the job market. 	<ul style="list-style-type: none"> The analysis showed that engaging social partners and other labour market organisations in up- and reskilling initiatives is a regular practice in the EU. 	High
5-1-12	a.6 Interconnections within the learning ecosystem	<p>The engagement of all key stakeholder groups at all stages of an initiative:</p> <ul style="list-style-type: none"> Joining forces allows for building on the strengths of each of the stakeholder groups, and thereby for ensuring the appropriate organisation of the efforts leading to the achievement of the 	<ul style="list-style-type: none"> One of the key benefits of multi-stakeholder collaboration is the pooling of resources and expertise. Each stakeholder brings unique perspectives, knowledge, and resources to the table, which, when combined, create a more robust and comprehensive approach to up- and reskilling. This collaboration allows for the identification of emerging trends, the anticipation of future skill needs, and the development of innovative training methods and programs. It also ensures that 	High

Nr	Key Performance Driver	Best practice description (based on section 4.3.1. of the Report)	Feasibility assessment in the EU	Feasibility level
		objectives set.	<p>initiatives are adaptable to changing circumstances and can quickly respond to new challenges and opportunities in the labour market.</p> <ul style="list-style-type: none"> This collaboration helps to build trust and consensus among stakeholders, leading to more sustainable and long-term solutions for up- and reskilling. The analysis showed that the majority of the analysed EU initiatives demonstrated multi-stakeholder collaboration, implying the engagement of both public and private sectors and key stakeholder groups from those sectors. 	
5-1-13	a.6 Interconnections within the learning ecosystem	<p>Collaboration:</p> <ul style="list-style-type: none"> Companies jointly engage in up- and reskilling activities which allows them to pool their resources, knowledge, and expertise to address common challenges related to workforce development. 	<ul style="list-style-type: none"> There are risks for companies to engage in joint activities with their competitors such as a risk that confidential information about their operations, strategies, or technologies may be shared with competitors, compromising their competitive advantage. Additionally, there may be concerns about potential antitrust issues and the perception of collusion among competitors. These risks, coupled with the lack of a clear comprehensive framework for collaboration for up- and reskilling activities, may jeopardise the adoption of this practice. The Blueprint for Sectoral Cooperation on Skills⁴⁹ recognises the importance of companies collaborating in order to address common skills needs and challenges. It encourages companies to develop innovative solutions, share best practices, and create training programs that meet the evolving needs of the sector. This collaboration can take various forms, such as joint research and development projects, knowledge sharing platforms, and sector-specific partnerships. The Blueprint emphasises the need for companies to work together to ensure a skilled and adaptable workforce that can drive innovation and competitiveness in the sectors. The activities of the Blueprint are, however, limited to specific sectors and projects. 	Medium

⁴⁹ <https://ec.europa.eu/social/main.jsp?catId=1415&langId=en>

Nr	Key Performance Driver	Best practice description (based on section 4.3.1. of the Report)	Feasibility assessment in the EU	Feasibility level
5-1-14	a.6 Interconnections within the learning ecosystem	<p>Developing a connected learning eco-system:</p> <ul style="list-style-type: none"> • It implies a systematic approach where stakeholders communicate with each other, have a joint interaction platform, and share a common vision and objectives. • Various communication channels can be applied to connect stakeholders in learning ecosystems including regular meetings and forums, online platforms, working groups, feedback mechanisms etc. 	<ul style="list-style-type: none"> • The analysis showed that many of the analysed EU initiatives are reported to be highly connected and act as a system (i.e., having a joint vision, objectives, and actions). Alternatively, the initiatives have clear communication mechanisms in place, and exchanges happen on a regular basis. Although not all EU initiatives exhibit the presence of an actual learning ecosystem, it can still be considered a relatively common and a highly desirable practice. 	High

5.2. Feasibility assessment for Dimension B: Learners

Table 5-2 provides the results of the feasibility assessment for the best practices identified within Dimension B: Learners. As can be seen from the Table, almost all of the identified best practices within this dimension can be considered as being highly feasible in the EU context.

Table 5-2: Feasibility assessment of best practices for Dimension B: Learners

Nr	Key Performance Driver	Best practice description (based on section 4.3.2. of the Report)	Feasibility assessment in the EU	Feasibility level
5-2-1	b.1 Opportunity to determine own learning path	<p>High flexibility of training programmes:</p> <ul style="list-style-type: none"> • Training programmes are often based on modules, where learners have a high degree of freedom in how they put the programme together. 	<ul style="list-style-type: none"> • The analysed training programs (both EU and non-EU) are in general designed to be flexible, consisting of modular structures that enable learners to customise and develop their own learning program. This flexibility encourages learners to take ownership of their education and tailor it to their unique needs and aspirations. • The analysis shows that long-term training programs that are not tied to specific employers typically offer learners a greater degree of freedom in shaping their learning journey. These programs allow individuals to explore various subjects and acquire a diverse set of skills, ultimately leading to a more well-rounded education. • On the other hand, short-term training programs that often are directly linked to specific employers tend to offer lower flexibility to learners in determining their own learning path (as those are primarily driven by employer needs). 	High
5-2-2	b.1 Opportunity to determine own learning path	<p>Feedback by learners:</p> <ul style="list-style-type: none"> • Based on the collected inputs, the decisions can be made on subsequent changes in the courses/programme, if needed. 	<ul style="list-style-type: none"> • The analysis showed that collecting feedback from learners is a typical practice for both EU and non-EU up- and reskilling initiatives. • Gathering feedback directly from learners allows gaining valuable insights into the effectiveness and impact of these initiatives. This feedback can help identify areas of improvement, address challenges or gaps in the programs, and ensure that the initiatives are meeting the needs and expectations of the learners. • Feedback can be collected through various methods, such as surveys, interviews, focus groups, and online platforms. These methods allow learners to share their experiences, provide suggestions for improvement, and highlight any issues they may have encountered. • Additionally, engaging learners in the feedback process empowers them and makes them feel valued, fostering a sense of ownership and accountability in their own learning journey. Therefore, it would be essential to prioritise the collection of feedback from learners to 	High

Nr	Key Performance Driver	Best practice description (based on section 4.3.2. of the Report)	Feasibility assessment in the EU	Feasibility level
			continuously enhance and optimise up- and reskilling initiatives.	
5-2-3	b.2 Career guidance and assistance with learning (including self-assessment opportunities)	<p>Dedicated career counsellors:</p> <ul style="list-style-type: none"> Counsellors allow learners to select from multiple opportunities and pathways to reach their specific goals and interests. Counsellors can help learners explore their interests, complete assessments, and continue supporting learners in their pathways. 	<ul style="list-style-type: none"> Career counsellors play a vital role in helping learners explore their interests, identify their strengths and weaknesses, and make informed decisions about their educational and career pathways. By offering personalised guidance and support, career counsellors can assist learners in completing assessments to identify their skills and preferences, enabling them to make well-informed choices about their future. Furthermore, career counsellors can continue to support learners throughout their educational journey, providing guidance and resources to help them adapt and develop in their chosen pathways. The analysis shows that having dedicated career counsellors in place is a typical practice in the analysed initiatives both within and outside the EU. 	High
5-2-4	b.2 Career guidance and assistance with learning (including self-assessment opportunities)	<p>Dedicated mentors on every course:</p> <ul style="list-style-type: none"> Mentors aim to help the learners through the course, and also to provide guidance on career opportunities. 	<ul style="list-style-type: none"> The analysis shows that having dedicated mentors on every course is not a typical practice; however, if the scale/budget of an initiative allows for it, it can be highly beneficial. 	Medium
5-2-5	b.3 Access to (digital) learning infrastructures including tools and trainers	<p>Providing support to learners to get access to (digital) learning infrastructures:</p> <ul style="list-style-type: none"> Some learners may need to get support with access to learning infrastructures (both digital and physical). 	<ul style="list-style-type: none"> All analysed initiatives (both EU and non-EU) confirmed the presence of the necessary learning infrastructures. The analysis shows that in some cases, learners may experience challenges with having direct access to the relevant learning infrastructures and thus may need additional support. Examples of such support include access to electronic devices and physical premises, as well as free-of-charge access to the dedicated online platforms. This type of support is reported to be highly valuable for less advantaged learners. 	High

Nr	Key Performance Driver	Best practice description (based on section 4.3.2. of the Report)	Feasibility assessment in the EU	Feasibility level
5-2-6	b.4 Recognition of learning	<p>Offering an appropriate form of recognition:</p> <ul style="list-style-type: none"> The analysed initiatives operate alongside both formal and informal education and training systems. They typically make sure the results get recognised in a way appropriate to the learning. 	<ul style="list-style-type: none"> The analysis showed that most initiatives (both EU and non-EU) pay special attention to the recognition of learning and thereby acknowledge its importance. These recognition mechanisms serve as tangible evidence of the skills and competencies acquired through these initiatives and can be valuable assets for learners in their career progression. Badges and microcredentials, for example, provide a granular and specific recognition of skills acquired in shorter-term courses or modules. On the other hand, learning passports and certificates offer a more comprehensive recognition of broader skill sets acquired through longer-term programs. This recognition not only motivates learners to continue their up- and reskilling journey but also enhances their employability and mobility in the labour market. 	High
5-2-7	b.4 Recognition of learning	<p>Accreditation of certificates:</p> <ul style="list-style-type: none"> In some cases, learners receive certificates upon concluding certain level of a learning journey. 	<ul style="list-style-type: none"> It was suggested by the stakeholders that accreditation would be preferable in certain cases on a national/EU level. At the same time, it was reported to be a lengthy and complicated process, which may not be suitable for curricula that are rapidly changing based on external environment. 	Medium

5.3. Feasibility assessment for Dimension C: Funding

Table 5-3 provides the results of the feasibility assessment for the best practices identified within Dimension C: Funding. As can be seen from the Table, also here, almost all of the identified best practices can be considered as being highly feasible in the EU context.

Table 5-3: Feasibility assessment of best practices for Dimension C: Funding

Nr	Key Performance Driver	Best practice description (based on section 4.3.3. of the Report)	Feasibility assessment in the EU	Feasibility level
5-3-1	c.1 Availability of funding to support SMEs	SMEs as typical funding recipients: <ul style="list-style-type: none"> Many of the analysed initiatives provided funding specifically to SMEs to support their up- and reskilling processes. 	<ul style="list-style-type: none"> The analysis showed that supporting SMEs with their up- and reskilling activities by providing the relevant funding is a regular practice in the EU. In many cases it was suggested to be the only option for those SMEs to acquire the necessary skills. 	High
5-3-2	c.2 Role of public funding	Central role of public funding: <ul style="list-style-type: none"> Many of the analysed initiatives are heavily dependent on public funding. The assigned public funding often depends on the size of the participating companies. For smaller companies, public funding then matches higher proportion of the total costs than for larger ones. 	<ul style="list-style-type: none"> In the EU, public funding is reported to play a central role in the landscape of up- and reskilling initiatives, and many of the analysed programs heavily rely on public funds to ensure their effectiveness and reach. The importance of public funding lies in its ability to support a wide range of individuals and organisations, address market failures, and promote inclusivity in skills development. As long as skills remain a key priority on the agenda of the EU and national policy makers, the feasibility of this best practice can be considered high. However, this feasibility is closely connected to the aspect of consistency and continuity of policies (which will be addressed below under 5-3-5). EU policy makers should continue to prioritise and allocate resources to support up- and reskilling initiatives, recognising their vital role in fostering a skilled and adaptable workforce, driving economic growth, and promoting social cohesion. 	High
5-3-3	c.3 Role of private funding	Significant role of private funding: <ul style="list-style-type: none"> Private funding was in many cases reported as being highly desirable and crucial for the feasibility of specific initiatives. Not all the analysed initiatives managed to attract private funding. In those cases, stakeholders often expressed a 	<ul style="list-style-type: none"> While public funding plays a significant role in supporting up- and reskilling initiatives in the EU, it is highly important to attract private funding to supplement and enhance these efforts. Private funding brings additional resources, expertise, and innovation to up- and reskilling initiatives, contributing to their sustainability and effectiveness. However, attracting private funding to these initiatives can be challenging due to several reasons. Firstly, private investors often prioritise projects that offer immediate financial returns. Up- and reskilling initiatives, on the 	Medium

Nr	Key Performance Driver	Best practice description (based on section 4.3.3. of the Report)	Feasibility assessment in the EU	Feasibility level
		<p>clear need to consider engaging companies in the future.</p>	<p>other hand, typically have long-term benefits that may not be easily quantifiable in monetary terms.</p> <ul style="list-style-type: none"> Secondly, the perceived risk associated with up- and reskilling initiatives can make it difficult to attract private funding. The success of these initiatives relies on various factors, including the commitment of participants, the quality of training programs, and the availability of job opportunities upon completion. Companies may be hesitant to invest in initiatives that have uncertain outcomes or that require a longer time horizon for returns on investment. Furthermore, the lack of a standardised framework for measuring the impact and effectiveness of up- and reskilling initiatives can pose a challenge in attracting private funding. Companies often rely on data and metrics to assess the potential return on their investments. Without clear and comparable indicators of success, it can be challenging to convince private investors of the value and impact of up- and reskilling initiatives. The EU policy makers could address these challenges by creating incentives for private funding, developing clear impact measurement frameworks, and promoting collaboration and coordination among different stakeholders. 	
5-3-4	c.4 (Co-)funding by learners	<p>Co-funding by learners to increase learner engagement:</p> <ul style="list-style-type: none"> It was suggested to increase learner engagement and motivation. This option can only be applied to target audiences that are capable of paying the training fee, e.g., currently employed individuals. 	<ul style="list-style-type: none"> Most of the analysed initiatives do not practice any form of co-funding by learners. The use of co-funding by learners in up- and reskilling initiatives was not suggested to be a common practice in the EU. However, there are potential benefits to exploring the use of co-funding by learners in EU up- and reskilling initiatives. Firstly, co-funding can foster a sense of ownership and commitment among learners. When individuals contribute financially to their own up- and reskilling, they are more likely to be motivated and engaged in the learning process. This increased motivation can lead to higher completion rates and better outcomes for learners, as they have a personal investment in their own success. 	Medium

Nr	Key Performance Driver	Best practice description (based on section 4.3.3. of the Report)	Feasibility assessment in the EU	Feasibility level
			<ul style="list-style-type: none"> Secondly, co-funding can help alleviate the financial burden on public funding sources. By sharing the cost of up- and reskilling initiatives with learners, public funds can be directed towards other areas of need or used to expand the reach of these initiatives. Co-funding can also contribute to the sustainability of up- and reskilling programs, as it diversifies the sources of funding and reduces reliance on public resources. It is, however, essential to design co-funding models that are equitable and inclusive, taking into account the socio-economic diversity of learners and providing support for those who may face financial constraints. Furthermore, the effectiveness of co-funding relies on the availability of affordable financing options for learners. Policy makers could explore mechanisms such as income-contingent loans or flexible payment plans to ensure that co-funding does not create a financial burden for learners or discourage participation. 	
5-3-5	c.5 Sustainability of funding and alignment of different funding types	Diversity of funding types: <ul style="list-style-type: none"> the need to diversify the funding types to ensure sustainability of their respective initiatives. 	<ul style="list-style-type: none"> Currently, up- and reskilling initiatives in the EU heavily rely on public funds for financing. To enhance the sustainability and effectiveness of these initiatives, it is crucial to diversify the sources of funding. 	Medium

5.4. Feasibility assessment for Dimension D: Regulatory Framework

Table 5-4 provides the results of the feasibility assessment for the best practices identified within Dimension D: Regulatory Framework. As can be seen from the Table, all of the identified best practices can be considered as being highly feasible in the EU context. As was outlined in Chapter 4 of the Report, this dimension also proved to have the highest impact on the overall performance of the up- and reskilling initiatives.

Table 5-4: Feasibility assessment of best practices for Dimension D: Regulatory Framework

Nr	Key Performance Driver	Best practice description (based on section 4.3.4. of the Report)	Feasibility assessment in the EU	Feasibility level
5-4-1	d.1 Integration into the overall skills strategy/agenda of the country/EU	<p>The presence of the overall skills strategy at the national level:</p> <ul style="list-style-type: none"> embedded into the overall skills strategy/agenda at the national and (for the EU initiatives) the EU levels. 	<ul style="list-style-type: none"> A national (and EU-wide) up- and reskilling vision and strategy, developed by policy makers, is reported to be crucial for uniting stakeholders and fostering collaboration in the up- and reskilling landscape. It demonstrates the commitment and long-term orientation of the government, increasing trust and engagement from the private sector. The strategy benefits the private sector by addressing skill gaps, enhancing productivity, and promoting innovation. Education and training providers benefit from alignment and collaboration, resulting in relevant and high-quality programs. Learners gain access to diverse up- and reskilling opportunities, improving employability, and enabling them to adapt to changing job requirements. The analysis showed that most of the analysed EU initiatives are well embedded in the national and the EU skills strategies. 	High
5-4-2	d.2 Integration into the digital regulatory framework	<p>The presence of digital components:</p> <ul style="list-style-type: none"> Digital tools and approaches have become essential for modern up- and reskilling initiatives, even if they are not directly related to ICT. The up- and reskilling initiatives may not always be directly integrated into a digital strategy of a country, but they still can contribute to the digitalisation of economy by employing digital tools and approaches for training other types of skills. 	<ul style="list-style-type: none"> By embracing digital tools and approaches, such as, for example, online learning platforms, virtual reality simulations, and data analytics, up- and reskilling programs can be made more accessible, personalised, and effective. These digital solutions enable learners to acquire new skills remotely, (if relevant) at their own pace, and in a way that aligns with their individual needs and preferences. Digital tools facilitate the collection and analysis of data, allowing policy makers and other stakeholders to monitor the effectiveness of up- and reskilling initiatives, identify areas for improvement, and make data-driven decisions. Integrating digital tools and approaches into up- and reskilling initiatives is crucial for ensuring the success and relevance of these programs in the new age. The analysis showed that integrating digital tools and approaches into the up- and reskilling initiatives is already a common practice in the EU (as well as in non-EU initiatives). 	High

Nr	Key Performance Driver	Best practice description (based on section 4.3.4. of the Report)	Feasibility assessment in the EU	Feasibility level
5-4-3	d.3 Integration into the green regulatory framework	<p>The presence of ‘green’ components:</p> <ul style="list-style-type: none"> It implies the inclusion of green skills in the curricula. 	<ul style="list-style-type: none"> The analysis showed that while most of the analysed EU initiatives may not yet be directly integrated into the overall green strategies of their countries, some of them still contribute to the preparation of specialists for the greenification of the economy. The EU has recognised the importance of green skills, and it increasingly becomes a high priority in up- and reskilling programs. However, this trend is not exclusive to the EU. Other parts of the world, such as North America, Asia and Australia witness a similar trend. 	High
5-4-4	d.4 Awareness raising	<p>Full-scale promotional campaigns for new initiatives</p> <ul style="list-style-type: none"> For new up- and reskilling initiatives, there is often a need for full-scale promotional campaigns to make sure the target audience is properly reached. 	<ul style="list-style-type: none"> The analysis showed that especially new initiatives (both EU and non-EU) typically need active awareness raising which could include dedicated kick-off events, roadshows, press conferences, websites, social media channels etc. 	High
5-4-5	d.5 Availability of learning infrastructures including tools and trainers	<p>Access to learning infrastructures:</p> <ul style="list-style-type: none"> Learning infrastructures are essential for providing learners with the necessary resources and support to acquire new skills and knowledge. 	<ul style="list-style-type: none"> The analysis showed that in most cases, both EU and non-EU initiatives offer good access to learning infrastructures (including tools and trainers), treating it as one of the key priorities. 	High

6. Policy recommendations

Chapter 6 presents an overview of recommendations developed based on the analysis outlined in the previous Chapters. These recommendations are **aimed primarily at the EU and national policy makers**, and have an objective of providing practical suggestions on how to advance up- and reskilling-related policy development and implementation. The roles of other relevant stakeholder groups (including large companies and SMEs, education and training providers, social partners and other labour market organisations, and learners) were addressed in *Chapters 4* and *5*, while analysing the identified best practices. While the current Chapter aims to specifically zoom into the role of policy makers, as mentioned above, for the successful design and implementation of up- and reskilling policies, the engagement of all key stakeholder groups is crucial at all stages.

In *Chapter 5*, the feasibility assessment of the identified best practices related to the Key Performance Drivers was presented. Due to a large number of the identified best practices, prioritisation first needed to be performed in order to extract and further develop the key recommendations. Section 6.1. outlines the results of this prioritisation exercise, leading to section 6.2. that, in turn, presents the recommendations associated with the identified priorities. Finally, an additional set of recommendations is presented in section 6.3, related specifically to the Key Performance Metrics.

6.1. Prioritisation of the identified best practices

As outlined above, the objective of the prioritisation exercise was to identify a set of best practices related to the Key Performance Drivers of the highest priority that would then be transformed into specific policy recommendations. Tables 6-1 – 6-4 present the results of this prioritisation exercise, with a particular focus on the EU context, for each of the four dimensions of the Key Performance Drivers. The associated levels of effort were assigned based on the following principle: **‘High’** – special attention is needed from the policy makers’ side to strengthen this practice in the EU; **‘Medium’** – while the practice may already exist in the EU, additional attention of policy makers would be highly beneficial; **‘Low’** – no additional attention may be currently required, as the practice is already well established in the EU. It is important to emphasise that **best practices with a Low required level of effort in the Tables below should still be considered as crucial for the success of up- and reskilling initiatives. They are just not addressed in detail in the recommendations below.**

Table 6-1: Prioritisation of best practices for Dimension A: Stakeholders

Nr	Key Performance Driver	Best practice description (based on section 4.3.1)	Feasibility level for the EU (based on section 5.1)	Required level of effort ⁵⁰
5-1-1	a.1 Role of policy makers	Central role of policy makers in organising and coordinating the up- and reskilling initiatives, representing a linking pin bringing all key stakeholder groups together	High	Low
5-1-2	a.1 Role of policy makers	Providing expertise and guidance for the actual implementation of up- and reskilling initiatives, to make sure those stay relevant for and visible to the target groups, in line with any related changes	High	High

⁵⁰ **‘High’** – special attention is needed from the policy makers’ side to strengthen this practice in the EU; **‘Medium’** – while the practice may already exist in the EU, additional attention of policy makers would be highly beneficial; **‘Low’** – no additional attention may be currently required, as the practice is already well established in the EU.

Nr	Key Performance Driver	Best practice description (based on section 4.3.1)	Feasibility level for the EU (based on section 5.1)	Required level of effort ⁵⁰
		in employment policies		
5-1-3	a.1 Role of policy makers	Stimulating private sector to engage , providing a central vision, along with the overall support and commitment	High	Medium
5-1-4	a.2 Role of large companies	Serving as a source of information about labour market trends , and specifically their own employment-related needs	High	Low
5-1-5	a.2 Role of large companies	Co-designing the curricula , providing valuable insights into the skill needs of the workforce	High	Low
5-1-6	a.2 Role of large companies	Serving as intermediaries for SMEs , to conduct the training needs analysis based on the SMEs' business strategies, and to curate/provide courses on relevant in-demand and priority skills	High	Low
5-1-7	a.3 Role of SMEs	Communication of needs to policy makers and large companies	High	Low
5-1-8	a.4 Role of education and training providers	Serving as a guarantee for a high quality of training , maintaining trust in curricula and ensuring a high quality of the training courses	High	Low
5-1-9	a.5 Role of social partners and other labour market organisations	Serving as catalysts of the up- and reskilling actions , acting as industry intermediaries, and having an ability to reach out directly to the workforce and companies	High	Low
5-1-10	a.5 Role of social partners and other labour market organisations	Promoting projects via diverse channels (i.e., social media, websites, events etc.):	High	Low
5-1-11	a.5 Role of social partners and other labour market organisations	Maintaining contacts with leading professionals (e.g. vocational trainers)	High	Low
5-1-12	a.6 Interconnections within the learning ecosystem	The engagement of all key stakeholder groups at all stages of an initiative for building on the strengths of each of the stakeholder groups, and thereby for ensuring the appropriate organisation of the efforts leading to the achievement of the objectives set	High	Medium
5-1-13	a.6 Interconnections within the learning ecosystem	Collaboration which allows companies to pool their resources, knowledge, and expertise to address common challenges related to workforce development	Medium	High
5-1-14	a.6 Interconnections within the learning ecosystem	Developing a connected learning ecosystem where stakeholders communicate with each other, have a	High	Low

Nr	Key Performance Driver	Best practice description (based on section 4.3.1)	Feasibility level for the EU (based on section 5.1)	Required level of effort ⁵⁰
	ecosystem	joint interaction platform, and share a common vision and objectives		

Table 6-2 presents the results of the prioritisation exercise with a particular focus on the EU context for Dimension B: Learners.

Table 6-2: Prioritisation of best practices for Dimension B: Learners

Nr	Key Performance Driver	Best practice description (based on section 4.3.2)	Feasibility level in the EU (based on section 5.1)	Required level of effort ⁵¹
5-2-1	b.1 Opportunity to determine own learning path	High flexibility of training programmes , where learners have a high degree of freedom in how they put the programme together.	High	Low
5-2-2	b.1 Opportunity to determine own learning path	Feedback by learners , based on which the decisions can be made on subsequent changes in the courses/programme, if needed	High	Low
5-2-3	b.2 Career guidance and assistance with learning (including self-assessment opportunities)	Dedicated career counsellors who can help learners explore their interests, complete assessments, and continue supporting learners in their pathways	High	Low
5-2-4	b.2 Career guidance and assistance with learning (including self-assessment opportunities)	Dedicated mentors on every course to help the learners through the course, and also to provide guidance on career opportunities	Medium	Low
5-2-5	b.3 Access to (digital) learning infrastructures including tools and trainers	Providing support to learners to get access to (digital) learning infrastructures to facilitate their engagement in up- and reskilling	High	Low
5-2-6	b.4 Recognition of learning	Offering an appropriate form of recognition for up- and reskilling results	High	Low
5-2-7	b.4 Recognition of learning	Accreditation of certificates at the centralised level	Medium	High

Table 6-3 presents the results of the prioritisation exercise with a particular focus on the EU context for Dimension C: Funding.

⁵¹ 'High' – special attention is needed from the policy makers' side to strengthen this practice in the EU; 'Medium' – while the practice may already exist in the EU, additional attention of policy makers would be highly beneficial; 'Low' – no additional attention may be currently required, as the practice is already well established in the EU. It is important to emphasise that best practices with a Low required level of effort in the Tables below should still be considered as crucial for the success of up- and reskilling initiatives. They are just not addressed in detail in the recommendations below.

Table 6-3: Prioritisation of best practices for Dimension C: Funding

Nr	Key Performance Driver	Best practice description (based on section 4.3.3)	Feasibility level in the EU (based on section 5.1)	Required level of effort ⁵²
5-3-1	c.1 Availability of funding to support SMEs	SMEs as typical funding recipients to support their up- and reskilling processes	High	Low
5-3-2	c.2 Role of public funding	Central role of public funding to support up- and reskilling efforts	High	Low
5-3-3	c.3 Role of private funding	Significant role of private funding to complement public investments	Medium	High
5-3-4	c.4 (Co-)funding by learners	Co-funding by learners to increase learner engagement	Medium	Low
5-3-5	c.5 Sustainability of funding and alignment of different funding types	Diversity of funding types to ensure sustainability of their respective initiatives	Medium	High

Table 6-4 presents the results of the prioritisation exercise with a particular focus on the EU context for Dimension D: Regulatory Framework.

Table 6-4: Prioritisation of best practices for Dimension D: Regulatory Framework

Nr	Key Performance Driver	Best practice description (based on section 4.3.4)	Feasibility level in the EU (based on section 5.1)	Required level of effort ⁵³
5-4-1	d.1 Integration into the overall skills strategy/agenda of the country/EU	The presence of the overall skills strategy at the national level aiming to promote up- and reskilling efforts	High	Low
5-4-2	d.2 Integration into the digital regulatory framework	The presence of digital components , even if the initiatives are not directly related to ICT	High	Low
5-4-3	d.3 Integration into the green regulatory framework	The presence of 'green' components , which implies the inclusion of green skills in the curricula	High	Medium
5-4-4	d.4 Awareness raising	Full-scale promotional campaigns for new initiatives to make sure the target audience is properly reached	High	Low

⁵² 'High' – special attention is needed from the policy makers' side to strengthen this practice in the EU; 'Medium' – while the practice may already exist in the EU, additional attention of policy makers would be highly beneficial; 'Low' – no additional attention may be currently required, as the practice is already well established in the EU. It is important to emphasise that best practices with a Low required level of effort in the Tables below should still be considered as crucial for the success of up- and reskilling initiatives. They are just not addressed in detail in the recommendations below.

⁵³ *Ibid.*

Nr	Key Performance Driver	Best practice description (based on section 4.3.4)	Feasibility level in the EU (based on section 5.1)	Required level of effort ⁵³
5-4-5	d.5 Availability of learning infrastructures including tools and trainers	Access to learning infrastructures for providing learners with the necessary resources and support to acquire new skills and knowledge	High	Low

6.2. Recommendations on Key Performance Drivers

Below we present specific policy recommendations for each of the best practices with a High or Medium level of priority, as outlined in section 6.1. The following eight recommendations were developed:

- **Recommendation A1: Continuous upskilling of policy makers engaged in up- and reskilling policies;**
- **Recommendation A2: Stimulating the involvement of private sector in up- and reskilling initiatives in different forms;**
- **Recommendation A3: Stimulating the engagement of all key stakeholder groups in the design and implementation of up- and reskilling policies;**
- **Recommendation A4: Establishing a framework for collaboration in up- and reskilling;**
- **Recommendation B1: Simplifying and accelerating the accreditation process by leveraging technology;**
- **Recommendation C1: Increasing the role of private funding in up- and reskilling initiatives;**
- **Recommendation C2: Diversifying funding types for up- and reskilling initiatives;**
- **Recommendation D1: Including ‘green’ components in up- and reskilling initiatives.**

These recommendations are applicable to different levels of policy making including the EU, national, and regional/local levels. Furthermore, the extracted lessons learned are relevant not only to the initiatives led by policy makers, but also to those initiatives led by other key stakeholder groups. To this end, the presented recommendations are of broader orientation addressing a wide range of up- and reskilling initiatives from different settings and with different levels of complexity.

6.1.1. Recommendation A1: Continuous upskilling of policy makers engaged in up- and reskilling policies

It is crucial for policy makers to continuously upskill themselves to bridge any knowledge gaps and ensure they possess the necessary expertise to effectively address the skills challenges and guide other stakeholder groups. Policy makers need to stay updated on the latest technological and socio-economic developments to make informed decisions regarding up- and reskilling policies.

Regular upskilling of policy makers can be achieved through various means, such as **consulting skills-related intelligence sources including relevant publications and online portals, attending relevant training programs, participating in workshops and**

conferences, and engaging with experts and practitioners. This continuous learning process equips policy makers with the knowledge and skills needed to understand the challenges faced by external stakeholders, identify effective solutions, and provide valuable guidance and support.

By continuously upskilling themselves, policy makers can enhance their ability to analyse data, assess the impact of up- and reskilling initiatives, and make evidence-based decisions. This expertise allows them to effectively coordinate large-scale up- and reskilling initiatives, ensuring that resources are allocated efficiently and that the initiatives align with the needs of industries and the labour market.

6.1.2. Recommendation A2: Stimulating the involvement of private sector in up- and reskilling initiatives in different forms

Encouraging private sector involvement is crucial for the success of up- and reskilling initiatives. This involvement can take different forms including not only funding, but also the provision of equipment and materials; preparing, and organising training programmes; offering employment opportunities etc. It can be stimulated by policy makers through the following strategies:

- **Providing financial incentives** to companies that actively participate in up- and reskilling initiatives: it can be done through, for example, tax breaks, grants, or subsidies. The incentives should be structured in a way that rewards companies for investing in the development of their workforce and supporting the broader upskilling agenda.
- **Facilitating public-private partnerships** to jointly develop and implement up- and reskilling initiatives: this collaboration leverages the expertise and resources of both sectors, ensuring a more comprehensive and effective approach. Establishing dedicated platforms or committees that bring together representatives from government, industry, and educational institutions can foster these partnerships.
- **Introducing co-funding mechanisms** where the private sector contributes a portion of the funding for up- and reskilling initiatives: this shared investment demonstrates the commitment of both the public and private sectors towards building a skilled workforce. The co-funding can be based on the size and financial capacity of the participating companies.
- **Providing recognition and certification of companies** that actively engage in up- and reskilling initiatives: it implies establishing a system that acknowledges companies for their efforts in providing training, offering employment opportunities, and supporting the development of skills in their workforce. This recognition can enhance the reputation and competitiveness of these companies.
- **Creating an enabling policy environment** that supports private sector engagement in up- and reskilling initiatives: it includes flexible regulations that allow companies to adapt their training programs to changing needs, streamlined administrative processes for accessing funding, and clear guidelines on the expectations and benefits of participation.
- **Facilitating knowledge sharing and the exchange of best practices among companies:** it implies establishing platforms or networks where companies can share their experiences, challenges, and successful strategies in up- and reskilling. This collaboration can inspire and motivate other businesses to get involved.
- **Collaborating with industry associations and other labour market organisations** to promote up- and reskilling initiatives within their sectors: industry

associations can play a vital role in advocating for the importance of upskilling, providing guidance to companies, and mobilising resources for training and development programs.

6.1.3. Recommendation A3: Stimulating the engagement of all key stakeholder groups in the design and implementation of up- and reskilling policies

Policy makers can mobilise multiple strategies to effectively stimulate the engagement of all key stakeholder groups in the design and implementation of up- and reskilling policies. This collaborative approach ensures that policies are comprehensive, inclusive, and responsive to the needs of the workforce and the evolving economy.

- **Establishing collaborative platforms** or working groups that bring together representatives from all key stakeholder groups: these platforms can serve as a forum for dialogue, knowledge sharing, and joint decision-making. They should be inclusive and provide equal representation to all stakeholders, ensuring that their perspectives and expertise are taken into account.
- **Conducting regular consultations and needs assessments** with all key stakeholder groups to understand their specific needs, challenges, and priorities. This can be done through surveys, interviews, focus groups, and workshops. The insights gathered from these consultations should inform the design and implementation of up- and reskilling policies.
- **Promoting a co-creation approach** where all key stakeholder groups actively participate in the design and development of up- and reskilling policies. This implies involving them in policy discussions, inviting their input and feedback, and incorporating their suggestions into the policy framework. This collaborative approach ensures that policies are relevant, practical, and aligned with the needs of the various stakeholders.
- **Encouraging resource sharing and collaboration among key stakeholder groups:** it can involve sharing best practices, expertise, and resources related to up- and reskilling, facilitating partnerships between education and training providers and companies to develop and deliver training programs that meet industry needs, fostering collaboration between social partners and employment agencies to identify job opportunities and support the placement of skilled workers.
- **Ensuring clear communication and transparency** throughout the design and implementation of up- and reskilling policies: it implies providing regular updates to all key stakeholder groups, keeping them informed about the progress, outcomes, and impact of the initiatives. Transparent communication builds trust and encourages continued engagement and support from all stakeholders.
- **Establishing a robust monitoring and evaluation framework** to assess the effectiveness and impact of up- and reskilling policies: it implies involving all key stakeholder groups in the monitoring and evaluation process, seeking their input and feedback. This collaborative approach ensures that policies can be continuously improved based on the insights and recommendations of the stakeholders.

6.1.4. Recommendation A4: Establishing a framework for collaboration in up- and reskilling

The feasibility assessment in the EU in *Chapter 5* (section 5.1.) suggested the lack of a clear comprehensive framework for collaboration for up- and reskilling activities. The

different approaches, methodologies, and training programs of companies and other stakeholders make it difficult to align their efforts and share resources effectively. Effective collaboration arrangements can avoid duplication of efforts and inefficiencies, encouraging companies to engage in collaborative initiatives.

Companies in particular may be reluctant to share knowledge, resources, or best practices due to concerns about losing their competitive advantage. Building trust and promoting a collaborative mindset among companies require time, effort, and a supportive ecosystem. **Establishing mechanisms for cooperation, regular communication, and conflict resolution** are essential to overcome these challenges. Partnerships where players perceived as “neutral” (e.g., government agencies, industry associations, consultants) are involved, can help build this trust. To build effective cooperation arrangements, clear guidelines, incentives, and support mechanisms from policy makers are reported to be highly helpful.

There is a need for a **clear framework** that addresses the specific concerns and risks associated with collaboration in up- and reskilling. This framework should provide guidelines and safeguards to ensure that companies can collaborate without violating competition laws, as recently made by the European Commission with the **horizontal guidelines** contained in the Horizontal block exemptions⁵⁴. Ideally such a framework could also address issues such as intellectual property rights, data sharing, and confidentiality to protect the interests of participating companies.

Dedicated knowledge exchange platforms focused on up- and reskilling actions can facilitate the sharing of best practices, lessons learned, and success stories from collaboration. These platforms can serve as a resource hub for companies and other stakeholders, providing them with guidance and insights on how to navigate the challenges and maximise the benefits of collaboration. EU policy makers can support the development and maintenance of these platforms to foster a culture of learning and collaboration.

6.1.5. Recommendation B1: Simplifying and accelerating the accreditation process by leveraging technology

Accreditation provides a more formal and standardised recognition of learning outcomes, ensuring consistency and quality across different programs and institutions. It also carries a higher level of credibility and trust among employers and other stakeholders.

Leveraging technology and digital platforms could help simplify and accelerate the accreditation process. **Online assessment tools, digital portfolios, and blockchain technology** could be utilised to verify and validate learning outcomes, ensuring transparency and security in the recognition process. These technological advancements could also facilitate the recognition of non-traditional forms of learning, such as online courses and microcredentials.

By developing a **more agile and technology-driven accreditation framework**, policy makers could create a balance between ensuring the quality and credibility of up- and reskilling initiatives while also adapting to the rapidly changing learning landscape. This approach could enable learners to receive formal recognition for their acquired skills and competencies in a timely and efficient manner, enhancing their employability and mobility in the EU labour market⁵⁵.

One of the challenges in adopting blockchain technology for accreditation is **the need for standardisation and interoperability**. The EU would need to establish common

⁵⁴ https://competition-policy.ec.europa.eu/antitrust-and-cartels/legislation/horizontal-block-exemptions_en

⁵⁵ See also <https://www.openaccessgovernment.org/accreditation-the-building-blockchains-of-delivering-confidence/84269/>

standards and protocols to ensure that blockchain-based accreditation systems are compatible and interoperable across Member States. This would require coordination and collaboration among the EU institutions, regulatory bodies, and educational and training providers to develop a unified approach to blockchain-based accreditation.

6.1.6. Recommendation C1: Increasing the role of private funding in up- and reskilling initiatives

Besides measures outlined in section 5.1.2. focussing on stimulating the overall involvement of private sector in up- and reskilling initiatives, the following strategies can be applied by policy makers to specifically increase the role of private funding:

- **Raising awareness and enhancing information** about the benefits and opportunities of investing in up- and reskilling initiatives among companies: this can involve disseminating success stories, best practices, and case studies that highlight the positive impact of company investment in workforce development. Policy makers can also create platforms or networks that connect companies with up- and reskilling initiatives, facilitating further knowledge sharing and collaboration.
- **Recognising and rewarding actively involved companies** that demonstrate a commitment to up- and reskilling initiatives, as part of their corporate social responsibility (CSR) efforts. This can include public recognition, inclusion in CSR rankings and indices etc. By highlighting and rewarding companies that invest in workforce development, policy makers can incentivise other companies to follow.
- **Streamlining regulatory processes and reducing administrative burdens** for companies that invest in up- and reskilling initiatives: simplifying procedures for accessing funding, obtaining necessary permits, or complying with regulations can make it easier for companies to allocate financial resources towards workforce development. This can encourage more companies to invest in up- and reskilling initiatives.

6.1.7. Recommendation C2: Diversifying funding types for up- and reskilling initiatives

As outlined in *Chapter 4* (section 4.3.3.), there is a need to diversify the funding types to ensure sustainability (i.e., continuity) of up- and reskilling initiatives. 100% publicly funded initiatives are particularly vulnerable, and there is a need to attract other funding sources. Sections 5.1.2. and 5.1.6. already presented strategies on how to stimulate the engagement of private funding in up- and reskilling initiatives.

In addition, *in some cases*, co-funding by learners could also be considered. Encouraging learners to contribute financially to their own up- and reskilling fosters a sense of ownership and commitment. This co-funding model can help alleviate the financial burden on public funds and enhance the sustainability of up- and reskilling initiatives. However, it is essential to design co-funding models that are equitable and inclusive, ensuring that individuals from all socio-economic backgrounds have access to these opportunities. This approach is therefore less appropriate for the initiatives targeting less advantaged groups.

6.1.8. Recommendation D1: Including 'green' components in up- and reskilling initiatives

As highlighted in *Chapters 2* (section 2.1.) and *4* (section 4.3.4.), the inclusion of green skills in up- and reskilling initiatives is crucial for addressing the challenges of climate change, promoting sustainable development, and ensuring a skilled workforce for the

green economy. Below we list several strategies that can be mobilised by policy makers for this purpose:

- **Developing Green Skills Frameworks** that define the knowledge, competencies, and qualifications required for green jobs: these frameworks can serve as a guide for designing up- and reskilling initiatives that incorporate green skills. By providing clear guidelines, policy makers can ensure that green skills are included in training programs and that the workforce is equipped with the necessary knowledge and abilities for the green economy;
- **Establishing partnerships with green industries** to ensure the inclusion of green skills in up- and reskilling initiatives: collaborating with companies, trade associations, and industry experts can help policy makers identify the specific green skills needed by the workforce. By involving green industries in the design and implementation of up- and reskilling initiatives, policy makers can ensure that the training aligns with industry needs and promotes the development of a skilled green workforce.
- **Integrating green skills in formal education systems:** this can involve revising curricula to include modules or courses on sustainability, renewable energy, circular economy, and other green topics. By embedding green skills in education, policy makers can ensure that students are exposed to these concepts early on and are better prepared for future up- and reskilling initiatives.
- **Offering financial incentives to companies and individuals** to encourage the inclusion of green skills in up- and reskilling initiatives: this can include grants, subsidies, or tax benefits for companies that invest in green skills training for their employees. Policy makers can also offer scholarships or financial support to individuals pursuing training or education in green skills. By making it financially attractive, policy makers can stimulate the inclusion of green skills in up- and reskilling initiatives.
- **Raising awareness** about the importance of green skills and providing information on available up- and reskilling opportunities: this can involve public campaigns, online platforms, or dedicated information centers that provide information on green skills training programs, certifications, and career paths. By increasing awareness and accessibility, policy makers can encourage individuals and companies to actively seek out and participate in up- and reskilling initiatives that include green skills.
- **Evaluating and monitoring the impact:** this can involve tracking the number of individuals trained in green skills, assessing the effectiveness of training programs, and measuring the contribution of green skills to the transition towards a sustainable economy. By demonstrating the positive impact of green skills, policy makers can further encourage the further inclusion of these skills in up- and reskilling initiatives.

6.3. Recommendations on Key Performance Metrics

As outlined in *Chapter 1* (section 1.3.), when setting objectives and developing Key Performance Indicators (KPIs) for up- and reskilling initiatives, it is highly advisable to **go beyond the explicit (traditional) focus on the Economy dimension** and include also other crucial dimensions such as **Individual and Company**. While economy-related indicators provide valuable insights into the overall impact of up- and reskilling initiatives, it is equally important **to consider the perspectives and outcomes for learners and companies**. Below we elaborate on this approach in more detail:

- **Holistic assessment of impact:** by including indicators that focus on learners and companies, policy makers can obtain a more holistic assessment of the impact of up- and reskilling initiatives. Economy-related indicators, such as job creation or GDP growth, provide valuable macro-level insights. However, learner and company indicators offer a micro-level perspective, allowing policy makers to understand how individuals and organisations are benefiting from the initiatives.
- **Learner-centric approach:** learner-related indicators can measure the effectiveness of training programs, the acquisition of new skills, and the satisfaction of learners. By considering learner-related outcomes, policy makers can evaluate the quality and relevance of the training provided, identify areas for improvement, and ensure that learners are equipped with the necessary skills to succeed in the evolving job market. A learner-centric approach also promotes inclusivity and addresses the needs of individuals from diverse backgrounds.
- **Alignment with company needs:** company-related indicators allow policy makers to assess the alignment between up- and reskilling initiatives and the needs of companies. These indicators can measure the extent to which companies are able to find skilled workers, the impact of up- and reskilling on company image, and the level of satisfaction among employers. By considering company outcomes, policy makers can ensure that up- and reskilling initiatives are designed to meet the demands of the labour market, address skill gaps, and enhance the competitiveness of companies. This alignment benefits both companies and the overall economy.
- **Stakeholder engagement and accountability:** including learner- and company-related indicators in up- and reskilling KPIs promotes stakeholder engagement and accountability. By involving learners and companies in the measurement and evaluation process, policy makers demonstrate a commitment to their needs and perspectives. This engagement fosters trust, encourages participation, and ensures that the outcomes of up- and reskilling initiatives are aligned with stakeholder expectations.

The analysis and benchmarking framework applied in the current study demonstrated the use of the abovementioned approach in practice.

7. Methodology and practical considerations

The current chapter summarises the methodology and practical considerations for all three Tasks of the study. The objective of this chapter is to equip the reader with additional information on the way the activities of the study were performed and how those led to the conclusions presented in the earlier chapters of this Report.

7.1. Task 1: Structured collection of information and analysis

This section highlights the approach for Task 1, which implied structured collection of information on up- and reskilling initiatives and its analysis.

7.1.1. Task 1 design

Task 1 proved to be the most work-intensive activity of the study and implied complex coordination of multiple (often parallel) activities particularly with regard to data collection (desk-research, survey and interviews).

To this end, the applied project management approach aimed to ensure that work on diverse initiatives can happen in parallel, coordinated by dedicated team members responsible for specific geographical territories. The targeted 39 EU and non-EU countries were divided among the team members responsible for this Task. Specifically, the project team was split into several *research clusters* consisting of team members from the core project team responsible for covering specific geographical territories.

The overall design of Task 1 is presented in Figure 7-1.

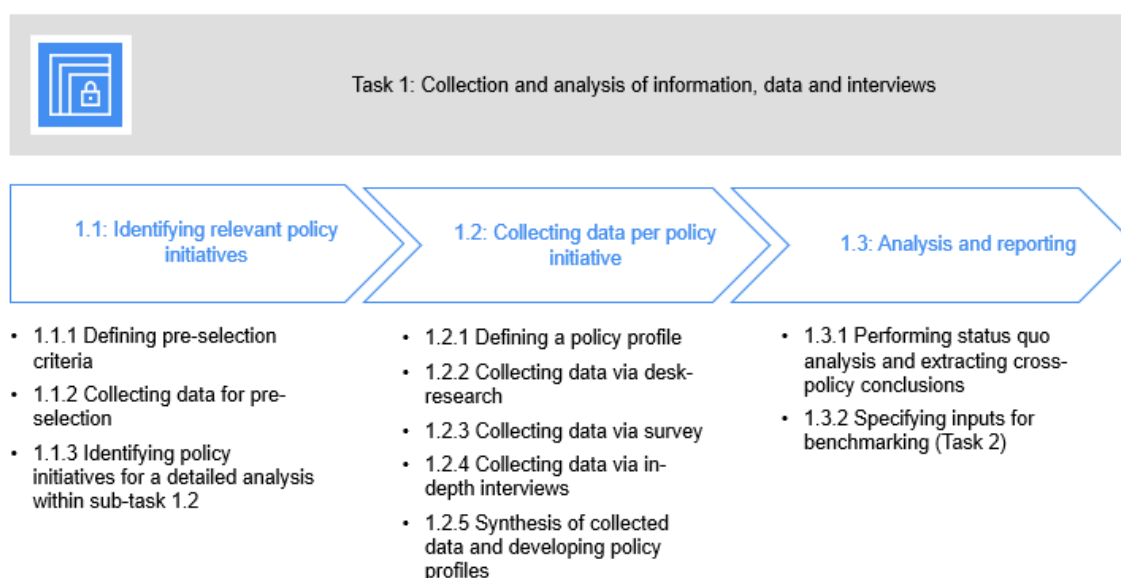


Figure 7-1: Task 1 design

Below we address the objectives and methodology of each of the specific sub-tasks of Task 1.

7.1.2. Sub-task 1.1: Identifying relevant initiatives

Sub-task 1.1 implied scanning the current re- and upskilling policy landscape and identifying relevant initiatives.

The objective of this sub-task was to perform a status quo analysis of existing re- and upskilling initiatives in the specified geographical areas (as outlined in section 1.2.3 of the Report) and to select the most relevant initiatives to be explored in sub-task 1.2 (collecting data per policy initiative). The current sub-task implied compiling the initial policy fiches to be used for a pre-selection for sub-task 1.2. Such pre-selection was crucial as many of the analysed countries have a wide range of potentially relevant initiatives and collecting detailed information on all potentially relevant initiatives would be both economically unfeasible and technically unnecessary.

Sub-task 1.1 resulted in a broad pool of re- and upskilling initiatives, and then, based on the defined pre-selection criteria, a sample of initiatives was formed for a detailed analysis within sub-task 1.2.

As outlined in Figure 7-1, sub-task 1.1 was operationalised into three steps.

Step 1.1.1: Defining pre-selection criteria

Step 1.1.1 implied developing the relevant criteria for the pre-selection of up- and reskilling initiatives to be included in the status quo database. The following three pre-selection criteria were used for the initial search of the initiatives:

- *Criterion 1:* Direct relevance to re- and/or upskilling;
- *Criterion 2:* Focus on labour force (adults currently working or willing & able to work; i.e., employed + unemployed labour force);
- *Criterion 3:* Initiatives (co-)driven by policy makers and involving businesses as active stakeholder(s).

These criteria were developed in close consultation with the EISMEA/Commission. Once this step was completed, the identified selection criteria were used for step 1.1.2 Collecting data for pre-selection.

Step 1.1.2: Collecting data for pre-selection

Step 1.1.2 implied collecting data for the status quo database in all 39 countries falling under the geographical scope of the study (as outlined in section 1.2.3 of the Report).

For each of the identified initiatives, the following types of data were collected:

- Country;
- Policy title;
- Level (international/national/regional);
- Objectives/brief description;
- Target group;
- Launch year;
- Total duration (years);
- Industry sector;
- Input pre-selection Criterion 1;
- Input pre-selection Criterion 2;

- Input pre-selection Criterion 3;
- Relevant web links;
- Additional remarks.

The project team performed an extensive desk-research and Internet crawling, and mobilised the support of PwC Global Education & Skills Network. The identified initiatives, covering all countries falling under the geographical scope of the study, were included in the status quo database.

Once this step was completed, the identified initiatives were scored and shortlisted within step 1.1.3 Identifying initiatives for a detailed analysis within sub-task 1.2.

Step 1.1.3: Identifying initiatives for a detailed analysis within sub-task 1.2

Step 1.1.3 implied:

- Making selection for the final sample based on the initial policy profiles in consultation with the national focal points and the EISMEA/Commission;
- Identifying the most prominent initiatives;
- Identifying at least one initiative per country for the final sample.

Figure 7-2 outlines the scoring system that was developed and used by the project team for selecting the initiatives for the final sample. The scoring system consisted of the four selection criteria (S1 – S4), corresponding to a specific number of points in case the criterion is met. The initiatives were scored by the project team at the country level. The initiatives with the highest score were given the status of the first-choice initiatives and were further used as the primary candidates for the in-depth analysis within sub-task 1.2 / Task 2. The initiatives with the second-best score (per country) were kept on the selection list as alternatives to be used in case the analysis of the first-choice initiatives proved to be unfeasible (e.g., data was not possible to obtain; further investigation showed insufficient relevance to the current study etc.). The development of the scoring system and its implementation took place in close consultation with the EISMEA/Commission.

Scoring system for selecting the final sample

Selection criterion	Column in the Excel matrix	Nr of points if met	Remarks
S1. Explicit involvement of companies	L	2	Active involvement of companies is a high priority
S2. Maturity level minimum 5 years/Data availability (incl. access to stakeholders)	G	1	A minimum of 5 years is needed to be able to assess the impact
S3. Partnerships	P	1	Partnerships between policy makers and industry
S4. Large-scale target groups	F	1	Applicability to broad population groups (employed or unemployed workforce in general)
TOTAL maximum points:		5	
Each identified initiative from the pool will be scored based on the above criteria and then shortlisting will be done (initiatives with the highest scores will be selected for the analysis)			

Figure 7-2: Scoring system for selecting for the final sample

The text box below provides accompanying remarks for the implementation of the abovementioned scoring system.

Text Box 7-1: Accompanying remarks for the implementation of the scoring system for shortlisting the initiatives from the pool

Criterion S1 points should be given when companies are explicitly involved in any form (they can be the initiators, sponsors, training providers etc.). When the initiative is meant for the benefit of companies (they are beneficiaries), but companies do not play an active role in this up- or reskilling initiative, no points should be given.

Criterion S2: it is not a must to be minimum 5 years old, but it is expected to be easier to get data on the impact if this criterion is met; younger initiatives can also be included (without scoring on this criterion) if the research team expects to be able to find data on its KPIs. If the maturity level is under 5 years, but the information on the initiative is likely to be relatively easy to find, then it is still 1 point for this criterion.

Criterion S3: points should be given when the initiative implies partnership between different stakeholder groups (industry, supporting structures, education and training providers), with the involvement of government. So, if multiple stakeholder groups are involved, including government, then points should be given here.

- Some initiatives may be driven by companies (S1), but do not imply collaboration with government and/or other stakeholders. In that case, only S1 will result in points, and not S3.
- Option: If the initiative implies active involvement of companies AND partnership between government and other stakeholders, then this will result in points for both S1 and S3, which is great as this is what we are looking for.

Criterion S4: points should be given if the initiative covers more than one sector at the national level (or regional level but only where we are analysing the initiatives at the level of specific regions).

The project team developed a list of the first and second choice initiatives and shared it with EISMEA/ Commission for feedback and validation. In total, 50 initiatives were selected for the final sample aimed at in-depth analysis within sub-task 1.2 (45 initiatives from national and regional levels of the specified 39 countries plus 5 extra initiatives spread across different countries).

At least one initiative per country was selected for the final sample. In addition, the project team reserved 5 more positions for other initiatives for the sample for those initiatives that offered to be particularly promising and relevant to explore, but which were not yet included in the initial sample. These additional initiatives were spread across different countries from the sample.

The final list of the analysed initiatives, however, had to be modified based on the outcomes of the interactions with the relevant stakeholders. The key reasons for modifications included the following: (1) stakeholders did not respond; (2) stakeholders were not willing to participate in the study; (3) stakeholders informed the project team that the selected initiative should not be included in the analysis (e.g., less relevant, no available results).

Once this step was completed, the project team started working on sub-task 1.2 Collecting data per policy initiative.

7.1.3. Sub-task 1.2: Collecting data per policy initiative

Sub-task 1.2 implied collecting data per policy initiative from the selected sample.

The objective of sub-task 1.2 was to develop detailed descriptions of the identified initiatives and generate a knowledge base for the status quo analysis and reporting. Furthermore, it implied collecting part of the data for the benchmarking exercise to be conducted within Task 2. As outlined in Figure 7-1, sub-task 1.2 was operationalised into five steps.

Step 1.2.1 Defining a policy profile

Step 1.2.1 implied defining the types of data that need to be collected for a detailed policy profile for the status quo analysis within sub-task 1.3 and for the benchmarking exercise of Task 2. The finalised policy profile consists of three key sections: (1) General; (2) Key Performance Metrics, and (3) Key Performance Drivers. The General section implies presenting the key data per policy initiative including its title, country, level, duration, target audience, objectives, and a brief description. The Key Performance Metrics section implies developing short summaries on the performance of each of the initiatives from the sample at each of the analysed dimensions, namely individual, company and economy. Finally, the Key Performance Drivers section focuses on the summaries of the factors enabling the performance of the analysed initiatives, including stakeholders, learners, funding, and regulatory framework. The policy profile template was fully aligned with the structure of the online questionnaire (as will be outlined below), to ensure targeted data collection.

Once the policy profile was defined and validated, the project team started collecting the actual data on each of the initiatives from the sample.

Step 1.2.2 Collecting data via desk-research and establishing first contact with focal points

Step 1.2.2 implied collecting data on the selected initiatives via desk-research (i.e., dedicated websites, reports, and other Internet resources). The project team specifically applied this data collection strategy for identifying the key focal points (i.e., key coordinating stakeholders) per policy initiative, as well as to gather some basic initial data for the policy profiles.

Once the focal points were identified, the project team aimed to obtain their agreement for participating in the study and their support with identifying other relevant stakeholders. The project team aimed for identifying multiple relevant stakeholders per policy initiative. In parallel, the project team launched the online survey within step 1.2.3. Part of the desk-research continued in parallel with the online survey and in-depth interviews.

The identified focal points/stakeholders were then approached by the project team with an invitation to participate in the study. This invitation was accompanied by a support letter by EISMEA/Commission, and the corresponding data protection notice. The project team established the first contacts and explained the key types of contribution expected for the study. The focal points/stakeholders were also informed about the ways the data will be processed and used, and the benefits of their participation in the study.

In some cases, the approached focal points/stakeholders declined the invitation of the project team to participate, and the corresponding initiatives had to be replaced by comparable alternatives.

Step 1.2.3 Collecting data via the online survey

Step 1.2.3 implied collecting data on the selected initiatives via an online survey. The latter was sent to the relevant stakeholders (i.e., policy makers, companies, education and

training providers, supporting structures etc.), with a request to provide the relevant inputs for the analysis on a specific policy initiative from the sample. More information on the approach and structure of the online survey will be provided in the description of Task 2.

Once this step was partially complete, the project team launched step 1.2.4 Collecting data via in-depth interviews. Part of the online survey activities continued while the project team was conducting in-depth interviews.

Step 1.2.4 Collecting data via in-depth interviews

Step 1.2.4 implied collecting data on the selected initiatives via in-depth interviews with the representatives of the relevant stakeholder groups (i.e., policy makers, companies, education and training providers, supporting structures). The inputs from the in-depth interviews accompanied the data collected by means of desk-research and the online survey, as mentioned above.

Once this step was complete, all collected data was systemised and prepared for the analysis within sub-task 1.3 Analysis and reporting.

Step 1.2.5 Synthesis of collected data and developing policy profiles

As outlined above, the production and presentation of the policy profiles follows a common structure and template/layout. The profiles present both factual information/data and qualitative insights, emphasising the key elements, using bullet points and/or headings.

The profiles were developed with an idea to make them easy to read and understand, and be punchy and informative, while also grounded in solid research and analysis. The project team aimed at limiting the profile of each policy initiative to one page, where possible. The policy profiles can be found in *Annex B* of the Report.

7.1.4. Sub-task 1.3: Analysis and reporting

After collecting the relevant data and compiling policy profiles, an in-depth analysis of the status quo was performed and reported.

Sub-task 1.3 aimed at performing an in-depth status quo analysis of re- and upskilling initiatives in the relevant geographical areas. The objective of this analysis was to develop a good understanding of the global landscape of re- and upskilling policies, with a particular attention to their scope, size, level, type of involved stakeholders, overall stakeholder ecosystem, and specifically the results.

Within sub-task 1.3, we performed a cross-policy comparison and extracted practical conclusions with regard to the status quo. As outlined in Figure 7-1, sub-task 1.3 was operationalised into two steps.

Step 1.3.1 Performing status quo analysis and extracting cross-policy conclusions

Step 1.3.1 implied performing an in-depth status quo analysis of re- and upskilling initiatives in the relevant geographical areas. Within this step, a cross-policy comparison was performed and practical conclusions with regard to the status quo analysis were extracted.

Step 1.3.2 Specifying inputs for benchmarking (Task 2)

Step 1.3.2 implied specifying the relevant indicators and types of data that was used for benchmarking within Task 2. The project team used the developed inputs for sub-tasks 2.1 Developing benchmarking methodology and 2.2 Collecting data for benchmarking.

7.2. Task 2: Developing the benchmarking tool, analysis of best practices and proposing recommendations Indicators (KPIs)

The current section presents the approach towards Task 2. This task implied developing a benchmarking tool aiming to identify the best practices of up- and reskilling initiatives involving businesses as active stakeholders, conducting in-depth analysis of success and failure factors, and proposing recommendations for designing future re- and upskilling initiatives.

7.2.1. Task 2 design

Figure 7-3 presents the overall design of Task 2 highlighting the key activities within each of the sub-tasks.

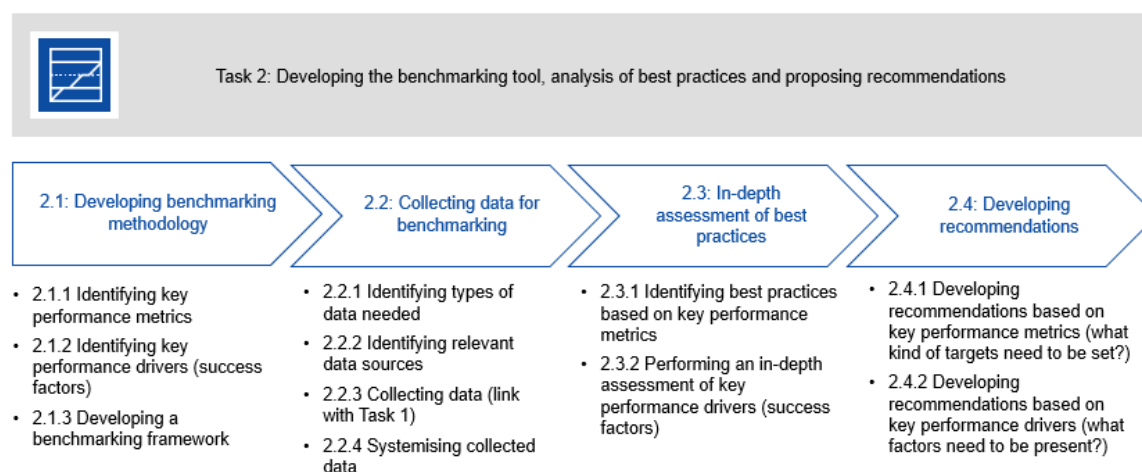


Figure 7-3: Task 2 design

Below we address the objectives, methodology and progress of each of the specific sub-tasks of Task 2.

7.2.2. Sub-task 2.1: Developing benchmarking methodology

The objective of sub-task 2.1 was to develop benchmarking methodology that would allow for objective comparison and identification of best practices, in particular of those which yield the best results for companies and the workforce.

The overall purpose of this exercise was to identify the success (and failure) factors having a direct impact on the performance of initiatives. The benchmarking framework needed to allow for a sufficient degree of flexibility to be able to accommodate the diversity of contexts of the analysed initiatives.

When selecting the relevant KPIs, it was crucial to distinguish between key performance metrics and key performance drivers, with the corresponding indicator sets. Our approach towards developing each of the indicator sets was outlined in section 1.3 of the Report.

As outlined in Figure 7-3, sub-task 2.1 was operationalised into three steps.

Step 2.1.1 Identifying key performance metrics

The identification of the key performance metrics for re- and upskilling initiatives was performed by means of:

Extensive desk-research for methodologies and comparable analyses in policy reports, scientific studies, specialist blogs etc.; and

Active stakeholder engagement in co-creation and validation of the selected indicators by means of an interactive workshop (W1) held on 14 March 2023 in Brussels (Task 3).

Section 1.3 of the Report presented a fine-tuned list of indicators for the key performance metrics including the corresponding data type sources. The selected indicators focus on achieving the sustainable nature of the skills economy. The latter implies a long-term orientation/continuity of up- and reskilling activities, a mentality shift (i.e., a shift towards a lifelong learning culture), and synergies between all levels including individual, company and economy.

Step 2.1.2 Identifying key performance drivers (success factors)

Similarly to the key performance metrics, the identification of the key performance drivers for re- and upskilling initiatives was done by means of:

- Extensive desk-research for methodologies and comparable analyses in policy reports, scientific studies, specialist blogs etc.; and
- Active stakeholder engagement in co-creation and validation of the selected indicators by means of an interactive workshop (W1) held on 14 March 2023 in Brussels (Task 3).

The key performance drivers refer to the factors that determine/influence the performance of the analysed initiatives (i.e., key success factors in case they have a positive impact and key failure factors in case their impact is negative). Section 1.3 of the Report presented a fine-tuned list of indicators for the key performance drivers including the corresponding data type sources. Also here, the project team had to prioritise and, whenever needed, develop composite indicators, to best accommodate the needs of the data collection and analysis processes.

Both sets of indicators were then integrated into the overall benchmarking framework (as was presented in Figure 1-2 in section 1.1.3 of the Report). This framework formed the essence of the benchmarking tool aiming to allow for objective comparison of the diverse up- and reskilling initiatives assessed in the analysis.

7.2.3. Sub-task 2.2: Collecting data for benchmarking

Sub-task 2.2 aimed to collect the data necessary for the identification of best practices based on the objective comparison of the analysed policies, and for extracting critical success factors together with the factors that have a limited or negative influence on the success of a specific re- and upskilling policy initiative.

The benchmarking framework was subsequently translated into the specific data types that need to be collected. The main source of collecting data per policy initiative is an online survey. The latter is distributed among the key stakeholders involved in the design, implementation, and evaluation of the initiatives in question. The online survey was developed in Qualtrics⁵⁶. The online survey was then accompanied by desk-research and in-depth interviews, with an objective to fill in the gaps and to validate the inputs of the

⁵⁶ <https://www.qualtrics.com>

survey. *Annex C* presents the structure of the questionnaire and indicates the links between the questionnaire and the specific elements of the benchmarking framework.

7.2.4. Sub-task 2.3: In-depth assessment of best practices

Sub-task 2.3 implied conducting an in-depth assessment of the analysed best practices. Sub-task 2.3 had two specific objectives:

- To assess best practices based on key performance metrics; and
- To perform an in-depth assessment of key performance drivers (success factors).

The methodology for sub-task 2.3 addresses each of the key objectives of this sub-task.

Step 2.3.1 Identifying best practices based on key performance metrics

The identification of best practices needed to be performed based on the key performance metrics. For this purpose, we developed composite variables for each of the dimensions based on individual performance metrics of these dimensions. These composite variables (at the level of performance metrics dimensions) were used for mapping the identified initiatives depending on their performance. The identified best practices were presented to and validated by the relevant stakeholders during an interactive workshop (Task 3).

Step 2.3.2 Performing an in-depth assessment of key performance drivers (success factors)

For the identification of key success factors (and factors that have no or negative impact on success), there was a need to perform an in-depth assessment of the relationship between the performance drivers (independent variables) and performance metrics (dependent variables). This analysis consisted of descriptive statistics, correlation, and PLS Regression. The first method was used to gather a first impression of and benchmark the data, whereas correlation and PLS Regression were used to explore the relationships amongst and between the metrics and drivers.

Correlation Analysis

In this analysis, Pearson's correlation was used, which measures the strength and direction of a linear relationship between two continuous variables⁵⁷. Correlation was used for two reasons, namely, to assess multicollinearity and determine whether a linear model is appropriate for further analysis.

Partial Least Squares Regression

For examining the abovementioned relationships, we used the Partial Least Squares Regression (PLS). A great advantage of PLS regression over classic regression are the available charts that describe the data structure. Thanks to the correlation and loading plots it is easy to study the relationship among the variables, either being relationships among the independent variables or dependent variables, as well as between independent and dependent variables. The score plot gives information about sample proximity and dataset structure. The biplot gather all these information in one chart⁵⁸.

As a result of this analysis, we were able to statistically explore the relationship between the key performance drivers and key performance metrics (grouped into specific

⁵⁷ Faizi, N. & Alvi, Y. (2023). *Biostatistics Manual for Health Research*. Academic Press. <https://www.sciencedirect.com/topics/computer-science/pearson-correlation>

⁵⁸ <https://www.xlstat.com/en/solutions/features/partial-least-squares-regression#:~:text=What%20is%20Partial%20Least%20Squares,used%20to%20perform%20a%20regression.>

dimensions) and identify the impact of each performance driver on a certain dimension of performance metrics.

We performed the required checks to make sure the number of data points in the sample is sufficient for the analysis of this broad list of variables. The identified relationships were then assessed and transformed into analytical conclusions. Using proven statistical methods for the identification of best practices aimed to maximise the objectivity of judgement.

Partial Least Squares (PLS) Regression is a multivariate statistical technique that, unlike common regression techniques, such as Multiple Regression (MR), allows comparison between multiple independent – predictor – variables (x) and multiple dependent – target – variables (y)⁵⁹. More specifically, PLS Regression describes the relationship between two matrices (X and Y), by modelling the multidimensional direction in the X matrix that explains the maximum multidimensional variance direction in the Y matrix. PLS is particularly beneficial when modelling a small data set, where multicollinearity may be present, as it is able to robustly handle independent variables with a lower risk of chance correlation than would result when applying Multiple Regression⁶⁰.

PLS Regression reduces multicollinearity by reducing the dimensionality of correlated variables and modelling the underlying and shared impact of those variables. It does this for both independent and dependent variables. As such, it reduces the chance of skewed or misleading results, which is common in regression analyses conducted with multicollinearity. This benefit is particularly relevant in this case, as several variables are intercorrelated. A key limitation to this is that covariance is *scale bound*. This means that relationships modelled on different scales may provide misleading results. This risk can be mitigated by standardising the scales on which data is measured. In this analysis, the scales for all drivers and metrics were already aligned because they were all 5-point Likert.

The consistency (precision) of a PLS Regression model is closely linked to the sample size used to build the model. The sample size should be roughly ten times the number of parameters (reported as PLS coefficients) modelled in the most complex regression of the PLS model⁶¹. In this case, only 47 observations were collected meaning that only a maximum of five parameters can be modelled accurately. As discussed later, two models included more independent variables than this threshold, meaning that they cannot be deemed statistically accurate.

A key parameter in PLS Regression is the number of components, which can take integer values between 1.0 and the number of features (predictor variables, x). The number of components is selected to best summarise the original predictors and target variables. In this analysis, the number of components was selected per PLS Regression model as a trade-off that minimised the Mean Squared Error (MSE) and maximised the amount of variance (R^2) explained by the model.

MSE is the average squared difference between true value of an observation and the value predicted for that same observation⁶². As such, it is a measure of how well a model fits the underlying data. The value of the MSE may range indefinitely but is always positive. Its size is informative only in reference to the scale of underlying data. R^2 is a measure between 0.0 and 1.0 that describes the amount of variation in the underlying data that is described by the model. The closer to 1.0, the more variation in the target

⁵⁹ Pirouz, D. (2006). An Overview of Partial Least Squares. *SSRN Electronic Journal*, 10.

⁶⁰ Cramer III, R.D. (1993). Partial Least Squares (PLS): Its strengths and limitations. *Perspectives in Drug Discovery and Design*, 1, 269 – 278.

⁶¹ Barclay, D. W., Higgins, C. A., & Thompson, R. (1995). The partial least squares approach to causal modeling: Personal computer adoption and use as illustration. *Technology Studies*, 2(2), 285–309.

⁶² *Mean Squared Error*. (n.d.). Britannica. <https://www.britannica.com/science/mean-squared-error>

variable is accounted for by the predictor variables, and vice versa. As such, it is another measure of how well a model fits the underlying data.

Based on the trade-off between MSE and R^2 , as shown in Figure 7-4, Figure 7-5, and Figure 7-6, below, the following number of components was selected for each of the three PLS Regression Models:

- Aggregated Model 1: Number of Components = 3
- Aggregated Model 2: Number of Components = 2
- Aggregated Model 3: Number of Components = 3

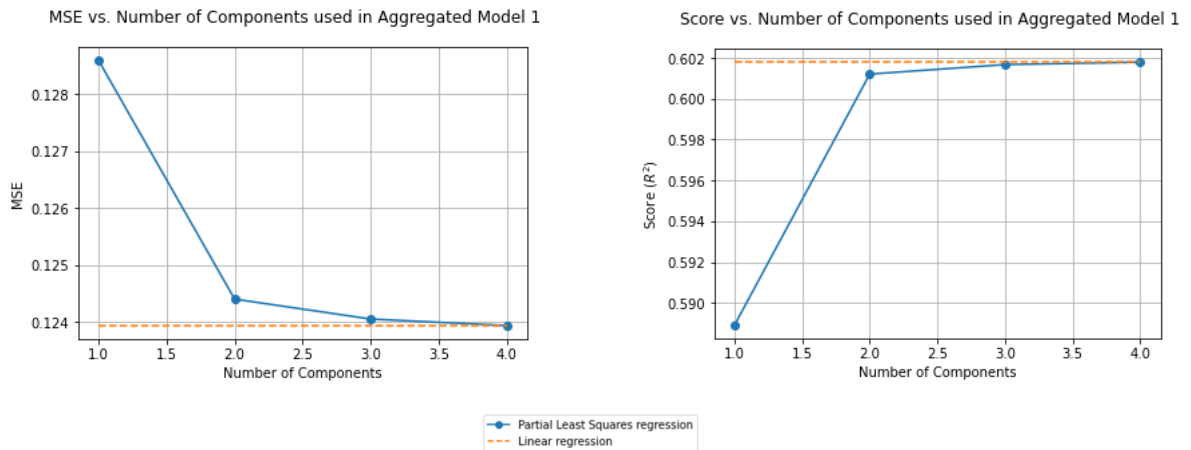


Figure 7-4: MSE and R^2 values per number of components for Aggregated Model 1

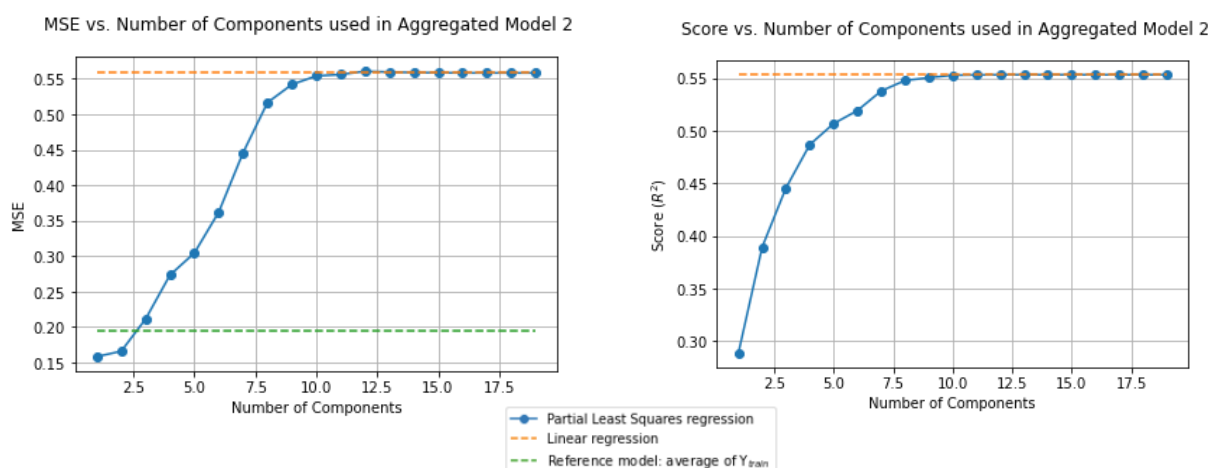


Figure 7-5: MSE and R2 values per number of components for Aggregated Model 2

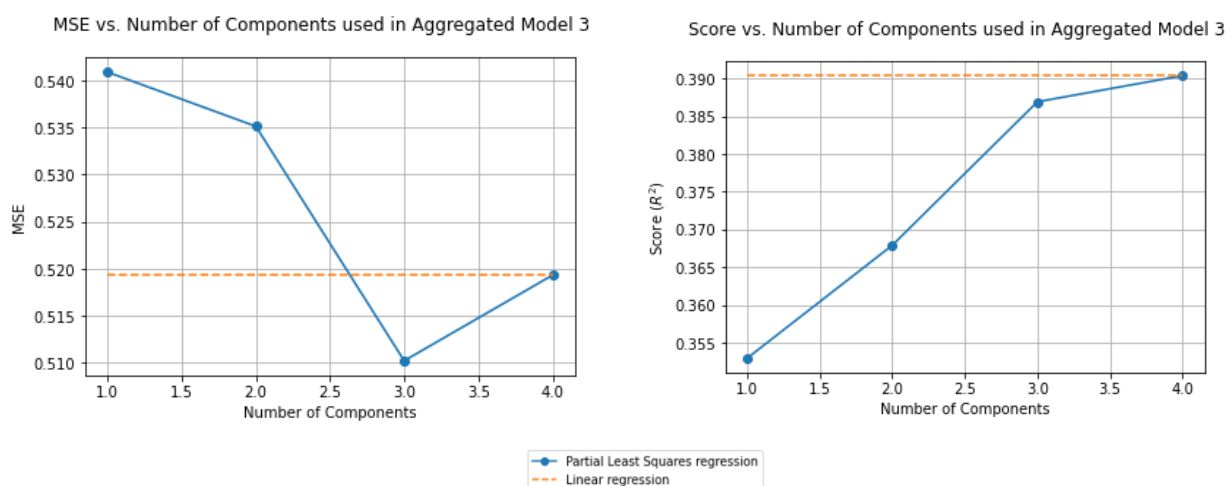


Figure 7-6: MSE and R2 values per number of components for Aggregated Model 3

Figure 7-5 shows an increasing mean square error, as the number of components increases. This can be explained by overfitting of the model. Aggregated Model 2 separately models the impact of each of the individual drivers on the aggregated metric dimensions. This is a large number of parameters relative to the size of the dataset used. As a reference, the MSE of taking a constant line (predicting the target variable as an average of train set outcome) is also plotted. This line serves as a baseline indicative of a model that would predict at random. Two components were chosen for Aggregated Model 2, as any more components results in an MSE greater than the baseline and would therefore be a model that performs no better than one that predicts at random.

7.2.5. Sub-task 2.4: Developing recommendations

Sub-task 2.4 implied developing recommendations for future policy making:

- Recommendations based on key performance metrics (what kind of targets need to be set?);
- Recommendations based on key performance drivers (what success factors need to be present?).

The above conclusions, as well as the outcomes of research done during implementation of Task 1 and results of workshops implemented in Task 3, served as the base for drafting recommendations for stakeholders and policy decision makers. They also took into

account the foreseen “greenification”⁶³ and digitalisation⁶⁴, as well as regulatory and policy frameworks planned for the next years’ deliverables. As outlined above, specific questions on greenification and digitalisation were included in the online questionnaire for sub-tasks 1.2 and 2.2.

We thus specifically aimed for the full alignment of the proposed recommendations with the latest greenification and digitalisation strategies of the EU, as well as other relevant ambitions related, among others, to inclusiveness of education & training, promoting lifelong learning etc. The recommendations aim to help in designing re- and upskilling policies and initiatives.

Special attention was paid to the analysis of the transferability, scalability, and sustainability of the identified best practices in the EU context. Transferability refers to the extent to which a policy/initiative transferable to other contexts (whether is linked to specific framework conditions such as legislation, cultural aspects etc.). Scalability implies the potential of a policy/initiative for extending its coverage to broader target groups. Finally, Sustainability refers to the extent to which the results produced by a policy/initiative are likely to be usable for years to come. These aspects were analysed based on the data collected within Tasks 1 and 2 and were partially presented to stakeholders for validation during the dedicated second workshop within Task 3.

The recommendations are structured per stakeholder group (i.e., policy makers (EU/national/local; companies (large and SMEs); education & training providers; social partners and other labour market organisations; learners), clearly indicating specific roles/activities and timelines.

7.3. Task 3: Organising workshops

The current section presents the approach towards Task 3 aiming to organise stakeholder workshops.

7.3.1. Task 3 design

Figure 7-4 presents the overall design of Task 3 highlighting the key activities within each of the sub-tasks. Two different workshops needed to be organised within this Task:

- **Workshop 1 (linked to Task 2):** for the representatives of the key stakeholder groups (businesses, social partners and other labour market organisations, national organisations, academia, vocational and educational training providers, etc.), with an objective to co-design and test the KPIs (performance metrics, performance drivers and the overall benchmarking framework); and
- **Workshop 2 (linked to Task 2):** for policy makers, as well as the representatives of other key stakeholder groups as highlighted above, with an objective to validate the initial study results that then needed to be further developed in the Final Report.

The workshops had to be organised as full-day hybrid workshops (on the spot for the participants originating from the EU and online for the participants outside of the EU), in Brussels.

⁶³ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

⁶⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/shaping-europe-digital-future_en and https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en

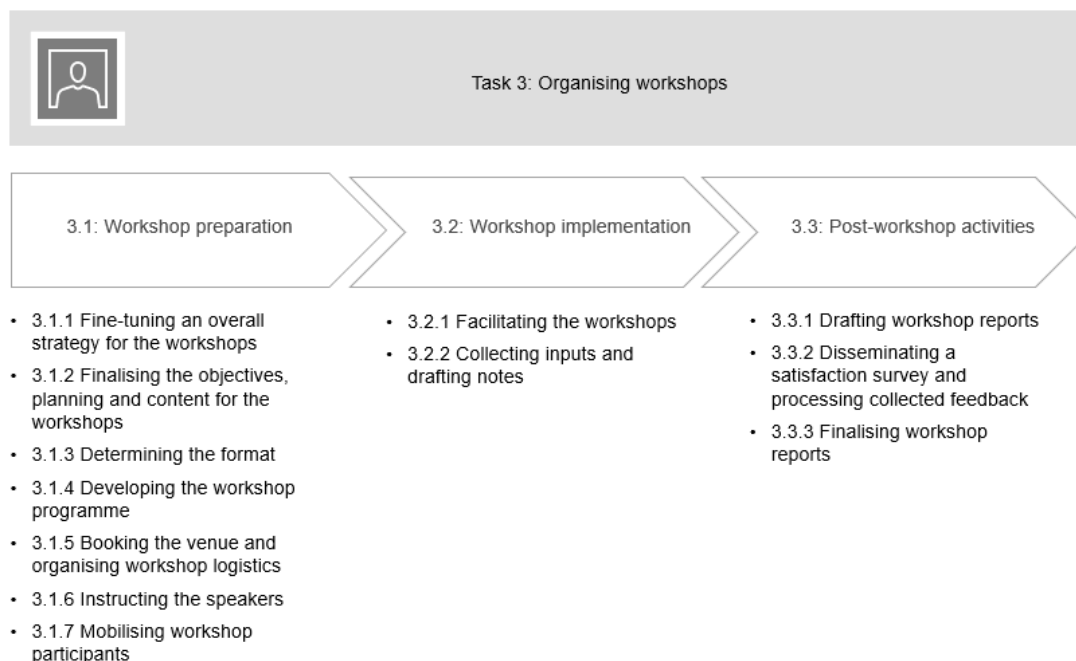


Figure 7-4: Task 3 design

Workshop 1 was held in Brussels on 14 March 2023. Workshop 2 was also held in Brussels and took place on 26 September 2023. Below we address the objectives and methodology of each of the specific sub-tasks for both workshops. The detailed workshop minutes including lists of participants are provided in *Annex E* of this Report for both Workshop 1 and 2.

7.3.2. Sub-task 3.1: Workshop preparation

In this section, we summarise our approach towards preparing the workshops.

The workshop preparation activities were organised into the following steps:

- Step 3.1.1 Fine-tuning an overall strategy for the workshop;
- Step 3.1.2 Finalising the objectives, planning and content for the workshop;
- Step 3.1.3 Determining the format;
- Step 3.1.4 Developing the workshop programme;
- Step 3.1.5 Booking the venue and organising workshop logistics;
- Step 3.1.6 Instructing the speakers;
- Step 3.1.7 Mobilising workshop participants.

Each of the abovementioned steps was conducted following the detailed approach, as outlined in the original Technical Offer. The approach was fine-tuned in close cooperation with the EISMEA/Commission.

Workshop 1 (W1) aimed to engage the relevant stakeholders in co-designing/validating the Key Performance Indicators (KPIs) to be included in the benchmarking framework. The workshop participants were offered a detailed benchmarking methodology for their feedback and validation, and specifically for collecting their practical insights and experiences.

W1 aimed to provide an interactive setting for exchanging opinions, testing ideas and co-creating the final methodology solution. The main objective Workshop 1 was to make sure the final benchmarking methodology is well aligned with the practical observations from

the field and optimally meets stakeholders needs and expectations. The project team aimed to mobilise the representatives of all the key stakeholder groups actively involved in up- and reskilling, and specifically at the EU and national policy makers, businesses, supporting structures (e.g., industry associations, trade unions, round tables, network organisations, etc.), academia, and vocational and educational training providers.

W1 was built around the key co-creation sessions, the first one aiming at co-design of the Key Performance Metrics, and the second one aiming and co-design of the Key Performance Drivers. These sessions were preceded by a brief introduction to the project approach and methodology, and then followed by a dedicated summary and validation session in the end of the workshop.

Workshop 2 (W2), in turn, was linked to the presentation of the results of the benchmarking exercise and the validation of the draft policy recommendations. How do the analysed up- and reskilling initiatives compare with each other in terms of their performance at the individual, company, and economy levels? What are the key factors influencing the impact of up- and reskilling initiatives? Which (combinations of) building blocks allow for creating the most impactful up- and reskilling initiatives? What are the roles of specific stakeholder groups in maximising the success of up- and reskilling initiatives? These are examples of questions that were addressed at W2.

W2 aimed to engage the relevant stakeholders in validating the draft results of the analysis including the global benchmarking exercise, the key success factors, and the corresponding policy recommendations for all key stakeholder groups. The workshop participants were offered a detailed overview of the results for their feedback and validation, and specifically for collecting their practical insights and experiences.

The main objective of W2 was to make sure the final analysis and policy recommendations are well aligned with the practical experiences from the field and optimally meet stakeholder needs and expectations. The workshop thus offered an opportunity to get a unique insight into the latest study results and to provide practice-based inputs and opinions for further advancement of the analysis. The outcomes of the workshop were taken onboard for developing the current Report containing both the detailed analysis of the benchmarking exercise and the corresponding policy recommendations.

7.3.3. Sub-task 3.2: Workshop implementation

The current section addresses our approach to the workshop implementation activities. The objective of sub-task 3.2 was to ensure a smooth workshop implementation, taking into account the outlined technical requirements and specific objectives of the workshops. The two key steps within this sub-task referred to facilitating the workshops, as well as collecting inputs and drafting notes.

Step 3.2.1 Facilitating Workshop 1

The workshops were facilitated by experienced professionals from the project team, accompanied by the inputs of external experts. Both workshops took place in a hybrid form, with 27 participants in total for W1 (from both EU and non-EU countries; 13 participants joined the workshop physically, and the other 14 in a virtual form), and with 35 participants for W2 (similarly from both EU and non-EU countries; 14 participants joined the workshop physically, and the other 21 in a virtual form).

Step 3.2.2 Collecting inputs and drafting notes

During the workshops, the dedicated project team members were collecting inputs and taking notes. Those were then processed into detailed workshop reports, as presented in *Annex E* of the Report.

7.3.4. Sub-task 3.3: Post-workshop activities

In this section, we summarise our approach towards the post-workshop activities. Sub-task 3.3 aimed to systemise and develop the relevant workshop outputs. The post-workshop activities for W1 and W2 were organised into three steps.

Step 3.3.1 Drafting workshop reports

After the workshops, the project team developed summaries of the outcomes and conclusions, as presented in *Annex E* of the Report.

Step 3.3.2 Collected feedback from participants

Specifically for W1, the workshop participants were approached with an invitation to provide feedback on the workshop report and additional suggestions.

Step 3.3.3 Finalising workshop reports

The collected feedback was then processed, and the final versions of the workshop reports were developed and shared with the EISMEA/Commission.

Annex A: Status quo country summaries

Table A-1: Status quo summaries of up- and re-skilling landscape per country

Country	Status quo summary
EUROPE (EU AND THE UNITED KINGDOM)	
Austria	<p>The skills policy of Austria has a strong focus on apprenticeship and dual vocational education and training (VET) systems. Austria places great importance on providing practical, hands-on training for individuals, allowing them to gain valuable skills and experience in a real work environment. Another notable aspect is the close collaboration between the government, employers, and social partners. The skills policy in Austria involves active participation and cooperation between these stakeholders to ensure the relevance and quality of training programs. Additionally, Austria places great importance on social inclusion and equal opportunities. The policy aims to provide accessible and inclusive training opportunities for individuals from all backgrounds, including those with disabilities or disadvantaged backgrounds. Overall, Austria's skills policy stands out for its emphasis on apprenticeship and dual VET systems, collaboration between stakeholders, and commitment to social inclusion.</p> <p>A promising initiative that was identified shows a high degree of company involvement/participation, as well as a high level of maturity (Training Network Digital competences & IT security) [1]. In general, many of the initiatives we found for Austria are on a cross-national level but not necessarily initiated by Austria itself. Additionally, the majority of initiatives are quite young (less than 5 years).</p> <p>[1] https://www.digitalregion.at/digitalregion-oberoesterreich/digital-bildung/digital-skills/qualifizierungsverbund-digitale-kompetenz-it-security</p>
Belgium	<p>Belgium has a federal structure, and each region (Flanders, Wallonia, and Brussels) has its own skills policy and initiatives tailored to their specific needs and priorities. This allows for a more targeted approach and flexibility in addressing regional skills gaps. Another notable aspect is the emphasis on lifelong learning and upskilling. Belgium recognises the importance of continuous skill development and provides various programs and incentives for individuals to acquire new skills or upgrade existing ones throughout their careers. Additionally, Belgium places great importance on the recognition of prior learning and the validation of non-formal and informal learning. The skills policy aims to acknowledge and value the skills and knowledge individuals have acquired through work experience or other non-traditional pathways. Overall, Belgium's skills policy stands out for its regional approach, focus on lifelong learning, and recognition of prior learning.</p> <p>In Belgium, we found multiple local initiatives and a national strategy plan. Due to the linguistic and cultural division of the country, there are different local initiatives [1] depending on the region.</p> <p>[1] https://emploi.wallonie.be/files/DOCS/Actualit%C3%A9s/40READY_ECOSYSTEME_ACCOMPAGNEMENT_FOR_MATIGNON.pdf</p>

Country	Status quo summary
<p>Bulgaria</p>	<p>The skills policy of Bulgaria has a focus on improving the quality and relevance of vocational education and training (VET) programs. Bulgaria has implemented reforms to align VET programs with the needs of the labour market, ensuring that individuals acquire skills that are in demand. Another notable aspect is the emphasis on digital skills and digital transformation. Bulgaria recognises the importance of digital literacy and aims to equip individuals with the necessary skills to thrive in the digital age. The skills policy also places importance on promoting entrepreneurship and innovation, encouraging individuals to develop entrepreneurial mindsets, and supporting the creation of innovative businesses. Additionally, Bulgaria has implemented measures to enhance social inclusion and equal opportunities, ensuring that individuals from all backgrounds have access to quality training and employment opportunities. Overall, Bulgaria's skills policy stands out for its focus on improving the quality and relevance of VET, emphasis on digital skills and entrepreneurship, and commitment to social inclusion.</p> <p>Bulgaria has a few national skills programmes like 'the Digital Bulgaria 2025 Program' and the 'Digital National Alliance' [1]. While one of the objectives of the Digital Bulgaria 2025 Program is upskilling and reskilling the ICT skills of the workforce, the strategy is broadly defined, without the provision of specific training possibilities [2]. The same holds for the Digital National Alliance. On the other hand, the initiatives that do provide training possibilities often focus on basic IT skills. For instance, MyCompetence provides digital training that also covers topics like how to write an email [3]. The initiatives relevant to the scope of the current study are called 'the Digital skills for Bulgarian SME's' and 'the Telerik Academy' [4], [5].</p> <p>[1] https://digital-skills-jobs.europa.eu/en/about/national-coalitions/bulgaria-digital-national-alliance</p> <p>[2] https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/bulgaria-digital-bulgaria-2025-national-programme</p> <p>[3] https://mycompetence.bg/en/static/1</p> <p>[4] https://digital-skills-jobs.europa.eu/en/inspiration/good-practices/digital-skills-bulgarian-smes-programme</p> <p>[5] https://www.telerikacademy.com/business/partner-program</p>
<p>Croatia</p>	<p>Croatia has a focus on lifelong learning and continuous skills development. Croatia has implemented various initiatives to promote upskilling and reskilling opportunities for individuals throughout their careers, including adult education programs and training vouchers. The country also places great importance on the recognition of non-formal and informal learning, allowing individuals to receive recognition for skills acquired outside of formal education. Additionally, Croatia emphasises the importance of industry collaboration and partnerships, with programs that encourage employers to invest in skills development and apprenticeship programs. The skills policy of Croatia also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of Croatia stands out for its focus on lifelong learning, recognition of non-formal learning, industry collaboration, emphasis on digital skills, and commitment to continuous skills development.</p> <p>While there have been efforts to promote upskilling and reskilling in Croatia [1] [2], there is a need for more targeted initiatives to address the challenges facing the labour market and improve the skills and qualifications of the workforce. It appears that there may be a lack of coordination among different stakeholders involved in the labour market, including government agencies, employers, and training providers. This can make it difficult to develop and implement effective training and development programs that meet the needs of both employers and individuals.</p> <p>[1] https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/croatia-national-development-strategy-2030</p> <p>[2] https://hrvatska2030.hr/</p>

Country	Status quo summary
<p>Cyprus</p>	<p>Cyprus has a focus on vocational education and training (VET) as a means to address the skills gap and promote employability. Cyprus has implemented various initiatives to enhance the quality and relevance of VET programs, including partnerships with industry and the establishment of vocational schools. The country also places great importance on the recognition of prior learning, allowing individuals to receive recognition for skills acquired through work experience or non-formal education. Additionally, Cyprus emphasises the importance of entrepreneurship and innovation, with programs that support the development of entrepreneurial skills and encourage the creation of new businesses. The skills policy of Cyprus also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of Cyprus stands out for its focus on VET, recognition of prior learning, emphasis on entrepreneurship, and commitment to developing digital skills.</p> <p>The Cyprus Lifelong Learning Strategies (2007-2022) describes general objectives of Cyprus regarding reskilling and upskilling of the workforce [1], complemented by Digital Skills and Jobs initiative and the Nova initiative [2], [3].</p> <p>[1] http://archeia.moec.gov.cy/mc/933/lifelong_learning_strategy_2021_2027.pdf</p> <p>[2] https://staging.digitalcoalition.gov.cy/digital-academy-for-citizens/</p> <p>[3] https://cesie.org/en/project/nova/</p>
<p>Czech Republic</p>	<p>The Czech Republic has a well-developed system of vocational schools and apprenticeships that provide individuals with practical skills and knowledge needed for specific industries. The country also places great importance on promoting lifelong learning and continuous skills development, recognising the need for individuals to constantly update their skills to adapt to changing labour market demands. Another notable aspect is the emphasis on digital skills and the integration of technology in education and training. The Czech Republic is actively investing in digital infrastructure and initiatives to ensure that its workforce is equipped with the necessary digital competencies. Additionally, the skills policy of the Czech Republic emphasises the importance of regional cooperation and partnerships, with a focus on aligning education and training programs with the needs of local industries. Overall, the Czech Republic's skills policy stands out for its focus on VET, lifelong learning, digital skills, and regional cooperation.</p> <p>The Strategy for Education Policy of the Czech Republic 2030+ (2021) sets out the direction of education development and investment priorities for the next ten years. The aim is to modernise the education system of the Czech Republic in the field of regional education, leisure time activities and non-formal education and lifelong learning. The Strategy 2030+ has two main strategic objectives, which will be implemented through five strategic lines. The main goal is to modernise the system of vocational fields of education and thereby facilitate the transition of school leavers to the labour market and also to support acquiring qualifications already during the studies [1].</p> <p>[1] https://eurydice.eacea.ec.europa.eu/national-education-systems/czech-republic/national-reforms-related-transversal-skills-and</p>
<p>Denmark</p>	<p>The skills policy of Denmark has a focus on active labour market policies and lifelong learning. Denmark places great emphasis on providing individuals with opportunities for continuous skill development and retraining throughout their careers. Another notable aspect is the close collaboration between education institutions, employers, and labour market organisations. Denmark has established strong partnerships to ensure that the skills being taught align with the needs of the labour market, promoting a smooth transition from education to employment. Additionally, Denmark's skills policy prioritises social inclusion and equal opportunities, aiming to provide access to quality education and training for all individuals, including vulnerable groups. Overall, Denmark's skills policy stands out for its focus on lifelong learning, collaboration between stakeholders, and commitment to social inclusion.</p> <p>With its Digital Growth Strategy 2025, Denmark aims to secure its position as a leading country in the digital skills area. The strategy supports the development of a highly skilled talent pool of qualified professionals [1]. Multiple initiatives in Denmark focus on reskilling and upskilling the workforce. The National Digital Skills and Jobs coalition was created with a purpose to strengthen digital skills throughout the Danish population [2]. Moreover, Denmark instituted the adult vocational training programmes. These programmes are tailored to the needs of the local labour market and its trainees [3].</p> <p>[1] https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/denmark-digital-growth-</p>

Country	Status quo summary
	<p>strategy-2025</p> <p>[2] https://digital-skills-jobs.europa.eu/en/about/national-coalitions/denmark-national-digital-skills-and-jobs-coalition</p> <p>[3] https://www.amu-fyn.dk/praktisk/international/engelsk/</p>
<p>Estonia</p>	<p>Estonia has a focus on digital skills and the integration of technology in education and training. Estonia has implemented various initiatives to promote digital literacy and the use of digital tools in learning, including the introduction of coding and robotics in schools. The country also places great importance on the recognition of informal and non-formal learning, allowing individuals to receive recognition for skills acquired outside of formal education. Additionally, Estonia emphasises the importance of entrepreneurship and innovation, with programs that support the development of entrepreneurial skills and encourage the creation of startups. The skills policy of Estonia also recognises the need for lifelong learning and continuous skills development, with initiatives that promote upskilling and reskilling opportunities for individuals throughout their careers. Overall, the skills policy of Estonia stands out for its focus on digital skills, recognition of non-formal learning, emphasis on entrepreneurship, and commitment to lifelong learning.</p> <p>National Digital Strategy of Estonia 2030 aims mostly at the digitalisation and building of digital skills among teachers and students in elementary and secondary school, by creating networks, knowledge sharing platforms, assessment tools, upskilling programs for teachers and academic staff etc. [1].</p> <p>[1] Estonia's Digital Agenda 2030 https://www.mkm.ee/media/6970/download</p>
<p>Finland</p>	<p>The skills policy of Finland has a strong focus on education and training as a driver of economic growth and social well-being. Finland places great importance on providing high-quality education and training at all levels, from early childhood education to vocational and higher education. Another notable aspect is the emphasis on a learner-centred approach and individualised learning paths. Finland recognises the importance of tailoring education and training to the needs and interests of each learner, promoting personalised learning experiences. Additionally, Finland's skills policy places great emphasis on continuous professional development for teachers and trainers, ensuring that they have the necessary skills and knowledge to deliver effective education and training. Overall, Finland's skills policy stands out for its focus on high-quality education, learner-centred approach, and investment in teacher development.</p> <p>The digitalisation of the workforce in Finland also begins from an early age which means that development of digital skills was included by the government in a national core curriculum providing digital tools and devices as a part of education, including coding classes and online learning [1]. Nevertheless, a large amount of upskilling and reskilling programs were developed due to the COVID-19 pandemic and nowadays are aiming at reducing its consequences for workers. This also led to creation of cross-sectoral, public, and private-led programs for gaining basic digital skills [2]. Among the studied programs there are also those targeting young employees willing to share their experience and learn from more experienced workers in their field through workshops, mentoring platforms, short programs led by universities, training programs from one stakeholder. Strong emphasis has been put on the involvement of seniors and disadvantaged people into the labour market by investing in vocational training and seminars for jobseekers [3].</p> <p>[1] https://www.businessfinland.fi/globalassets/julkaisut/digital-finland-framework.pdf</p> <p>[2] https://www.helsinki.fi/en/news/education/pandemic-increasing-importance-digital-skills-digital-literacy-education-insufficient-many-european-countries</p> <p>[3] https://zenodo.org/record/5226910#.ZCPp3XZBxPZ</p>
<p>France</p>	<p>The skills policy of France has a focus on vocational education and training (VET) as a pathway to employment and economic development. France places great emphasis on providing high-quality vocational training programs that equip individuals with the skills needed for specific occupations. Another notable aspect is the strong partnership between employers and training institutions. France has established close collaborations between companies and vocational training centers to ensure that the skills being taught align with the needs of the labour market. Additionally, France's skills policy emphasises the importance of apprenticeships as a means of combining theoretical learning with practical work experience. This approach allows individuals to acquire valuable skills while being directly exposed to the world of work. Overall, France's skills policy stands out for its focus on vocational training, strong employer partnerships, and promotion of apprenticeships as a pathway to employment.</p> <p>France has a rich history of administering upskilling/reskilling programmes, with its Lifelong Learning/Training programme (Formation tout au long de la vie) being launched as far back as 1971. As a prominent industrial power in the European Union, France boasts a well-balanced mix of</p>

Country	Status quo summary
	<p>regional, national, and cross-EU upskilling/reskilling programmes. These programmes have evolved over time to meet the ever-growing needs of the population. The National Plan for Digital Inclusion, launched in 2018, is a prime example of such evolution [1]. The programme aims to promote digital skills across the country and includes a clear focus on developing the relevant skills, necessary infrastructure, and overall support to maximize their potential utilization. France's successful upskilling/reskilling programmes are characterised by their targeted approach, which ensures that the necessary resources are made available to facilitate their implementation. We also observe a growing trend of programmes at the regional level.</p> <p>[1] https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/france-national-plan-digital-inclusion</p>
<p>Germany</p>	<p>The skills policy of Germany has an emphasis on dual vocational education and training (VET) system. Germany has a well-established system that combines classroom learning with practical on-the-job training, allowing individuals to acquire both theoretical knowledge and practical skills. Another notable aspect is the close collaboration between businesses, vocational schools, and chambers of commerce. This partnership ensures that the skills being taught align with the needs of the labour market, and that individuals receive training that is relevant and up-to-date. Additionally, Germany's skills policy places great importance on the recognition and certification of skills acquired through non-formal and informal learning. This allows individuals to have their skills recognised and valued, enhancing their employability and career prospects. Overall, Germany's skills policy stands out for its dual VET system, strong collaboration between stakeholders, and recognition of non-formal and informal learning.</p> <p>There has been a concerted effort by both industry and government to support upskilling and reskilling initiatives, such as policies aimed at increasing the skill level in the field of microelectronics (e.g. METIS) or maritime technology (e.g. The Shipbuilding Pact for Skills). Additionally, Germany has launched a National Skills Strategy which aims to address the country's skill gaps and ensure that its workforce is prepared for the future of work [1], [2].</p> <p>[1] https://www.bmas.de/SharedDocs/Downloads/DE/Publikationen/a805e-implementation-report-national-skills-strategy.pdf?__blob=publicationFile&v=3</p> <p>[2] https://www.bmas.de/SharedDocs/Downloads/EN/Topics/Initial-and-Continuing-Training/national-skills-strategy.pdf?__blob=publicationFile&v=7#:~:text=The%20Skills%20Strategy%20formulates%20answers.increased%20responsibility%20of%20CET%20stakeholders</p>
<p>Greece</p>	<p>Greece has a focus on vocational education and training (VET) as a means to address unemployment and improve employability. Greece has implemented various initiatives to enhance the quality and relevance of VET programs, including partnerships with industry and the establishment of vocational schools. The country also places great importance on apprenticeships and work-based learning, providing opportunities for individuals to gain practical skills and experience in real work settings. Additionally, Greece emphasises the importance of lifelong learning and continuous skills development, with initiatives that promote upskilling and reskilling opportunities for individuals throughout their careers. The skills policy of Greece also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of Greece stands out for its focus on VET, apprenticeships, lifelong learning, and digital skills.</p> <p>Greece offers a diverse range of national upskilling/reskilling programmes, mostly managed by the Manpower Employment Organisation (OAED) under the Ministry of Labour and Employment [1]. Nevertheless, some programmes are led by private companies, as exemplified by the "Upskilling and Certification in Cloud Microsoft Services" programme. Given its high unemployment rate compared to other EU Member States, the upskilling/reskilling programmes of Greece heavily focus on the unemployed. However, the country also offers several initiatives to support employees, reflecting the prevailing view that upskilling/reskilling is a vital tool for social progression. "MOTIV-Action" is a particularly successful programme that helps low-skilled adults access upskilling pathways, increasing their job opportunities.</p> <p>[1] https://motiv-action.eu/news/co-operation-between-oaed-and-online-training-providers/</p>

Country	Status quo summary
<p>Hungary</p>	<p>Hungary has a focus on dual vocational education and training (VET) as a means to bridge the gap between education and the labour market. Hungary has implemented a dual training system that combines classroom learning with practical work experience, allowing individuals to acquire both theoretical knowledge and practical skills. The country also places great importance on the recognition of prior learning, allowing individuals to receive credit for skills acquired through work experience or non-formal education. Additionally, Hungary emphasises the importance of lifelong learning and continuous skills development, with initiatives that promote upskilling and reskilling opportunities for individuals throughout their careers. The skills policy of Hungary also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of Hungary stands out for its focus on dual VET, recognition of prior learning, lifelong learning, and digital skills.</p> <p>The Hungarian Government created the Digital Workforce Program that is part of the Digital Success Program [1]. This program includes short- and medium-term solutions to educate more IT and digitally trained professionals. One of the initiatives that was supported by the Digital Workforce Program is called ‘developing digital competences for adults (GINOP 6.1.2.)’. The aim of this project is to narrow the digital gap through improvement of digital skills and competences of adults [2].</p> <p>[1] https://digitalisjoletprogram.hu/en/content/dwp-digital-workforce-program</p> <p>[2] https://www.cedefop.europa.eu/en/news/hungary-supporting-digital-transition-vet</p>
<p>Ireland</p>	<p>In Ireland, there is a strong focus on collaboration between government, industry, and education providers to ensure that the skills being developed align with the needs of the labour market. Ireland has established sector-specific skills strategies and partnerships to identify and address skills gaps in key industries such as technology, healthcare, and manufacturing. The country also places great importance on promoting lifelong learning and upskilling, with initiatives and funding available to support individuals in acquiring new skills throughout their careers. Another notable aspect is the emphasis on entrepreneurship and innovation, with programs and support available for individuals to start their own businesses and develop innovative ideas. Additionally, the skills policy of Ireland recognises the importance of attracting and retaining international talent, with initiatives in place to encourage skilled migrants to work and contribute to the Irish economy. Overall, the skills policy of Ireland stands out for its collaboration between stakeholders, focus on lifelong learning, emphasis on entrepreneurship and innovation, and recognition of the value of international talent.</p> <p>The Government put a focus on further training for many years. The Expert Group on Future Skills Needs (EGFSN [1]) was set up in 1997 by the Irish government. The EGFSN was tasked with monitoring all sectors of the Irish economy and identifying current and future skills shortages. The information generated by the skills identification system is translated into skills development programs. The SOLAS [2] Skills and Labour Market Research Unit provides the Group with data, analysis and research and manages the National Skills Database. SOLAS is the State agency that oversees the building of a world class Further Education & Training (FET [3]) sector in Ireland, developing skills to fuel Ireland’s future.</p> <p>[1] https://enterprise.gov.ie/en/what-we-do/workplace-and-skills/employment-permits/employment-permit-policy/expert-group-on-future-skills-needs-egfsn/</p> <p>[2] https://www.solas.ie/</p> <p>[3] https://www.solas.ie/f/70398/x/64d0718c9e/solas_fet_strategy_web.pdf</p>
<p>Italy</p>	<p>The skills policy of Italy has a focus on promoting lifelong learning and continuous skill development. Italy recognises the importance of adapting to changing labour market demands and encourages individuals to acquire new skills throughout their careers. Another notable aspect is the emphasis on university-industry collaboration. Italy has established strong partnerships between universities and businesses to ensure that the skills being taught align with industry needs and to facilitate the transition from education to employment. Additionally, Italy’s skills policy places great importance on promoting entrepreneurship and innovation. The country supports initiatives that encourage individuals to start their own businesses and fosters an entrepreneurial mindset. Overall, Italy’s skills policy stands out for its focus on lifelong learning, university-industry collaboration, and support for entrepreneurship and innovation.</p> <p>The analysis resulted in the finding of a major national strategy the “Italian Strategy for Digital Skills”[1] and three relevant initiatives the “Istituti Tecnici Superiori”[2], the “Training Tax Credit”[3] and the “New Skills Fund” [4]. The three initiatives differ quite noticeably from one another as some</p>

Country	Status quo summary
	<p>of them like the “Istituti Tecnici Superiori” mainly focus on vocational training for the employed workforce in specific technology areas like energy efficiency or sustainable mobility, whereas “Training Tax Credit” offers companies the opportunity of obtaining tax credits for the training costs of employees. Finally the “New Skills Fund” offers companies the opportunity of financing the salary hours of employees, which are used for training. To conclude, several broad initiatives have been developed, with the aim of encouraging companies to promote the upskilling of their workforce.</p> <p>[1] Italy - National Strategy for Digital Skills Digital Skills and Jobs Platform (europa.eu): https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/italy-national-strategy-digital-skills</p>
<p>Latvia</p>	<p>Latvia has implemented initiatives to support entrepreneurship education and provide resources for aspiring entrepreneurs to start and grow their businesses. The country also places great importance on the development of digital skills, recognising the increasing demand for digital literacy in the modern workforce. Latvia has implemented programs to enhance digital skills and promote the adoption of new technologies. Additionally, the skills policy of Latvia emphasises the importance of lifelong learning and continuous skills development, with initiatives that promote upskilling and reskilling opportunities for individuals throughout their careers. The skills policy of Latvia stands out for its focus on entrepreneurship, digital skills, and lifelong learning.</p> <p>Latvia has created a National Digital skills and Jobs Coalition named eSkills Partnership. Since the beginning of this partnership, training projects have been implemented a lot at Small and Medium-Sized enterprises, the workforce, ICT professionals and all Latvian citizens. The partnership was already established in 2013 and is key in closing the digital gap in Latvia [1].</p> <p>Next to this partnership, research shows that Latvia has recently started improving the digital skills of people at risk of unemployment. This vulnerable group is being targeted with the ‘Training (lifelong education) of persons at risk of unemployment with the voucher method’ [2] and the ‘training program by Google and the state Employment Agency (NVA)’. The training program by Google is targeting the digital skills of people at risk of unemployment by providing trainings in “IT support”, “Data analysis”, “User experience design”, “Project management”, “Digital marketing and e-commerce [3]</p> <p>[1] https://eprasmes.lv/</p> <p>[2] https://eprasmes.lv/training-offer/bezdarba-riskam-paklauto-personu-apmacibu-ar-kuponu-metodi/</p> <p>[3] https://eprasmes.lv/training-offer/nva-sadarbiba-ar-google-piedava-digitalo-prasmju-apguves-iespejas/</p>
<p>Lithuania</p>	<p>Lithuania has a focus on fostering a strong connection between education and the labour market. Lithuania has implemented measures to align the skills taught in educational institutions with the needs of employers, ensuring that individuals are equipped with the relevant skills and knowledge for the job market. The country also places great importance on the recognition of prior learning, allowing individuals to receive credit for skills acquired through work experience or non-formal education. Additionally, Lithuania emphasises the importance of lifelong learning and continuous skills development, with initiatives that promote upskilling and reskilling opportunities for individuals throughout their careers [1]. The aim of “Connected Lithuania” is to improve the overall digital competency and skills for all citizens. The skills policy of Lithuania also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of Lithuania stands out for its focus on aligning education with the labour market, recognition of prior learning, lifelong learning, and digital skills.</p> <p>[1] https://www.kpmc.lt/refernet/en/policy-actions-to-strengthen-life-long-learning-in-lithuania/</p>
<p>Luxemburg</p>	<p>The skills policy of Luxembourg has a focus on promoting digital skills and innovation. Luxembourg recognises the importance of equipping individuals with the necessary digital competencies to thrive in the digital age. The country invests in initiatives to enhance digital literacy and offers training programs to develop skills in emerging technologies. Another notable aspect is the emphasis on international mobility and multiculturalism. Luxembourg encourages individuals to gain international experience and fosters a diverse and inclusive workforce. The country offers support for language learning and provides opportunities for individuals to work and study abroad. Additionally, Luxembourg's skills policy places great importance on promoting sustainable development and green skills. The country is committed to transitioning to a green economy and offers training programs in areas such as renewable energy and sustainable practices. Overall, Luxembourg's skills policy stands out for its focus on digital skills, international mobility, and sustainability.</p>

Country	Status quo summary
	<p>Luxembourg prioritises reskilling/upskilling programs, particularly in future and digital skills, to maintain its competitive edge in the region and facilitate the diversification of the economy. These programs are tailored towards meeting the growing requirements of an increasingly digital and tech-focused world. The goal is to provide upskilling and reskilling opportunities to jobseekers and employees through proactive initiatives like the Future Skills program, which uses national and sectoral studies to determine future skill needs [1]. Unlike some countries, Luxembourg views these programs as a means of maintaining competitiveness rather than solely for social progression. The Lifelong Learning Programme, which started in 1971, has since been transformed through regular methodology, partnerships, and objectives updates.</p> <p>[1] https://www.cedefop.europa.eu/en/news/luxembourg-future-skills-initiative-launched-2020#:~:text=It%20consists%20of%20a%20three.project%20management%20skills</p>
<p>Malta</p>	<p>The skills policy of Malta has a strong emphasis on promoting lifelong learning. Malta recognises the importance of continuous skill development and encourages individuals to engage in learning activities throughout their lives. Another notable aspect is the focus on developing digital skills. Malta acknowledges the increasing importance of digital technologies in the modern world and strives to equip its workforce with the necessary digital competencies. Additionally, the skills policy of Malta emphasises collaboration between industry and education. This collaboration ensures that the skills being developed align with the needs of the labour market, leading to better employment opportunities for individuals. Overall, Malta's skills policy stands out for its commitment to lifelong learning, digital skills development, and industry-education collaboration.</p> <p>Malta's skills strategies clearly show that reskilling and upskilling the workforce is a highly relevant issue [1]. The Malta National Lifelong Learning Strategy aims to empower citizens with innovative and personalised approaches to adult learning, but it is a broadly formulated strategy. Looking at specific initiatives, such as Jobsplus Training Services and the Skills Development 2020 initiative, Malta's broad strategy is being implemented in specific upskilling and reskilling training for the workforce [2].</p> <p>[1] https://timesofmalta.com/articles/view/time-to-upskill-and-reskill.867244</p> <p>[2] https://maltaenterprise.com/sites/default/files/Skills%20Development%20Scheme%202020%20%28Version%201.0%29%20FINAL.pdf</p>
<p>The Netherlands</p>	<p>The skills policy of the Netherlands has a focus on vocational education and training (VET). The Netherlands has a well-developed system of vocational education that integrates theoretical knowledge with practical skills, preparing individuals for specific occupations. The country also emphasises the importance of work-based learning and apprenticeships, providing opportunities for individuals to gain hands-on experience in real work settings. Another notable aspect is the emphasis on lifelong learning and upskilling. The Netherlands recognises the need for individuals to continuously update their skills to keep up with technological advancements and changing labour market demands. The country offers a wide range of training and development programs for individuals at all stages of their careers. Additionally, the Netherlands' skills policy places great importance on collaboration between education institutions, employers, and government agencies. The country has established strong partnerships to ensure that the skills being taught align with industry needs and to facilitate smooth transitions from education to employment. Overall, the Netherlands' skills policy stands out for its focus on vocational education, lifelong learning, and collaboration between stakeholders.</p> <p>In the Netherlands, reskilling and upskilling of the workforce is thus a highly relevant topic [1]. Major initiatives steered by the government have been launched in recent years. An initiative such as the "STAP Budget" is one such example, where citizens can claim an amount of money and spend it on an accredited company that facilitates and organises the workshop or training. The SLIM Subsidy Scheme, funded by the Dutch Government stimulates training and development in Dutch SMEs with subsidy. The target groups are SMEs in the sectors: agricultural sector, hospitality sector and recreation sector [2].</p> <p>[1] https://www.pwc.nl/actueel-en-publicaties/diensten-en-sectoren/people-and-organisation/upskilling-en-reskilling-belangrijker-dan-ooit-in-post-coronatijd.html</p> <p>[2] https://www.rijksoverheid.nl/onderwerpen/leven-lang-ontwikkelen/leven-lang-ontwikkelen-financiele-regelingen/slim-regeling</p>

Country	Status quo summary
<p>Poland</p>	<p>The skills policy of Poland encompasses has a focus on vocational education and training (VET). Poland has a well-developed system of vocational education that combines classroom learning with practical training, preparing individuals for specific trades and occupations. The country also emphasises the importance of apprenticeships and work-based learning, providing opportunities for individuals to gain hands-on experience in real work settings. Another notable aspect is the focus on promoting entrepreneurship and innovation. Poland encourages individuals to develop entrepreneurial skills and supports the creation of new businesses and startups. The country offers various programs and initiatives to foster entrepreneurship and provides support for individuals to start their own ventures. Additionally, Poland's skills policy places great importance on international cooperation and mobility. The country actively participates in European initiatives and programs to promote cross-border learning and collaboration. Poland also offers opportunities for individuals to study and work abroad, gaining international experience and expanding their skills. Overall, Poland's skills policy stands out for its focus on vocational education, entrepreneurship, and international cooperation.</p> <p>The education and training management system in Poland comprises three levels: national, regional and local. The Ministry of Education and Science conducts education policy with the support of other ministries responsible for particular professions. Adult education and continuing vocational education and training are provided in continuing education centers, vocational training centers and in post-primary vocational schools [1]. These institutions offer vocational qualification courses, vocational skills courses and general competence courses. There is also a possibility of obtaining market qualifications that can be awarded by all entities conducting business activity that meet the conditions set out in the law. Due to the clear shortage of specific qualifications and the ongoing economic transformations forcing the reduction of employment in traditional industries, general skills strategy has been adopted: Integrated Skills Strategy 2030. The Integrated Skills Strategy 2030 is a strategic policy framework for the development of skills that are necessary for: strengthening social capital, social inclusion, economic growth, achieving a high quality of life. The implementation of this goal is based on six priority areas, in. al. raising the level of key skills in children, youth and adults; increasing the participation of employers in the development and better use of skills; equalizing opportunities in access to development and opportunities to use skills [2].</p> <p>Still the re/upskilling initiatives are mainly dispersed and often on a small scale (dedicated to a group of several dozen or several hundred people). Actions of this kind are often also sectoral, for example teachers and nurses, and thus their scope of impact is limited.</p> <p>[1] http://refernet.ibe.edu.pl/images/Publikacje/Spotlight_on_VET_PL_2019_final.pdf</p> <p>[2] https://www.ibe.edu.pl/pl/projekty-krajowe/zintegrowana-strategia-umiejtnosci</p>
<p>Portugal</p>	<p>Portugal has implemented measures to improve the quality and relevance of education, with a particular emphasis on STEM (Science, Technology, Engineering, and Mathematics) subjects. The country also places great importance on promoting entrepreneurship and innovation, with initiatives and support available for startups and small businesses. Another notable aspect is the emphasis on internationalisation and mobility, with programs in place to encourage Portuguese students and professionals to gain international experience and attract foreign talent to Portugal. Additionally, the skills policy of Portugal recognises the importance of lifelong learning and upskilling, with initiatives and funding available to support individuals in acquiring new skills throughout their careers. Overall, the skills policy of Portugal stands out for its focus on a knowledge-based economy, promotion of entrepreneurship and innovation, emphasis on internationalisation, and commitment to lifelong learning.</p> <p>Two major national programs have been found, the "Portugal Digital" [1] on the one hand and "INCoDe.2030" [2] on the other. These two national programs are of significant importance for the upskilling and reskilling environment in Portugal.</p> <p>[1] Início - Portugal Digital: https://portugaldigital.gov.pt/</p> <p>[2] Eixos - EN - Incode 2030: https://www.incode2030.gov.pt/en/eixos-en/</p>
<p>Romania</p>	<p>The emerging skills policy of Romania has a focus on strengthening vocational education and training. Romania recognises the importance of practical skills and aims to provide individuals with the necessary training to succeed in specific industries. Another significant aspect is the promotion of entrepreneurship and innovation. The skills policy encourages individuals to develop their entrepreneurial skills and fosters an environment that supports innovation and creativity. Additionally, Romania places great importance on the recognition and validation of skills. The policy aims to enhance the recognition of non-formal and informal learning, ensuring that individuals' skills are acknowledged and valued in the labour market. Overall, Romania's skills policy stands out for its emphasis on vocational training, entrepreneurship, innovation, and the recognition of skills.</p>

Country	Status quo summary
	<p>Referring to the Vocational education and training (VET) is to underline that despite the high policy ambitions, it often remains a sector with a low(er) social standing. "Among EU Member States, Romania has one of the highest rates of early leavers from education. Meanwhile, adult training is quite low compared to the European average. These factors affect young people's ability to integrate both social and labour market. [1] Government invests more in vocational training for young people than in further education for well-educated adults. This can be seen from the fact that there are hardly any specific programs for adult training, but for young people, such as the DALIVET [2] program, which promotes dual training for the young population.</p> <p>[1] From Trends in Women Education and Training in Romania https://proceedings.lumenpublishing.com/ojs/index.php/lumenproceedings/article/view/215</p> <p>[2] http://www.proiectdalivet.ro/</p>
Slovakia	<p>The skills policy of Slovakia has a focus on dual education and apprenticeships. Slovakia recognises the importance of practical training and aims to provide individuals with opportunities to gain hands-on experience in their chosen fields. Another notable aspect is the emphasis on aligning education with the needs of the labour market. The skills policy aims to bridge the gap between education and employment by ensuring that the skills being developed are in line with the demands of industries. Additionally, Slovakia places great importance on lifelong learning and upskilling. The policy encourages individuals to engage in continuous learning and provides various opportunities for skill development throughout one's career. Overall, Slovakia's skills policy stands out for its focus on dual education, industry alignment, and lifelong learning.</p> <p>The Lifelong Learning and Counselling Strategy for 2021–2030's principal objective is to make sure that every citizen has access to opportunities for lifelong learning, skill development, and civic engagement at every stage of life [1]. Actions for up/reskilling are mostly addressed to either a sector or a group of addressees. The activities are targeted, for example, at women and girls in the ICT sector. The widest scope of activities in this area are addressed to entrepreneurs.</p> <p>[1] https://www.minedu.sk/data/att/22182.pdf</p>
Slovenia	<p>The skills policy of Slovenia has a strong focus on lifelong learning and continuous professional development. Slovenia recognises the importance of individuals updating their skills throughout their careers and offers a range of training and development programs to support this. The country also places great emphasis on promoting digital skills and digital literacy, acknowledging the growing importance of technology in the modern workforce. Another notable aspect is the focus on strengthening the connection between education and the labour market. Slovenia works to ensure that the skills being taught align with industry needs and actively involves employers in the design and implementation of educational programs. The country also encourages work-based learning and apprenticeships to provide individuals with practical experience. Additionally, Slovenia places importance on social inclusion and equal opportunities, aiming to provide access to education and training for all individuals, including those from disadvantaged backgrounds. Overall, Slovenia's skills policy stands out for its focus on lifelong learning, digital skills, industry collaboration, and social inclusion.</p> <p>The "Development Strategy for the Information Society 2020" outlines what Slovenia is focussing on regarding VET [1]. Two specific programmes were found: Digit NOO and Digital Knowledge for the Jobs of the Future. While there are some programs available through government agencies and private organisations, they may not be widely advertised or easily accessible. Additionally, many of these programs may be targeted towards specific industries or professions, initiated by private organisations with no link with the Government.</p> <p>[1] https://www.gov.si/assets/ministrstva/MJU/DID/Digital-Slovenia-2020-Development-Strategy-for-the-Information-Society-until-2020.pdf</p>
Spain	<p>The skills policy of Spain has a focus on promoting dual vocational training. Spain has implemented a dual training system that combines classroom learning with practical on-the-job training, providing individuals with the necessary skills and experience to enter the workforce. The country also emphasises the importance of apprenticeships and work-based learning, offering opportunities for individuals to gain hands-on experience in real work settings. Another notable aspect is the focus on digital skills and innovation. Spain recognises the increasing importance of technology in the modern economy and places great emphasis on equipping individuals with digital skills to meet the demands of the digital age. The country also encourages entrepreneurship and supports the creation of</p>

Country	Status quo summary
	<p>startups and innovative businesses. Additionally, Spain's skills policy places importance on internationalisation and mobility. The country actively participates in European initiatives and programs to promote cross-border learning and collaboration. Spain also offers opportunities for individuals to study and work abroad, gaining international experience and expanding their skills. Overall, Spain's skills policy stands out for its focus on dual vocational training, digital skills, entrepreneurship, and international cooperation.</p> <p>The Spanish initiatives mainly consist of broad measures [1], which have the objective of updating and improving the current vocational training offer in the country. Nevertheless, one initiative stood out among the rest, the "Digitalzate" [2] plan is a public-private initiative, which has the objective of providing courses for the upskilling and reskilling of the Spanish workforce.</p> <p>[1] plan-de-modernizaci-n-de-la-formaci-n-profesional.pdf (educacionyfp.gob.es) or Formación Profesional Plan de Recuperación, Transformación y Resiliencia Gobierno de España. (planderecuperacion.gob.es)</p> <p>[2] https://digitalzateplus.fundae.es/digitalzate/1 and https://portal.mineco.gob.es/RecursosArticulo/mineco/ministerio/ficheros/210127_plan_nacional_de_competencias_dijitales.pdf</p>
<p>Sweden</p>	<p>The skills policy of Sweden has a strong emphasis on lifelong learning and continuous skills development. Sweden recognises the importance of individuals updating their skills throughout their careers and provides various opportunities for adult education and training. The country also places great importance on promoting gender equality in skills development, aiming to address gender imbalances in traditionally male-dominated fields. Another notable aspect is the focus on sustainability and green skills. Sweden actively promotes sustainable development and offers training programs to equip individuals with the skills needed for a green economy. The country also places importance on promoting digital skills and digital literacy, acknowledging the growing importance of technology in the modern workforce. Additionally, Sweden's skills policy emphasises the importance of collaboration between education and industry. The country works closely with employers to ensure that the skills being taught align with industry needs and actively involves employers in the design and implementation of educational programs. Overall, Sweden's skills policy stands out for its focus on lifelong learning, gender equality, sustainability, digital skills, and industry collaboration.</p> <p>On the one hand, the initiatives like "Ingenjör 4.0" [1] or "Expertkompetens" [2] focus on highly specific targets like industry workers or working professionals in the areas of AI and autonomous systems. On the other hand, Sweden also counts with broader initiatives like "Labour market education" [3] or "Funding for retraining and lifelong learning" [4], aimed at the Swedish workforce including employed and unemployed people. Therefore, it can be concluded that Sweden has been able to develop a strong upskilling and reskilling environment through the combination of different complementary initiatives.</p> <p>[1] Ingenjör4.0 - Upskilling for future manufacturing (ingenjor40.se): https://www.ingenjor40.se/</p> <p>[2] Expertkompetens - Sweden Digital Skills and Jobs Platform (europa.eu): https://digital-skills-jobs.europa.eu/en/inspiration/good-practices/expertkompetens-sweden</p> <p>[3] Arbetsmarknadsutbildning - Arbetsförmedlingen (arbetsformedlingen.se) and Hitta utbildning - Yrkesområden (arbetsformedlingen.se): https://arbetsformedlingen.se/for-arbetssockande/extra-stod/stod-a-o/arbetsmarknadsutbildning</p> <p>[4] Sweden: funding for retraining and lifelong learning CEDEFOP (europa.eu): https://www.cedefop.europa.eu/en/news/sweden-funding-retraining-and-lifelong-learning</p>
<p>United Kingdom</p>	<p>The skills policy of the United Kingdom has a focus on apprenticeships and vocational training. The UK recognises the value of practical skills and provides a robust apprenticeship system that allows individuals to gain hands-on experience while earning a qualification. Another notable aspect is the emphasis on employer engagement. The skills policy aims to involve employers in the design and delivery of training programs, ensuring that the skills being developed are aligned with industry needs. Additionally, the UK places great importance on digital skills and innovation. The policy recognises the increasing importance of digital technology and aims to equip individuals with the necessary skills to thrive in the digital economy. Overall, the United Kingdom's skills policy stands out for its emphasis on apprenticeships, employer engagement, and digital skills.</p> <p>On a regional level, the United Kingdom has implemented the 'Skills for Life' program. This program was already implemented in 2001 and offers free courses for all adults who want to upskill or reskill</p>

Country	Status quo summary
	<p>to improve their careers. Together with many other courses, the program offers essential digital skills courses which will close the digital skills gap amongst adults [1]. Next to this program on a regional level, the United Kingdom partnered up with Google to offer 9000 jobseekers digital and technical training and gain a Google Career certificate. These courses include IT Support, Data Analyst, Project Manager and UX Designer [2].</p> <p>[1] https://skillsforlife.campaign.gov.uk/</p> <p>[2] https://grow.google/intl/uk/about/</p>
NORTH AMERICA	
Canada	<p>Canada has a strong focus on promoting lifelong learning and continuous skills development. Canada has implemented various initiatives to support individuals in acquiring new skills and upgrading existing ones throughout their careers. The country also places great importance on the recognition of foreign credentials and prior learning, allowing skilled immigrants to integrate into the Canadian workforce more easily. Additionally, Canada emphasises the importance of industry collaboration and partnerships, with programs that encourage employers to invest in training and development. The skills policy of Canada also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of Canada stands out for its emphasis on lifelong learning, recognition of foreign credentials, industry collaboration, focus on digital skills, and commitment to supporting individuals throughout their careers.</p> <p>The federal government has committed to investing over 1 billion USD in programs aimed at helping Canadians develop new skills and prepare for the jobs of the future [1]. Technology-related skills are in high demand: In particular, skills related to information technology, data analysis, and cybersecurity are in high demand in Canada [2].</p> <p>In Canada, the private sector has recognised the importance of up- and reskilling initiatives and has actively participated in supporting such policies. Many Canadian companies have established partnerships with educational institutions, industry associations, and government bodies to develop training programs and provide financial support for up- and reskilling initiatives. These partnerships have helped bridge the skills gap and ensure a workforce that is equipped with the necessary skills for the future. Opportunities are reported to exist for employers to learn from each other's experiences, but they lack networks or forums to share best practices or collaborate. In establishing upskilling and reskilling initiatives, it is reported to be not always clear to employers where they should turn for resources or potential partners. While post-secondary institutions have been upskilling and reskilling workers for years through Continuing Education units, government funding and traditional post-secondary programs are reported to be not always agile enough to be responsive to industry's skills needs. Canada's largest businesses are reported to be better positioned to engage in upskilling and reskilling activities than SMEs, who have less capacity and resources at their disposal [3].</p> <p>The upskilling for Industry Initiative places employers at the forefront of identifying the skills needs of high-growth industries. By fostering partnerships between employers and training providers, The Upskilling for Industry Initiative seeks to develop and deliver demand-driven short cycle upskilling programs to meet the needs of employers.</p> <p>Next to The Upskilling for Industry Initiative, The Sectoral Workforce Solutions Program is a highly relevant initiative. The Sectoral Workforce Solutions Program (SWSP) helps key sectors of the economy implement solutions to address their current and emerging workforce needs.</p> <p>[1] https://www.newswire.ca/news-releases/government-of-canada-invests-in-skills-training-to-help-get-canadians-back-to-work-875418054.html</p> <p>[2] https://www.newswire.ca/news-releases/government-of-canada-invests-in-training-for-information-and-communication-technology-workers-888356428.html</p> <p>[3] https://www.bher.ca/sites/default/files/2023-03/Skills%20Working%20Group%20Report.pdf</p>

Country	Status quo summary
<p>Unites States</p>	<p>The skills policy of the United States (the U.S.) has a focus on lifelong learning and continuous skill development. The U.S. recognises the need for individuals to adapt to rapidly changing job markets and encourages ongoing education and training throughout one's career. Another notable aspect is the emphasis on private sector involvement. The skills policy aims to engage employers and industry leaders in the development of training programs, ensuring that the skills being taught are relevant and in-demand. Additionally, the U.S. places great importance on entrepreneurship and innovation. The policy supports initiatives that encourage entrepreneurship and provide resources for individuals to start and grow their own businesses. Overall, the United States' skills policy stands out for its emphasis on lifelong learning, private sector involvement, and support for entrepreneurship.</p> <p>In the U.S., funding for upskilling and reskilling is often driven by private sector initiatives, with limited public funding support. The country is reported to have a clear need for more federal funds for job training [1]. In researching initiatives in the U.S. at the national level, it was a challenge to find specific initiatives with a current training programme linked to them. At the national level, the United States focus mainly on disadvantaged groups [2]. Some national initiatives were found that fall within the scope of the study, with one of the two initiatives focusing on manufacturing sector workers only, the other initiative being cross-sector. At the regional level, across the states, there are more initiatives focusing on reskilling and upskilling the workforce [3]. In the United States, reskilling and upskilling initiatives are mainly developed and rolled out from within the states.</p> <p>Green skills in the U.S. are reported to be growing slower than green jobs, thereby creating a pressure for companies to get creative to find the workers they need to carry out the energy transition. Universities are reported to be stepping up to help close the green skills gap by developing programs to train professionals with new green skills. The need for green skills varies across industries. The green shift in the energy and transport workforces are reported to be particularly pronounced [4].</p> <p>[1] https://www.brookings.edu/articles/should-the-federal-government-spend-more-on-workforce-development/</p> <p>[2] https://www.uschamber.com/workforce/education/data-deep-dive-upskilling-and-reskilling-our-workforce</p> <p>[3] https://www.forbes.com/sites/forbeshumanresourcescouncil/2023/01/11/how-reskilling-and-upskilling-help-companies-prepare-for-the-future/?sh=456a10f816e6</p> <p>[4] https://www.wsj.com/articles/americas-green-skills-gap-raises-concerns-about-energy-transition-90095ab0</p>
<p>ASIA</p>	
<p>China</p>	<p>The skills policy of China encompasses several special aspects that distinguish it from other countries. One key aspect is the strong emphasis on vocational education and training (VET) to address the country's growing demand for skilled workers. China has implemented various initiatives to promote vocational education and enhance the quality and relevance of vocational training programs. The country also places great importance on developing skills in emerging industries such as artificial intelligence, robotics, and renewable energy. Additionally, China has established partnerships between government, industry, and educational institutions to ensure that the skills being developed align with the needs of the labour market. Another notable aspect is the focus on promoting entrepreneurship and innovation, with policies and support available for startups and small businesses. Additionally, China recognises the importance of international cooperation and has implemented programs to attract international talent and facilitate knowledge exchange. Overall, the skills policy of China stands out for its emphasis on vocational education, focus on emerging industries, collaboration between stakeholders, support for entrepreneurship and innovation, and commitment to international cooperation.</p> <p>The Chinese government aims to reshape the national skills development system in order to reduce the skills mismatch, promote self-employment for young people and mobilise different ways of learning in order to cope with the need for highly skilled workers [1].</p> <p>In China, the national Government initiates high-level strategic initiatives and directions, and the local provincial and city-level governments introduce specific policies / programmes that fit for the local context and development goals. We have found several national strategic plans for China and three up- and reskilling programmes on a national level. In the case of China, interesting up-and reskilling programmes could be found for Hong Kong. Hong Kong, as well as Macao, are both Special Administrative Regions (SAR) in China. An example of a Hong Kong initiative would be the Employees Retraining Board, which is a longstanding statutory body that has been established since 1992. The board has an employment-driven approach, in which the offered training courses are continuously monitored so as to meet the changing needs of the market. To achieve this, the ERB sets up Industry Consultative Networks (ICN) in which representatives of employer organisations from different industries share expert advice on market demand, skills requirement and training</p>

Country	Status quo summary
	<p>needs [2]. They also advise on the design of existing courses and the development of new courses to ensure that the training portfolio caters timely for market changes.</p> <p>When it comes specifically to vocational education and training, policies in the past 10 years have resulted in more young people entering China's talent pool for manufacturing and innovation. China continuously invested to improve the public recognition and social status of vocational education, as well as the promotion prospects and payment of skilled workers. According to the guideline released by the State Council, skilled workers are projected to make up 30 percent or more of the nation's total working population by 2025. The highly skilled will, in turn, comprise roughly one-third of all skilled workers. The numbers, quality and structure of skilled workers will be adapted to meet the nation's modernisation requirements by 2035 [3].</p> <p>In China, environmental education is reported to be guided by the two guidelines issued by the Ministry of Education. It is reported to be most commonly integrated into various relevant subjects, such as geography, chemistry, biology, physics, Chinese language, and moral education. However, the practice of environmental education in China is unbalanced across different regions; it is more prevalent in economically abundant regions such as Shanghai [4]. The government plans to peak and neutralise national carbon emissions, and for a comprehensive green transition, are reported to have caused a boom in "green employment" in China. The sector is expected to employ 1 million people by 2025. There are, however, only a few degrees in China specifically covering climate change and decarbonisation, nor is there a training system in place for this. China is reported to lack high-level technical talent in the carbon sector. It can be expected that jobs in green sectors such as environmental protection, energy and sustainable consumption will further increase in the future. The lack of green talent in China serves as an indicator for further action for the Chinese education and labour markets [5].</p> <p>[1] https://www.ilo.org/beijing/areas-of-work/skills-and-employability/lang--en/index.htm</p> <p>[2] https://www.erb.org/erb/stakeholders/industry_consultative_network/en/</p> <p>[3] https://www.chinadaily.com.cn/a/202211/16/WS637446e8a31049175432a036.html</p> <p>[4] https://news.climate.columbia.edu/2021/05/04/sustainability-education-china/</p> <p>[5] https://chinadialogue.net/en/business/green-jobs-take-off-china/</p>
India	<p>India focuses on skill development to address the country's large youth population and unemployment challenges. India has implemented various initiatives to promote vocational education and training (VET), with a particular emphasis on sectors such as manufacturing, healthcare, and information technology. The country has also established numerous skill development programs and institutions to provide training and certification to individuals, including those from disadvantaged backgrounds. Additionally, India places great importance on promoting entrepreneurship and innovation, with policies and support available for startups and small businesses. The skills policy of India also recognises the importance of international collaboration and has implemented programs to attract foreign investment and expertise. Overall, the skills policy of India stands out for its focus on skill development, emphasis on key sectors, support for entrepreneurship and innovation, commitment to inclusivity, and efforts to foster international collaboration.</p> <p>Specifically, India aims to become the "skills capital of the world" [1]. With 'Skill India Mission' as an overarching mission, the Indian government initiated several re- and upskilling initiatives that aim to develop practical skills, which are required by the industry and therefore, improve employment rate in the country [2] (meeting Criterion 1: direct relevance to re- and/or upskilling). With India being a 'young' country due to its 67.5% working-age population [3], the development of a skilled and educated workforce plays a significant role in enhancing its overall economy and fighting poverty.</p> <p>Hence, Indian initiatives predominantly focus on up-skilling the young segment of the population in various business segments. Since implementation, the overarching mission has helped boost employment [2]. However, an active involvement or participation of business stakeholders cannot be confirmed for most of the initiatives and much of the re- and upskilling is done by education centres without further business involvement.</p> <p>[1] https://www.cii.in/PolicyAdvocacyDetails.aspx?enc=TMfg/R8QnXek+I/Hdn5x4OSZpzfvK0etlkox5aDpKJeCS/EKUJr+v+T7MUqhR6PIE</p> <p>[2] https://www.ibef.org/government-schemes/skill-india</p>

Country	Status quo summary
	<p>[3] OECD (2023), Working age population (indicator). doi: 10.1787/d339918b-en (Accessed on 28 March 2023) (https://data.oecd.org/pop/working-age-population.htm)</p>
<p>Japan</p>	<p>The skills policy of Japan has a focus on vocational education and training (VET) as a pathway to employment. Japan has a well-established system of vocational schools and apprenticeships that provide individuals with practical skills and knowledge needed for specific industries. The country also places great importance on fostering a strong work ethic and instilling discipline in students through rigorous training programs. Another notable aspect is the emphasis on lifelong learning and continuous skills development. Japan recognises the need for individuals to constantly update their skills to adapt to changing labour market demands and offers various training programs and certifications to support this. Additionally, Japan's skills policy places importance on internationalisation and promoting global skills. The country actively encourages international exchanges and collaborations, providing opportunities for individuals to gain international experience and develop a global mindset. Overall, Japan's skills policy stands out for its focus on VET, lifelong learning, work ethic, and internationalisation.</p> <p>Being an ageing society and a highly technologised country, Japan has a lifelong learning culture that has been established for many years, and a workforce that accumulates a lot of overtime. We identified a lifelong learning strategy which was formalised by the 1990 Lifelong Learning Promotion Law and several initiatives. The Japan Times revealed that 1 in 4 companies admitted that their employees work between 80 and 100 hours of overtime per month [1]. The Cyber University / Open University of Japan is highly popular, allowing students to study from home and when they can take the time to learn.</p> <p>[1] https://www.japantimes.co.jp/news/2016/10/07/national/social-issues/1-in-4-firms-say-some-workers-log-80-hours-overtime-a-month-white-paper-on-karoshi/</p>
<p>Singapore</p>	<p>Singapore's upskilling/reskilling program is world-class, with a focus on two main programs, Skills Future and Workforce Skills Support Scheme. These programs offer a range of initiatives designed to upskill the entire population, including students, early and mid-career employees, and employers. Skills Future is Singapore's flagship upskilling program, and the government covers the financial costs of training through various financial instruments such as Skills Credit, which citizens can use exclusively to purchase training courses, or Enterprise Credit and salary payments made by companies on behalf of employees undergoing upskilling [1]. In addition to these programs, Singapore offers a range of complementary services, such as an online skills portal, national skills frameworks across sectors of the economy, skills accelerator, and job-skills integrator. By prioritising widespread participation and effectiveness, Singapore has created a comprehensive upskilling agenda. Overall, Singapore's skills policy stands out for its focus on skills development, lifelong learning, industry collaboration, digital skills, and career guidance.</p> <p>A key feature of Singapore is its whole-of-government approach to national talent development. Skills development is not just a focus area for the ministries of Education and Manpower, which lead the SkillsFuture Singapore and Workforce Singapore initiatives respectively. It is also the focus of all ministries, within the scope of an all-embracing Smart Nation Strategy. Co-creation is an intrinsic element of the strategy, bringing together experts, brainpower (including talent from other countries), and stakeholders to find innovative solutions to challenges [2].</p> <p>Singapore has consistently been in the top 3 countries of the Global Talent Competitiveness Index due to its holistic developmental approach. The latter connects the development of skills to their productive use in the right market and business environment [2].</p> <p>[1] https://www.skillsfuture.gov.sg/</p> <p>[2] https://www.worldgovernmentsummit.org/docs/default-source/publication/2022/unleashing-the-skills--en.pdf</p>

Country	Status quo summary
<p>South Korea</p>	<p>The skills policy of South Korea has a strong emphasis on technical and vocational education and training (TVET) as a pathway to employment. South Korea has a well-developed system of vocational schools and apprenticeships that provide individuals with practical skills and knowledge needed for specific industries. The country also places great importance on promoting entrepreneurship and innovation, encouraging individuals to start their own businesses and fostering a culture of creativity and risk-taking. Another notable aspect is the focus on industry-academia collaboration, where educational institutions work closely with industries to develop curricula that align with industry needs. South Korea also places importance on internationalisation and global skills, promoting international exchanges and collaborations to enhance the global competitiveness of its workforce. Additionally, South Korea's skills policy emphasises the importance of lifelong learning and continuous skills development, recognising the need for individuals to constantly update their skills to adapt to changing labour market demands. Overall, South Korea's skills policy stands out for its focus on TVET, entrepreneurship, industry-academia collaboration, internationalisation, and lifelong learning.</p> <p>Distance education plays a major role in Korea in making higher education widely available, particularly for the purpose of lifelong education. Cyber universities, which came into existence in 2001, offer online programs in sophisticated fields such as information security management, which reflects the characteristics and needs of an information society, and design engineering which mirrors the development in the field of Information and Communication Technology (ICT) [1]. Lifelong learning is organised through the Lifelong Learning Promotion Plan. The lifelong learning centers are organised by the Ministry of Education and focuses on recreational AND the labour law and is governed by the Ministry of Employment and Labour [2].</p> <p>[1] https://library.oapen.org/bitstream/handle/20.500.12657/23272/1006884.pdf?sequ#page=89</p> <p>[2] https://www.oecd-ilibrary.org/docserver/cd2b486a-en.pdf?expires=1678790409&id=id&accname=quest&checksum=D4086A4635E17A93CC039BE8F421D6F7</p>
<p>OTHER COUNTRIES</p>	
<p>Australia</p>	<p>The skills policy of Australia has a focus on industry-led training and collaboration. Australia recognises the importance of aligning skills development with the needs of industries and actively involves employers in the design and delivery of training programs. Another notable aspect is the emphasis on vocational education and training (VET). The skills policy places great importance on providing individuals with practical, job-ready skills through a robust VET system that offers a wide range of qualifications and pathways. Additionally, Australia places great importance on international collaboration and mobility. The policy aims to foster global partnerships and provide opportunities for individuals to gain international experience and skills. Overall, Australia's skills policy stands out for its industry collaboration, emphasis on VET, and international focus.</p> <p>The initiatives in Australia target specific regional areas or ethnic groups. For example, the Digital Skills Cadetship trial targets a variety of cohorts, with some having a specific emphasis on supporting women, aboriginal people, or migrants into the tech workforce [1].</p> <p>The Australian government also invested in providing employees with low fee or free training opportunities. These trainings are short courses, often referred to as microcredentials or skill sets. These skill sets can be used as a starting point to complete a full qualification at a later stage. Moreover, Australia has a clear divide between state level and regional level. These free training opportunities are regulated on a regional level, with each region offering their own separate training program [2].</p> <p>[1] https://www.dewr.gov.au/digitalskillscadetshiptrial</p> <p>[2] https://skills.education.nsw.gov.au/nsw-fee-free-short-courses</p>
<p>Brazil</p>	<p>Brazil has a focus on vocational education and training (VET) as a means to address the skills gap and promote employability. Brazil has implemented various initiatives to enhance the quality and relevance of VET programs, including partnerships with industry and the establishment of vocational schools. The country also places great importance on the recognition of informal and non-formal learning, allowing individuals to receive recognition for skills acquired outside of traditional educational settings. Additionally, Brazil emphasises the importance of entrepreneurship and innovation, with programs that support the development of entrepreneurial skills and encourage the</p>

Country	Status quo summary
	<p>creation of new businesses. The skills policy of Brazil also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of Brazil stands out for its focus on VET, recognition of informal learning, emphasis on entrepreneurship, and commitment to developing digital skills. The federal government has spearheaded the implementation of upskilling/reskilling programmes, with Pronatec (National Program for Access to Technical Education and Employment) being its flagship programme since 2011. The programme has undergone periodic updates to its training, mechanisms, and partnerships. These initiatives primarily target underprivileged communities, indicating that Brazil views upskilling as a tool for promoting upward social mobility. With a large population, Brazilian programmes are designed to cater to millions of beneficiaries [1]. Private businesses are also jumping on board, offering specialised programmes like "Escola do Trabalhador 4.0", a partnership between Microsoft and the Federal Ministry of Education.</p> <p>[1] https://www.oecd-ilibrary.org/sites/9789264309838-8-en/index.html?itemId=/content/component/9789264309838-8-en</p>
South-Africa	<p>South Africa has implemented various initiatives to provide training and employment opportunities for historically disadvantaged groups, including youth, women, and people with disabilities. The country also places great importance on the recognition of prior learning and informal sector skills, allowing individuals to receive recognition for skills acquired through non-formal means. Additionally, South Africa emphasises the importance of industry partnerships and collaboration, with programs that encourage employers to invest in skills development and apprenticeship programs. The skills policy of South Africa also recognises the need for digital skills in the modern workforce and has implemented programs to enhance digital literacy and support the adoption of new technologies. Overall, the skills policy of South Africa stands out for its focus on inclusivity, recognition of prior learning, industry collaboration, emphasis on digital skills, and commitment to addressing historical inequalities. A notable detail unique to the upskilling situation in South Africa is the focus on the youth population and the transfer of basic skills that can be taught as vocational education [1]. Due to the high unemployment rate, especially of younger people [2], many initiatives from South Africa aim to improve the situation for the unemployed youth but do not necessarily focus on up- or re-skilling the working population. Additionally, for many of our search results, we could not clearly specify if businesses are involved in the reskilling as active stakeholders.</p> <p>[1] https://skillsafrica.org/</p> <p>[2] https://www.undp.org/south-africa/publications/human-development-indices-and-indicators-2018-statistical-update</p>
United Arab Emirates (UAE)	<p>The skills policy of the United Arab Emirates (UAE) has a strong focus on diversifying the economy and reducing reliance on oil by developing a highly skilled and knowledge-based workforce. The UAE places great importance on promoting science, technology, engineering, and mathematics (STEM) education, as well as vocational and technical training, to equip its citizens with the skills needed for emerging industries. The country also emphasises the importance of innovation and entrepreneurship, encouraging individuals to develop new ideas and start their own businesses. Another notable aspect is the focus on international collaboration and partnerships, with the UAE actively working with global institutions and experts to exchange knowledge and best practices. Additionally, the UAE's skills policy emphasises the importance of Emiratisation, which aims to increase the employment of Emirati nationals in the private sector by providing them with the necessary skills and support. Overall, the UAE's skills policy stands out for its focus on diversification, STEM education, innovation, international collaboration, and Emiratisation.</p> <p>Reskilling and upskilling are particularly important as some industries, such as oil and gas, are becoming less dominant and others, such as technology and renewable energy, are growing [1] [2]. The UAE government has launched several initiatives to support reskilling and upskilling, such as the "National Program for Advanced Skills" as a strategy, and the "Future Skills Program" as a concrete training programme [3].</p> <p>[1] https://www.khaleejtimes.com/nation/abu-dhabi/preparing-uae-for-the-post-oil-era</p> <p>[2] https://u.ae/en/information-and-services/jobs/future-skills-for-youth</p> <p>[3] https://uaecabinet.ae/en/details/news/uae-joins-world-economic-forums-closing-the-skills-gap-programme</p>

Annex B: Policy Profiles

Table B-1: Overview of policy profiles

Policy profile nr	Country	Policy title
EUROPE (EU AND THE UNITED KINGDOM)		
B1	• Austria 1	• Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security
B2	• Austria 2	• fit4internet
B3	• Belgium	• Le Plan de relance pour la Wallonie / Recovery Plan - axis 6 (Supporting the (re)construction and resilience of devastated areas) - Projet 315: Des solutions à la pénurie de main d'œuvre dans le secteur de la construction (prime à la formation)
B4	• Bulgaria	• Digital Skills for Bulgarian SMEs
B5	• Croatia	• Grow Croatia with Google
B6	• Cyprus	• Grow Digital CY (Digital Skills and Jobs Coalition Cyprus)
B7	• Czech Republic	• Czechitas New Generation
B8	• Denmark 1	• Green Skills
B9	• Denmark 2	• Omstillingsfonden ("Transition Fund")
B10	• Estonia	• kood/Jõhvi
B11	• Finland	• Virittämö Employment Service (Digital Helsinki)
B12	• France	• Training Aid // FNE-Formation
B13	• Germany	• NETWORK Q 4.0 - Network for the training of vocational training staff in the digital transformation
B14	• Greece	• Upskilling and reskilling in In-Demand Industries with a focus on Digital and Green Skills
B15	• Hungary	• InnoEnergy Skills Institute
B16	• Ireland	• Skillnet Ireland
B17	• Italy 1	• Patto per il Lavoro = Pact for Labour initiative: DEVELOP DIGITAL SKILLS
B18	• Italy 2	• House of emerging technologies - 5G Emerging Technologies Support Program
B19	• Latvia	• Grow Latvia with Google
B20	• Lithuania 1	• Upskilling programs, organised by Lithuanian Public Employment Service (PES) (voucher system)
B21	• Lithuania 2	• Modularisation of formal VET curriculum
B22	• Luxemburg	• Future Skills Initiative
B23	• Malta	• Jobplus courses (1990), Training Pays Scheme (2017 - July 2023), Work Exposure Scheme (2016 - July 2023), Trade Testing (1990), VASTE (2016)
B24	• The Netherlands 1	• The STAP-budget
B25	• The Netherlands 2	• SLIM: The Subsidy Incentive Scheme for Learning and Development in SMEs
B26	• Poland	• Competences for sectors - offer for entrepreneurs [Kompetencje dla sektorów - oferta dla przedsiębiorców]
B27	• Portugal	• Emprego + Digital 2025 More Digital Jobs 2025
B28	• Romania	• Transilvania IT Cluster
B29	• Slovakia	• Women Academies (Aj Ty v IT- Projects for adult women)
B30	• Slovenia 1	• Digital Knowledge for the Jobs of the Future
B31	• Slovenia 2	• Slovene digital coalition - Digitalna Slovenija
B32	• Spain	• Digitalízate
B33	• Sweden	• Ingenjör4.0
B34	• United Kingdom	• Institute of Coding
• NORTH AMERICA		
B35	• Canada 1	• Quick Train Canada - Microcredentials

Policy profile nr	Country	Policy title
B36	• Canada 2	• Polytechnics Canada
B37	• Canada 3	• Future Skills Centre
B38	• United States 1	• US TAA - Trade Adjustment Assistance for Workers
B39	• United States 2	• Online Learning from Your DOL: NY State
B40	• United States 3	• US California = High Road Training Partnership
• ASIA		
B41	• China	• Guangdong Social Security Integration and Rural Worker Training Project
B42	• India 1 (national)	• Futureskills Prime
B43	• India 2 (regional)	• HIMACHAL PRADESH SKILL DEVELOPMENT POLICY
B44	• Japan	• Hiroshima Prefecture Reskilling Initiative
B45	• Singapore	• SkillsFuture Movement driven by SkillsFuture Singapore (SSG)
B46	• South Korea	• Partnership between K-MOOC, the National Institute for Lifelong Education and Coursera
• OTHER COUNTRIES		
B47	• South Africa	• Technogirl

Policy profile B1 Austria 1: Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security

1. General			
1.1 Name policy initiative	Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security		
1.2 Country	Austria	1.3 Level (national/regional)	Regional
1.4 Launch year of policy initiative	2017	1.5 Completion year of policy initiative (total nr of years)	Ongoing(6)
1.6 Managing authority	Arbeitsmarktservice Oberösterreich (public employment service), Amt der Oö. Landesregierung (provincial government)		
1.7 Target audience	Small and medium sized enterprises		
1.8 Objectives/brief description	<p>The Qualifizierungsverbund enables following four pillars to develop skills, focussing in the pilot phase on digital skills:</p> <ul style="list-style-type: none"> - Access to a tailor-made funded training offer for participating companies - Support from an advisory team in determining training needs and in creating an individual personnel development concept - Free participation in expert lectures and networking events - Exchange of experiences with other companies 		
2. Key Performance Metrics			
2.1 Individual	The initiative provides the best possible advice on opportunities in the area of further education and funding (in general as well as with a special focus on digitalisation). The extent to which the qualification actually increases competences is not surveyed in the project itself. It is a preventive instrument of labour market policy for upskilling and reskilling of employees to strengthen their skills and the competitiveness of the employers, so it also helps to prevent unemployment.		
2.2 Company	Through the wide range of services in the field of further education and human resource development, companies are sensitised to up- and reskilling and deal with it strategically. For those companies who already developed a learning culture, the initiative is a support to improve it.		
2.3 Economy	The Qualifizierungsverbund is a constantly growing initiative with currently more than 190 companies participating. With this network, up to 40.000 employees can be reached. The initiative does not aim to implement new technologies in companies but rather to raise awareness for the application of new technologies, sensitization of managers and qualification of employees.		
3. Key Performance Drivers			
3.1 Stakeholders	The public employment service and the provincial state act as contracting and funding agencies and actively shape the framework conditions of the initiative. Companies are as funding recipients not involved in the development and design of the initiative. The fundamental idea of the Qualifizierungsverbund is to support especially small and medium-sized Enterprises regarding the access to promotions and networks. The trainings and courses are tailored to the needs of companies and are developed and designed by training providers. The public employment service, as a main funding agency, is responsible for the development, design, and evaluation of the initiative. The state's location agency acts as initiator of the initiative and provides support for networking activities and marketing. Operational management is carried out by ÖSB GmbH, a management consultancy commissioned by the employment office. Social partners promote the initiative.		
3.2 Learners	The use of learning infrastructure depends on the type of training implemented. Both – analogue classroom format and e-learning courses - are offered. Learners usually receive certifications.		
3.3 Funding	The consulting service within the framework of this initiative is 100% publicly funded. Further training is 50% publicly funded for certain target groups and under certain conditions. The funding model combines federal funds from the Labour Market Administration with funds from the province of Upper Austria.		
3.4 Regulatory Framework	The Qualifizierungsverbund is an existing measure of the Pact for Work and Qualification in Upper Austria. The regional skilled labour strategy Workplace Upper Austria 2030 serves as the strategic framework. There is no connection to a nationwide strategy. To date, there is no nationwide labour market strategy. The training providers are selected jointly in the network and are thus also subject to cross-company quality control.		

Policy profile B2 Austria 2: fit4internet

1. General			
1.1 Name policy initiative	fit4internet		
1.2 Country	Austria	1.3 Level (national/regional)	
1.4 Launch year of policy initiative	2018	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Federal Ministry of digital and economic affairs (BMDW until 2022), Federal Ministry of Finance (2022ff), Association fit4internet (NGO 2018ff until today)		
1.7 Target audience	Austrian society: primarily targeting young people, the labour force, jobseekers, and older people.		
1.8 Objectives/brief description	<p>fit4internet is organised as a non-profit association and acts as a platform for increasing digital skills in Austria in close cooperation with companies, institutions, and organisations. The ultimate goal is to enable the competent use of digital technologies and the broad participation of society as a whole in digitisation.</p> <p>Purpose and tasks:</p> <ul style="list-style-type: none"> • Rapid and standardised competence development including deepening of competence for coping with the digitisation requirements in Austria's economy and society. • Dissemination of skills for the time being for three focus groups: young people, professionals including re-entrants, generation 60+. • Coordination of as many IT-relevant organisations, companies, or societies as possible in order to gain the broadest possible basis for the implementation of these goals. • Bundling of activities to increase basic skills for mobile Internet use. • Establishment of the Austrian certification system for digital competences in accordance with the European Framework of Reference for Digital Competences of Citizens. 		
2. Key Performance Metrics			
2.1 Individual	<p>There is a raise in the competence level of people using DigComp evaluating tools from 2021 to 2022 (+2% in total). Significantly increased the digital knowledge measured in their evaluation tools based on DigComp in "Safety in the digital world" (+15%), Artificial Intelligence (+10%), Data Science (+11%). In the daily digital competences and professional digital competences, we could monitor minor increases (+1%). Own representative study in Austria measuring the digital skills (self-evaluation and knowledge): "learning by doing", "learning through platforms/internet", "learning with help of family members or colleagues" are the most widely used formats for acquiring digital skills. Formal education or paid training, on the other hand, ranks in the lower third of popularity and use. People are more aware that digital skills are important to stay relevant at the job. The awareness of the DigComp framework as well as accompanying studies for the fit4internet tools have also raised the awareness of education providers for the difficulties and framework conditions of learners. This in turn has a positive effect on corresponding advertising and motivational measures.</p>		
2.2 Company	<p>High interest of the companies that embarked on the DigComp-AT-Journey. They regularly participate in HR-circles addressing the newest applications of DigComp, they participate in the representative Study "Digital Skills Barometer" with their own employees, or they use the DigComp evaluation tools for their recruiting and upskilling measures in their companies. Austrian economic structure - with an enormous proportion of SMEs - poses a challenge for up- and reskilling. A study carried out three years ago clearly showed that scarce human resources - and thus a lack of time - are one of the main reasons for the lack of training and education strategies in small companies. Since the Corona-pandemic the need for digital well-trained employees, standardisation and use of evaluations and internal upskilling measures to address the skills shortage are omnipresent.</p>		
2.3 Economy	<p>For f4i: +110,000 people have used the steadily increasing number of evaluation tools since 2019; +2,300 people have been certified with the Dig-CERT - Certificate Examination for Digital General Knowledge in Everyday Life and Work since 2022; +500 vocational training and qualification formats have been referenced to DigComp; +250 of these are publicly accessible in a course database; currently, the soft launch of the Digital Skills Profile, the e-portfolio for formally, non-formally or informally acquired digital skills, is taking place, which is why the website is also only accessible via password protection for the test group and competence verification providers (already in the pilot phase 2021/2022, +200 people have tested the platform as lead users). + 10,000 people have been made #digitalfit in fit4internet's own qualification formats, including around 2,000 employees in fit4internet partner companies policy initiative: specific funding measures were set up (digital skills cheques) by the Research Promotion Agency to specifically bring together companies and training institutions (universities, universities of applied sciences, etc.) and to develop training formats.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>The fit4internet initiative comprises two pillars: 1) The responsible Federal Ministry from the public side 2) Industry (leading Austrian companies invested significantly within the past 5 years in the initiative to push the implementation of DigComp)</p> <p>Both partners set essential impulses in their respective frameworks to ensure standardisation through implementation of the DigComp. The fit4internet association implemented the elements of "evaluation, qualification and certification" of digital skills with substantial co-investment by industry and project-related participation by companies within the framework of four individual grants approved by the responsible Federal Ministry. There were thus two leading</p>		

	<p>partners who built up the entire Digital Skills ecosystem in Austria through a corresponding interdisciplinary task force. Two essential governance elements in AT are the interdisciplinary Taskforce Digital Skills and, since last year, the new Digital Skills Initiative, which aims to scale previous activities and results and anchor them broadly in the system - with the participation of as many stakeholders as possible - currently almost 100.</p> <p>SMEs were not target companies so far except collaboration projects and initiatives of fit4internet with the Austrian Digital Skills Hubs.</p> <p>Education and training providers were actively involved in referencing their offers (training courses, curricula etc.) and pilot projects (Smartphone licence courses, Kaffee Digital, Digital Skills Cheques etc).</p> <p>Austrian Public Employment Service referenced all their +500 job profiles to DigComp with digital skills competence areas and levels (first and only national public employment service in EU so far!) and actively uses the DigComp as standard specification in tenders. The Austrian Chamber of Labour (AK) has promoted several DigComp-based projects in companies and with works councils in its large AK DigiFonds (150 million).</p>
3.2 Learners	<p>The DigComp evaluation tools are used at the beginning of learner journeys to determine the level of digital competence in the 6 competence areas of DigComp AT. The tools can be used throughout the further learning journey as well. In addition, a method of mapping learning opportunities to the DigComp framework was successfully piloted. This gives learners the opportunity to choose from different offers from different providers following their test results from the f4i tools. This method is currently being scaled up as part of a follow-up initiative.</p> <p>With the soon-to-be-launched Digital Skills Profile, Austria is the first country in the EU to have a so-called e-portfolio for digital skills. The DSP is an online platform through which learners can register with an e-ID, upload and reference their evidence of competence in digital skills, whether acquired formally, non-formally or informally. The learner then receives a combination certificate with all his or her evidence, which shows the individual digital competence profile according to DigComp and NQF with competence levels and learning outcomes. The learner can use it for job purposes, career developments or upload it to the Europass.</p>
3.3 Funding	<p>It must be distinguished between the financial expenditures of the public sector and those of industry within the framework of the fit4internet initiative. For the development in the past 5 years, a key of 50:50 was aimed for defined measures. This has essentially been achieved. In addition, both the public sector and the fit4internet association as well as other players have developed, implemented, or financed individual measures.</p>
3.4 Regulatory Framework	<p>After 5 years of successful development work by the public sector, the fit4internet initiative will be transferred to the Digital Competence Offensive (DKO) in 2023, in which a different constellation will be used. The DKO is essentially the national DSJC, which aims to bring together all relevant stakeholders and in particular to further strengthen interministerial work. DigComp AT is to be used as a reference framework in formal education as well, and further targeted measures for upskilling are to be taken in different priority areas.</p>

Policy profile B3 Belgium: Le Plan de relance pour la Wallonie / Recovery Plan - axis 6

1. General			
1.1 Name policy initiative	Le Plan de relance pour la Wallonie / Recovery Plan - axis 6 (Supporting the (re)construction and resilience of devastated areas) - Projet 315 : Des solutions à la pénurie de main d'œuvre dans le secteur de la construction (prime à la formation)		
1.2 Country	Belgium	1.3 Level (national/regional)	Regional
1.4 Launch year of policy initiative	2021	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Walloon Government		
1.7 Target audience	Construction, timber and electricity sectors		
1.8 Objectives/brief description	The Walloon Government adopted additional measures to enable the construction, timber and electricity sectors to find job applicants and rebuild flooded areas as quickly as possible. To motivate the participants to take an interest in the construction sector and to pursue further education.		
2. Key Performance Metrics			
2.1 Individual	<p>The construction sector is short of labour. Almost all trades are considered to be in short supply, or critical. Additional measures are needed to help companies find job applicants.</p> <p>Project 315: Solutions to the labour shortage in the construction sector (training bonus) The general aim of this project is to overcome the labour shortage and attract more young people and workers to the sector. The project consists of the following set of measures:</p> <ul style="list-style-type: none"> ▪ Granting a pilot training bonus: "Reconstruction Plan" of €2,000 to jobseeker (Forem) ▪ Granting a pilot training bonus: "Reconstruction Plan" of €2,000 to learners on sandwich courses at IFAPME (IFAPME) ▪ Monitor IFAPME learners for 3 years to award the €2,000 bonus. ▪ Granting a "Chèque permis de conduire" (driving licence voucher) to all job seekers and learners who enroll in a training course that is part of the programme of the reconstruction plan. 		
2.2 Company	<p>Project 315 is open to young people who want to follow a sandwich course, people who want to learn a new trade (retraining), and unemployed people. The following profiles are trained at IFAPME:</p> <ol style="list-style-type: none"> 1. Work-linked training / sandwich course 2. Training for company managers / Entrepreneurship training (This is training to learn a trade. It is supplemented by management courses to become self-employed. 3. Coordination- and management training (This is also training to learn a trade. The programme does not offer management courses, but prepares to manage people.) 		
2.3 Economy	<p>Arrival of new workers (particularly young people) can lead to a refreshment of the company's outlook, particularly on ecological and re-use issues. The new employee has been trained in new technologies. The new worker demonstrates an interest in integrating technology into the production process. The company undertakes an analysis of the opportunities for digitalization.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>Leading role has the policy makers. The construction sector is active, but does not play a leading role. The sector is made up more of large companies than SMEs. Education and training providers are highly active, but not leading. They implement the action plan. The sector (managed on a parity basis) and the employers' organisations have played an important role in the design of the measure in order to respond as effectively as possible to the realities on the ground. The different stakeholder groups are highly interconnected.</p>		
3.2 Learners	<p>Generally, a "certificate of participation" is issued at the end of the course. If the course leads to a qualification, a diploma/certificate/attestation of achievement is issued. These diplomas are important because they provide access to the profession. Some professions are regulated and one need specific diplomas.</p>		
3.3 Funding	<p>The state provides 100% funding for the training and the bonus of 2000€. The recovery plan for Wallonia ends in 2024.</p>		
3.4 Regulatory Framework	<p>The policy initiative is well integrated into the overall skills strategy of the country but not in the digital strategy nor green strategy of the country.</p>		

Policy profile B4 Bulgaria: Digital Skills for Bulgarian SMEs

1. General			
1.1 Name policy initiative	Digital Skills for Bulgarian SMEs		
1.2 Country	Bulgaria	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2017	1.5 Completion year of policy initiative (total nr of years)	2018
1.6 Managing authority	Global Libraries Bulgaria - Foundation		
1.7 Target audience	Labour force in Bulgaria, with a focus on SME employees. A pilot project		
1.8 Objectives/brief description	The programme Digital Skills for Bulgarian SMEs was launched in 2018 by the Global Libraries Bulgarian Foundation (GLBF). The initiative, previously implemented in Latvia, was successfully replicated in Bulgaria and aimed to connect libraries to private businesses, so they can take up the role of educational centres for modern digital knowledge and SME-specific skills. Partners of GLBF are the "Made in Bulgaria - Union of Small and Medium Business" Association.		
2. Key Performance Metrics			
2.1 Individual	The trained representatives of SMEs in the four areas: digital marketing, cloud services, safe online transactions and Data protection and privacy had the opportunity check their knowledge by solving special tests. The training program aimed to improve conditions for production and business at the beginning of the Fourth Industrial Revolution, and related changes in management and information systems with the introduction of artificial intelligence device systems, blockchain technologies, and cryptocurrencies by increasing the opportunities for sustainable employment and the quality of the workforce in Bulgarian SMEs. Together with the received knowledges and skills, the trained representatives of SMEs also received certificates which would improve their attractiveness for the labour market.		
2.2 Company	<p>Systematic training for the acquisition of digital competencies conducted by employers is poorly developed. At the level of management in small enterprises, there is a lack of sufficient understanding of the need to constantly increase the knowledge and training of workers.</p> <p>Also, the acquisition of new knowledge and teachings is not always tied to an increase in payment. Owing to the participation in the trainings in the library, the representatives of SMEs realized that it is a good place where they can continue to improve their digital competences and that they are a suitable place for lifelong learning.</p> <p>The project aimed to give new opportunities to employees in SMEs through improved access to flexible lifelong learning processes and to increase the % of employees who will participate in accessible forms of non-formal learning and independent learning. For the aims of the project GLBF offers a modern online learning platform with automated processes, so that the involved companies can use it to improve the management of skills and knowledge of the employees.</p>		
2.3 Economy	"Digital Skills for Small and Medium-Sized Enterprises in Bulgaria" was a pilot project. We involved 30 representatives of SMEs. We also trained 10 digital competence trainers. In 2017, green skills were not explicitly mentioned. However, the trainings have resulted in some development of green skills competences in the pilot.		
3. Key Performance Drivers			
3.1 Stakeholders	<p>A wide range of stakeholders - district governments, municipalities, public libraries, NGOs, business entities, digital service providers, employers, and educational and training institutions - will be invited to participate in the partnership for the development of public libraries as major centers for providing accessible and flexible forms of non-formal learning for acquisition of digital competencies of SMEs employees and owners. SME's representatives were involved in all project activities.</p> <p>The individual modules were developed by experts who have many years of experience as trainers. Education and training providers were invited to participate in the training of trainers. Also, we asked their opinion at the evaluation face about the program and methodology. The education and training providers joined the local network of different stakeholders for digital skills.</p>		
3.2 Learners	The project did not aim at career guidance, but rather at increasing the digital competences of those working in SMEs. All trainees had access to the GLBF learning platform (Moodle), with automated administration communication and evaluation processes		
3.3 Funding	<p>As a trainee no financial contribution was requested. There is uncertainty as to how much private and public funding was provided.</p> <p>SMEs in Bulgaria do not allocate enough funds to increase the qualifications of their employees. On the one hand, these are very often small family businesses that cannot allocate funds for training. on the other hand, some representatives of SMEs do not realize the importance of investments in new digital skills for workers.</p>		
3.4 Regulatory Framework	<p>"In general, in Bulgaria, information campaigns related to various programs and application opportunities are not well organized and are held at the last moment.</p> <p>"</p> <p>There is no centralized training platform built. At the moment, the Ministry of Labour and Social Policy announced an intention to build one. Many of the VET centres provide training platforms and information about these can be found on the NAPOO portal.</p>		

Policy profile B5 Croatia: Grow Croatia with Google

1. General			
1.1 Name policy initiative	Grow Croatia with Google		
1.2 Country	Croatia	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2020	1.5 Completion year of policy initiative (total nr of years)	2022 (2 years)
1.6 Managing authority	Ministry of Labour, Pension System, Family and Social Policy, Croatian Employment Service, Google, Algebra.		
1.7 Target audience	Entrepreneurs starting their own businesses – users of the self-employment active labour market measure and later expanded to employed and unemployed persons.		
1.8 Objectives/brief description	<ul style="list-style-type: none"> - Provide courses on relevant digital skills for people starting their digital businesses on relevant skills like digital marketing, setting up a webpage, setting up the target audience, Google Analytics, etc. - Provide relevant skills for the Croatian workforce, both employed and unemployed on relevant skills like digital marketing, project management, data analytics, etc. - Raise awareness on the importance of digital skills and the need to keep up with the trends in this area. 		
2. Key Performance Metrics			
2.1 Individual	This initiative has had a significant impact at the individual level. Firstly, it has increased the mastery of the beneficiaries on digital skills, and it has raised awareness on the importance of these skills and the need to always keep up with the trends. In addition, the initiative has also considerably improved the attractiveness of learners for the labour market as learners have been provided with digital skills, which are on high demand and which have improved the productivity of the learners and businesses. What is more, the dynamic nature of the workshops has also increased the motivation of learners to continue learning as they have understood that this will enable a better career. Number of beneficiaries: Introduction into digital marketing: over 1000. Digital Garage Workshops: 662. Google certificates: 375.		
2.2 Company	This initiative has been divided into several different activities, like workshops on relevant skills for new entrepreneurs like digital marketing, setting up a webpage or Google Analytics, as well as other workshops for the country's workforce on areas like project management or data analytics. In addition, this initiative has been a good base for developing more projects and services in the future. Interest has also grown among employers to give these opportunities to their workers.		
2.3 Economy	This initiative considerably increased the digitalisation of the economy as the numbers obtained are quite big for Croatia. In addition, this initiative was carried out during the Covid-19 period, so everything was provided online, and this impacted the need for more digitalisation in work and education. Beneficiaries also learned that digital also means communication. What is more, learning through digital platforms also helped SMEs, as Croatia is above the EU average on digital skills and implantation of digital, so it gave individuals and SMEs the opportunity to gain an advantage.		
3. Key Performance Drivers			
3.1 Stakeholders	In the design, implementation and evaluation of this initiative, stakeholders played an active role. In addition, large companies were highly involved, as Google was the developer of this initiative and Algebra the training provider. On the other hand, SMEs only provided occasional support. Communication was frequent and regular, especially between the ministry of Labour and the Croatian Employment Service, which were the main stakeholders and Algebra.		
3.2 Learners	This initiative was essentially aimed at new entrepreneurs and later expanded to the rest of the workforce. Learners could not select their own path as the course outlines were already determined. Nonetheless, beneficiaries were given advice on how to continue learning. During workshops, candidates worked closely with the trainers. Learners could have individual consultations, which was a great way to motivate learners as their questions were answered by people with experience in the sector.		
3.3 Funding	Public funding: less than 5% of the total funding. Private funding: more than 75% of the total funding. Co-funding by learners: less than 5% of the total funding as training was free for learners. This was a one time off initiative for potential cooperation with the employment service. Afterwards, the funding stopped as this was also a Google initiative for the EU.		
3.4 Regulatory Framework	This initiative was not particularly well integrated into Croatia's skills strategy as this was a one-time thing and an initiative for the EU. In addition, at this time, Croatia did not count with a skills strategy per se. Regarding the awareness raising, this initiative was overall good as it managed to raise awareness of the importance of digital skills and it was also key for raising the level of digital skills in the country.		

Policy profile B6 Cyprus: Grow Digital CY

1. General			
1.1 Name policy initiative	Grow Digital CY (Digital Skills and Jobs Coalition Cyprus)		
1.2 Country	Cyprus	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2015	1.5 Completion year of policy initiative (total nr of years)	2020 (5 years)
1.6 Managing authority	Permanent Secretary of the Deputy Ministry of Research Innovation and Digital Policy and Digital Champion of Cyprus (Current Title). When the Coalition Cyprus was implemented in 2015, he was the Permanent Secretary of Ministry of Energy, Commerce and Industry and Digital Champion of Cyprus)		
1.7 Target audience	Workforce (government and private sector), students, soldiers, people with disabilities etc.		
1.8 Objectives/brief description	<ul style="list-style-type: none"> - Awareness of the importance of acquiring eSkills - Providing upskilling opportunities to upgrade and enhance the digital skills for all target audience. - Educate about the necessity of the acquisition of eSkills and provide the necessary skills to the students that will enter the workforce. - Provide free certification for students, unemployed and people with disabilities - Increase awareness of the situation in some sectors and the opportunities for upskilling. 		
2. Key Performance Metrics			
2.1 Individual	This initiative has considerably increased the level of mastery of skills like digital competences. In addition, the initiative has also increased the attractiveness of learners to the labour market in a variety of different ways. However, it should be highlighted that prior to the development of the initiative a survey was developed and shared among companies, trade unions, etc., which gave their view on the needs of the specific needs of the country. This enabled the managing authority to create an initiative with a clear focus on the specific needs of the country's labour market.		
2.2 Company	Regarding the impact of this initiative at company level, this initiative has played a role in developing a learning culture. This was one of the initiative's main objectives and according to the interviewees the results showcase that it was achieved. Not only that, but since the initiative focused on the needs of the country's labour market, this initiative made workers more attractive for companies. In addition, it also counted with the very active work from companies like Microsoft or Google, which provided training.		
2.3 Economy	This initiative has had an impact on Cyprus' economy, as it has helped upskill between 10.000 and 100.000 people. In addition, this upskilling initiative has made the workforce more productive and better equipped. Finally, it has also encouraged companies to digitalise.		
3. Key Performance Drivers			
3.1 Stakeholders	Stakeholders have played a crucial role in the different phases of the program development. In the design phase, stakeholders were involved in gathering the needs of the government and the country's labour market, analysing the results and developing an appropriate initiative. In addition, other stakeholders like large companies and SMEs, have also played an active role during the implementation phase, as they have been involved in the different working groups and have provided learning material and funding. Other stakeholders like trade unions, were involved during the design stage but had a minor involvement afterwards.		
3.2 Learners	In this initiative, the specific learning paths were determined by the different stakeholders. In addition, this initiative offers the learners access to different digital tools and trainers, like those provided by Microsoft and Oracle. However, it should be noted that not all the training options developed as part of this initiative provided a certification upon completion.		
3.3 Funding	Funding: between 5% and 35% provided by public funding. Between 25% and 50% provided by private funding. Less than 5% provided by the learners themselves. The interview revealed that, as the private sector was involved in the funding and additional funding came from the country's digital champion and the EU, they did not encounter any problems with funding during the duration of the program.		
3.4 Regulatory Framework	The fact that the government took a primary role in the design of the initiative, as well as the fact that there was a previous analysis of the situation and needs of the country's labour market, ensured that the policy initiative was well integrated into the overall skills strategy of Cyprus. This is also true for the digital strategy of the country. Also, as mentioned before one of the main objectives was raising awareness about the opportunities offered and their benefits.		

Policy profile B7 Czech Republic: Czechitas New Generation

1. General			
1.1 Name policy initiative	Czechitas New Generation		
1.2 Country	Czech Republic	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2014	1.5 Completion year of policy initiative (total nr of years)	ongoing (9 years)
1.6 Managing authority	Czechitas		
1.7 Target audience	Women and girls		
1.8 Objectives/brief description	<p>Czechitas is a non-profit organisation behind the initiative Czechitas - New Generation, which aims to promote diversity in the information technology (IT) sector by increasing the number and participation of girls and women and enhancing the digital competences of the new generation of young people. Launched in 2014, the organisation has established educational and community centres in eight cities. The regional offices focus on local community needs and requirements, with the aim of maximising impact and involving the new generation throughout the regions of the Czech Republic. Czechitas also offers scholarships for women participating in the Digital Academy, financed from the European Social Fund. Czechitas network of centres throughout the Czech Republic enables the organisation of many workshops and courses on different levels of expertise, which focus on a particular skill or technology, providing a possibility to anyone to explore the world of information technologies. A wide range of activities, including workshops, lectures, summer camps/schools, hackathons, trade fairs, career support, as well as short online courses on different tech topics - programming, website creation, data analytics, cybersecurity can be accessed via the website. Courses with a longer duration, such as the 3-month long Digital Academy, which gives an opportunity to participants to reskill into the IT sector and receive a professional qualification, are also organised on a regular basis.</p>		
2. Key Performance Metrics			
2.1 Individual	<p>The policy initiative significantly increased the level of mastery of specific skills among women and girls in the Czech Republic. Since 2022, the initiative Czechitas managed to increase the digital skills of 8 000 women. Moreover these women have expressed the will of joining other available courses. One of the main success factors of Czechitas is that more than 50% of reskilling courses attendants were able to start/transfer a career in ICT/Tech. The reputation of the graduates is good and most of them are reliable, highly motivated, and fast learners. In addition, 80% of the students attend these courses on their own initiative and only 20% are obliged to attend such courses by their employers.</p>		
2.2 Company	<p>Czechitas strongly contributed to the development of a long-term vision for up-and reskilling for the cooperating companies. Czechitas is being supported by numerous private companies both financially and by providing their ICT experts as lecturers/mentors for the courses. Employers deeply appreciate that learners finish the course as well as their willingness to continue learning despite their age, position, or other circumstances. In addition, the companies appreciate the diverse backgrounds of the students and strong will to learn. In general, the current policy initiative increased the attractiveness on the labour market and around 100 analysed companies by Czechitas shared that their graduates are well known among the recruiters.</p>		
2.3 Economy	<p>Since the moment of launching the initiative, Czechitas was able to train between 10 000 and 100 000 people. In addition, Czechitas was able to measure that around 10 000 participants were career changers to ICT. The ratio of women that work in ICT/Tech (and thus contribute to the digital economy) after completing the course compared to increase of ICT specialists on Czech labour market up to about 10%.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>Czechitas receive the occasional support from the policy makers and are partially financed by government programs. Contrarily, they try to influence/inspire state policy on the issues of digitalisation. Despite the support of the government Czechitas managed to establish the active involvement of large companies. Private companies (both large and small) provide financial support and give their specialists to lead the courses and actively contribute to the lecture planning and the curriculum. In addition, Czechitas has the support from the employment platform (LMC) by providing data from the labour market in order to benchmark the impact of the initiative. Also, Czechitas shares the ICT job positions among the students and graduates. To keep the created stakeholder network active Czechitas organises meetups among their partner companies twice a year.</p>		
3.2 Learners	<p>The learners can determine their own learning path but do not provide the milestones for the performance measurement. Thus, Czechitas offers a career guidance and helps with determining the most suitable learning path. The invited specialists are helping students to meet the labour market requirements and basic trends. For example, Czechitas recently launched a range of courses on cyber security. Hence, the learners have access to the digital learning infrastructures including tools and trainers. The students can watch some of the courses online as self-paced tutorials. Beside the regular courses, the learners get the access to the recording of the courses even after the graduation. Czechitas also offer licences to IBM skills build and Coursera.</p>		
3.3 Funding	Public funding – 40% Co-funding by learners - 25%		
3.4 Regulatory Framework	Czechitas is working according to their own path. Contrarily, Czechitas is trying to cooperate with policy makers on formulating the strategic framework.		

Policy profile B8 Denmark 1: Green Skills

1. General			
1.1 Name policy initiative	Green Skills		
1.2 Country	Denmark	1.3 Level (national/regional)	Regional
1.4 Launch year of policy initiative	2021	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	Esbjerg Municipality		
1.7 Target audience	The main goal of the Green Skills initiative is to up- and reskill the workforce (both the employed and unemployed), so companies involved in the green transition have better access to relevant skills.		
1.8 Objectives/brief description	The main objective is that as many people as possible become a part of the green transition in the short and long term. The Green Skills initiative highlights and points out, through campaigns, presentations and active communication, - both towards both employer, employees, unemployed, organization and professionals -, the need and advantage in having certain skills regarding the ongoing and future green transition.		
2. Key Performance Metrics			
2.1 Individual	The Green Skills initiative is becoming a visible and integrated part of the local employment efforts in the jobcentre. The upskilling effort is tendered and executed by the educational institutions, who provide the relevant courses and training to companies and their employees.		
2.2 Company	The Green Skills initiative highlights and points out through campaigns, presentations and active communication, - both towards both employer, employees, unemployed, organisation and professionals -, the need and advantage in having certain skills regarding the ongoing and future green transition. The Green Skills initiative has created a common direction for retraining and upskilling for the green transition for all the actors who are involved. The main value is that these actors have a common strategy and anchor, as no institution can overcome these challenge by themselves. The establishment of the Green Skills initiative is also an attempt to develop a learning culture at companies. Several companies do not have the required knowledge so that they can be economically compensated when they upskill their employees.		
2.3 Economy	The focal point in the Green Skills initiative is to provide skills that secure the green transition, and especially the green energy transition. Digitalisation is a natural and integrated part of some of the re- and upskilling initiatives, but not the main focus. The city of Esbjerg is the Danish Energy Metropolis and thus the centre of the Danish energy transformation. The transition must take place for the purpose of transitioning the energy sector from oil and gas to renewable energy and especially offshore wind. After this, a lot of industries will then follow, such as Carbon, Capture and Storage, Power to X etc. Due to the Green Skills initiative, a big part of the workforce is getting upskilled and retrained.		
3. Key Performance Drivers			
3.1 Stakeholders	Green Skills functions as a network and cooperation between different actors who want to initiate and coordinate initiatives that can provide the workforce with skills that can contribute to ensuring the practical implementation of the green transition and energy transformation. The initiative has a particular focus on skilled and specialised workers. The Green Skills collaboration takes place with respect for existing tasks and divisions of labour in the employment, education, and business areas, and is always anchored with the actors who already have responsibility for solving tasks within the field in question. Policy makers have a big interest, influence, and impact on the Green Skills initiative. The municipal policy makers and administration in Esbjerg have allocated budget funds to the project (personnel resources), and made it a part of the overall employment-strategy in the municipality. The goals and strategy in Green Skills therefore have an alignment with the goals and strategy within Esbjerg Municipality. The secretariat that will support the activities in the Green Skills project is formally anchored in the Esbjerg Municipality, financed by Rybners and Esbjerg Municipality and located at Rybners.		
3.2 Learners	The up- and reskilling activities in Green Skills are targeting specific jobs and also offer the opportunity to take formal education. In every course there is associated a mentor whose aim is to help the students through the course and provide guidance on career opportunities. During the courses, relevant trade unions are also involved by providing the participants with information about job opportunities in the industry.		
3.3 Funding	Companies' participation in re- and upskilling activities are strongly supported by helping identifying needs, organise courses and opportunities for support and financing. Rybners (the largest educational institution with the Green Skills framework) has Full-service concept which helps Companies in this regard. Companies are guided in relevant upskilling and receive financial reimbursement for the expenses they have through upskilling. Up- and reskilling in Denmark is financed by both companies, public funds and funds agreed as part of a collective agreement between employers and employees. Upskilling of employees takes place in a combination of public funding and collectively agreed funds (depends on education content and industry). Therefore, it is difficult to provide an exact percentage of the public tax-financed share of the upskilling expenses.		
3.4 Regulatory Framework	There is a clear and ambitious national strategy for the green transition, and a clear national strategy to provide more skilled workers, - and a national/ political recognition that both are closely related.		

Policy profile B9 Denmark 2: Omstillingsfonden (“Transition Fund”)

1. General			
1.1 Name policy initiative	Omstillingsfonden (“Transition Fund”)		
1.2 Country	Denmark	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2018	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	Ministry of Higher Education and Science, Agency for Higher Education and Science		
1.7 Target audience	Omstillingsfonden does not target specific qualifications, but labour market relevant courses at levels 5-6 for people with vocational training who are (primarily) employed.		
1.8 Objectives/brief description	With the Omstillingsfonden, skilled and unskilled employees have the opportunity to gain a qualification boost by participating in academy and diploma courses. There are possibilities to get up to DKK 10,000 annually.		
2. Key Performance Metrics			
2.1 Individual	The types of courses Omstillingsfonden targets (academy and diploma courses) have generally been evaluated positively regarding impact on the work/workplace. The student receives ECTS points that are widely recognized in both the DK labour-market and internationally.		
2.2 Company	No statement can be made as to whether the policy has or hasn’t considerably contributed to the development of a long-term vision for up- and reskilling for the (directly or indirectly) involved companies.		
2.3 Economy	There have been given around 30.000 grants. A person can receive several grants for several courses, so the figure is not equal to the number of people.		
3. Key Performance Drivers			
3.1 Stakeholders	<p>Omstillingsfonden is an initiative from a tripartite agreement in 2017 between the government and the labour market organizations (both employers and employees). The agreement states: "DKK 65 million is allocated annually for participation fees in connection with continuing and further education, where employees can participate in publicly approved academy and diploma programs in their free time or during working hours by agreement with the employer and thus obtain an actual qualification boost in the form of ECTS credits. Support can be granted for participation fees for training modules up to a maximum of DKK 10,000 per person per year." A working group with these parties and HE (High Education) institutions are set up to follow the implementation. The Agency for Higher Education and Science have the leading role in design, implementation etc.</p>		
3.2 Learners	The programmes that the learners can follow with the grant are highly flexible module-based programmes. The student has much freedom in how to compile his programme within 6 years. Each module ends with an exam providing ECTS-points. The HE institutions that provide the courses offer free guidance etc.		
3.3 Funding	<p>Omstillingsfonden pays all or a portion of the tuition fee for the participants. Most larger enterprises normally pay this fee on behalf of their employees, which is less the case for SME's. Omstillingsfonden removes a financial barrier for SME's demanding to let their employees participate in up- and reskilling programmes.</p> <p>Omstillingsfonden is 100% publicly funded and it pays either the whole tuition fee or the biggest portion of the fee for a course. The courses also receive a taximeter grant from the government which pays approximately 20% of the cost of providing the course. Any tuition fee cost above the threshold of DKK 10.000 per year for the target group is funded privately by either the student or the employer.</p> <p>Within the timeframe of the tripartite agreement, it is sustainable. However, there is uncertainty about Omstillingsfonden long term future until the agreement is either prolonged or ends.</p>		
3.4 Regulatory Framework	The HE institutions and labour market organisations use Omstillingsfonden extensively for marketing, information or recruiting (of students/employers) purposes. Hence it is a tool for marketing of up- and reskilling courses more than something that needs to be marketed itself.		

Policy profile B10 Estonia: kood/Jõhvi

1. General			
1.1 Name policy initiative	kood/Jõhvi		
1.2 Country	Estonia	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2021	1.5 Completion year of policy initiative (total nr of years)	Ongoing (3)
1.6 Managing authority	MTÜ (NGO) Tuleviku Tehnoloogiaharidus		
1.7 Target audience	<p>kood/Jõhvi is an Estonian and international coding school for adults looking for self-development or retraining chances.</p> <p>kood/Jõhvi addresses the lack of software engineers in Estonia, offers an innovative addition to regular schools and strengthens the Estonian educational system. In addition to offering a high-level education and creating top-level specialists, the school aims to support the development of local entrepreneurship and create new jobs in the region.</p> <p>Each year the number of the students enrolled in the course is growing. In 2021 there were 200 students enrolled, in 2022 - 300. In 2023 there will be up to 500 new students (around 300 students will begin on September 13, 2023, and 200 students will begin on January 17, 2024).</p>		
1.8 Objectives/brief description	<p>It's an up to two year full-time program that provides learners with skills needed to enter the labour market. As a general outcome, the organiser sees that the learners are able to enter the labour market faster than after regular university programmes. It's an up to two year full-time program, however it is possible to graduate in a shorter time since the learners manage their own learning schedule and learning path.</p> <p>To apply, a candidate must be at least 18 years old, have a basic education (Estonian education 9th grade), and either be a resident or have a permit to live in Estonia for 24 months. No prior coding experience is required.</p>		
2. Key Performance Metrics			
2.1 Individual	It's an up to 18-month full-time program, taking place in Jõhvi, Estonia. As a general outcome, the organiser sees that the learners are able to enter the labour market faster than after a regular university programme. The kood/Jõhvi learning model is based on self-learning, thus the self-learning skills are strongly supported and contribute to the LLL.		
2.2 Company	kood/Jõhvi is co-created and supported by private companies, which understand the need of re/up-skilling. kood/Jõhvi addresses the lack of software engineers in Estonia. kood/Jõhvi is supported by over 30 private companies, who support the program financially and substantially (co-design of the curriculum in line with the needs of future employers). Also private entrepreneurs are involved in the process of the co-creation of the curriculum.		
2.3 Economy	<p>The school will help to reduce the lack of software engineers in Estonia, offer an innovative addition to regular schools and strengthen our educational system. kood/Jõhvi creates a strong base for further studies at universities and working at technology companies. Also the school aims to support the development of local entrepreneurship and to create new jobs in the region.</p> <p>Jõhvi was chosen as the location in accordance with the Estonian regional development plan. The establishment of an educational institution directly contributes to the education objective H1 of the Ida-Virumaa County Development Strategy, which provides a comprehensive education in Ida-Viru County by 2030+, ensuring students at least three language skills, strong digital competencies and an entrepreneurial attitude.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	kood/Jõhvi is supported by over 30 private companies, who support the program financially and substantially (co-design of the curriculum in line with the needs of future employers). Also private entrepreneurs are involved in the process of the co-creation of the curriculum. Public authorities are not involved in the initiative (no funding, no co-creation of the content), however the program got positive feedback from the policy makers. Due to the self-learning model of up/re-skilling the initiative is parallel to more traditional ways of learning.		
3.2 Learners	<p>The learners get full support in getting the digital learning infrastructure, as they are provided with a laptop and overall learning environment. Additionally, there is a possibility to work on-site in a school building located in Jõhvi, Estonia (2. Tartu põik 5). The 5-story school building is equipped with study floors, meeting rooms, dormitory floor, kitchens and other facilities. The learners are offered a diploma. If necessary, any other extra documents (statements, certificates) can be provided.</p> <p>The organisation has its own recruitment model that ensures a match with the talent and a company. Application process: The application process is divided into two stages. The first component is the online test. The top scorers in the Online Test will be invited to participate in a 3-week intensive on-site Selection Sprint. The Online Test is a game that tests memory, problem-solving abilities, and logical reasoning. During the Selection Sprint, the results of each quest, raid, and exam will grant each candidate the experience points. At the end of the Sprint, the candidates with the most experience points will be accepted into the full programme.</p>		
3.3 Funding	kood/Jõhvi operates as a non-profit organisation and currently its core activities are not co-funded by the Estonian government. Public funding was provided to renovate the 5-story school building in Jõhvi, Estonia (2. Tartu põik 5).		

	<p>There's no tuition fee for the students.</p> <p>By August 2023 full financial support is provided by the organisers. However the new model is being introduced in September 2023. In the new model, a learner who graduates from the training program and successfully enters the labour market (with a salary 1,3 times average Estonian monthly salary) is supposed to pay at least 200 Euro/month until the overall amount reaches 4.000 Euro.</p>
<p>3.4 Regulatory Framework</p>	<p>The establishment of an educational institution directly contributes to the education objective H1 of the Ida-Virumaa County Development Strategy, which provides a comprehensive education in Ida-Viru County by 2030+, ensuring students at least three language skills, strong digital competencies and an entrepreneurial attitude.</p> <p>The school is based in Jõhvi, Ida-Virumaa, and it is a contribution to the community, the region's economic competitiveness, creation of new opportunities and boosts the diversity of technical and entrepreneurial skills. Therefore, in the long run the initiative contributes to the digital transformation of the economy, with particular focus on rural areas.</p>

Policy profile B11 Finland: Virittämö Employment Service (Digital Helsinki)

1. General			
1.1 Name policy initiative	Virittämö Employment Service (Digital Helsinki)		
1.2 Country	Finland	1.3 Level (national/regional)	national/regional
1.4 Launch year of policy initiative	2017	1.5 Completion year of policy initiative (total nr of years)	ongoing (6 years)
1.6 Managing authority	No data		
1.7 Target audience	Unemployed, marginalised people, all people		
1.8 Objectives/brief description	<p>The Digitalents Helsinki -concept increases the digital work life skills of young people and creates living labs for companies. The aim of Digitalents Helsinki is to give the participants the needed skills to get employed by the companies of the cooperation network or in the open job market. We work with new ideas modelled by young people in cooperation with professionals in ICT and digital media productions. Activities consist of digital projects in software development, IT & security, new media, graphic design, and new technology.</p> <p>The Digitalents Helsinki has created an open space and community at Maria 01 startup -campus in Helsinki and has built a solid basis for new skills development bringing together people with different know-how and background; subsidised young employees, youth on a work trial, apprentices and young enthusiasts as well as professionals and volunteers.</p>		
2. Key Performance Metrics			
2.1 Individual	<p>The general satisfaction from provided courses is very high, 64% of participants have rated the service 4 or 5 out of 5 for skills development. 0% participants have rated their skills development during the service as low. The background of the participants is very diverse as well as age and work experience. One of the main values of the initiative is promotion and continuation of lifelong learning. Over half (56%) of past participants report that they enrolled on some course or courses offered by a partner UAS during their wage subsidy work period at Virittämö. 75% of those who have enrolled say they have taken individual courses to enhance their skills. 15% have taken courses with the goal of entering university or a university of applied sciences. Roughly 40% of past participants have found a job or a place to study after taking part.</p>		
2.2 Company	<p>Virittämö partners with companies looking to hire talent. They approach potential students by themselves and they have their own criteria and databases to select the people. Graduated students are rewarded with 60 credits that can be used as a basis to apply for different university programs. The training also helps in the field of low occupational abilities, people that were unemployed for a long time can receive support from the students in the universities. Such support is an obligatory work practice for the students. This tells that the initiative has a holistic approach to the subject. As a result, 50+ different companies or public sector employers have hired participants, either during or after the 7 month work period. Especially from the ICT and software development sectors.</p>		
2.3 Economy	<p>The service can employ and train around 30 people at a time. As the intake is continuous, the flow of people through the service is around 50-60 people annually.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>The initiative receives support in the form of expertise and guidance from municipal-level policy makers who work in the employment sector. Also, the policy makers are helping with the language support to those students whose level of Finnish is not satisfactory for the labour market and other kinds of support. The large companies provide the initiative with the information on the trends on the labour markets or the current demands in different fields. Nowadays, the initiative has limited possibilities to address all the national and global trends. SMEs are seen as their niche and are currently developing ways to integrate SMEs to our learning and recruiting paths. They are also developing Virittämö's upskilling and learning opportunities in cooperation with two universities of applied sciences.</p>		
3.2 Learners	<p>Every participant grows to a certain role during their working period. The approach is holistic and needs-based. Virittämö's 7-month programme includes upskilling through everyday tasks, real projects, formal courses, and peer-to-peer learning. An important part is that we coach our participants to their coming role in the open job market through career guidance & job search skills training. Supporting functional capacity and work ability is also part of the package (for those who need it). In a nutshell: the idea is to create an individual path for every participant based on individual needs and requirements of the job market. The partner university enhances Virittämö's employees' functional capacity and work ability in cooperation with students and teachers of occupational therapy.</p>		
3.3 Funding	<p>City of Helsinki. Since 2020, the service has been funded from the Helsinki Vocational College and Adult Institute's budget.</p>		
3.4 Regulatory Framework	<p>Currently the initiative is ahead of the national strategy. Nevertheless, it is important to understand that digital development should be sustainable and useful for a longer perspective. Also, the initiative has very active social media channels and is quite popular, so there is very little need for extra marketing efforts towards potential applicants</p>		

Policy profile B12 France: Training Aid // FNE-Formation

1. General			
1.1 Name policy initiative	Training Aid // FNE-Formation		
1.2 Country	France	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	1963	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	Ministry of Labour		
1.7 Target audience	Employees		
1.8 Objectives/brief description	<p>The policy aims at upskilling individuals in order to promote employee retention and supporting companies that are working to develop in three key areas:</p> <ul style="list-style-type: none"> • Environmental sustainability • Digital transformation • Agri-food development, particularly toward organic food production <p>The policy assists companies in adapting to economic changes by financing training actions that contribute to the preservation and development of their employees' skills. It can fund training projects for all employees, regardless of their socio-professional category or educational level, with the exception of employees under apprenticeship or professional training contracts.</p>		
2. Key Performance Metrics			
2.1 Individual	<p>The policy aims at upskilling individuals, with a specific focus on digital, green, entrepreneurial, and technical skills. As of 2023, the policy has priority focus on digitalisation, environmental transition and the agri-food sector. The initiative helped to considerably improve the attractiveness of learners in the job market. The trainings provided are highly valued in the job market and recognised by companies.</p>		
2.2 Company	<p>FNE is a key measure for supporting businesses in their transition, ensuring their competitiveness, facilitating their transformation, and maintaining the employment of their trained workforce.</p> <p>The FNE-Formation programme supports businesses in response to economic changes. It provides funding for training actions aimed at preserving and enhancing the skills of their employees. The training aid is not intended to facilitate an employee's change of employer but rather to encourage the employer to retain the employee in their current position. FNE-Formation was also a key tool during the sanitary crisis. In the spring of 2020, the use of the FNE-formation was widely encouraged, in order to respond effectively to the immediate training needs of companies, particularly those whose employees had been placed on part-time work, to support companies in the economic recovery.</p>		
2.3 Economy	<p>In total, more than 1,000,000 employees have been trained since the establishment of the initiative. Only between 2021 and 2022, 75,226 companies and 948,654 individuals benefitted from the trainings provided.</p> <p>The goal of the FNE is to sustain the digitalisation of the economy and to help employees to face this huge change. The aid enables companies to secure funding for the implementation of innovative projects or those requiring high levels of digital expertise.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>Policy makers take a leading role in this initiative by adapting the support provided to the needs of the economy. FNE has been characterised in the past by strong legal flexibility, being adapted frequently in the past to better fit the economic- and labour environment. Changes are often triggered by feedback and data coming from the private sector, with particular focus on small- and medium sized companies, which are the primary beneficiary of this policy.</p> <p>Education and training providers play a significant role in training delivery but are less involved in the policy definition and direction.</p> <p>A key stakeholder in the process is the operator of competences, a public body that aims to promote, organise, and facilitate the training programmes. The operators of competences maintain constant communication with companies, among themselves, and also with the state services at the local level.</p>		
3.2 Learners	The learners are not free to choose directly the format of their learning but are guided by the programme operators.		
3.3 Funding	<p>The bulk of the funding comes from the public sector (between 50% and 75%), with companies and individual learners contributing a smaller amount. The Ministry encourages businesses to invest in training their workforce. The intensity of public funding depends on various criteria, including the size and workforce of the company.</p>		
3.4 Regulatory Framework	<p>The transformation of the training aid programme in 2023 is directly aligned with government policies regarding ecology and energy transition. Two out of the three priority areas include supporting businesses through training in the fields of ecological and agri-food transition.</p> <p>Promotion is carried out on multiple levels, including on the ministry's website, through its teams of developers located in various regions, and through the operators of competences</p>		

Policy profile B13 Germany: NETWORK Q 4.0

1. General			
1.1 Name policy initiative	NETWORK Q 4.0 - Network for the training of vocational training staff in the digital transformation		
1.2 Country	Germany	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2019	1.5 Completion year of policy initiative (total nr of years)	Ongoing(6)
1.6 Managing authority	German Economic Institute in cooperation with various local educational institutions (Bildungswerke der Wirtschaft)		
1.7 Target audience	Small and medium sized enterprises		
1.8 Objectives/brief description	The initiative aims to prepare vocational training personnel for the digital transformation by developing region-specific training formats and using an innovative Blended-Learning approach. The goal is to adapt dual vocational training to the challenges of digitisation.		
2. Key Performance Metrics			
2.1 Individual	Based on data of March 2023, over 4000 individuals participated in further education opportunities since October 2019. Those training opportunities are based on the blending learning concept and were therefore safely available during the Covid-19 crisis. The contents within these training opportunities were created using the Design-Thinking approach and capture the needs of vocational trainers within certain industrial sectors to keep up with the digital transformation. The range of topics covered by trainings and other offers (other short training formats like talks, events, videos, or workshops) is very diverse. Around 100 training courses in 14 topic clusters are offered. All trainings include the core topic of digitisation of TVET in addition to a technical or interdisciplinary focus.		
2.2 Company	<p>The approach is unique in three ways:</p> <p>1.) Trainings for individuals are offered from a broad variety of industrial sectors, including the large sectors like metal and electrical or chemical, but also often neglected sectors in further (digital) training like caring for the elderly, agriculture, tourism, and the textile industry.</p> <p>2.) Due to the blended learning approach trainings are available for individuals from all over Germany and are not restricted to a certain region. Additionally, due to the cooperation with a variety of local educational institutions close to the employers' associations -the so-called Bildungswerke der Wirtschaft- many individuals have gained access to courses that would normally never look beyond their region for further training opportunities.</p> <p>3.) This cooperation further allows to include specific regional needs in courses provided, e.g. there are some regions in Germany with a high level of tourism where vocational trainers are required to teach their apprentices how to create satisfaction surveys using digital tools.</p> <p>Individuals from large companies take part in the trainings of the projects, give feedback after completing specific trainings and sometimes act as experts within the training. Individuals from large companies are also part in Design-Thinking-Workshops and further in focus groups. Further individuals recommend trainings to their network.</p>		
2.3 Economy	One of the impact targets of the project is that "TVET trainers manage to increase the company's ability for innovative digital processes and solutions". Therefore, the project aims to contribute to the development of a long-term vision for up- and reskilling for the involved companies.		
3. Key Performance Drivers			
3.1 Stakeholders	The initiative is currently funded by the Federal Ministry of Education and Research. Research personnel and management at the German Economic Institute and educational trainers and management at the cooperation educational institutions are in frequent communication with administrative professionals at the Federal Ministry of Education and Research.		
3.2 Learners	Currently around 55 percent of participants are from larger companies, around 45 percent of participants are from SME. The initiative is trying to enhance activities for SME using specific marketing and downscaled trainings.		
3.3 Funding	Currently the courses in this initiative are free for participants and are fully supported by public funding. This was due to support the development and first implementation of innovative courses currently not found on the market. It is the goal to create a self-sufficient initiative but that is likely going to take a few more years.		
3.4 Regulatory Framework	As the business model of Germany is strongly associated with the skills and competencies of individuals with vocational qualifications, the initiative deems it highly important to support vocational trainers in their process of reskilling. Further, apprentices are a source of innovation in Germany, especially in SME. The overall digital strategy of Germany is targeting different areas in education, starting from primary school up to universities. However, few other initiatives support vocational education in such a broad context targeting various industrial sectors and offering help for part-time vocational trainers.		

Policy profile B14 Greece: Upskilling and reskilling in In-Demand Industries with a focus on Digital and Green Skills

1. General			
1.1 Name policy initiative	Upskilling and reskilling in In-Demand Industries with a focus on Digital and Green Skills		
1.2 Country	Greece	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2022	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	Greek Public Employment Service (DYPA)		
1.7 Target audience	Unemployed individuals, Jobseekers, Employees		
1.8 Objectives/brief description	<p>Funded by the Recovery and Resilience Facility of the European Commission, within the framework of the action: “Sub2: Horizontal skills upgrade programmes for targeted populations (Horizontal upskilling / reskilling programmes to targeted populations) – Action 16913”, the DYPA is cooperating with licensed life-long learning centres (LLL centres) for provision of training programmes to unemployed people registered in the unemployment registers.</p> <p>This comes in light of Greece’s national effort to upgrade the skills of Human Capital particularly in the “digital” and “green” skills. Beyond allowing for an effective interconnection of the unemployed with the labour market and improving their employability, the programme also prioritises the preservation of future jobs.</p> <p>The objective of the programme is to provide theoretical training services to unemployed over 18 years of age and officially registered as unemployed. The training provided will also be validated with a certification of knowledge and skills acquired. The training ranges from 50-200 hours, leading to acquisition of digital and green knowledge/skills. The beneficiaries will be provided ‘Training Vouchers’ which can be used to uptake the training courses. The beneficiaries of the programme will be selected on the basis of a public invitation of the Greek public employment service, DYPA.</p> <p>The daily duration of the training programme cannot exceed 4 hours with a programme of up to 80 hours being planned for completion within 2 months. The process of certification is on the basis of the current National or European Institutional framework(s) and certificates will be awarded only after passing the mandatory certification exams. Each beneficiary, who successfully completes the training programme and obtains the Knowledge and Skills Certification is entitled to an educational allowance of €5/hour of training.</p>		
2. Key Performance Metrics			
2.1 Individual	As the operation part of the policy initiative only kicked-off in 2022, its impact on increasing the attractiveness of learners for the labour market could not be quantitatively assessed. However, the initiative considerably increased the level of mastery of specific skills as well as the motivation of learners to work and to continue learning.		
2.2 Company	The policy initiative considerably contributed to the development of a learning culture for the companies involved. However, its impact on development of long-term vision for up- and reskilling, as well as, attractiveness of labour market for employers (i.e., employee retention rate, etc.) could not be ascertained.		
2.3 Economy	While there is no data on re-integration, only on the completion of training. The initiative is targeted at 500,000 people, of which 156,000 people have already completed training as of 19 th June 2023. With its focus on both digital- and green skills, the policy initiative considerably contributed to the digitalization and greenification of the economy.		
3. Key Performance Drivers			
3.1 Stakeholders	The Greek Employment Service (DYPA) plays a leading role in the design, implementation, and evaluation of the policy initiative. It is also occasionally supported by large companies as well as Small, Medium Enterprises. The different stakeholders were loosely connected with DYPA serving as a central coordinator. The programme itself is delivered in partnership with various Lifelong Learning Centers in the country.		
3.2 Learners	All learners that enrolled in the programme are awarded appropriate recognition for their efforts in the form of certificates. The policy initiative offers learners the opportunity to develop their own learning path by making the Training Vouchers available to the beneficiaries in addition to the educational allowance of €5/hour of training		
3.3 Funding	The programme is largely publicly funded with public funding covering more than 90% of the total. Companies do not play a critical role in the funding, with less than 5% of the total funds required.		
3.4 Regulatory Framework	The programme is well integrated into Greece’s overall skills strategy and appropriate efforts have been made to promote the programme. With 500,000 people expected to take up the learning initiative, an active awareness raising programme is essential for effective uptake. To further aid with the same, the programme also ensured that learners had appropriate learning infrastructure including tools and trainers.		

Policy profile B15 Hungary: InnoEnergy Skills Institute

1. General			
1.1 Name policy initiative	InnoEnergy Skills Institute		
1.2 Country	Hungary	1.3 Level (national/regional)	International
1.4 Launch year of policy initiative	2021	1.5 Completion year of policy initiative (total nr of years)	Still ongoing (2 years)
1.6 Managing authority	EIT InnoEnergy		
1.7 Target audience	The main focus of this initiative is on companies, but it also includes B2B and B2C.		
1.8 Objectives/brief description	- The InnoEnergy Skills institute has the objective of upskilling and reskilling the workers in the battery sector.		
2. Key Performance Metrics			
2.1 Individual	<p>This initiative has had a significant impact at the individual level. Firstly, the developed training content significantly increases the knowledge, understanding, and skills about batteries. Hence, different segments like automotive, and electricity generation and distribution can benefit from this knowledge.</p> <p>In addition, it has improved the attractiveness of learners for the labour market considering that most of OEMs are already in execution of their transformation towards EV production. This means that they are in need of a workforce with knowledge about batteries. Moreover, with a high number of foreign direct investments in Hungary within the battery sector, there is a demand for thousands of engineers with also the A) overall understanding and B) subject matter expertise of battery engineering.</p>		
2.2 Company	<p>This initiative is having a positive impact on companies as it is expected that there will be an increase in competitiveness of companies providing access to cutting edge battery knowledge Especially when considering that this knowledge is not accessible in Europe anywhere else.</p>		
2.3 Economy	<p>In the case of Hungary, this initiative has trained fewer than 10.000 people.</p> <p>However, it is making a contribution to the greenification of the economy as the content developed by InnoEnergy addresses energy transition at large. Including best practices, explaining why the electrification of mobility and storage markets are incremental on national, regional and even local level.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>In the case of this initiative, policy makers have only provided occasional support, as its engagement is too weak for now. However, the support from policymakers is required for working towards the goal of integrating battery related know-how in the current work practices. Policy makers should have a role to incentivise the private sector to invest into the required workforce, while also support the upskilling of public sector. This also includes police, healthcare, fire departments or any other sectors and professional personnel coming into relation with batteries during their daily work. However, these workers have not had any proper education about the technology.</p> <p>In the case of companies, SMEs have been more willing to participate from the beginning, although their resources are limited. The opposite holds for large companies, since they haven't shown willingness to participate, as they were reluctant to get external training and focused more on their inhouse knowledge. However, after discussions this willingness has grown.</p>		
3.2 Learners	<p>In the case of this initiative, once a skill / job profile to be achieved is selected, the learning path shall be followed as created in the curricula. However, the learning path can be extended with additional trainings if required. Performance measurements are included (multiple times) within one learning path.</p> <p>In addition, the learner receives a certificate upon concluding certain level of the learning journey. However, accreditation would be preferable in certain cases on national level. Unfortunately it is a lengthy and non-scalable process.</p>		
3.3 Funding	<p>This initiative has experienced how the Hungarian stakeholders have withdrawn from their commitment to provide public funding for the reskilling and upskilling of learners within the battery sector. This is an incremental challenge, considering that the market requires significant efforts to meet the demand of the manufacturing and assembly sectors within the battery value chain.</p> <p>It was stated that the reskilling of blue-collar workers must be supported by resources of the member states.</p>		
3.4 Regulatory Framework	<p>The re/upskilling focus has been highlighted in the national battery strategy and aligned with the NetZero 2030 strategy of Hungary. Therefore, the integration of the content provided by the Skills Institute would fundamentally support the green transition on member state level.</p> <p>The re/upskilling focus has been highlighted in the national battery strategy and theoretically approved by the relevant Ministerial stakeholders. However, further active integration has not been showcased.</p>		

Policy profile B16 Ireland: Skillnet Ireland

1. General			
1.1 Name policy initiative	Skillnet Ireland		
1.2 Country	Ireland	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	1999	1.5 Completion year of policy initiative (total nr of years)	On going
1.6 Managing authority	Department of Further and Higher Education, Research, Innovation and Science		
1.7 Target audience	The business support agency of the Government of Ireland, responsible for advancing the competitiveness, productivity, and innovation of Irish businesses through enterprise-led workforce development support over 22,500 businesses nationwide and provide a wide range of valuable learning experiences to over 86,500 trainees. The mission is to facilitate increased participation in enterprise training and workforce learning in Ireland.		
1.8 Objectives/brief description	Skillnet Ireland places a focus on key areas such as Accelerating Digitalisation, Talent for Climate Action, Developing SME Business Leadership. Here are some examples of Skillnet Business networks offering and National talent initiatives through which Skillnet Ireland addresses technical and non-technical skills - Green Tech Skillnet (https://www.greentechskillnet.com/) with offerings in areas such as green hydrogen, offshore wind, electric vehicle, energy storage, ESG reporting, Energy Auditors - Technology Ireland ICT Skillnet (https://ictskillnet.ie/) with offerings in areas such as AI, Blockchain, Cybersecurity, Data Analytics, Digital Sales, Global business services, Leadership or Software development		
2. Key Performance Metrics			
2.1 Individual	Skillnet Ireland enhances the general competency and employability of learners, leading to increased career mobility and greater life opportunities. Skillnet Ireland is committed to supporting learners of all levels in the workforce, enhancing career mobility and employability. Learners employed within the private sector or commercial semi-state can access Skillnet Ireland training through their company. Jobseekers can also develop new skills to increase their employability and employment progression opportunities through training programmes and work placement through the Skills Connect programme (https://www.skillnetireland.ie/skills-connect/).		
2.2 Company	The primary objective of Skillnet Ireland is to increase participation in enterprise training by businesses as it is Ireland's only business support agency dedicated to workforce development that puts enterprises in control of the process. Skillnet partners with over 57 industry bodies that are either sectoral or geographically based and foster a networked and partnership-based approach that leverages Ireland's open culture of collaboration. Encouraging enterprises to lead the process in this way helps ensure that programmes delivered through Skillnet Ireland are highly relevant to the needs of industry. In 2021, Skillnet Ireland supported over 1,100 multinational companies across a range of sectors including MedTech, technology, financial services, biopharmachem and advanced manufacturing. But SMEs are the backbone of private sector employment in Ireland. 93% of the companies supported in 2021 were small to medium enterprises with 80% of that total number of businesses supported being small or micro enterprises.		
2.3 Economy	Digitalisation is a Strategic Pillar of the Skillnet Ireland-Statement of Strategy, and critical to this is ensuring businesses and their workforces have the necessary digital skills to enhance the productivity, growth, and development of their organisation. To support these objectives, Skillnet Ireland has committed additional investment to enable the expansion of additional programmes including digital transformation. Digitalisation is a key objective of all our 70 networks with most businesses utilising and relying on technology regardless of their sector. Skillnet Ireland delivered digital skills programmes to over 12,000 workers across multiple sectors in 2021 with a two-pronged focus on specialised talent for new or emerging technologies, and in enabling digital transformation within the SME sector.		
3. Key Performance Drivers			
3.1 Stakeholders	Skillnet Ireland is a business support agency of the Government of Ireland, with a mandate to advance the competitiveness, productivity, and innovation of Irish businesses through enterprise-led workforce development. Skillnet Ireland, together with its industry and educational partners, contributes to both the formation and the implementation of enterprise and labour market policy and is delivering substantive actions across all key cross government and sectoral strategies. Skillnet Ireland Key policy stakeholders are regularly engaged in the design and evaluation of Skillnet Ireland's overall policy direction.		
3.2 Learners	All participants undertaking any programme in its portfolio are obligated to provide feedback about their learning outcomes and experience on the programme. This allows Skillnet to update skills pathway with great agile to meet unfolding needs rather than reinventing the wheel. Recent updates include Computer Vision, Natural Language Processing, AI for business leaders. Based on annual report records, see exact numbers people trained through Skillnet Ireland programmes: 86,570 in 2021; 81,895 in 2020; 70,270 in 2019; 56,182 in 2018; This amounts to a total of 751,184 people training since 2008. Skillnet Ireland was created in 1999, so if we were to consider that at least 39,000 people were trained annually, then the total of people trained since the creation of Skillnet Ireland would amount to more than 1 million people.		
3.3 Funding	In 2021, Skillnet Ireland invested approximately EUR 60.2 million to support talent development in Ireland. This investment included EUR 37.7 million channelled from the National Training Fund managed by the Department of Further and Higher Education, Research, Innovation and Science. It also included enterprise contributions for a total of EUR 22.5 million. This amounts to approximately 40% of private investment.		
3.4 Regulatory Framework	The National Digital Strategy (Harnessing Digital: The Digital Ireland Framework - https://www.gov.ie/pdf/?file=https://assets.gov.ie/214584/fa3161daaa9d-4b11-b160-9cac3a6f6148.pdf#page=null) puts forward that Skillnet Ireland's business support networks should be		

	<p>utilised. A key aim of the recent White Paper on Enterprise published by the Department of Enterprise Trade and employment (https://enterprise.gov.ie/en/publications/white-paper-onenterprise-2022-2030.html) is to ensure 90% of SMEs having Basic Digital Intensity by 2030 to ensure competitiveness. Digitalisation is a Strategic Pillar of the Skillnet Ireland-Statement of Strategy, and critical to this is ensuring businesses and their workforces have the necessary digital skills to enhance the productivity, growth, and development of their organisation. To support these objectives, Skillnet Ireland has committed additional investment to enable the expansion of additional programmes including digital transformation.</p>
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Policy profile B17 Italy 1: Patto per il Lavoro

1. General			
1.1 Name policy initiative	Patto per il Lavoro = Pact for Labour initiative: DEVELOP DIGITAL SKILLS		
1.2 Country	Italy	1.3 Level (national/regional)	Regional
1.4 Launch year of policy initiative	2023	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	MUNICIPALITY OF MILAN		
1.7 Target audience	The project aims to increase the level of mastery of digital skills of the general population of the City of Milan. In particular, the first courses have target groups at a higher risk of digital marginalization: <ul style="list-style-type: none"> • Citizens over 60 years of age • Foreign citizens living in the Metropolitan City of Milan 		
1.8 Objectives/brief description	In 2022, The Metropolitan City of Milan has signed the Pact for Labour, a public notice of expression of interest opened by the Municipality of Milan, aimed at the implementation of projects and initiatives in the territory. The aim is to provide skills and experience to young and unemployed people helping them to enter the workforce. It is the start of a pioneering model of public-private cooperation, a model that could contribute to the development and training of the local communities. It is also a place-based intervention, in order to increase the number of free services offered in the suburbs. Within this context, the initiative Develop Digital Skills developed by the private telco company Fastweb was born. The aim of the project is also to promote lifelong learning and professional development amid future technological changes. Through an internal programme of voluntary activities done in working hours by the employees of Fastweb, a series of courses have been set up to enhance the digital skills of the general population of the city of Milan. Specific the most significant digital skills useful to enter the labour market, covering the basic toolkits up to the use of work specific social media. This is done also thanks to the Municipality, which has put electronic devices at disposal of participants as well as used its own premises as classrooms. Courses are free of charge and deliver a certificate at the end.		
2. Key Performance Metrics			
2.1 Individual	The project also aims to promote lifelong learning and professional development amid future technological changes.		
2.2 Company	The aim of the project is also to share competences. Fastweb employees decided to make her expertise available to other people wishing to learn new digital skills and extend their knowledge in a flexible way.		
2.3 Economy	This policy initiative aims to create a bridge between the gap of academics and requirements of job markets by offering the latest job-oriented training. Students acquire a set of skills that are usable in everyday work.		
3. Key Performance Drivers			
3.1 Stakeholders	Patto per il Lavoro is an agreement signed between the Milan Municipality, associations and trade unions. It aims to develop innovative projects between stakeholders (investors, customers, employees, suppliers, local communities), citizens and Milan Municipality. The course content is exclusively designed by Fastweb according with Milan Municipality. The teachers are volunteer employees from Fastweb staff. There's no financial compensation from the city for Fastweb. It's a model of public-private collaboration born with social and training purposes.		
3.2 Learners	Students have the opportunity to use specific digital tools and suitable software provided by Fatsweb and the Milan Municipality. A certificate of participation is delivered to each participant.		
3.3 Funding	The Municipality of Milan provides classrooms equipped with tech resources such as tablets, computers and internet connection. Fastweb provides volunteers from its staff to offer training to students within their working hours. They are a group of professionals which are prepared, available and accepted the challenge to share their skills. The training course is completely free of charge.		
3.4 Regulatory Framework	Unemployment has become a critical issue and is made even more dramatic by the mismatch in skills between job seekers and the needs of organisations. This policy initiative is well integrated into the national and local training policies, in order to bridge between employment demand and supply.		

Policy profile B18 Italy 2: House of emerging technologies - 5G Emerging Technologies Support Program

1. General			
1.1 Name policy initiative	House of emerging technologies - 5G Emerging Technologies Support Program		
1.2 Country	Italy	1.3 Level (national/regional)	National program but applied at city level
1.4 Launch year of policy initiative	2021	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Ministry of Enterprise and Made in Italy		
1.7 Target audience	The interventions are aimed at municipalities, as beneficiaries, in which there is an ultrabroadband network in 5G mobile technology, as the leader of a partnership composed of Italian universities and/or research centres and companies, SMEs and/or startups established Italian or with an operational headquarters on the Italian territory.		
1.8 Objectives/brief description	<p>The 5G Technology Support Program promotes technology transfer centres (the "Houses of Emerging Technologies") to combine the scientific skills of universities and research institutions with the needs of companies. The Technology Houses have as their objective in particular:</p> <ul style="list-style-type: none"> • support research and experimentation projects • supporting the creation of startups • encourage technology transfer to small- and medium-sized enterprises. <p>The topics concerned are: Blockchain and Crypto Asset, Internet of Things (IoT), Artificial intelligence, 6G, quantum technologies.</p> <p>The perspective analysed through the insights of the EDIH HSL of Basilicata Creativa, focuses on collective training programs with local entrepreneurs and in the field of cultural and creative industries to improve digital awareness on emerging technologies (AI, blockchain, Big Data).</p>		
2. Key Performance Metrics			
2.1 Individual	One-to-one mentoring- and coaching pathways with companies from the cultural and creative industries that have participated in a public call. The companies selected underwent a vertical training and are assisted in the development of new prototypes.		
2.2 Company	Some SMEs that have participated in the training have started processes to generate new prototypes, upskilling- and reskilling paths for internal staff, recruiting new staff and paths for new services and products. All companies that have started these processes are medium/large.		
2.3 Economy	This policy project is part of a broader programme that the regional government is putting in place from about 4 years and for the coming years through the policies of the ERDF OP: policy to improve the matching between companies and research centres that use sectorial clusters in the Smart Specialization Strategy program.		
3. Key Performance Drivers			
3.1 Stakeholders	Casa delle Tecnologie Emergenti is an intervention promoted by the Ministry of Enterprise and Made in Italy and counts on the collaboration of the Municipality. The Municipality enacts the initiative at a local level and is responsible of it; A cluster or competencies centre, which is the agent who provides the courses and expertise needed to improve skills for the companies involved, in this case EDIH HSL of Basilicata; A local university which also provides expertise, represented here by Politecnico di Bari and Università degli Studi della Basilicata; CNR, the National Institution in Italy for the promotion of research.		
3.2 Learners	Local companies and entrepreneurs are the final beneficiaries of the programme. Digital skills are built through one-on-one mentoring between entrepreneurs or selected employees of a company and the local cluster or competences centre. This allows the beneficiaries to have better awareness of the advancements on local, national- and international level and this allows them to improve their digitalisation processes.		
3.3 Funding	More than 75% of the funding of the programme is provided publicly. The maximum budget for the whole programme at national level is that of €80.000.000.-		
3.4 Regulatory Framework	The context in which this initiative is set is that of drawing together the expertise of universities and local centres and enabling them to transfer said knowledge to local enterprises. In particular, it promotes the development of skills which relate to the realms of 5G/6G mobile technology, Blockchain, AI and big data. These are all key technologies which should be exploited by a country which has the aim of developing the competencies of its enterprises. For this reason, the initiative is well integrated into the national and local priorities, bridging academic knowledge with sector skills.		

Policy profile B19 Latvia: Grow Latvia with Google

1. General			
1.1 Name policy initiative	Grow Latvia with Google		
1.2 Country	Latvia	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2021	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Ministry of Economics and LIAA		
1.7 Target audience	Small and medium-sized businesses in Latvia		
1.8 Objectives/brief description	<p>The program 'Grow Latvia with Google' was launched in 2018 by Google and the Ministry of Economics and is still ongoing. The program aims to promote the digital development of Latvian companies by providing free courses to at least 3000 small-to-medium-sized businesses. The offered courses are aimed at strengthening their resilience in an everchanging world by providing courses in the field of digital marketing, technology integration, export and e-commerce.</p> <p>Moreover, the program will also help the Latvian economy, as small businesses who leverage digital tools, are able to build a digital 'safety net' and perform significantly better than their counterparts. Such companies are also more likely to be job creators, hiring 3 times more employees than others, according to the Connected Commerce Council.</p>		
2. Key Performance Metrics			
2.1 Individual	<p>In cooperation with local partners, Google will provide training in areas such as export, e-commerce, digital marketing and integrating technology into business. The trainings will be suitable for all employees of small and medium-sized enterprises who wish to improve their digital skills. The wide range of tools and educational courses are not only suitable for existing businesses, but also for those who are at the start of their business journey or those wanting to pursue a career switch.</p> <p>The program considerably improved the learner's; (1) level of mastery of digital, green, entrepreneurial and technical skills, (2) attractiveness for the labour market (i.e., ability to find a job/ increase job security), (3) motivation to work and to engage in lifelong learning.</p>		
2.2 Company	<p>Although the offered courses and training programs do seem to positively impact the key performance metrics of individual learners, this effect is not directly observed on the company-level. While the initiative aims to improve the resilience of small to medium-sized businesses in Latvia to cope with an ever-changing digital environment, the initiative directly focuses on the learner. As such, no data exists on the effect of the initiative on these SME's on i.e., the long-term vision or reskilling of involved SME's. In addition, no direct or indirect effect is found for the relationship between the offered courses in the initiative and subsequent improvement of businesses' learning culture or attractiveness on the labour market (i.e., employee retention rate). Although the trainings provide participants with knowledge necessary to grow their companies by teaching them how to use digital platforms to expand their business, increase export or reach new customers online, no data is available on the effect of the initiative on business performance.</p>		
2.3 Economy	<p>"Grow Latvia with Google" involved approximately 10.000 participants (learners) of SMEs. As no data is available on the effect of this initiative on the digitalization of the Latvian economy, the effect can neither be confirmed nor denied. Moreover, the effect of the initiative on the greenification of the economy (i.e., training of green skills and impact on the climate) cannot be established as the primary purpose of the initiative is to improve digital skills (and no data is available).</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>The most important stakeholder and driver behind the initiative's implementation and evaluation are policy makers (active involvement) i.e., the Ministry of Economics and LIAA. Therefore, large companies, SME representatives or education/training providers or employment agencies/ trade unions did not engage in this policy initiative. Subsequently, no connected 'learning ecosystem' was developed to systematically communicate or align visions and objectives among various stakeholders.</p>		
3.2 Learners	<p>The project did aim to improve career guidance by providing the learners with the opportunity to determine their own learning path. The courses included milestones for performance measurement and included self-assessment opportunities. In addition, the digital learning environment offered by Google included various trainings, tools and programs which, after successful completion of the learning, is awarded with a certificate.</p>		
3.3 Funding	<p>There is uncertainty surrounding the role of funding in supporting SMEs in this initiative, as no data is readily available. However, the role of <i>public funding</i> is less than 5% of total funding, while the role of <i>private funding</i> amounts to more than 75% (Google offers their free training material on Coursera). Subsequently, learners do not have to contribute financially, which ensures continuity and sustainability of the initiative.</p>		
3.4 Regulatory Framework	<p>"The level of digitalization of businesses has a major impact on their ability to adapt to different situations and take on new challenges, which is particularly important today", emphasizes Jānis Vitenbergs, Minister of Economics. Hence, the policy makers invite everyone to participate in the initiative as it aligns with the skill and digital strategy of Latvia. In addition, the initiative is successful in raising awareness and inform the learners about the offered opportunities and learning infrastructure. To conclude, no integration with Latvia's green strategy is found in this initiative.</p>		

Policy profile B20 Lithuania 1: Upskilling programs, organised by Lithuanian Public Employment Service (PES)

1. General			
1.1 Name policy initiative	Upskilling programs, organised by Lithuanian Public Employment Service (PES) (voucher system)		
1.2 Country	Lithuania	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2017	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Ministry of Social security and Labour		
1.7 Target audience	PES is organizing vocational training for registered jobseekers		
1.8 Objectives/brief description			
2. Key Performance Metrics			
2.1 Individual	The level of mastery of specific skills of learners has strongly increased. Introducing vocational training voucher system has allowed the reduction of bureaucratic obstacles in the process of organising and administering vocational training measures, to ensure prompt reaction to the labour market needs. This is proven by the high rate of integration into the labour market after the training. Individuals participate in training during which they acquire the qualifications and/or competences required for the labour market. In this case, the learners select the training provider themselves (training providers are not being selected by the employment service (PES)).		
2.2 Company	PES organises vocational training for employed jobseekers in the case of modernisation at the company where the jobseeker is employed.		
2.3 Economy	Between 10,000 and 100,000 people have been trained. There is a lot of interest in training programmes related to the digitalisation of the economy, as such skills increases the chances of being integrated into the labour market. The use of renewable resources, the circular economy and the green economy are increasingly influencing changes on the labour market. The demand for labour in the corresponding fields (related to the greenification) is increasing, so the need for new qualifications is also growing. However, there is still a lack of training programmes that directly relate to the greenification of the economy.		
3. Key Performance Drivers			
3.1 Stakeholders	<p>The Public Employment Service constantly carries out labour market analyses and forecasts and communicates with companies in order to meet employers' needs as quickly as possible with appropriate support and assistance. Furthermore, if the needed training program is missing, PES initiates the creation of the training programme while cooperating with potential training providers.</p> <p>PES is organising vocational training for registered jobseekers. Training programs are designed and training providers are being regulated by the Ministry of Education, Science and Sport. Quality of the training, in particular the formal training, is being monitored by the mentioned Ministry as well. However, PES is responsible for evaluation of effectiveness of vocational training and providing proposals to policymakers in order to improve the implementation of the measure.</p> <p>Large companies are the fastest in optimising their processes and modernising their operations. Involvement of such employers in designing the training programs is crucial.</p>		
3.2 Learners	Individuals choose training programs that are important for their career path, along with the preferred training provider. The implementation of vocational training and assessment of the measure is regulated by legislation. PES encourages the feedback from learners in order to take decisions on the changes if needed. Negative feedback could also influence the elimination of the training provider from the list.		
3.3 Funding	<p>Companies can use the possibilities provided by support for training measures when selecting the workers for the existing vacancies as well as maintaining the staff (employed jobseekers), in case new competencies are needed. PES is paying for the training services in such cases.</p> <p>PES is covering the training expenses but not exceeding the amounts set by legal regulations.</p>		
3.4 Regulatory Framework	<p>Support for training measures offered as well as career guidance provided by PES is a part of the lifelong learning system. Some possibilities exist for gaining green professions and qualifications for PES clients participating in support for training measures. However, there is still a lack of such specific training programs to be offered.</p> <p>Training support is the main active labour market policy measure offered to PES clients when training is needed to fill vacancies. Information events are organised and information is disseminated on the PES website, social media and in the media, focusing on skills that are in high demand in the labour market.</p>		

Policy profile B21 Lithuania 2: Modularisation of formal VET curriculum

1. General			
1.1 Name policy initiative	Modularisation of formal VET curriculum		
1.2 Country	Lithuania	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2018	1.5 Completion year of policy initiative (total nr of years)	ongoing
1.6 Managing authority	Qualifications and VET Development Centre (KPMPC)		
1.7 Target audience	The policy initiative is the core development of formal VET system offer for young learners and adults.		
1.8 Objectives/brief description	<p>The policy was aimed at updating the content of VET programmes in accordance with sectoral qualification standards development of which was led by national employer organisations or branch organisations in cooperation with KPMPC. It provided a momentum to revise the content of initial and continuing VET programmes, to introduce labour market, technological innovations and align programmes with the above-mentioned standards. Additionally, modular structure implies that when needed separate modules can be used for training instead of a full programme, making training more flexible. Modularisation of programmes also facilitated introduction of non-formal VET programmes, which must be aligned with competencies prescribed in standards, but which are more flexible in their delivery and content. This curriculum reform was aimed at making upskilling and reskilling more systematic, transparent, permeable, and enhancing its quality in terms of learner's outcomes. Additionally, modularisation was implemented in-line with introduction of credit system in VET, thus facilitating learning mobility and recognition of learning outcomes.</p>		
2. Key Performance Metrics			
2.1 Individual	The development of lifelong learning competence as one of the key competences should be integrated into the training process and boosting up a motivation for work and lifelong learning is one of the areas of vocational teachers' instructional strategies. In terms of lifelong learning the VET system is quite open to people with different educational backgrounds and needs, but the VET attractiveness still faces challenges.		
2.2 Company	<p>Main preconditions for companies to participate in upskilling and reskilling are created through this initiative: National qualification framework allows to identify the skills level both acquired in the labour market and during the formal training.</p> <p>VET curricula are based on the needs of labour market and developed according to the occupational standards for all main economy sectors.</p> <p>Training programs are modularised, and each module can be delivered separately, which allows to introduce new developments and tendencies from the labour market into curriculum more efficiently.</p> <p>Assessment of competencies and skills is separated from the learning process enabling to recognise skills acquired in different ways. These lifelong learning system preconditions allow employers to act more actively in the process of upskilling and upskilling of employees and to develop long term visions for staff professional development actions.</p>		
2.3 Economy	This estimation is based on number of IVET (initial vocational education and training) learners enrolled in modularised programmes and presumed number of CVET learners enrolled into the same programmes. Official statistics about CVET (continuing vocational education and training) learners enrolled in formal VET programmes may not cover all CVET courses participants.		
3. Key Performance Drivers			
3.1 Stakeholders	Modularisation of VET curriculum and update of training content in accordance with sectoral qualification standards have always been high on policy agenda. Representatives of large companies and SMEs may have participated in implementation of policy initiative as members of expert groups developing VET programmes.		
3.2 Learners	This policy initiative to some extent offers learners the opportunity to determine their learning path, to select modules as partial qualifications or select modules from the list of elective modules.		
3.3 Funding	Public funding (including EU funding) is the main funding source of the policy initiative, yet now, since modularised VET programmes or their modules may be offered to employees, a part of funding may come from private or company funds. The share of this type of funding is unknown.		
3.4 Regulatory Framework	Policy initiative is accompanied by teacher professional development and infrastructure development. The policy initiative is promoted and known to target audience (VET learners, employers playing a role in VET, etc.).		

Policy profile B22 Luxemburg: Future Skills Initiative

1. General			
1.1 Name policy initiative	Future Skills Initiative		
1.2 Country	Luxembourg	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2020	1.5 Completion year of policy initiative (total nr of years)	Ongoing (3+)
1.6 Managing authority	Agence pour le développement de l'emploi (ADEM)		
1.7 Target audience	Unemployed individuals, Employed individuals		
1.8 Objectives/brief description	<p>The Future Skills Initiative has three key pillars:</p> <ol style="list-style-type: none"> 1. Upskilling/Reskilling for unemployed individuals 2. Sectoral studies and surveys 3. Upskilling/Reskilling for employed individuals <p>Launched in the context of the pandemic, the objective of the first pillar was to use the longer unemployment periods during the pandemic for upskilling of transversal future skills (digital skills, soft skills, management skills) that would be important for most sectors and would be resilient to labour market transformations. This first pillar was targeting unemployed people.</p> <p>The objective of the second pillar was to conduct studies and sectoral surveys that aim to anticipate the development of jobs on the labour market and to find out in which areas employees specifically need further training.</p> <p>The objective of the third pillar, which is just about to launch, is to support companies with their up- and reskilling efforts. The third pillar therefore targets employed individuals.</p>		
2. Key Performance Metrics			
2.1 Individual	<p>Since the third pillar was not yet operational during the time of the survey, these results are collected for the first pillar:</p> <p>Of the participants in the FutureSkills training programme for the unemployed, 96% have responded that they were satisfied with the skills learned (56% were very satisfied, 40% satisfied). Within three months of the end of the programme, 60% of participants had an employment or subsidised employment measure (OTI – Compensated temporary occupation), which was a very satisfying result in the context of the pandemic.</p>		
2.2 Company	The third pillar of the programme, which concerns trainings for employed individuals was only recently launched. Therefore, no Key Performance Metrics for the same could be ascertained.		
2.3 Economy	In the first pillar of the programme, training for unemployed individuals, 491 people were trained and subsequently reintegrated into the labour market. Almost 50% of the training hours were dedicated to digital skills trainings, from digital transformation awareness using office software to cybersecurity, data analysis and basic programming.		
3. Key Performance Drivers			
3.1 Stakeholders	ADEM as the leading agency with ADEM officials (policy makers), Chambre of Commerce, Chamber of Employees as stakeholders.		
3.2 Learners	Designed to be fully virtual, the first pillar of the programme was held fully remotely to ensure its release and continuity during the pandemic. Participants were able to choose between two digital skills paths (advance office or data/coding fundamentals). The courses were personalised on basis of an individual assessment. Participants also received access to an e-learning platform with availability of more than 100 different courses that they could do in addition to the standard course content. Ultimately, learners receive a certificate of participation/completion following the completion of the respective training path.		
3.3 Funding	<p>Pillar one: 100% publicly funded.</p> <p>Pillar two: 100% publicly funded.</p> <p>Pillar three: The third pillar, with the training programme for employed individuals was just recently launched. Supporting organisations with public funding is considered to be a key success factor (derived from past learnings – e.g. Luxembourg Digital Skills Bridge). Funding will be provided in alignment with the following scheme:</p> <ol style="list-style-type: none"> 1. Small companies – 75% expenses covered through public funding, remaining 25% by the company. 2. Medium companies – 50% of expenses covered through public funding, remaining 50% by the company. 3. Large companies – 25% of expenses covered through public funding, remaining 75% by the company. <p>The individuals participating will not be expected to cover any part of the expenses.</p>		
3.4 Regulatory Framework	The policy is well integrated to the skills strategy of Luxembourg and is closely aligned with the Luxembourg OECD Skills Strategy. The policy initiative also pays sufficient attention to awareness raising activities to boost participation, in addition to providing learners access to appropriate learning infrastructure including tools and trainers.		

Policy profile B23 Malta: Jobplus courses (1990), Training Pays Scheme (2017 - July 2023), Work Exposure Scheme (2016 - July 2023), Trade Testing (1990), VASTE (2016)

1. General			
1.1 Name policy initiative	Jobplus courses (1990), Training Pays Scheme (2017 - July 2023), Work Exposure Scheme (2016 - July 2023), Trade Testing (1990), VASTE (2016)		
1.2 Country	Malta	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2016	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Jobsplus - Public Employment Services		
1.7 Target audience	Jobsplus' various training initiatives have been designed to facilitate the up-skilling and re-skilling of jobseekers and job changers. Through its free of charge courses, Jobsplus is offering an added incentive to individuals to take on training to improve their skills. Persons who are in the lower earnings stream and hence need more training to enhance their skills are also given a financial allowance to encourage them to take on more courses.		
1.8 Objectives/brief description	<p>Jobsplus offers a wide range of courses starting off from basic literacy skills, to soft skills and to more technical courses, however we cannot tap into all skills shortages, hence the introduction of the Training Pays Scheme which offers a financial grant to persons who would like to follow an accredited course or non-accredited but industry recognized course in the areas of ICT, Maritime and Aviation which are not offered by Jobsplus.</p> <p>Through the training grant, which is calculated at 75% of the cost of training, capped at €5,000, more people are encouraged to take on training opportunities, since it alleviates the financial burden. For those persons who do not like to learn through formal training, Jobsplus also offers placement schemes that allow jobseekers and inactive persons to learn the knowledge, skills and competences required for a specific occupation by means of hands-on training experience in a real working environment. Indeed, the Work Exposure Scheme has been designed to offer practical training. Individuals taking part in this scheme are placed with an employer and throughout the scheme they are acquiring the necessary skills to perform the job. Throughout the scheme, the trainees receive a training allowance payable by Jobsplus which is calculated on the national minimum wage. Alternatively for those persons who have the competences but no formal certification to prove their competence, Jobsplus runs the Trade Testing System. This is an assessment process which evaluates or validates the knowledge, skills, and competences a person acquires through non-formal and informal learning. This trade test can also serve for a person to take "stock" of the competences they possess, and they continue upskilling themselves by means of other formal training. In order to facilitate the integration of vulnerable jobseekers such as persons with registered disabilities, former prison inmates and substance abusers, long-term unemployed and migrants (refugees, asylum seekers, individuals with subsidiary protection status and individuals with temporary humanitarian status), Jobsplus, in collaboration with the Lino Spiteri Foundation offers the VASTE Programme.</p> <p>Through the VASTE, several training opportunities to equip participants with the necessary transversal skills to enter the labour market in either employment or self-employment are offered. The courses under the VASTE are intended to be basic thus participants would not achieve a level of mastery. All these measures have been designed to facilitate the learning process and to adapt to the different client groups that approach Jobsplus.</p>		
2. Key Performance Metrics			
2.1 Individual	<p>The needs of the labour market consistently change, which means that new skills are constantly needed. As a result, Jobsplus' schemes and training courses, which are demand driven, provide opportunities for the working age population to gain the necessary skillsets to engage and retain employment in an everchanging labour market. Past records show that people follow multiple courses or take part in multiple active measures. This indicates that learners have been directly or indirectly encouraged to take part in lifelong learning activities.</p> <p>It should be noted that due to the fact that Jobsplus' courses are followed in the majority by people already in employment, the percentage of inactive or unemployed persons finding employment after the course is not very high. In the case of training courses, Jobsplus is contributing towards the employability or job retention of employed persons. With regards to the Work Exposure Scheme, the percentage of those finding employment within 6 months following the scheme's end date is circa 50%.</p>		
2.2 Company	<p>Jobsplus runs multiple courses and sometimes employers approach Jobsplus to offer custom made courses for their employees. Consequently, such training directly upskills or re-skills the employees chosen by the employer to attend training. Same goes for the Work Exposure Scheme where employers can train and mould the jobseeker or inactive person in line with the company's requirements. This scheme may be considered as a preemployment training scheme, and at the term of the scheme the employer is encouraged to offer a job to the trainee.</p> <p>While training may disrupt the workflow, the fact that Jobsplus offers courses for free, and courses are offered online and in the evening, helps more employers to encourage their employees to take on Jobsplus courses. For courses that need to be held physically due to the nature of the training programme, Jobsplus also offers the possibility for the trainer to go to the employers' premises. When training is done during working hours, generally the training schedule is agreed with the employer. Hence the flexibility offered by Jobsplus can accommodate both the needs of the employer but also of the employees nominated for the training. When it comes to the Work Exposure Scheme, the employer has the added value that while a trainee is getting hands-on experience, the former is not liable to pay any wages to the trainees because they receive a training allowance directly from Jobsplus.</p>		

<p>2.3 Economy</p>	<p>Some of the courses offered by Jobsplus or through the Training Pays Scheme do contribute towards the promotion of digital skills, however one cannot say that it has been the focus of Jobsplus' training initiatives. Moreover, the VASTE includes a sub-activity that focused on providing participants with no computer knowledge with basic digital skills.</p>
<p>3. Key Performance Drivers</p>	
<p>3.1 Stakeholders</p>	<p>Given that Jobsplus' board of directors is composed of various stakeholders, the involvement is active. Moreover, the Employer Services Division within Jobsplus holds periodic meetings with stakeholders to discuss training opportunities and to promote the schemes that are on offer.</p> <p>When it comes to training courses, if Jobsplus decides to undertake a course that is more appealing for the large companies, then these are approached to provide feedback on the proposed training programme. Once a training programme is finalized, large companies are approached again and they are invited to nominate their employees to follow the course. The other three measures are different as the Training Pays Scheme and Trade Testing System are directed towards the individuals, while for the Work Exposure Scheme most companies making use of this scheme are the micro and small enterprises. However, employers (micro and large) together with other stakeholders such as NGOs and agencies are involved in seminars and consultations related to the training provider under the VASTE programme. The feedback gathered is taken into consideration when developing pilot projects and when applying for funding for new projects.</p> <p>The involvement of Training Service Providers is applicable only for the Training Pays Scheme. For the implementation of this scheme, Jobsplus approached providers who offer courses that would qualify under the scheme, and Jobsplus promotes their courses for free through Jobsplus' website and a catalogue that was specifically created for the functioning of this scheme. This scheme offers a financial grant to individuals who follow a course with external training service providers.</p> <p>Employer organisations and trade unions are encouraged to promote Jobsplus services with their members. When it comes to employers (large and micro), employer organisations and other stakeholders such as NGOs are approached to assist Jobsplus in identifying new skills shortages and to design new courses.</p>
<p>3.2 Learners</p>	<p>Recently Jobsplus introduced a few short trade courses, particularly designed for those who have not yet decided on which area of specialization to pursue. These short introductory courses can help them decide and after identifying which area to specialize in they can proceed with the accredited courses. Likewise, Jobsplus has other courses in ICT and Accounting where a person may progress from one course to the other. Jobsplus also offers a suit of soft skills courses which are needed for all occupations; hence learners may complement the technical skills acquired by following these courses too. Similarly, after following a Jobsplus course, trainees may opt to pursue courses at higher EQF level by means of the Training Pays Scheme.</p> <p>Persons who sit for the Trade Testing system may also opt to enhance their skills by means of Jobsplus courses or through Training Pays Scheme. The scenario tends to be different for VASTE participants. The VASTE Programme includes a number of different sub-activities which are available to the client. An initial assessment is carried out by the Occupational Therapist (OT – in the case of persons with disability) or the Employment Advisor and/or the Profiling and Guidance practitioner (PG) who then together with the client develops a personalized action plan (PAP) for employment which includes a unique learning path which aims to lead to eventual employment.</p> <p>Career guidance is mainly offered to learners who are registering for work with the Corporation. However, upon request guidance is also offered to those in employment and would like to change their job. When it comes to the Training Pays Scheme, career guidance is possibly provided by the respective training service providers. For the Work Exposure Scheme, the Placement Executives do offer career guidance to participants particularly to those who do not know which career to pursue. For trade testing, guidance is limited because assessment is based on the experience acquired by the candidate. With regards to the VASTE, although self-assessment opportunities are not available, the clients have their allocated Employment Advisor / Profiling and Guidance Practitioners or Job Coach to their disposal. During the basic ICT courses, Learning Support Assistance was provided during contact hours for those who required additional support.</p> <p>Most of Jobsplus' courses are offered online. For the online delivery Jobsplus uses Teams as it is a free of charge platform, hence giving full accessibility to learners without the need to download particular software. For those who do not have internet access or do not have a laptop or desktop, Jobsplus offers the possibility to follow the online training programme at its premises.</p> <p>Trainees who successfully complete a Jobsplus course are awarded a certificate of achievement. Some of the courses are accredited, hence the certificate awarded is pegged to the European Qualification Framework, hence facilitating mobility.</p>
<p>3.3 Funding</p>	<p>SMEs need assistance for employees to continue developing their skills, hence their company to remain competitive. It is highly beneficial for the small and medium enterprises that Jobsplus offers its courses for free and that Jobsplus offers the flexibility to tailor the training for their needs. Through the Work Exposure Scheme, where most employers are micro, small and medium, employers are given the opportunity to evaluate the trainees' abilities without adding to the company's financial burden. If they retain the trainee after the end of the scheme, employers have the possibility of seeking further financial assistance to recruit the trainee through the Access to Employment Scheme also administered by Jobsplus, subject that they fulfil the latter's scheme eligibility criteria.</p> <p>When it comes to Jobsplus courses, funding is 100% sustained through national funds. The Training Pays Scheme is part-financed by the European Social Fund and the grant is calculated at 75% of the cost of training capped at €5,000. The grant is then split 80% from the EU funds and 20% through national funds. ESF funds also part-finance by 80% the VASTE Programme, with the remaining 20% being funded through national funds. The Work Exposure Scheme is also part-financed by the European Social Fund. The trainee receives a training allowance payable by Jobsplus for each hour attended. Jobsplus claims funds through the EU funded project by means of simplified cost options, hence for every</p>

	milestone a trainee achieves, Jobsplus can raise a claim. The percentage of the refunds sought are split 80% from the EU funds and 20% through national funds. Private funding: This is applicable only for the Training Pays Scheme, since the individual applicant must pay the 25% of the training cost which is not covered by the subsidy.
3.4 Regulatory Framework	The sustainability of these measures is crucial to fulfil the obligations laid down in the National Employment Policy 2021 – 2030. While digitalisation is key, the National Employment Policy does not focus on digital skills only. This is because Malta is experiencing labour skills shortages across various sectors and occupations.

Policy profile B24 The Netherlands 1: The STAP-budget

1. General			
1.1 Name policy initiative	The STAP-budget		
1.2 Country	The Netherlands	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2022	1.5 Completion year of policy initiative (total nr of years)	Ongoing (3)
1.6 Managing authority	Dutch Ministry of Social Affairs and Employment		
1.7 Target audience	Adults 18 years and older who don't receive public retirement benefits (AOW). Employed as well as unemployed		
1.8 Objectives/brief description	With the STAP budget, everyone who is 18 years or older and has a connection with the Dutch labour market could apply for a maximum of € 1,000 per year for training aimed at their own development and sustainable employability		
2. Key Performance Metrics			
2.1 Individual	The STAP-budget aims at improving the labour market orientation at the individual level, as it offers applicants 1,000 EUR a year for training which is aimed at development and sustainable employability. The initiative had considerably positive impact on the labour market. Although there is no clear evidence that the initiative considerably improved specific skills, lots of people have been practically educated given the large volumes of trainings provided and the amount of citizens that received a subsidy in 2022 (approximately 22.000). Based on recent research by the court of audits, 40% of the participants would not have done the training without STAP.		
2.2 Company	The STAP-budget focusses on individuals and not on companies. The main rationale for this is that employers typically have training budgets, and it is their own responsibility to keep their staff trained. The STAP-budget aims to prevent the situations when employers transfer their training responsibility to the individual employees. Almost half of the users utilized the STAP budget to undergo training in order to find a new job, while the other half used the training to enhance their skills for their current job.		
2.3 Economy	In 2022, 240.000 people requested the STAP-budget. This request came mainly from the health and the marketing & communication sector. However, the budget is general in nature and is not targeting specific skills in the context of digitalisation or greenification.		
3. Key Performance Drivers			
3.1 Stakeholders	In the design, implementation and evaluation of the STAP-budget, the Ministry of Social Affairs and Employment and the Ministry of Education, Culture and Science play a leading role. During the design and implementation phase, social partners with representatives of employer and employee organisations played an active role in providing input. DUO, part of the Ministry of Education, Culture and Science, manages the training register in which trainers can enter their courses. To keep the stakeholders interconnected, a chain manager has been appointed to consult all the involved chain partners and implementers.		
3.2 Learners	Since the STAP-budget aims at anyone who is 18 years or older, who has not reached state pension age and who has a connection with the Dutch labour market, the initiative is aimed at personal development and sustainable employability. Learners can choose from the training register themselves and decide their own learning path. To support this, there is also a possibility to request STAP development advice on which workers can be supported in their orientation on learning and development. After completing the course, most of the trainings offer certificates or diplomas. All the trainings need a quality mark. However, due to the big amount of training providers (170.000), this was challenging to maintain.		
3.3 Funding	The government pays the STAP-budget in full. It is a replacement of the tax deductions and the available budget for STAP was 200 million EUR. However, it was recently decided that no more money will be made available for STAP from 2024 onwards due to cutbacks.		
3.4 Regulatory Framework	The STAP-budget contributes to the Dutch lifelong learning culture. The subsidy applicant can find out in two ways whether he or she can apply for a STAP budget for the course he or she wants to follow: Via the trainer and their website information or via a special STAP website. For awareness raising activities, the STAP-budget does not need additional publicity, as there is already more demand than the initiative can serve. That is also the reason why there has been some negative publicity about the application procedure.		

Policy profile B25 The Netherlands 2: SLIM: The Subsidy Incentive Scheme for Learning and Development in SMEs

1. General			
1.1 Name policy initiative	SLIM: The Subsidy Incentive Scheme for Learning and Development in SMEs <i>((SLIM) Stimuleringsregeling voor leren en ontwikkelen in mkb-ondernemingen en specifiek voor grootbedrijven in de landbouw-, horeca- of recreatiesector)</i>		
1.2 Country	The Netherlands	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2020	1.5 Completion year of policy initiative (total nr of years)	Ongoing (3)
1.6 Managing authority	Dutch Ministry of Social Affairs and Employment		
1.7 Target audience	Small- and Medium-Sized Enterprises		
1.8 Objectives/brief description	With this subsidy scheme, the Dutch government aims to stimulate training and development within SMEs. Businesses can apply for subsidies for the following four activities: <ol style="list-style-type: none"> 1. External advice to help develop a training and development plan for an SME; 2. Career advice for employees to stimulate them to actively think about their future; 3. Initiatives that encourage employees to develop themselves; 4. An SME business owner can offer a training spot for job seekers or adults that would like to switch careers. 		
2. Key Performance Metrics			
2.1 Individual	The SLIM-initiative aims to have impact at the individual level, as it promotes reskilling and upskilling efforts of SME employees. The individuals who have undergone development and training under this scheme are reported to have seen considerable benefits. Although precise figures are not available, the broad outreach and evident demand for the scheme suggest that the number of individuals impacted falls within the range of 10,000 and 100,000 people.		
2.2 Company	The performance of the SLIM-initiative at the company level appears to focus on transforming SMEs into learning-active environments, promoting lifelong learning. The subsidy has been used for various activities including organising training and promoting practical learning. An example is a landscaping company that received the SLIM subsidy because they did not have an existing learning programme, demonstrating the necessity of such development efforts. In the past period, a total of 4000 grants have been distributed to SMEs.		
2.3 Economy	The SLIM-initiative was suggested to have a substantial impact on the economy, particularly within the SMEs sector. In the absence of this subsidy, many SMEs might not have had the resources or motivation to invest in extensive employee development. This investment into human capital likely has led to improved business performance and increased innovation, and it was likely to stimulate economic growth in the SME sector.		
3. Key Performance Drivers			
3.1 Stakeholders	In the design, implementation and evaluation of the SLIM-initiative, stakeholders play a crucial role. During the design phase, panels with SMEs were organised to determine if the ideas of the policymakers were relevant and feasible. There was also extensive contact with employers' organisations, further ensuring the initiative's relevance to its intended beneficiaries. Overall, policy decisions were made while consulting overarching organisations. In addition, education and training providers could join a consortium in an application to assist in developing more training facilities during which they work closely together and have a joint vision and objective.		
3.2 Learners	This initiative is essentially aimed at SMEs so they can develop a learning culture for their employees. However, as this learning culture is developed, the employees of these SMEs are the ones who experience the greatest benefit, as they are developing themselves. Currently the learners do not to receive recognition in the form of a certifications as it is not a direct objective. However, companies themselves do start to provide various forms of certifications. In some cases, collaboration initiatives have been set up that validate the certifications.		
3.3 Funding	Small Enterprises: Funding by the Ministry of Social Affairs and Employment for 80%, SME for 20% Medium Enterprises: Funding by the Ministry of Social Affairs and Employment for 60%, SME for 40%.		
3.4 Regulatory Framework	The SLIM initiative contributes to the Dutch lifelong learning culture. The distinctive feature of SLIM is that its main goal is to enable development within SMEs, because employees in SMEs participate less in learning and development activities. The initiative is not specifically aimed at, for example, sustainability, but companies doing sustainable business can and do apply for the SLIM subsidy. <p>With regard to the awareness raising of SLIM among the target group, news reports are distributed when a new period is opened, and information and communication is shared via a dedicated platform. For this purpose, the Ministry of Social Affairs and Employment requested the 'Platform Talent for Technology' (Platform Talent voor Technologie, PTVT) to develop and execute a knowledge and support program for the duration of the subsidy. The platform provides a stage for the activities, and they support knowledge exchange between the participants in various forms. Online communication events are also organised where people can ask questions. In the beginning there was a small communication campaign. However, currently SLIM does not need additional publicity, as there is already more demand than the programme can serve. Examples/best practices of successful projects are shared through the Smart Working network, but there is no intention to drive further demand.</p>		

Policy profile B26 Poland: Competences for sectors - offer for entrepreneurs [Kompetencje dla sektorów - oferta dla przedsiębiorców]

1. General			
1.1 Name policy initiative	Competences for sectors - offer for entrepreneurs [Kompetencje dla sektorów - oferta dla przedsiębiorców]		
1.2 Country	Poland	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2018	1.5 Completion year of policy initiative (total nr of years)	ongoing (5)
1.6 Managing authority	Public authority (Polish Agency for Enterprise Development)		
1.7 Target audience	Micro, small, medium and large enterprises.		
1.8 Objectives/brief description	With this initiative Polish Agency for Enterprise Development provides co-financing support for micro, small, medium and large enterprises in the area of training, consulting and postgraduate studies. The support is addressed to enterprises operating in the following sectors: construction, finance, tourism, IT, fashion and innovative textiles, healthcare and social assistance, and automotive, including electromobility, and concerns topics defined by the Sectoral Competence Councils.		
2. Key Performance Metrics			
2.1 Individual	The objective of the initiative is to improve the professional competences of SME employees operating in specific industries. By participating in training, employees gain new qualifications or improve their current skills, thanks to which they have the opportunity to significantly develop professionally while remaining in the industry they know. Projects under Competences for Sectors are still ongoing. The target value under the measure was 18,496 people. As of June 15, 2023, 16,482 employees were trained. Success stories are available here .		
2.2 Company	Employees of SMEs are directed to participate in training by their superiors, which is being perceived by employees as an additional benefit of working in a given enterprise, as it potentially opens the way to promotion and higher earnings, and is an incentive to further develop skills. The development of digital and green competences is an indirect effect of the training, not the main goal.		
2.3 Economy	By improving the professional competences of employees, the initiative contributes to the development of SMEs that are the driving force of the Polish economy, thus contributing to the overall economic development of the country.		
3. Key Performance Drivers			
3.1 Stakeholders	The Polish Agency for Enterprise Development is the main body supervising all the activities carried out. The action is aimed at SMEs. Stakeholders take part in giving opinions on competition regulations and project fiches and are members of the Monitoring Committees. Large enterprises account for 25-40% of the participants of the Sector Councils.		
3.2 Learners	The participants of the training are employees of SMEs, directed to training by employers. The aim of the training is to improve the competencies and skills appropriate for a given industry (i.e. upskilling, not reskilling). Training is conducted using various methods and tools (including digital tools and activating methods). The training is completed with obtaining the appropriate attestation (e.g., certificate).		
3.3 Funding	Individual training participants do not incur any costs related to participation. It is a decisive factor when directing employees to training. Financing from European funds accounts for approximately 84% of the total funds used in the activity. Public funding accounts for less than 5% of the measures used. The private contribution of Entrepreneurs in the context of the whole measure is about 15% of the funds.		
3.4 Regulatory Framework	The initiative is a response to the direct demand of the market. The aim of the measure is to improve the professional competences of SME employees in selected sectors, the direct aim of the measure is not to develop digital competences or green skills.		

Policy profile B27 Portugal: Emprego + Digital 2025 | More Digital Jobs 2025

1. General			
1.1 Name policy initiative	Emprego + Digital 2025 More Digital Jobs 2025		
1.2 Country	Portugal	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2020	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	IEFP, I.P. - Institute of Employment and Vocational Training, Public Institute.		
1.7 Target audience	Employees in companies and social economy entities		
1.8 Objectives/brief description	The Employment + Digital Training measure, part of the Employment + Digital 2025 Programme, approved by Ministerial Order no. 246/2022 of 27 September, aims to provide training and retraining in the digital area for workers in companies and social economy entities, helping to foster the respective digital transformation of these employers, as well as improving the individual skills and qualifications of each of those involved in the vocational training projects.		
2. Key Performance Metrics			
2.1 Individual	This policy initiative increases the specialised training in digital skills of the employees ("More Digital Training-Employment" and "Check -Training + Digital"), self-employed workers ("Check -Training + Digital"), managers and leaders of companies ("More Digital Leader"), and trainers ("More Digital Trainer") to respond to the transversal needs of Portuguese economy. The priority of this policy initiative is given to employees who have low levels of digital proficiency, who are at risk of unemployment or in a situation of underemployment and of the under-represented sex in the profession exercised, with the objective of professional requalification.		
2.2 Company	This policy initiative was developed to respond to the substantial digital transformation in the business sector, which caused an increased demand for digitally trained employees. This policy contributes to the development of a long-term vision for the need of upskilling and reskilling for the involved companies.		
2.3 Economy	The pilot-project started at the end of 2020 through the signing of a partnership agreement between IEFP, the Portugal Digital Mission Structure (Estrutura de Missão Portugal Digital), the Portuguese Entrepreneurial Organization (CIP- Confederação Empresarial de Portugal) and the Portuguese Confederation of Commerce and Services (CCP - Confederação do Comércio e Serviços de Portugal) reaching 27.000 workers. The second phase, started by the end of 2022, for implementation in early 2023, aims to scale what was developed in pilot-project and also to further and give body to a whole program that proves to be structuring for the digital transition necessary for the national economic sector, with the aim of reaching 200.000 trainees (employees, managers and directors of companies, and trainers in digital area).		
3. Key Performance Drivers			
3.1 Stakeholders	The Institute of Employment and Vocational Training , Public Institute, has the leading role in the design, implementation, and evaluation of this policy initiative, namely in the creation, in 2023, of the Digital Transition Project Team - Management and Monitoring. Large companies / SMEs: The pilot-project started at the end of 2020 through the signing of a partnership agreement between IEFP, the Portugal Digital Mission Structure (Estrutura de Missão Portugal Digital), the Portuguese Entrepreneurial Organisation (CIPConfederação Empresarial de Portugal) and the Portuguese Confederation of Commerce and Services (CCP - Confederação do Comércio e Serviços de Portugal). These two Portuguese confederations have, among their members, large Portuguese companies, and small and medium-sized enterprises. The second phase of this initiative, namely "More Digital Training Employment", will count on the collaboration of about 275 training entities (that apply the competition that were promoted), across the country, will target workers of SMEs.		
3.2 Learners	A measure included in this program is the More Digital Training Cheque, in which adults choose the training in the digital area that most interests them, with a view to their up-and/or reskilling. Another measure included in this program is the More Digital Trainer; this initiative is for trainers who, in the exercise of their training activity, acquire specialized skills in terms of digital technologies applied to the training context. In addition this initiative is intended for professionals in the digital technology sector who do not own a certificate of pedagogical competences (CCP) under the terms of the legislation in force.		
3.3 Funding	"More Digital Jobs 2025" is financed by the PRR, with IEFP acting as final beneficiary and manager of the Programme's measures. The aim of this Programme, in its 4 measures, is to cover around 200.000 trainees and has a financial envelope of around 94 M€. There are 2 measures ("More Digital Training-Employment" and "More Digital Leader") aimed at SMEs totally for who it's totally free.		
3.4 Regulatory Framework	The Program of the XXIII Portuguese Constitutional Government was assumed as one of the strategic challenges to face the development of a «Digital Society, of creativity and innovation — The future now: Building a digital society». Thus, it is established as a priority for the implementation of a set of public policies, namely professional training and other initiatives aimed at the development of the digital skills of the Portuguese population in a transversal way. Although Portugal has taken great steps to boost its educational performance, the population is aging and the skills gap between educated youth and older adults is widening.		

Policy profile B28 Romania: Transylvania IT Cluster

1. General			
1.1 Name policy initiative	Transylvania IT Cluster		
1.2 Country	Romania	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2013	1.5 Completion year of policy initiative (total nr of years)	ongoing
1.6 Managing authority	Independent Cluster organised as an association (Relevant Institutions: EC/Romanian Authority for Digitalisation/ MCID Ministry of Research Innovation and Digitalisation/ Municipality of Cluj Napoca/ Regional Development Authorities)		
1.7 Target audience	Founded in 2013 by Aries Transylvania, Transylvania IT Cluster was originally aimed to support employees of member companies in the acquisition process of technical and soft skills, as well as offer a platform of knowledge and training for the implementation of collaborative projects. While this continues to remain an important focus, Transylvania IT Cluster further developed to match the sector development in Cluj - Napoca.		
1.8 Objectives/brief description	Transylvania IT Cluster works at the intersection between entrepreneurship, research, innovation, and public administration, pushing forward discussion and action around digital transformation thus enhancing community development through digitalisation.		
2. Key Performance Metrics			
2.1 Individual	<p>Through delivering training programmes (some under the POCU- Operational Programme Human Capital/POCA Operational Programme Administrative Capacities) the assessed improvement in capacities was considerably advanced in the following areas: basic digital competences, digital transformation individual and institutional capacity, training of trainers, management competences (agile, intercultural communication, business modelling) or IT skills (SCRUM, Python, JAVA etc). Similarly, the capacities developed within the Erasmus+ projects were also assessed as highly relevant, practical and with immediate applicability.</p> <p>Digital competences are required in most jobs, and many training courses were conducted in direct response to employers' requests, with the aim of enhancing job security and promotion opportunities. Further, the internship programme and outreach initiatives towards local universities have resulted in some of the participants being employed either with the Cluster or member companies.</p>		
2.2 Company	Through our approach of centring capacity building and training around the model of digital transformation, we contribute to member companies and beneficiary companies by helping them incorporate the digital dimension into their strategic planning and vision.		
2.3 Economy	<p>As the orchestrator of the Transylvania Digital Innovation Hub, Transylvania IT Cluster has contributed through the networking of tech-focus companies (e.g. Industry 4.0 working group), to the capacity building of employees with digital skills and through the entire cycle to the development of capacities to understand and articulate their digital transformation journeys.</p> <p>Through a dedicated strain of Green and digital projects (some having an important research and innovation component) and also through the development in Transylvania DIH of Green and Digital course the Cluster has contributed to the joint process of digital transformation and greenification of the economy and society.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>Both Transylvania IT Cluster and Transylvania DIH is in constant consultation and strives for the engagement of policy makers at the following levels:</p> <ul style="list-style-type: none"> - Membership in the Cluster and Digital Innovation Hub advisory - Project collaborations – the Cluster had a number of projects in partnership with policy makers - Review and input into policy documents that the Cluster is contributing to - Co-creation events <p>Large companies are members and play a major role in defining the strategy and in the governance structure of Transylvania IT Cluster;</p> <p>SME are members and play a major role in defining the strategy and in the governance structure of Transylvania IT Cluster. Additionally, SMEs represent the main target group of the activities of our DIH; As orchestrators the Cluster has taken on suggestions and initiatives from policy makers and large companies, SMEs, educators and have taken the leadership role for many such initiatives.</p> <p>Joint events bring these actors together quite often, yet a structural communication and interaction platform is missing</p>		
3.2 Learners	<p>Yearly surveys determine the themes and format of the training courses offered.</p> <p>The Cluster is looking to also provide recognition for some of the certificates, and given the fact that often participants of those training courses come at the indication of the HR departments, these processes are internalised and form part of the professional development and career path within their respective companies.</p>		
3.3 Funding	The role of funding of this policy initiative in supporting SMEs with their up- and reskilling initiatives is highly important. More than 75% of the total funding is financed by the public funding, the private funding differs between 5% and 35%.		
3.4 Regulatory Framework	<p>Recognition of up- and/or reskilling activities: some nationally recognized certificates are offered but often they face the challenge of qualifications profiles not being updated for future of work.</p> <p>The issue is addressed to the Ministry (is one topic of the VET) but dealing with the issue takes so much time.</p>		

	<p>Nevertheless, the certifications are recognized by the companies.</p> <p>With the increased demand for trainings, also come increased costs, especially personnel costs. Therefore, the IT Cluster needs more fundings. This poses a problem. The Pact for Skills, launched by the European Commission needs more concrete funded opportunities.</p>
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Policy profile B29 Slovakia: Women Academies (Aj Ty v IT- Projects for adult women)

1. General			
1.1 Name policy initiative	Women Academies (Aj Ty v IT- Projects for adult women)		
1.2 Country	Slovakia	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2017	1.5 Completion year of policy initiative (total nr of years)	Ongoing (6)
1.6 Managing authority	Aj Ty v IT		
1.7 Target audience	Aj Ty v IT was established to motivate and support girls and women in the information technology sector. Target group: girls from the age of 8 to high school students, as well as adult women.		
1.8 Objectives/brief description	<p>The focus of Aj Ty v IT is expressed by the motto “Technology has no gender”. Its goal is to actively contribute to building a gender equal technology sector. The organisers believe women, rather than being marginalised, need to become an integral part of our technological future.</p> <p>The initiative contributes to breaking social stereotypes about women’s involvement in IT. Aj Ty v IT is building a community and educating girls from the age of 8 to high school students, as well as adult women, for whom professional career programs are provided.</p>		
2. Key Performance Metrics			
2.1 Individual	The Aj Ty v IT initiative significantly increases the level of IT skills among female learners (girls and women), thus it improves the attractiveness of the learner on the labour market. In a direct sense it also boosts the motivation to learn and achieve new skills, as well as it promotes the LLL model.		
2.2 Company	On the level of a company, the initiative results in developing a long-term vision for up- and reskilling and increasing the level of learning culture.		
2.3 Economy	30,000 + Girls, women and teachers attended learning programs offered by Aj Ty v IT. 15,000 online classes were offered to the female learners. As a result, the initiative contributed to increasing the number of female students in ICT from 5 % to 15 %. The initiative itself however, has limited impact on digitalisation on the economy directly or green transformation of the economy.		
3. Key Performance Drivers			
3.1 Stakeholders	The initiative actively involves the large companies in the design, implementation, and evaluation of the programme in the directorial decisions regarding the adaptation of the educational program to the needs of large companies. SMEs are rarely involved and decision makers or employment agencies, employer organisations, trade unions are not engaged at all.		
3.2 Learners	Aj Ty v IT assists the female learners with career guidance and assistance with learning, as well as offers the access to the learning infrastructures including tools and trainers.		
3.3 Funding	The initiative is funded mostly by private funding - more than 75% of the total funding comes from the private sector, while the public funding is less than 5%. The female learners co-fund the initiative.		
3.4 Regulatory Framework	The initiative strongly contributes to the implementation of the digital strategy in Slovakia and the awareness raising activities by breaking social stereotypes about women’s involvement in IT.		

Policy profile B30 Slovenia 1: Digital Knowledge for the Jobs of the Future

1. General			
1.1 Name policy initiative	Digital Knowledge for the Jobs of the Future		
1.2 Country	Slovenia	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2019	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Digital Innovation Hub Slovenia		
1.7 Target audience	The initiative addresses students, jobseekers and employees in the public and private sectors, who need to acquire additional knowledge and skills to be able to make the most of all the advantages of modern technologies.		
1.8 Objectives/brief description	The initiative brought together as many as 18 stakeholders from the Slovenian public and private sector with the aim to make Slovenia a winner of the digital transition. https://www.fastlane-cee.net/news/46976#		
2. Key Performance Metrics			
2.1 Individual	The initiative resulted in many different practical actions e.g., voucher for the rise of digital competencies, the tool for estimation of the level of digital competencies for employees, with the recommendations given on particular topics. Currently the labour market in Slovenia significantly lacks ICT specialists, so all additional knowledge, upskilling and reskilling is certainly a competitive advantage of a person's position.		
2.2 Company	In the implementation of new technologies or developing of business processes, companies (SMEs) are strongly aware about the need of upskilling or reskilling.		
2.3 Economy	Less than 10.000 people got trained since the launch date of the initiative.		
3. Key Performance Drivers			
3.1 Stakeholders	The role of policy makers for this initiative is to provide financing, approve programs and select the facilitator. The DIH is in constant touch with SMEs, after the last financial framework, DIH Slovenia issued the questionnaire to beneficiaries (SMEs) to prepare the lessons learned document.		
3.2 Learners	The labour market in Slovenia meets a huge demand for ICT workers. For each student, who finishes the studies on Faculty of informatics and computing, there are 5 job posts open. There is a significant lack of teachers because salaries are not competitive, and there are cases where students do not finish the study (ca 40%), because they get employment before that and quit studying.		
3.3 Funding	In the last financial period the Digital voucher covered 60% of the cost. The financial structure for the following period is still unclear. The experience from other programs is that co-financing is a better option, because the students/trainees are then more dedicated to finish the course.		
3.4 Regulatory Framework	The voucher program will be changed for competencies in a way that in each voucher, provided to SMEs digital competencies will have to be included. Currently they are still waiting for the submission from the Ministry for economy for exact content, but the idea is that when there is a voucher for digital marketing, the provider also needs to ensure the course for the same service to educate the users. Digital vouchers are very well received by SMEs and they are constantly inquiring for information about the next round of vouchers. Even though the EDIH has facilitated a large number of SMEs (ca 9.000) that still represent 5-10% (if the sole proprietors who have the enterprise as a form of employment status are excluded), there is still a significant need for such a form of state aid.		

Policy profile B31 Slovenia 2: Slovene digital coalition - Digitalna Slovenija

1. General			
1.1 Name policy initiative	Slovene digital coalition - Digitalna Slovenija		
1.2 Country	Slovenia	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2017	1.5 Completion year of policy initiative (total nr of years)	ongoing
1.6 Managing authority	It is a coalition of key stakeholders in the country, signed also by the government		
1.7 Target audience	Digital skills for the labour force and Digital skills for ICT		
1.8 Objectives/brief description	The Slovenian Digital Coalition (Digitalna Slovenija) was established as a multi-stakeholder platform following a national-level agreement during the 11th Slovenian Business Summit on the topic of the digitalisation of economy. The Digital Coalition of Slovenia aims to streamline the country's digital transformation processes and support the Slovenian strategic framework adopted by Slovenia Digital Transformation Strategy Digitalna Slovenija 2030. The Coalition brings together stakeholders throughout the public and private sector (trade and industry, research and development, civil society, and public institutions). The coalition is not providing trainings but discussions, awareness, and directions on existing trainings of other institutions and organisations.		
2. Key Performance Metrics			
2.1 Individual	Through the Digital Skills and Jobs project, run by digital coalitions in Europe and in Slovenia, they have promoted and published many different education, training, and reskilling opportunities.		
2.2 Company	With information, awareness building, forum with gov institutions etc. they have contributed to the development of long-term visions on the topic.		
2.3 Economy	Of the less than a million employees in Slovenia there are about 1000 participants within the project. One major focus of this initiative is on digitalisation of the economy: Through the Digital Skills and Jobs project, they have directly promoted education and digital competences.		
3. Key Performance Drivers			
3.1 Stakeholders	There is no financial support for Digital Coalition of Slovenia from the Slovenian government. The Chamber of Commerce and Industry as well the ICT Association of Slovenia are strongly involved, representing also large and SME companies.		
3.2 Learners	As part of the Digital Skills and Jobs project, they have published and launched a wide range of self-assessment tools for different fields of interest. All published training courses indicate if the student would get a certificate, diploma, digital badge etc. after completing the course.		
3.3 Funding	The majority of the activities are not funded, one project called Skills & Jobs is funded by EU but will end this year.		
3.4 Regulatory Framework	All promotion over the last year and a half has been done through the Digital Skills in Jobs project.		

Policy profile B32 Spain: Digitalízate

1. General			
1.1 Name policy initiative	Digitalízate		
1.2 Country	Spain	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2019	1.5 Completion year of policy initiative (total nr of years)	Still ongoing (4 years)
1.6 Managing authority	Fundación Estatal para la Formación en el Empleo (Fundae) and Servicio Público de Empleo Estatal (SEPE)		
1.7 Target audience	The whole Spanish population including its workforce.		
1.8 Objectives/brief description	- Provide courses on relevant digital skills free of cost to the entire Spanish adult population, including its workforce		
2. Key Performance Metrics			
2.1 Individual	<p>This initiative has had a significant impact at the individual level. Firstly, it has provided a significant number of free courses to the Spanish population. It has reached 57 agreements with companies, thus enabling the free offer of nearly 1,500 training resources through the Fundae website. This space received more than 6,700,000 visits.</p> <p>In addition, these courses are offered on digital skills like Big Data, 5G, Internet of Things, Digital Marketing, Digital Language and Programming, etc.</p> <p>Even though this initiative can be categorised as a great one and a very important first step, there is still some room for improvement since it could for example also measure the learners' starting level of digitalisation, enable them to specify their training objectives and offer them specific itineraries so that from their starting level they can reach their training objectives.</p>		
2.2 Company	<p>This initiative has been constantly growing and adding more companies every year. From the companies perspective, this initiative enables companies to have access to new pools of potential future talent that they do not usually reach. What is more, this initiative has also helped raise awareness among the Spanish workers on the importance of lifelong learning.</p>		
2.3 Economy	<p>This initiative considerably increased the digitalisation of the economy as it enables the workforce to improve their digital skills free of charge.</p> <p>However, the initiative does not have access to the total number of people that have taken each particular course using this initiative. Nevertheless, 6,700,000 people have visited the Digitalízate space and the training resources hosted there.</p> <p>Digitalízate contributes to the greenification of the economy by offering relevant courses. It holds significant potential to provide the necessary training for workers in the 'green economy'.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>In this initiative companies play a very active role. Even though this is a public initiative, it signs cooperation contracts with different companies, which collaborate with this initiative by offering their courses.</p> <p>In addition, SMEs also benefit from the resources and tools provided by the companies with which agreements are signed. Events are organised for SMEs where the companies with which agreements have been signed play an important role in helping to raise awareness of the importance of digital skills training.</p>		
3.2 Learners	<p>The training resources are constantly being updated by the companies and interested persons can create their own learning itinerary in specific subjects as there is content from basic to advanced levels. Many of the courses include evaluation of the contents learned.</p> <p>Additionally, entities award diplomas or certificates upon completion of the courses.</p>		
3.3 Funding	<p>This initiative is publicly funded, with no financial obligations from the companies or co-learners involved, as it is entirely free of charge.</p>		
3.4 Regulatory Framework	<p>This initiative is included in the national plan for digital skills and is supported by SEPE, the Ministry of Labour and Social Economy, hence it can be observed that it is well integrated into the country's digital strategy.</p> <p>In addition, it has been selected as an inspiring practice by the public employment services of the European Union, hence demonstrating that it is a successful initiative.</p> <p>The aim of disseminating this collaborative space is to reach as many people in Spain as possible for their benefit. To achieve this, it is utilizing various tools including radio, social networks, events, and all activities involving Fundae.</p>		

Policy profile B33 Sweden: Ingenjör4.0

1. General			
1.1 Name policy initiative	Ingenjör4.0		
1.2 Country	Sweden	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2020	1.5 Completion year of policy initiative (total nr of years)	Ongoing (4)
1.6 Managing authority	Halmstad University, Sweden		
1.7 Target audience	The program targets professionals with an engineering background, but also other professionals such as operators, technicians, management etc. with an interest in smart and connected production.		
1.8 Objectives/brief description	Ingenjör4.0 is a unique, module based upskilling program developed in cooperation by 13 Swedish Universities. The program was initiated by The Swedish Production Academy within the strategic innovation program Produktion2030. It is a direct response to identified skills gaps in Sweden and is strongly supported, and co-funded, by the Swedish Innovation Agency INNOVA. Ingenjör4.0 enables a unique, innovative, large-scale, and life-long learning for professionals in the industry. The initiative will increase the competitiveness of the Swedish industry and strengthen Sweden's role as an international innovation and digitalisation leader.		
2. Key Performance Metrics			
2.1 Individual	The training is offered in the form of short courses, called upskilling modules (currently 39), divided in 15 learning areas. The training is provided by professors and teachers from 13 Swedish Universities, combining online and offline training, which add a local/regional dimension. Participants can mix modules to individually customise their upskilling/reskilling. Reported benefits for participants include, increased mastery of specific skills, improved attractiveness on the labour market and increased motivation for lifelong learning. Competence acquired from completed modules are carefully documented, which is crucial for both employee and employer.		
2.2 Company	While it is the individual who applies to the training modules, some of the companies they work for market the training internally. Ingenjör4.0 also offers matchmaking between the individual and company needs and the available modules. More than 30 companies are engaged, among them some large Swedish enterprises, such as Atlas Copco, Combitech, Sandvik, Scania, SKF, SSAB, Volvo, Volvo Cars, Northvolt and AFRY. The project started with a strong large-company connection but is slowly moving to also embrace SMEs.		
2.3 Economy	Ingenjör4.0 focuses on industrial digitalisation, adding Industry 5.0 values of sustainability and resilience, which are linked to the fulfilment of the net zero industry act. The nationwide coverage (13 universities) provides a uniform offer on upskilling in Sweden, with a consistent quality level. To assure quality of education, only universities are involved as trainers. They have done something new, by modularising the training packages, to allow for up- and reskilling. This approach also allows for research results to be deployed in education and in industry in shorter time than normal. The focused target group is a deliberate approach, with an aim to be more efficient. From 2020, 1200+ registrations were received; 50% completed; 20%-30% started, not completed.		
3. Key Performance Drivers			
3.1 Stakeholders	The Ingenjör4.0 has received recognition from the Swedish funding agency VINNOVA as a best practice. One reason for this acknowledgement is the successful coordination of the 13 universities, who have the leading role in the initiative. Another reason is the ability to connect with employer organisations industry, unions, and other stakeholders to fulfil upskilling needs in Swedish industry. The recent involvement of the national Industrial Development Centres (IUC) and their strong SME network as an intermediate, will hopefully increase the SME involvement in Ingenjör4.0. The trade unions Engineers of Sweden (160 000 members) as well as the Association of Swedish Engineering Industries (4100 member companies) actively support the initiative and promote it among their members. This activity will be even more intensified during autumn 2023.		
3.2 Learners	The module system strongly supports learners to determine their own learning path. The initiative partners are in the process of creating a new system for matching individual skill needs with available course modules, testing different approaches, e.g., AI solutions. In parallel, traditional matching and advice systems are used, including publications and conference presentations on the topic. The Ingenjör4.0 platform provides learners digital access to the modules and the learning paths. To create linkages on European level, the Ingenjör4.0 team will offer the platform and its content to be part of European initiatives, like "EIT Deep Tech Talent Initiative" and "EIT Manufacturing Skills.move". Printed certificates and now (from 2023) complimentary digital "Credly badges" are important tools to recognize the individuals' learning efforts.		
3.3 Funding	To motivate the fulfilment of the learning efforts, a fee of €200 per credit and person (20-25hours) – comparable to the Governmental funding – is paid by the learner or the learners employer. The price is set at break-even level for universities and doesn't cover already existing infrastructure. The funding from the companies is sustainable, however, the initiative is not sustainable as a stand-alone project, and there is no guaranteed governmental funding after 2024 (November). This is also a reason to be strongly engaged in EU initiatives, to get opportunities for additional funding.		
3.4 Regulatory Framework	In a report from "Samverkansgrupp - Competence for competitiveness", Ingenjör4.0 is mentioned as a role model. Trainings on high, advanced level for a specific target group – engineers and people with engineering background – are key aspects of what differentiate it from other initiatives. Within the target group the initiative has radically raised awareness of the needs for digitalisation skills in manufacturing – and provided opportunities to get those needs met. Potential learners can easily reach courses/trainers from 13 different universities in one single website, and this is normally not possible.		

Policy profile B34 United Kingdom: Institute of Coding

1. General			
1.1 Name policy initiative	Institute of Coding		
1.2 Country	United Kingdom	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2018	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	University of Bath, UK		
1.7 Target audience	Employed and unemployed citizens		
1.8 Objectives/brief description	The Institute of Coding (IoC) is a collaborative national consortium of industry, educators and outreach providers that are working together to respond to the UK's digital skills gap through the delivery of employer-led digital skills education. Through this collaborative approach, IoC partners have created more than 150 new courses that have engaged 900,000 diverse learners to date.		
2. Key Performance Metrics			
2.1 Individual	Learner surveys indicate that a majority of learners (75-100%) indicate an increase in their mastery of core digital skills as a result of the course. For the part of the work with most direct tracking of employment outcomes (Skills bootcamps), new employment rates have been 48-50%. Learner surveys post initiative show that a majority of learners indicate an increase in confidence of their own ability to learn digital skills and that a similar subset (more than 50%) also indicate increased willingness to work in digital roles.		
2.2 Company	It is known that companies have hired successful learners as part of an attempt to diversify their talent pipelines (hence the agreement), but the institute doesn't have figures yet to indicate the durability of that hiring policy.		
2.3 Economy	The initiative reached the milestone of 1 million learners enrolled on Institute of Coding courses. Narrowing the UK's shortage of digital skills is a major factor in supporting digitalisation. In that sense, the institutes education and training are part of the wider ecosystem contributing to digitalisation. They do not, however, focus on that digitalisation in their objectives or KPIs		
3. Key Performance Drivers			
3.1 Stakeholders	The Institute of Coding was originally funded by the UK Government's Department for Education and was announced by the Prime Minister in January 2018. More than 300 companies have worked on Institute of Coding projects and several also serve on the industry and diversity advisory boards. The Institute of Coding is led by the University of Bath and has 35 University partners across all its programs. TechUK has played a leading role in the formation, guidance and monitoring of the Institute of Coding. The ex-President of techUK (Jacqueline de Rojas) is the Industry Chair. The Employer, University, Charity, and Learner partners that make up the Institute of Coding agree objectives and strategy. Each stakeholder group plays an active role in delivery and is represented in the senior Governance Board. A team at the University of Bath then leads project management.		
3.2 Learners	Multiple pathways have been created to digital skills and employment. Some (such as the online courses created by the University of Leeds and Coursera) allow learners to curate their own pathways, whilst others (such as the Skills Bootcamps funded by the Department for Education) provide employer and provider curated courses. Every Institute of Coding course, funded under the original Institute of Coding funding from the Department for Education offered learners a portable IoC badge.		
3.3 Funding	The Institute of Coding was launched using Department for Education (i.e. government) funding but is now supported through a mixture of public and private funds. The courses are provided free of charge to learners.		
3.4 Regulatory Framework	The Institute of Coding was launched as part of the UK government's industrial and digital skills strategy and maintains links with national and local policymakers. It now operates as a stand-alone body through a combination of private and public funds.		

Policy profile B35 Canada 1: Quick Train Canada - Microcredentials

1. General			
1.1 Name policy initiative	Quick Train Canada - Microcredentials		
1.2 Country	Canada	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2022	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Canadian Colleges for a Resilient Recovery (C2R2)		
1.7 Target audience	Canadian workers		
1.8 Objectives/brief description	<p>Quick Train Canada education is fully funded, offered through select Canadian colleges, and comes in multi-week courses with options to learn virtually, in-person or both.</p> <p>Microcredentials are accelerated training programs offered by post-secondary education institutions that are intended to help people retrain or upgrade their skills in a variety of sectors to aid in advancing their career or finding new employment.</p>		
2. Key Performance Metrics			
2.1 Individual	As fully funded learning, this C2R2 program enabled learners to access training and further upskill in their industry.		
2.2 Company	With numerous employer partners across the country, microcredentials are seen as a way to quickly upskill the workforce and employees to meet the skills gaps that exist. Quick Train Canada provides training specific to the advancement in skills related to a low carbon economy and as a national priority, the appeal and vision from companies is significant.		
2.3 Economy	By March 2024, it is a goal to have 10,000 learners complete training since starting the program in January 2023. The microcredentials offered through Quick Train Canada prepare the companies and employees for success as most industry sectors shift to more sustainable practices. The project launched in February 2023 to help equip Canadian workers with the necessary skills to lead the shift to a green economy. The primary focus of C2R2 and the Quick Train program is to offer skills for a transition to a low carbon economy.		
3. Key Performance Drivers			
3.1 Stakeholders	<p>*Quick Train Canada is supported through funding from Employment and Social Development Canada (ESDC) as part of the Sectoral Workforce Solutions Program (SWSP). ESDC is the leader for training and skills development policy in the Canadian federal government.</p> <p>*Large companies / SMEs support Quick Train Canada and participate by opening training to their employees or advising on content creation as per standard protocols for program development within the Canadian college sector.</p> <p>* Quick Train Canada is made possible by the 14 C2R2 members as delivery agents--all of which are colleges, cégeps (French term for Collège d'enseignement general et professionnel, meaning: General and professional teaching college), polytechnics or institutes.</p>		
3.2 Learners	<p>Microcredentials allow for flexibility in learning and upskilling that may not typically exist with diploma or degree pathways. Short-cycle programming allows for pathways to be defined by the learner. Assessment opportunities are an essential component of microcredential learning framework. All Quick Train offerings are provided through the C2R2 institutions who offer access to seamless registration, learning management systems, and wrap around supports for students.</p> <p>Objective: 10.000 people trained in the timeframe of January 2023 until March 2024. Collecting data from the learner by optional survey at the beginning and end of any training opportunity that's being provided:</p> <ul style="list-style-type: none"> o 64% percent saying that they're already currently employed in full time employment. 11% have part time employment. Employees who are in the workforce and looking to transition. o 65% are over the age of 31. 		
3.3 Funding	<p>Quick Train Canada currently enables fully funded (tuition-free) education for learners--ultimately reducing a major barrier for many Canadians. The coalition's coordinating secretariat provides essential backbone support for the coalition.</p> <p>Beginning: Common approach of the colleges – idea initiated by them; The coalition came together before there was funding available and then the coalition together was advocating for funding opportunities.</p> <p>Funding: than integration in Sectoral Workforce Solutions program as they put a call for funding. C2R2 was solicited to participate, outcome: successful recipients. The Sectoral Workforce Solutions program is implemented through Employment and Social Development Canada, which is a Federal Department of the Government of Canada. Private funding between 5% and 35%: Not necessarily financial support, but rather materials and knowledge, because program is 100% financed within the ESDC SWSP funding envelop that ends March 31, 2024.</p>		
3.4 Regulatory Framework	The policy initiative is well integrated into the overall digital skills strategy of the country.		

Policy profile B36 Canada 2: Polytechnics Canada

1. General			
1.1 Name policy initiative	Polytechnics Canada		
1.2 Country	Canada	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2003	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Polytechnics Canada		
1.7 Target audience	Canadian employees - Most upskilling/reskilling programs are open to individual learners. There is no requirement for direct employer involvement in terms of identifying the program or skills in which a learner must engage.		
1.8 Objectives/brief description	Polytechnics Canada is a non-profit association representing 13 leading research-intensive, publicly supported polytechnics and institutes of technology. They advocate for federal action in areas where polytechnics provide solutions for a more innovative, productive and globally competitive country		
2. Key Performance Metrics			
2.1 Individual	<p>In addition to full length daytime programmes, the organisation offers a diverse number of short-term focused programmes to increase the mastery levels of specific skills for individuals wishing to upskill and/or reskill. These may be part of ongoing programmes such as Graduate Certificates allowing individuals with a diploma, degree, or adequate professional experience, to retrain and reskill themselves relatively quickly in new disciplines. Several other alternatives are available to all learners such as: individual part-time courses, microcredentials, intensive 14-week learning (Bootcamps) and certificates. Many of these programmes allow the organisation to claim partial provincial funding and help keep costs down to the end user.</p> <p>Upskilling and reskilling opportunities at Canada's polytechnic institutions are designed with the labour market in mind, ensuring that learners develop the skills in high demand.</p>		
2.2 Company	<p>All programming developed at polytechnic institutions is done so in conjunction with program advisory committees comprising of industry representatives. This ensures that all programming is designed to confer skillsets desirable to present-day industry.</p> <p>Knowing that the majority of Canadian companies are SMEs, it is essential to have partners like polytechnic institutions to deliver on a learning culture or promote lifelong learning among employees. "For employer-based programs, providing their employees with upskilling training has undoubtedly increased employee retention."</p>		
2.3 Economy	<p>While they have not measured upskilling/reskilling enrolment, the 13 member institutions report roughly 68,000 part-time students per year. We expect that many of these are engaging in upskilling or reskilling programs (almost 17,000 available across our membership).</p> <p>As the Canadian economy undertakes a green transition, polytechnics are increasingly being leveraged by individuals looking to develop a resilient skillset. The myriad of short- and long-form programming aimed at developing transversal green skills (e.g. green building principles, sustainable economic growth, etc.) offered at polytechnics have helped create a workforce endowed with flexible skillsets that can be employed across industries in a green economy.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>The polytechnic model of education is not formalised in most regions of Canada, giving policy makers limited opportunities to influence program design, implementation, or evaluation. That said, both federal and provincial governments have provided funding related to the development of microcredentials. An emphasis on green skills has influenced programming to some degree as well.</p> <p>* Policy makers tend to be more implicated in the overall identification of need, the RFP process, selection of winners and monitoring of progress. The design implementation and evaluation are more often than not, undertaken by the lead institution that applied for the funding. Final evaluation is also undertaken by Policy makers.</p> <p>* Large companies often provide leadership when it comes to identifying skills gaps in the economy and providing funding support for program development/delivery, particularly when it comes to digital skills, the engagement of under-represented groups and other industry-specific labour market priorities.</p> <p>+ SMEs are more likely to require their employees to take training at a public institution given that their ability to offer internal training is more limited.</p>		
3.2 Learners	<p>Most upskilling/reskilling programmes are open to individual learners. There is no requirement for direct employer involvement in terms of identifying the program or skills in which a learner must engage. By ensuring that programmes are connected to skills gaps within industry, a learner can take those skills back to their workplace or choose to pursue another job</p>		
3.3 Funding	<p>Where government funding is available to offset tuition for learners, this ensures broader access for both individuals and SMEs without sufficient resources to pay for the training on their own. Funding comes from different entities and depends on the course.</p>		
3.4 Regulatory Framework	<p>Upskilling and reskilling is understood as necessary to the skills strategy of the country, but policies and programs designed to overcome barriers (time, money, motivation, navigation) have been mixed or are still too nascent to have made an impact.</p>		

Policy profile B37 Canada 3: Future Skills Centre

1. General			
1.1 Name policy initiative	Future Skills Centre		
1.2 Country	Canada	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	2019	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	Employment and Social Development Canada		
1.7 Target audience	The aim is to help all workers in Canada benefit from effective skills development and training.		
1.8 Objectives/brief description	As a pan-Canadian organisation, Future Skills Centre works with partners across the country to understand how global trends affect the economy, and to identify what skills working-age adults need to thrive within an ever-evolving environment. FSC is funded by the Government of Canada's Future Skills Program. They were founded as a partnership between Ryerson University, Blueprint ADE, and the Conference Board of Canada. Ryerson—through the Office of the Vice-President of Research and Innovation—is the lead organisation for the consortium and the home base for the Centre.		
2. Key Performance Metrics			
2.1 Individual	53,000 people benefitted from training or employment opportunities. <ul style="list-style-type: none"> • Technical Skills: 137 projects (\$87M) • Digital Skills: 71 projects (\$59M) • Essential Skills: 26 projects (\$30M) • Skills for success (adaptability, resilience, innovation & entrepreneurship skills): 83 projects (\$72M) • Social & emotional skills: 73 projects (\$70M) 		
2.2 Company	35% of projects in our portfolio are being led by, or in partnership with, employers (still short of our target of 50%) <ul style="list-style-type: none"> • 39% of our investments are in sectors at high risk of automation • 44% of our investments are in sectors experiencing high growth 		
3. Economy	As of June 30, 2023, 53,705 people benefitted from training or employment opportunities. A total of \$59M (71 projects) has been invested into digital skills across FSC's portfolio. They have invested in 15 new and revised labour market information tools, career navigation tools and digital platforms. These tools are helping people and industries navigate labour market change at scale. To date, these tools and platforms have been accessed by 282,946 users or participants from coast to coast to coast. FSC has included projects related to various aspect of "greenification" and the move to a net-zero carbon economy among its priorities from its inception, including transitions for workers from the oil and gas sector to careers in technology, sustainable agriculture, fisheries and cleantech.		
3. Key Performance Drivers			
3.1 Stakeholders	The Future Skills Centre is funded by the Government of Canada through its Future Skills initiative. The Centre operates at arms-length and independently of government, but was awarded to a consortium of partners through a tender process designed by policymakers in the federal government to respond to the pressing need for objective understanding of in-demand skills and innovative solutions to bring those skills to Canadians. Senior executives at several large employers from the financial and professional services, retail and technology sectors serve as the Centre's Advisory Board, among others, supporting its objectives with expert advice and perspective on Canada's labour markets and future challenges and opportunities.		
3.2 Learners	Features of many of the initiatives supported by FSC are providing career guidance, practical labour market information, skill assessment tools and support that accommodate the diverse needs of learners. FSC operates alongside both formal and informal education and training systems. A significant portion of their work has a focus on microcredentials - both supporting their development and asking questions about the roles that they play in supporting upskilling and reskilling, and labour market success for learners.		
3.3 Funding	Canada's SMEs have a large share in the Canadian labour market and need support to be able to recruit, retain and train the talent they need. Supporting the ongoing evolution of supports for SMEs to meet near and longer-term needs for skills is a high priority for FSC. To date, 46 projects (18%) in FSC's portfolio focus on SMEs. All funding to date received by the Future Skills Centre comes from the Government of Canada under its Future Skills initiative. <p>There is no private sector funding and no co-funding by learners. The Future Skills Centre receives its funding through time-limited contribution agreements with the Government of Canada. The first mandate was for five years.</p>		
3.4 Regulatory Framework	As a result of Canada's federal system there is not a single skills strategy for the country. Sub-national governments (provinces and territories) have significant jurisdiction and roles in design and delivery of education and skills policy. That said, FSC has been able to create positive working relationships with actors at all levels of government that have resulted in developing a niche in these systems to support innovation in workforce development leading to the sharing of policy-relevant, evidence-based insights from their work.		

Policy profile B38 United States 1: US TAA - Trade Adjustment Assistance for Workers

1. General			
1.1 Name policy initiative	US TAA - Trade Adjustment Assistance for Workers		
1.2 Country	US	1.3 Level (national/regional)	national
1.4 Launch year of policy initiative	1974	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	*United States Department of Labor		
1.7 Target audience	The Trade Adjustment Assistance (TAA) Program seeks to provide adversely affected workers with opportunities to obtain the skills, credentials, resources, and support necessary to (re)build skills for future jobs. Any member of a worker group certified by the Department may be eligible to receive the following benefits and services at a local American Job Centre: training, employment and case management services, job search allowances, relocation allowances, and income support in the form of Trade Readjustment Allowances (TRA).		
1.8 Objectives/brief description	The TAA Program for workers was established in 1962, and since 1974 has served more than 5 million American workers. The program certifies more than 100,000 eligible workers annually. In FY 2022, there were 14,608 participants in the TAA Program and 7,045 participants are continuing to be served as of September 30th, 2022. Since July 1st, 2022, the TAA Program <u>has been unable to certify</u> new worker groups or serve workers separated on or after this date.		
2. Key Performance Metrics			
2.1 Individual	Only 41% of TAA participants in FY2022 had education beyond high school. Despite this, 74% of workers who enrolled in training, completed it.		
2.2 Company	The TAA for Workers program only indirectly engages with companies through the broader workforce development program. There is a separate program, called TAA for Firms - through the Commerce Department - that works directly with companies. The TAA for Workers Program does not have a true incumbent worker focus. Although a certain type of worker may be eligible while still employed, they often train for new work at a different company.		
2.3 Economy	The TAA for Workers program is tailored to the reemployment prospects of the individual worker. There is no specific broader theme applied. Many workers return to the manufacturing sector - although this is more likely to be precision manufacturing. The focus of training is tied to the local labour market where the worker lives or is willing to relocated to. There is no coordinated effort under the TAA Program to focus on any specific industry or development strategy.		
3. Key Performance Drivers			
3.1 Stakeholders	<p>Policy Makers: The TAA Program is administered by the USDOL but operated by the individual states. Although the USDOL* is responsible for publication of regulations and conducting evaluations, it is the individual states - in cooperation with local workforce development boards - that implement the program at the state and local level.</p> <p>Large C and SMEs: The TAA Program is a required partner under the Workforce Innovation and Opportunity Act which establishes employer-led workforce development boards at the state and local levels. These boards are the only vehicle through which employers would have any impact on the implementation of the TAA Program. They have little or no impact on the design of evaluation of the program.</p> <p>Education and training providers: TAA participants access training largely through existing educational providers and programs - most often the community college system. Educational providers implement the program by providing occupational and other training to workers.</p> <p>The state workforce agencies are directly responsible for the day-to-day implementation of the TAA Program through grants provided by the USDOL. Unions and other organisations connect to these agencies through the state and local workforce development boards.</p> <p>The stakeholders are connected through the local workforce development boards which meet on a regular basis throughout the year. They develop a multi-year local strategic and operational plan.</p>		
3.2 Learners	The TAA Program provides access to highly customizable training opportunities for workers. This includes certificate programs, degree programs, work-based learning opportunities, or a combination of these. The TAA Program requires states to provide employment and case management services to workers, including career guidance.		
3.3 Funding	For most workers, 100% of training and reemployment costs are paid through federal funds. If a worker is placed in a work-based learning opportunity with an employer, the employer must pay a portion of that cost of training. Under normal conditions, a worker should not have to contribute any personal funds towards the cost of their training. The TAA Program is subject to a reauthorisation process. The latest authorisation expired on July 1, 2022. Since that time, no new certifications have been issued for impacted worker groups.		
3.4 Regulatory Framework	The Department does little to promote the program. Instead, the Department relies on the state agencies to promote the program and conduct outreach to eligible workers. As a result, there is a wide variance in the quality and quantity of promotion and outreach activity from state to state.		

Policy profile B39 United States 2: Online Learning from Your DOL: NY State

1. General			
1.1 Name policy initiative	Online Learning from Your DOL: NY State		
1.2 Country	US – NY State	1.3 Level (national/regional)	State level (Regional)
1.4 Launch year of policy initiative	2020	1.5 Completion year of policy initiative (total nr of years)	Still ongoing (3 years)
1.6 Managing authority	New York State Department of Labor (NYSDOL)		
1.7 Target audience	When the NYS Department of Labor launched Coursera, it was only available to dislocated workers. In 2022, NYD DOL expanded this policy to allow adults, dislocated workers, Youth and Underemployed individuals to further increase the number of learners on the platform.		
1.8 Objectives/brief description	<p>- Provide courses through Coursera at no-cost to the NY state population.</p> <p>- Especially during Covid-19 when workers could not come into career centres. Afterwards, it was decided to expand the availability of this initiative to not only dislocated workers but also the rest of the adults and youth of the state.</p>		
2. Key Performance Metrics			
2.1 Individual	The impact that this initiative had varies depending on the learner. The majority of course completers are developing knowledge and skills needed for occupations in high demand. These courses and certificates improve the employability of jobseekers in demanded industries. In addition, the fact that the courses are made available to the participants free of charge increases the accessibility of lifelong learning for all participants.		
2.2 Company	The primary audience for the program is job seeking adults outside of their organisation. Nevertheless, a staff development program was also recently implemented		
2.3 Economy	<p>Since its inception, over 179,000 learners have participated in the initiative. These learners enrolled in over 735,000 content modules and completed over 125,000 modules.</p> <p>While the policy initiative is not explicitly focused on digitalisation it does promote and imply it. This is due to the fact that, as an online learning platform, Coursera requires a baseline of digital literacy from its users. In addition, the need for digital skills is also reflected in our usage patterns.</p> <p>Among our participants the top three Skill Domains developed are Business, Computer Science, and Data Science.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>The NYS DOL leadership is highly involved and leading the Coursera initiative throughout the state. In this respect, a team of DOL staff works directly with Coursera with the objective of developing the curations needed considering the labour market in different areas. Not only that, but the DOL policy makers worked directly with Coursera to design and implement the NYS DOL Coursera platform.</p> <p>In addition, there is regular revision of the developments as weekly reports are run and reviewed by DOL leadership to monitor and assess usage and the potential need for additional licenses.</p> <p>With respect to the needs of companies, the NYS DOLs Business Engagement teams have already begun to work with them, with the aim of identifying their needs and establishing how Coursera curations can prepare customers to meet those needs. Nevertheless, this plan is still at a very early stage.</p>		
3.2 Learners	Learners have the option to take any of the available courses and develop their own pathway. However, they also have the option of taking the recommended courses for a desired career pathway. In addition, Coursera is also linked to NYS Virtual Career Centre's Career Planner, allowing customers to identify a desired career pathway and helps them to assess skills gaps. From there, the Career Planner will recommend Coursera courses to help address those gaps.		
3.3 Funding	<p>The business needs are very important to the state and providing the funding to upskill and reskill New Yorkers will make them more marketable to businesses.</p> <p>In addition, in later phases, NY plans to assist businesses with upskilling/reskilling their employees to increase retention.</p> <p>This initiative is completely publicly funded.</p>		
3.4 Regulatory Framework	<p>Coursera is available in every county of NYS.</p> <p>Coursera is used nationwide, but this policy initiative is only for the implementation in New York State, by NYSDOL. Their partnership with the State University of New York (the largest comprehensive university system in the United States) has the potential to significantly extends the scope of this initiative.</p>		

Policy profile B40 United States 3: US California = High Road Training Partnership

1. General			
1.1 Name policy initiative	US California = High Road Training Partnership		
1.2 Country	US	1.3 Level (national/regional)	regional
1.4 Launch year of policy initiative	2016	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	California Workforce Development Board		
1.7 Target audience	The industry-based, worker-focused training partnerships build skills for California's "high road" employers — firms that compete based on quality of product and service achieved through innovation and investment in human capital, and can thus generate family-supporting jobs where workers have agency and voice.		
1.8 Objectives/brief description	The High Road Training Partnerships (H RTP) initiative started as a \$10M demonstration project designed to model partnership strategies for the state. Ranging from transportation to health care to hospitality , the H RTP model embodies the sector approach championed by the Board — industry partnerships that deliver equity, sustainability, and job quality. (Interview / survey: two representatives from the health care- and hospitality sector participated).		
2. Key Performance Metrics			
2.1 Individual	<p>Shirley Ware Education Center (Health Care Workers) and SEIU Joint Employer Education Fund: "We provide information to potential participants by recruiting unions workers, who are onsite in the healthcare facilities to help inform their coworkers of the training. Workers then spread information on the program at their respective workplace. We also work the halls of the hospitals to inform the employees." - They attend huddles (short, focused daily team meeting), union meetings (highest impact through word of mouth between unions members), word out through management (manager informs employees) - Organization of informative meetings - Targeted digital outreach. The foundation gets in contact with workers through email (around 100.000 emails), social media or ads on the radio</p> <p>Working / training hours: The trainings are offered at different times and days of the week, in the morning at 8am to 2am, or from 3am to 9am. It is possible to work before or after. For hospitality courses, there are no charges at all.</p>		
2.2 Company	<p>"Because of the requirement of H RTP, the employers are involved from the earliest stage. There is good high-level executive sponsorship in the program. If managers cannot let an employee attend for certain reasons, we still try to keep in touch with these potential participants to find a way for them to attend. We do a lot of Manager education and working with Human Resources departments. It's a process, we try to better understand their situation and adapt our training to their agenda so that an entire department does not drop out all at once, but is trained progressively."</p>		
2.3 Economy	<p>Health Care: Training utilises significant online training opportunities. During 2020 funding was focused on online learners and connecting online learning opportunities to career advancement. This has led to over 27,000 learners in 2021, the highest record in a single year to date during the second year of the pandemic.</p>		
3. Key Performance Drivers			
3.1 Stakeholders	<p>The policy makers have the leading role. Large companies and SMEs are active involved. Employment agencies, employer organisations, trade unions and other supporting structures have a highly active involvement in the design, implementation, and evaluation of this policy initiative.</p>		
3.2 Learners	<p>There are different mechanisms that allow for workers to maintain their jobs while they follow the training: learners can ask for benefits to reduce the working hours and still getting paid the same amount of salary they usually do. The program offers the resources (for example: monetary incentives), to incentive people to get involved.</p>		
3.3 Funding	<p>Health Care Workers: As many participants are single mothers, main bread winners, 80% woman, 71% of learners are workers of colour: for them, time and money are two key aspects to decide for or against further education. In principle, almost all programmes are 100% funded.</p> <p>California Workforce Development Board: "If the industry, companies and unions see the value add in this program because it's developing a skilled workforce, increasing competitiveness, improving retention of works, diversity... then they will invest. (...) The state investment will nevertheless decrease."</p>		
3.4 Regulatory Framework	<p>Regarding the integration of the policy into the overall digital strategy of the country is to say, that there are new federal dollars for digital equity coming to the state. Investments from 2016 onwards have proven to be the most important key success factor, as the number of learners has increased ever since.</p>		

Policy profile B41 China: Guangdong Social Security Integration and Rural Worker Training Project

1. General			
1.1 Name policy initiative	Guangdong Social Security Integration and Rural Worker Training Project		
1.2 Country	China	1.3 Level (national/regional)	Regional
1.4 Launch year of policy initiative	2013	1.5 Completion year of policy initiative (total nr of years)	2020
1.6 Managing authority	Department of Human Resources and Social Security		
1.7 Target audience	Urban and rural workers in Guangdong		
1.8 Objectives/brief description	<p>The objectives of the Guangdong Social Security Integration and Rural Worker Training Project for China are to enhance portability of social security data and beneficiary entitlements, and to strengthen the skills base and employment prospects of rural hukou workers in Guangdong. The project has two components.</p> <p>(1) Social security MIS component will invest into develop a new provincial Management of Information System (MIS) for Department for Human Resources and Social Security (DHRSS) which would serve to integrate data management across its major business lines (social insurance, employment services and HR management) and across the 21 prefectures in Guangdong province. The provincial MIS would provide for common data standards, information exchange through an integrated data sharing platform, coordination of social insurance benefits between prefectures for mobile beneficiaries\ who straddle more than one prefecture, and the decision support system to inform provincial DHRSS management.</p> <p>(2) Rural worker training component will invest in technical training institutions with a particular focus on short-term training needs of current and potential migrants for both entry level and upgrading of skills, supported by a strengthened set of services to support post-training placement. In addition, there will be a strong focus on deepening school-industry partnerships to enhance the labour market relevance of training. These emphases will enhance the relevance and skill-intensity of training to help fill skills gaps in Guangdong.</p> <p>The focus of this policy initiative will be on the second component: Rural Worker Training project (hereinafter referred to as RWT) .</p>		
2. Key Performance Metrics			
2.1 Individual	<p>The Rural Worker Training project has considerably increased the level of mastery of specific skills of trainees. The percentage of trainees who pass skills assessment tests exceeded expectations for students of all project schools. Students also excelled in different skills competitions. The Industry and Trade School hosted five national training centers for the World Skills competitions and the schools had the highest number of competitors and won the greatest number of awards nationwide.</p> <p>The Rural Worker Training project has also considerably increased the attractiveness of learners for the labour market. Practically all of the graduates found initial employment within six months after graduation. During the project implementation, the ratio of graduates finding initial employment within six months of total graduates and their job satisfaction maintained at a high level and showed an overall upward trend; and starting salaries for graduates continued to rise. The project has effectively boosted the employment rate, job satisfaction rate, and the starting salary of graduates from the three schools and has a positive effect on the career pathways of students/trainees. This shows motivation of learners to work and to continue learning.</p>		
2.2 Company	<p>The Rural Worker Training project aimed to provide a strong focus on deepening school-industry partnerships to enhance the labour market relevance and skill intensity of training to help fill skills gaps. These partnerships between enterprises and schools have the potential to be part of a long-term vision for up- and re-skilling for the (directly or indirectly) involved companies.</p> <p>The Rural Worker Training project has also contributed considerably to the development of a learning culture for the (directly or indirectly) involved companies. The private sector has jointly set up 139 practice training bases, and invested in equipment and consumables, on-the-job training, research and development, trainers exchange program, and HR.</p> <p>The Rural Worker Training project has also contributed to the attractiveness on the labour market for the (directly or indirectly) involved companies. Because of the school-industry partnerships, companies have had an active involvement in the design of the training programmes, and could tailor these training programmes to the specific needs of skills in the companies. As a consequence, trainees will have a better fit with the company's needs after they have finished the programme.</p> <p>The RWT project has established six school-enterprise alliances/training committees, built 245 enterprises school-industry partnership, conducted 174 training needs assessments, developing 216 enterprise-specific training courses, developed 68 dual training programs/classes, invited 543 technicians to participate in training, sent 1206 (person-time) school instructors in industry and carried out on-the-job training for 9,011 trainees.</p>		
2.3 Economy	<p>Three project schools in Guangdong have been involved with the Rural Worker Training project since the start of the project. Since its launch in 2013, the Rural Worker Training project has produced 41,381 graduates from the three project schools involved in the RWT.</p> <p>For the three project schools, more than 90% of the graduates have found employment within 6 months after</p>		

	<p>graduation when it comes to the degree course. For the short-term training, this was around 70% for two of the three project schools.</p> <p>Specific focus on digital or green skills have not been mentioned in the RWT. The RWT's main focus was to strengthen the skills base and employment prospects of rural workers in Guangdong (and later on also urban workers in a project restructuring in July 2017).</p>
<p>3. Key Performance Drivers</p>	
<p>3.1 Stakeholders</p>	<p>The Department of Human Resources and Social Security (DHRSS) part of the Chinese government had an active role in the RWT project. The DHRSS has set up selection criteria for the pilot schools in the RWT to which the goal was to learn from the best practices of these pilot schools. The selected schools should include a mix of geographic locations within the Province, service to a large number of rural trainees, willingness to innovate, and institutions that could offer a balance of hardware and software investments. The provincial government and project schools have documented the Project's innovations and have disseminated its lessons through channels such as mass media, workshops, and study tours. A video feature story of the RWT has been shot in June 2020.</p> <p>The RWT project supported project schools in institutionalising links with industry through formulation of guidelines and contracts for school-industry partnerships; joint development of standards, curriculum, and training programs; and industry involvement in instruction and assessment. Industry partners would be involved in all dimensions of training, including short-course training—upstream demand assessment and design, delivery, and evaluation, and further development. The Project would finance (a) surveys to identify training demands from employers and potential trainees; (b) establishment of skills development associations between schools, private training institutions, and industry partners; (c) establishment of joint advisory commissions on curriculum development to revise curriculum standards, evaluation standards, and design training programs; and (d) dissemination of training programs.</p> <p>A strong relationship with the private sector was instrumental in improving both the relevance and the quality of both degree and short-term training programs in the three project schools, thereby providing the graduates with skills required by the Province's labour market. The Project-financed activities aimed at strengthening school-industry links, including surveys to identify employers' training needs and strengthening training instructors' connections to industry. As a result, the project schools established six school-enterprise alliances/training committees, built 245 enterprises school-industry partnership, conducted 174 training needs assessments, developing 216 enterprise-specific training courses, developed 68 dual training programs/classes, invited 543 technicians to participate in training, sent 1206 (person-time) school instructors in industry and carried out on-the-job training for 9,011 trainees.</p>
<p>3.2 Learners</p>	<p>The Project aimed to upgrade the quality and relevance of training in the three schools by introducing a modular, competency-based curriculum with competencies set in consultation with industry. Setting up short-course, modular, and competency-based training makes courses better suitable for the creation of a learner's own learning path, and more responsive to those already employed, particularly migrant workers. Employment offices at project schools have provided career services for students, which is an established practice in the system.</p> <p>One of the goals of the RWT was to improve the learning infrastructure. Competency Based Training programs combined with upgraded facilities (classroom, buildings, integrated buildings/offices and stadium), and equipment (practical training equipment and school information systems) under the RWT have helped increase the competency of students. Students were granted a diploma after graduation.</p>
<p>3.3 Funding</p>	<p>The RWT project has largely been funded by the World Bank (approx. 70%). The provincial government has also provided funds to the RWT project in counterpart funds (approx. 30%). No data is available on co-funding by learners themselves. TVET students were still required to pay tuition fees. In some cases, students were eligible to receive tuition fee exemptions.</p>
<p>3.4 Regulatory Framework</p>	<p>The Project was highly relevant to China's 12th FYP for 2011-2015 and fully aligned with the World Bank Group (WBG) Country Partnership Strategy (CPS) for the period of FY2013 - FY20167 when it was developed. A common goal was shared to promote skills development of migrant workers.</p> <p>The RWT project has no direct relationship to the digital or green strategy of the country. However, the RWT project could have an indirect impact on the digital strategy of the country, since the improvement of TVET schools are part of a broader digital strategy.</p>

Policy profile B42 India 1: Futureskills Prime

1. General			
1.1 Name policy initiative	Futureskills Prime		
1.2 Country	India	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2020	1.5 Completion year of policy initiative (total nr of years)	Ongoing (3)
1.6 Managing authority	Ministry of Electronics and Information Technology, Government of India		
1.7 Target audience	Students through mid-level careerists in the IT sector.		
1.8 Objectives/brief description	Offers easy access to a wide variety of courses. The goal is to upskill IT professionals		
2. Key Performance Metrics			
2.1 Individual	The initiative was able to upskill over 630 000 people and aims to upskill more in the future.		
2.2 Company	Participants get exposure to over 30 thousand job opportunities. All the courses are curated by the industry.		
2.3 Economy	To connect the learners with the industry, employees and employers are connected through a designated portal, increasing the impact on the economy of the initiative.		
3. Key Performance Drivers			
3.1 Stakeholders	FutureSkills Prime leverages the power of the collective and has demonstrated how competitors can collaborate with the right motivation. There are top companies bringing their courses on to the platform - Microsoft, Google, Red Hat, AWS, Adobe to name a few. The initiative is currently working with 500 training providers and almost 1200 colleges to train and certify candidates in IT-ITES skills.		
3.2 Learners	The program offers customised course plans for different proficiencies. Learners consume only what is relevant. The program offers a competency diagnostic test to every learner to evaluate technical aptitude. The test provides recommendations for courses and job roles. In addition to courses, tools and trainers, Digital Skilling is made affordable for all as learners can upskill in 10 of the most in-demand technologies and earn incentives up to rupees 14,500. The program covers Foundation, Bridge and Deep Skilling courses across technologies, including AI, IoT, Big Data Analytics, Cloud Computing, Cybersecurity etc. The government now directly 'funds the ambitions' of eligible learners enabling them to navigate careers in these fascinating technology domains. While the platform offers numerous industry-handpicked courses and pathways, many of them free of cost, the incentive program helps candidates upskill in the paid technical courses while earning reimbursement on completion. The objective was to make it easy for learners to take these courses and improve their employability prospects, and at the same time, not make them take on an extra burden in their academic schedule. These courses are now nationally recognised and earn credits for students as part of their degree course while making sure they have skills to be job ready.		
3.3 Funding	The initiative is entirely state funded, but learners have to pay a small amount for some of the trainings.		
3.4 Regulatory Framework	The FutureSkills Prime program is the technology skilling hub of India.		

Policy profile B43 India 2: HIMACHAL PRADESH SKILL DEVELOPMENT POLICY

1. General			
1.1 Name policy initiative	HIMACHAL PRADESH SKILL DEVELOPMENT POLICY		
1.2 Country	India	1.3 Level (national/regional)	Regional
1.4 Launch year of policy initiative	2015	1.5 Completion year of policy initiative (total nr of years)	Ongoing (6)
1.6 Managing authority	HIMACHAL PRADESH KAUSHAL VIKAS NIGAM, DEPARTMENT OF TECHNICAL EDUCATION-HIMACHAL PRADESH		
1.7 Target audience	Youth population		
1.8 Objectives/brief description	Upskill the local youth in TVET skills and prepare them for the job market of the future.		
2. Key Performance Metrics			
2.1 Individual	The Skill Development initiatives taken by HP Kaushal Vikas Nigam has significantly improved the employability and entrepreneurship skills of youth of Himachal Pradesh, which further has impacted the increase in livelihood opportunities.		
2.2 Company	The State Government and its organisations empanel reputed private training providers to supplement the efforts of State departments and institutions in providing skill training.		
2.3 Economy	Training is provided by the State Government Institutes and Departments, Private Sector, and Industries/Industrial Associations.		
3. Key Performance Drivers			
3.1 Stakeholders	Himachal Pradesh Kaushal Vikas Nigam (HPKVN) is the primary implementing agency of the Himachal Pradesh Skills Development Project (HPSDP), the flagship employment and livelihood scheme of the Government of Himachal Pradesh.		
3.2 Learners	The Skill Development initiatives taken by HP Kaushal Vikas Nigam has significantly improved the employability and entrepreneurship skills of youth of Himachal Pradesh, which further has impacted the increase in livelihood opportunities. The training curriculum has been devised as per the need of industries, therefore, initiatives have considerably improved the attractiveness of the learners.		
3.3 Funding	The initiative is entirely state funded.		
3.4 Regulatory Framework	The initiative is part of the national skills strategy.		

Policy profile B44 Japan: Hiroshima Prefecture Reskilling Initiative

1. General			
1.1 Name policy initiative	Hiroshima Prefecture Reskilling Initiative		
1.2 Country	Japan	1.3 Level (national/regional)	regional
1.4 Launch year of policy initiative	2022	1.5 Completion year of policy initiative (total nr of years)	Still ongoing
1.6 Managing authority	Hiroshima Prefecture Government		
1.7 Target audience	In this initiative, more than 190 SMEs started to conduct reskilling projects and more than 1,000 employees in total passed the IT exam called IT Passport. It is a national standardised test.		
1.8 Objectives/brief description	Awareness-raising seminars and training programmes are organised for managers and officers in charge of human resources to deepen their understanding of risk reduction and to promote recognition of issues and acquisition of the necessary concepts and methods of introduction in order to tackle risk reduction in their own companies. Although to deepen understanding of the need for reskilling among managers, etc. And, to increase the number of companies promoting reskilling by changing the awareness of management.		
2. Key Performance Metrics			
2.1 Individual	At this point, no big labour migration is happening, but the mayor of Hiroshima is expecting it in a next phase. It contributed to the job security as of now.		
2.2 Company	The policy initiative considerably contributed to the development of a learning culture for the involved companies but it is not a dominant movement yet.		
2.3 Economy	In this initiative, there is lot of discussion on green reskilling- and digital skills. Some automobile companies started to have some projects related to reskilling.		
3. Key Performance Drivers			
3.1 Stakeholders	The Hiroshima Prefecture have a leading role but the association of SMEs is very active in this initiative too. This is active PPP (Public Private Partnership) and they have meetings on a regular basis with government, business associations, digital providers, labour unions, etc.		
3.2 Learners	Hiroshima Prefecture will be providing learning providers a learning pass to SMEs in 2024.		
3.3 Funding	141 M yen was secured for 2023 for this initiative.		
3.4 Regulatory Framework	Overall, Japan's skills policy stands out for its focus on VET, lifelong learning, work ethic, and internationalisation.		

Policy profile B45 Singapore: SkillsFuture Movement driven by SkillsFuture Singapore (SSG)

1. General			
1.1 Name policy initiative	SkillsFuture Movement driven by SkillsFuture Singapore (SSG)		
1.2 Country	Singapore	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2014	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	SkillsFuture Singapore, a statutory board under the Ministry of Education (MOE)		
1.7 Target audience	Singapore Workforce		
1.8 Objectives/brief description	<p>SkillsFuture Singapore is an umbrella initiative from the Ministry of Education, leading a number of upskilling initiatives and programmes, each with a specific focus or area of interest. It was launched in 2014, and is still ongoing, with the aim of being a continuous programme with no end date.</p> <p>SkillsFuture Singapore (SSG) drives and coordinates the implementation of the national SkillsFuture movement, promotes a culture and holistic system of lifelong learning through the pursuit of skills mastery, and strengthens the ecosystem of quality education and training in Singapore. Its mission is to enable individuals to learn for life, pursue skills mastery and develop fulfilling careers, for a future-ready Singapore.</p> <p>Some of the programmes include:</p> <ul style="list-style-type: none"> • SkillsFuture Series, which focuses on data analytics, tech-enabled services and urban solutions • SkillsFuture Career Transition Programme, which focuses on providing mid-career individuals with industry relevant skills • SkillsFuture for Digital Workplace, which focuses on supporting corporation's digital transformation 		
2. Key Performance Metrics			
2.1 Individual	<p>In 2022, over 560 000 individuals have participated to one of SSG's supported learning initiatives.</p> <p>SSG has improved the attractiveness of learners for the labour market significantly, with 97% of about 58,000 surveyed trainees indicating that they were able to perform better at work after undergoing SSG-supported training.</p> <p>SSG empowers individuals to make well-informed decisions, ensuring that skill acquired are industry relevant. The SkillsFuture Career Transition Programme for example supports mid-career individuals in acquiring industry-relevant skills to improve employability and pivot to new sectors and roles.</p> <p>The wide spectrum of programmes supported by SSG have helped to make learning affordable and accessible and to encourage individuals to upskill and reskill.</p> <p>Annually published reports such as the Skills Demand for the Future Economy Report (SDFE), which is SSG's annual skills report, help to provide additional insights to help Singaporeans plan their skills development journey. This journey is further supported by a number of digital tools to facilitate the process of finding and enrolling in classes that are relevant to them. The MySkillsFuture Portal for example gives learners a one stop shop to find the courses they need.</p>		
2.2 Company	<p>SSG has contributed to the development of a long-term vision for up- and reskilling for the involved companies. This is exemplified through the number of enterprises benefitting from SSG-supported programmes, which reached 20,000 in 2022.</p> <p>There are a number of SSG programmes targeting businesses specifically, such as the SFEC, focusing on Enterprise Transformation, or the NACE, focusing specifically on small- and medium sized companies.</p> <p>As such, SSG has considerably contributed to the development of a learning culture in the workplace.</p> <p>Also the economic and labour market impact is easily quantifiable: a 10% increase in local workforce that took part in a sponsored training has led to an average of 0.7% higher revenue over 4 years, an average of 0.5% larger local employment over 4 years, a 2.2% improvement in labour productivity on average over 2 years, and a 0.6% percentage-point improvement in the retention of local employees in the year of training.</p>		
2.3 Economy	<p>A total number between 500,000 and 1,000,000 workers have benefitted from various SSG programmes since their introduction.</p> <p>Digitalisation and Greenification:</p> <p>SSG has launched a number of programmes that are particularly focussing on the digitisation of the economy. The SkillsFuture for Digital Workplace programme focuses on supporting the digital transformation of workplaces, with particular focus on Data Analytics, Cybersecurity Risk, In-demand Digital Tools, and Automation. The goal is to help</p>		

	<p>Singaporeans and enterprises be better prepared for the rapidly evolving digital economy.</p> <p>The Skills Demand for the Future Economy Report, published annually by SSG, aims to share jobs and skills insights to support Singaporeans plan their skills development journey. It covers growth areas such as the Digital Economy, Green Economy and the Care Economy, guiding the interests of learners toward those critical areas.</p> <p>SSG programmes also contribute to a greenification of the local economy by providing explicit training opportunities as skills such as Green Facility Management. These programmes are seeing a demand growth of more than 2,000%. Within the Sustainable Finance domain, skills such as Carbon Markets and Decarbonisation Strategies Management and Sustainable Investment Management are seeing demand growth of more than 1,500%.</p>
3. Key Performance Drivers	
3.1 Stakeholders	<p>SSG takes a leading role in the SkillsFuture Movement. The organisation does so by designing, implementing and evaluating SSG's initiatives and by seeking to preparing Singapore's workforce for new opportunities through building a market responsive lifelong learning ecosystem that provides relevant, high quality and accessible adult learning for all workers.</p> <p>Also large corporations are actively involved as partners and intermediaries, providing insights and giving additional reach to the programmes, helping to shape the direction. Smaller corporations are less involved in the decision making, but are the main beneficiary of the programmes, taking advantage of the opportunities to upskill their workforce in key areas.</p> <p>Training providers are involved in the design, implementation and monitoring the quality and outcomes of courses.</p> <p>SSG has also built a network of intermediaries and trade associations, unions and employment agencies to be ambassadors of the training programmes in order to increase the reach of SSG.</p>
3.2 Learners	<p>SSG programmes are providing learners opportunities to determine their own career path as well as providing guidance and assistance with their respective learning journey.</p> <p>Learners are given career guidance and assistance via the RIASEC Profiling Tool, which helps them understand their personality, strengths, and work values to help identify suitable career options.</p> <p>SSG has also introduced the Singapore Workforce Skills Qualifications, which is a credential system that trains, develops, assesses, and certifies skills and competencies for the workforce. The Skills Framework provides key information on the job roles and skills that an individual needs to perform various job tasks and to stay transferable.</p>
3.3 Funding	<p>Funding is a highly important element of the SSG initiative.</p> <p>To make learning affordable and easily accessible, and to encourage SMEs to upskill and reskill their employees, enhanced course fee subsidies of up to 70% - 90% are made available to SMEs for SSG-supported courses under the Enhanced Training Support for SMEs (ETSS). Absentee Payroll funding is also made available to encourage employers and help them to defray manpower costs incurred when they send their employees for certifiable skills training.</p> <p>On an individual level, SSG has introduced a learning credit system to support Singaporeans with their own learning efforts. Since Jan 2015, a \$500 opening credit is given to all Singapore Citizens aged 25 years and above for them to attend skills-related courses. The government announced a one-off top-up of \$500 to every Singapore Citizen aged 25 years and above as of 31 December 2020.</p> <p>Specific for Singaporean Citizens aged 40 and above, SSG has also made available the SkillsFuture Mid-Career Enhanced Subsidy (MCES), with up a subsidy of up to 90% of course fees for SSG-supported courses. For Citizens with greater needs such as long-term unemployed individuals or persons with disabilities, there would be additional course fee funding support of up to 95% of course fees.</p>
3.4 Regulatory Framework	<p>The SSG is a national initiative and complements other sectoral level programmes such as the Tech Skills Accelerator (TeSA) programme managed by the Infocomm Media Development Authority (IMDA) for the tech sector. It is integrated within the overall digitalisation strategy of the country through the Industry Digital Plans. Similarly, it is integrated with Singapore's green initiatives strategy.</p>

Policy profile B46 South Korea: Partnership between K-MOOC, the National Institute for Lifelong Education and Coursera

1. General			
1.1 Name policy initiative	Partnership between K-MOOC, the National Institute for Lifelong Education and Coursera		
1.2 Country	South Korea	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2022	1.5 Completion year of policy initiative (total nr of years)	Ongoing
1.6 Managing authority	Ministry of Education, National Institute for Lifelong Education https://blog.coursera.org/course-partners-with-k-mooc-and-the-national-institute-for-lifelong-education-to-upskill-200000-learners-in-south-korea/		
1.7 Target audience	The initiative will help over 200,000 adult learners develop the high-demand digital skills needed to advance their education and careers in the new economy and embrace lifelong learning amid rapid transformation.		
1.8 Objectives/brief description	Through this partnership, learners across Korea will have access to 70 job-relevant, Korean-language courses from top universities and industry leaders worldwide, including Yale University, University of Pennsylvania, Google and DeepLearning AI. The initiative, supported by the Ministry of Education, aims to equip students, graduates, school and university educators, as well as middle- and late- career professionals with the professional and digital skills needed for jobs of the future.		
2. Key Performance Metrics			
2.1 Individual	K-MOOC is a service that provides free high-quality lectures through its online platform, so that anyone can learn what they want at anytime, anywhere, thus helping adult learners who work and study at the same time to balance their time, overcome financial difficulties and continue learning. According to the K-MOOC learner survey conducted in 2023, 59.4% of the respondents were working adults, accounting for a significant portion.		
2.2 Company	There is a steady increase of enterprises' requests for MOU agreements to use K-MOOC in their in-service training. K-MOOC is an online education service for individual learners. There is no measurement on performance outcomes at the corporate level.		
2.3 Economy	As South Korea embrace the fourth industrial revolution, K-MOOC continue to develop and provide specialised courses in the areas that will lead digital transition, such as Big Data and Artificial Intelligence, as well as courses in digital transformation that would help learners to enhance their employability. K-MOOC continues to develop and provide courses in green skills and climate change, keeping up with the social demands due to the rise of importance on social values and sustainable development.		
3. Key Performance Drivers			
3.1 Stakeholders	As NILE is under the jurisdiction of the Ministry of Education, annual management plans are drafted by the Ministry of Education. K-MOOC is a national policy initiative in which the budget comes directly from the national government. Thus, policy directions on national human resources development and individual learner demands are reflected into its operation. Industry giants play no direct roles in the process; however, we do have some SMEs that participate in the course development and operation at the moment, and some also provides corresponding budgets to the initiative. The main providers for K-MOOC are universities and other participating institutions that run courses on the platform, and they develop and operate courses in accordance with the management plan and guidelines that are announced by the Ministry of Education annually. The main providers for K-MOOC are universities and other participating institutions that run courses on the platform, and they develop and operate courses in accordance with the management plan and guidelines that are announced by the Ministry of Education annually.		
3.2 Learners	To help learners with course selection, K-MOOC develops and provides curriculum system for certain fields, as well as course series to choose from. To help with learning, each course in K-MOOC has a teaching assistant(s). NILE has developed K-MOOC platform(https://new.kmooc.kr), a representative MOOC platform for Korea that supports online course provision, learning management and interaction between instructors and learners. Additionally, K-MOOC platform fully complies with international web accessibility standards, making it easier for the elderly as well as learners with disabilities to fully experience online learning. Furthermore, some K-MOOC courses are also offered in Korean Sign Language.		
3.3 Funding	K-MOOC is funded by the government, however, in recent years, some course development institutions (i.e. universities and colleges) also provide voluntary subsidies.		
3.4 Regulatory Framework	K-MOOC has developed programs in the areas that are strategically important for national human resource development in the key technologies and industries. In line with national policy of human resources development in digital technologies, K-MOOC continues to develop and provide courses in digital transformation areas, such as big data and artificial intelligence. Recognizing the importance of sustainable development and social values, K-MOOC has been developing and providing courses in environmental issues and related areas.		

Policy profile B47 South Africa: Technogirl

1. General			
1.1 Name policy initiative	Technogirl		
1.2 Country	South Africa	1.3 Level (national/regional)	National
1.4 Launch year of policy initiative	2004	1.5 Completion year of policy initiative (total nr of years)	Ongoing (19)
1.6 Managing authority	TechnoGirl Trust		
1.7 Target audience	(Unemployed) young women		
1.8 Objectives/brief description	<p>The programme has 3 models:</p> <p>1) Structured Career Mentoring Programme (grade 9-12) in partnership with companies that implement the programme (173 companies have participated in the programme). Delivery through MS Teams, Yomobi and hosted by companies during school holidays - experienced professionals deliver lessons (grade 9-12); participating girls/learners have access to Yomobi resources from their school which enables inclusion of boys and lots of learners; Throughout all models, companies are involved, The programme is anchored on partnerships.</p> <p>2) A second model is Post Schooling Mentorship (Studying at higher education institutions) implementing a Success Enhancing Knowledge Skills & Strategy Interventions (SEKSSI) and academic support until completion of qualification.</p> <p>3) The last model is the Digital Skills Training (Unemployed youth)</p>		
2. Key Performance Metrics			
2.1 Individual	Number and pass rate of certifications/degrees achieved by the learners; Performance of young women in STEM fields;		
2.2 Company	In each company there are core mentors, delivering the learnings and the companies have to provide significant resources to deliver the programme; Networking sessions are conducted in partnership with professional associations; Through the exposure that the learners get, the companies can help influence them on their career paths; Learners know the culture and demands of the companies and become employees of choice which benefits the company because they can build their future employees; Companies therefore use the programme for recruiting purposes		
2.3 Economy	The Digital skills training is aimed at beneficiaries that are unemployed. It teaches basic digital skills and further training after that for specialisation, gaining qualifications		
3. Key Performance Drivers			
3.1 Stakeholders	2 ministries are strategic partners and there are SLAs with the participating companies. The Department of Basic Education has the role of identifying girls and branding/advocacy. The Department of Women, Youth and Persons with Disabilities partners with TechnoGirl Trust to co-host strategic events, advocate for the programme and increase participation of women in STEM. The provincial departments of education collaborate with TechnoGirl Trust to implement the programme in schools at the provincial level.		
3.2 Learners	The post-schooling mentorship after grade 12, is a follow-up programme (info following) with various modules and interaction at different intervals to ensure learners complete their studies; It is aimed at maintaining learner focus and have a high completion rate for their studies. After every phase learners gain a certificate/digital badges and in the post-schooling program the learners receive their degrees; Post Schooling - (Bachelor or similar certificates); Digital skill - (Coding fundamental certificates and other life skills);		
3.3 Funding	100% public funding for the digital programme 25-50% funding for job shadowing; Job shadowing and networking sessions are privately funded; Job shadowing and networking sessions are privately funded		
3.4 Regulatory Framework	TechnoGirl is integrated in the National Skills Development Plan 2030 which described skills to be prioritised in the country.		

Annex C: Online questionnaire sub-tasks 1.2 and 2.2

Table C-1: Questionnaire for data collection on specific initiatives within sub-tasks 1.2 and 2.2

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
1 General					
				<i>Please provide the general details of the policy initiative below.</i>	
1.1	N/A	N/A	Text	1.1 Exact name of the policy initiative	Open text, compulsory
1.2				1.2 Country	Single choice option (39 countries from the list)
1.3	N/A	N/A	Text	1.3 Launch year of the policy initiative (yyyy)	Single choice option, compulsory (2013; 2014; 2015...; 2023; Before 2013, please specify ...)
1.4	N/A	N/A	Text	1.4 Completion year of the policy initiative (yyyy) [in case the initiative has not yet been completed, please select 'Still ongoing']	Single choice option, compulsory (2013; 2014; 2015...; 2023; Still ongoing; Before 2013, please specify ...)
1.5	N/A	N/A	Text	1.5 Name of the managing authority (e.g., specific Ministry, governmental agency, company, education and training provider)	Open text, compulsory
1.6	N/A	N/A	Text	1.6 Please indicate the details of the persons who filled in this survey. These details will be used by the project team in case of questions regarding the provided answers, including potential follow-up interviews. In case multiple persons fill in the survey, please specify all the involved persons. 1 [Name, Position, Organisation, E-mail address]: 2 [Name, Position, Organisation, E-mail address]:	Open text, compulsory; optional for 2-5

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
				3 [Name, Position, Organisation, E-mail address]: 4 [Name, Position, Organisation, E-mail address]: 5 [Name, Position, Organisation, E-mail address]:	
2 Key Performance Metrics					
2.1 Individual					
				<i>The current set of questions addresses the performance of the policy initiative at the individual level, i.e., at the level of learners who went through up- and/or reskilling in the context of this initiative. Please indicate to what extent you agree with the statements below.</i>	
2.1.1	i.1	Level of mastery of specific skills (e.g., entrepreneurial, digital, green etc.)	Qualitative/ranges (Likert scale 1-5)	2.1.1 The policy initiative <u>considerably increased</u> the level of mastery of specific skills (e.g., digital, green, entrepreneurial, technical etc.) that it was targeting in learners. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
2.1.2				2.1.2 Please provide any additional remarks regarding your answer to question 2.1.1 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
2.1.3	i.2	Attractiveness for the labour market (i.e., ability to find a job, job security and job promotion opportunities)	Qualitative/ranges (Likert scale 1-5)	2.1.3 The policy initiative <u>considerably improved</u> the attractiveness of learners for the labour market (i.e., the ability to find a job, job security and job promotion opportunities). <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
2.1.4				2.1.4 Please provide any additional remarks regarding your answer to question 2.1.3 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
2.1.5	i.3	Motivation to work and to continue learning (lifelong learning)	Qualitative/ranges (Likert scale 1-5)	2.1.5 The policy initiative <u>considerably increased</u> the motivation of learners to work and to continue learning (lifelong learning). <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
2.1.6				2.1.6 Please provide any additional remarks regarding your answer to question 2.1.5 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
2.2 Company					
				<i>The current set of questions addresses the performance of the policy initiative at the level of involved companies. Please indicate to what extent you agree with the statements below.</i>	
2.2.1	ii.1	Development of a long-term vision for up- and reskilling	Qualitative/ranges (Likert scale 1-5)	2.2.1 The policy initiative <u>considerably contributed</u> to the development of a long-term vision for up- and reskilling for the (directly or indirectly) involved companies. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
2.2.2				2.2.2 Please provide any additional remarks regarding your answer to question 2.2.1 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
2.2.3	ii.2	Development of a learning culture (i.e., promotion of lifelong learning at the workplace)	Qualitative/ranges (Likert scale 1-5)	2.2.3 The policy initiative <u>considerably contributed</u> to the development of a learning culture (i.e., promotion of lifelong learning at the workplace) for the (directly or indirectly) involved companies. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
2.2.4				2.2.4 Please provide any additional remarks regarding your answer to question 2.2.3 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
2.2.5	ii.3	Attractiveness on the labour market (i.e., employee retention rate and company's ability to find new employees)	Qualitative/ranges (Likert scale 1-5)	2.2.5 The policy initiative <u>considerably increased</u> the attractiveness on the labour market (i.e., employee retention rate and company's ability to find new employees) for the (directly or indirectly) involved companies. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
2.2.6				2.2.6 Please provide any additional remarks regarding your answer to question 2.2.5 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
2.3 Economy					
				<i>The current set of questions addresses the performance of the policy initiative at the level of the whole economy.</i>	
2.3.1	iii.1	Closing the skills supply and demand gap (i.e., scale of matching supply and demand such as nr of people trained and (re)integrated into the labour market)	Quantitative/ranges (Likert scale 1-5)	<p>2.3.1 What is the total number of people trained <i>and</i> (re)integrated into the labour market in the context of this policy initiative since its launch date?</p> <ul style="list-style-type: none"> • <10.000 people • Between 10.000 and 100.000 people • Between 100.000 and 500.000 people • Between 500.000 and 1.000.000 people • >1.000.000 people 	Single choice, compulsory
2.3.2			<p>2.3.2 Please provide any additional remarks regarding your answer to question 2.3.1 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i></p>		Open text, optional
2.3.3	iii.2	Contribution to the digitalisation of the economy	Qualitative/ranges (Likert scale 1-5)	<p><i>Please indicate to what extent you agree with the statements below.</i></p> <p>2.3.3. The policy initiative <u>considerably contributed</u> to the digitalisation of the economy (i.e., the initiative had an explicit focus on the digitalisation of work, it implied training digital⁶⁵ skills and/or promoted the use of digital technologies at the workplace).</p> <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory

⁶⁵ For more information on the digital skills please refer to the *DigComp Framework 2.2* at https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
2.3.4				2.3.4 Please provide any additional remarks regarding your answer to question 2.3.3 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
2.3.5	iii.3	Contribution to the greenification of the economy	Qualitative/ranges (Likert scale 1-5)	<p><i>Please indicate to what extent you agree with the statements below.</i></p> <p>2.3.5. The policy initiative <u>considerably contributed</u> to the greenification of the economy (i.e., the initiative had an explicit focus on the 'greenification' of work, it implied training green⁶⁶ skills and reducing negative impact on climate at the workplace).</p> <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
2.3.6				2.3.6 Please provide any additional remarks regarding your answer to question 2.3.5 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3 Key Performance Drivers					
3.1 Stakeholders					
				<i>The current set of questions addresses the drivers behind the success of the policy initiative at the level of specific stakeholder groups.</i>	
3.1.1	a.1	Role of policy makers	Qualitative/ranges (Likert scale 1-5)	3.1.1 What is the role of <u>policy makers</u> in the design, implementation, and evaluation of this policy initiative?	Single choice, compulsory

⁶⁶ For more information on the green skills please refer to the *GreenComp: The European Sustainability Competence Framework* at <https://publications.jrc.ec.europa.eu/repository/handle/JRC128040>

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
				<ul style="list-style-type: none"> No engagement at all Occasional support Active involvement Highly active involvement, but not leading Leading role 	
3.1.2				3.1.2 Please provide any additional remarks regarding your answer to question 3.1.1 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.1.3	a.2	Role of large companies	Qualitative/ranges (Likert scale 1-5)	3.1.3 What is the role of <u>large companies</u> in the design, implementation, and evaluation of this policy initiative? <ul style="list-style-type: none"> No engagement at all Occasional support Active involvement Highly active involvement, but not leading Leading role 	Single choice, compulsory
3.1.4				3.1.4 Please provide any additional remarks regarding your answer to question 3.1.3 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.1.5	a.3	Role of SMEs	Qualitative/ranges (Likert scale 1-5)	3.1.5 What is the role of <u>SMEs (Small and Medium-Sized Enterprises)</u> in the design, implementation, and evaluation of this policy initiative? <ul style="list-style-type: none"> No engagement at all Occasional support Active involvement Highly active involvement, but not leading Leading role 	Single choice, compulsory
3.1.6				3.1.6 Please provide any additional remarks regarding your answer to question 3.1.5 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following</i>	Open text, optional

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
				<i>format: [Name], [Organisation]: [Remark]</i>	
3.1.7	a.4	Role of education and training providers	Qualitative/ranges (Likert scale 1-5)	<p>3.1.7 What is the role of <u>education and training providers</u> in the design, implementation, and evaluation of this policy initiative?</p> <ul style="list-style-type: none"> • No engagement at all • Occasional support • Active involvement • Highly active involvement, but not leading • Leading role 	Single choice, compulsory
3.1.8				<p>3.1.8 Please provide any additional remarks regarding your answer to question 3.1.7 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i></p>	Open text, optional
3.1.9	a.5	Role of employment agencies, employer organisations, trade unions and other supporting structures	Qualitative/ranges (Likert scale 1-5)	<p>3.1.9 What is the role of <u>employment agencies, employer organisations, trade unions and other supporting structures</u> in the design, implementation, and evaluation of this policy initiative?</p> <ul style="list-style-type: none"> • No engagement at all • Occasional support • Active involvement • Highly active involvement, but not leading • Leading role 	Single choice, compulsory
3.1.10				<p>3.1.10 Please provide any additional remarks regarding your answer to question 3.1.9 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i></p>	Open text, optional
3.1.11	a.6	Interconnections within the learning ecosystem	Qualitative/ranges (Likert scale 1-5)	<p>3.1.11 To what extent are different stakeholder groups <u>interconnected</u> (i.e., systematically communicate with each other; have a joint interaction platform; have a joint vision and objectives) <u>within the learning ecosystem</u> in the context of this policy initiative?</p> <ul style="list-style-type: none"> • Not connected at all • Loosely connected (communication happens occasionally) • Well connected (communication happens regularly) 	Single choice, compulsory

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
				<ul style="list-style-type: none"> Highly connected, but do not act as a system (communication happens frequently, but no joint vision, objectives and actions) Highly connected and act as a system (i.e., joint vision, objectives and actions) 	
3.1.12				3.1.12 Please provide any additional remarks regarding your answer to question 3.1.11 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.2 Learners					
				<i>The current set of questions addresses the drivers behind the success of the policy initiative at the level of individual learners. Please indicate to what extent you agree with the statements below.</i>	
3.2.1	b.1	Opportunity to determine own learning path, including milestones for performance measurement	Qualitative/ranges (Likert scale 1-5)	3.2.1. The up- and/or reskilling activities in the context of this policy initiative offer the learners an opportunity to determine their <u>own learning path</u> , including milestones for performance measurement. <ul style="list-style-type: none"> Strongly disagree Disagree Neither agree or disagree Agree Strongly Agree 	Single choice, compulsory
3.2.2				3.2.2 Please provide any additional remarks regarding your answer to question 3.2.1 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.2.3	b.2	Career guidance and assistance with learning (including self-assessment opportunities)	Qualitative/ranges (Likert scale 1-5)	3.2.3. The up- and/or reskilling activities in the context of this policy initiative offer the learners <u>career guidance and assistance with learning</u> (including self-assessment opportunities). <ul style="list-style-type: none"> Strongly disagree Disagree Neither agree or disagree Agree 	Single choice, compulsory

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
				<ul style="list-style-type: none"> Strongly Agree 	
3.2.4				3.2.4 Please provide any additional remarks regarding your answer to question 3.2.3 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.2.5	b.3	Access to (digital) learning infrastructures including tools and trainers	Qualitative/ranges (Likert scale 1-5)	<p>3.2.5. The up- and/or reskilling activities in the context of this policy initiative offer the learners <u>access to the (digital) learning infrastructures including tools and trainers</u>.</p> <ul style="list-style-type: none"> Strongly disagree Disagree Neither agree or disagree Agree Strongly Agree 	Single choice, compulsory
3.2.6				3.2.6 Please provide any additional remarks regarding your answer to question 3.2.5 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.2.7	b.4	Recognition of learning	Qualitative/ranges (Likert scale 1-5)	<p>3.2.7. The up- and/or reskilling activities in the context of this policy initiative offer the learners appropriate <u>recognition</u> of their learning efforts (e.g., certificate, diploma, digital badge etc.).</p> <ul style="list-style-type: none"> Strongly disagree Disagree Neither agree or disagree Agree Strongly Agree 	Single choice, compulsory
3.2.8				3.2.8 Please provide any additional remarks regarding your answer to question 3.2.7 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
3.3 Funding					
				<i>The current set of questions addresses the drivers behind the success of the policy initiative at the level of different funding types. Please indicate to what extent you agree with the statements below.</i>	
3.3.1	c.1	Availability of funding to support SMEs	Quantitative/ranges (Likert scale 1-5)	<p>3.3.1 What is the role of funding of this policy initiative in <u>supporting SMEs</u> (Small and Medium-Sized enterprises) with their up- and reskilling initiatives?</p> <ul style="list-style-type: none"> • Highly unimportant/not applicable • Unimportant • Neutral • Important • Highly important 	
3.3.2				3.3.2 Please provide any additional remarks regarding your answer to question 3.3.1 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.3.3	c.2	Role of public funding (including micro-funding for learners)	Qualitative/ranges (Likert scale 1-5)	<p>3.3.3 What is the role of <u>public funding</u> (including potential micro-funding for learners) in the context of this policy initiative?</p> <ul style="list-style-type: none"> • Less than 5% of the total funding • Between 5% and 25% of the total funding • Between 25% and 50% of the total funding • Between 50% and 75% of the total funding • More than 75% of the total funding 	Single choice, compulsory
3.3.4				3.3.4 Please provide any additional remarks regarding your answer to question 3.3.3 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.3.5	c.3	Role of private funding	Quantitative/ranges (Likert scale 1-5)	<p>3.3.5 What is the role of <u>private funding</u> (i.e., funding coming from the private sector) in the context of this policy initiative?</p> <ul style="list-style-type: none"> • Less than 5% of the total funding 	Single choice, compulsory

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
				<ul style="list-style-type: none"> Between 5% and 25% of the total funding Between 25% and 50% of the total funding Between 50% and 75% of the total funding More than 75% of the total funding 	
3.3.6				3.3.6 Please provide any additional remarks regarding your answer to question 3.3.5 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.3.7	c.4	(Co-)funding by learners	Quantitative/ranges (Likert scale 1-5)	<p>3.3.7 What is the role of <u>(co-)funding by learners</u> (i.e., financial contributions by the learners themselves for the opportunity to engage in up- and reskilling) in the context of this policy initiative?</p> <ul style="list-style-type: none"> Less than 5% of the total funding Between 5% and 25% of the total funding Between 25% and 50% of the total funding Between 50% and 75% of the total funding More than 75% of the total funding 	Single choice, compulsory
3.3.8				3.3.8 Please provide any additional remarks regarding your answer to question 3.3.7 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.3.9	c.5	Sustainability of funding and alignment of different funding types	Qualitative/ranges (Likert scale 1-5)	<p>3.3.9 The funding available for this policy initiative can be considered <u>sustainable</u> (i.e., there is certainly regarding its continuity in time, with different funding types well aligned).</p> <ul style="list-style-type: none"> Strongly disagree Disagree Neither agree or disagree Agree Strongly Agree 	Single choice, compulsory
3.3.10				3.3.10 Please provide any additional remarks regarding your answer to question 3.3.9 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following</i>	Open text, optional

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
				<i>format: [Name], [Organisation]: [Remark]</i>	
3.4 Regulatory Framework					
				<i>The current set of questions addresses the drivers behind the success of the policy initiative at the level of the regulatory framework. Please indicate to what extent you agree with the statements below.</i>	
3.4.1	d.1	Integration into the overall skills strategy/agenda of the country/EU	Qualitative/ranges (Likert scale 1-5)	3.4.1 The policy initiative is well integrated into the overall <u>skills strategy</u> of the country. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
3.4.2				3.4.2 Please provide any additional remarks regarding your answer to question 3.4.1 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.4.3	d.2	Integration into the digital regulatory framework	Qualitative/ranges (Likert scale 1-5)	3.4.3 The policy initiative is well integrated into the overall <u>digital strategy</u> of the country. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
3.4.4				3.4.4 Please provide any additional remarks regarding your answer to question 3.4.3 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.4.5	d.3	Integration into the green	Qualitative/ranges	3.4.5 The policy initiative is well integrated into the overall <u>green strategy</u> of the	Single choice,

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
		regulatory framework	(Likert scale 1-5)	country. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	compulsory
3.4.6				3.4.6 Please provide any additional remarks regarding your answer to question 3.4.5 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.4.7	d.4	Awareness raising (i.e., promotion activities including dedicated marketing budgets) about the up- and reskilling policy initiative	Qualitative/ranges (Likert scale 1-5)	3.4.7 The policy initiative pays sufficient attention to the <u>awareness raising activities</u> (i.e., promotion activities including dedicated marketing budgets) to inform the target audience about the opportunities it offers. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory
3.4.8				3.4.8 Please provide any additional remarks regarding your answer to question 3.4.7 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
3.4.9	d.5	Availability of learning infrastructures including tools and trainers	Qualitative/ranges (Likert scale 1-5)	3.4.9 The policy initiative provides access to learners to the appropriate <u>learning infrastructure</u> including tools and trainers. <ul style="list-style-type: none"> • Strongly disagree • Disagree • Neither agree or disagree • Agree • Strongly Agree 	Single choice, compulsory

PACT FOR SKILLS ANALYSIS FINAL REPORT

Question nr	Indicator nr	Metric/indicator	Data type	Question and answer options	Question type
3.4.10				3.4.10 Please provide any additional remarks regarding your answer to question 3.4.9 in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional
4 Additional remarks					
4.1				4.1. Please provide any additional remarks in the text box below. <i>As different stakeholders may fill in the same survey, please indicate your name and organisation next to your remark in the following format: [Name], [Organisation]: [Remark]</i>	Open text, optional

Please click on "Submit" to submit the questionnaire. Thank you very much for your inputs!

Annex D: List of consulted stakeholders

Table D-1: List of consulted stakeholders who agreed to be disclosed

No	First and Last Name	Organisation	Country	Policy initiative title
1	Yang Huang	The World Bank Group	China	Guangdong Social Security Integration And Rural Worker Training Project
2	Anna Valouchová	Czechitas	Czech Republic	Czechitas New Generation
3	Andolene Hofmeyr	TechnoGirl Trust	South Africa	TechnoGirl
4	Mahlatshe Sithole	TechnoGirl Trust	South Africa	TechnoGirl
5	Staff Sithole	TechnoGirl Trust	South Africa	TechnoGirl
6	Naresh Kumar	HPKVN	India	Himachal Pradesh Skill Development Policy
7	Kaamna Jain	nasscom	India	futureskills prime
8	Sarah Watts-Rynard,	Polytechnics Canada	Canada	Polytechnics
9	Devon Blaskevitch	Polytechnics Canada	Canada	Polytechnics
10	Adrienne Madden	Canadian Colleges for a Resilient Recovery (C2R2)	Canada	Quick Train Canada - microcredentials
11	Noel Baldwin	Future Skills Centre	Canada	Future Skills Centre
12	Valerie Rousselin Somerville	Skillnet Ireland	Ireland	Skillnet Ireland
13	Kasia Pilat	Skillnet Ireland	Ireland	Skillnet Ireland
14	Dave Feenan	Technology Ireland ICT Skillnet	Ireland	Skillnet Ireland
15	Humberto Ferreira	IEFP, I.P. (Institute of Employment and Vocational Training, Public Institute).	Portugal	Emprego Mais Digital (More digital employment)
16	Antero Kevin Leedu	MTÜ (NGO) Tuleviku Tehnoloogiaharidus	Estonia	kood/Jõhvi
17	Veronika Pizano	Aj Ty v IT	Slovakia	Aj Ty v IT
18	Kristina Mazalin	Croatian Employment Service	Croatia	Grow Croatia with Google
19	Iva Ivankovic	Algebra University	Croatia	Grow Croatia with Google
20	Hrvoje Balen	Algebra University	Croatia	Grow Croatia with Google
21	Argyro Constantinou	Office of the Digital Champion of Cyprus - Permanent Secretary of the Deputy Ministry of Research Innovations and Digital Policy	Cyprus	Grow Digital CY (Digital Skills and Jobs Coalition Cyprus)
22	Katerina Solomou	Ministry of Energy, Commerce and Industry	Cyprus	Grow Digital CY (Digital Skills and Jobs Coalition Cyprus)
23	Odeta Kupetienė	Qualifications and Vocational Education and Training Development Centre.	Lithuania	Modularisation of formal VET curriculum
24	Lina Vaitkute	Qualifications and Vocational Education and Training Development Centre.	Lithuania	Modularisation of formal VET curriculum
25	Inga Balnanosienė	Lithuanian Employment Service	Lithuania	Lithuanian Employment Service
26	Graziella Caruana	Jobsplus – Public Employment Services	Malta	Jobsplus training services
27	Mariella Vella	Jobsplus – Public Employment Services	Malta	Jobsplus training services
28	Nicola Cini	Jobsplus – Public Employment Services	Malta	Jobsplus training services
29	MT Raphael Scerri	Jobsplus – Public Employment Services	Malta	Jobsplus training services
30	Andra Tanase	Transylvania IT Cluster	Romania	Transylvania IT Cluster
31	Rachid Hourizi	institute of coding	UK	institute of coding
32	Tim Rainey	California Workforce Development Board	US California	High Road Training Partnerships
33	Rebecca Hanson	Shirley Ware Education Center,	US California	High Road Training Partnerships
34	Adine Forman	LA Hospitality Training Academy	US California	High Road Training Partnerships
35	Timothy Theberge	Department of Labor, Employment & Training Administration	US	Trade Adjustment Assistance for Workers

No	First and Last Name	Organisation	Country	Policy initiative title
36	Robert Hoekstra	Department of Labor. Employment & Training Administration	US	Trade Adjustment Assistance for Workers
37	Susan Worden	Department of Labor. Employment & Training Administration	US	Trade Adjustment Assistance for Workers
38	Dana Politis	NYSDOL	US - NY	Online Learning from Your DOL: NY State
39	Pamela Miller	NYSDOL	US - NY	Online Learning from Your DOL: NY State
40	Christopher Myers	NYSDOL	US - NY	Online Learning from Your DOL: NY State
41	George Christopoulos	DYPA - Greek Public Employment Services	Greece	Upskilling and reskilling in In-Demand Industries with a focus on Digital and Green Skills
42	Daniel Rodenburg	Ministry of Social Affairs and Employment	The Netherlands	(SLIM) Stimuleringsregeling voor leren en ontwikkelen in mkb-ondernemingen en specifiek voor grootbedrijven in de landbouw-, horeca- of recreatiesector
43	Astrid Bottenberg	Ministry of Social Affairs and Employment	The Netherlands	(SLIM) Stimuleringsregeling voor leren en ontwikkelen in mkb-ondernemingen en specifiek voor grootbedrijven in de landbouw-, horeca- of recreatiesector
44	Leonie Hazelhorst	Platform talent voor Technologie	The Netherlands	(SLIM) Stimuleringsregeling voor leren en ontwikkelen in mkb-ondernemingen en specifiek voor grootbedrijven in de landbouw-, horeca- of recreatiesector
45	Monika Łyk	Polska Agencja Rozwoju Przedsiębiorczości, Departament Rozwoju Kadr w Przedsiębiorstwach	Poland	Competences for sectors - offer for entrepreneurs [Kompetencje dla sektorów - oferta dla przedsiębiorców]
46	Paulina Zadura	Polska Agencja Rozwoju Przedsiębiorczości, Departament Analiz i Strategii	Poland	Competences for sectors - offer for entrepreneurs [Kompetencje dla sektorów - oferta dla przedsiębiorców]
47	Jaakko Hyytiä	Helsinki Vocational College and Adult Institute - Virittäjä	Finland	Digitalents Helsinki
48	Tapani Martti	Metropolia UAS	Finland	Digitalents Helsinki
49	Alissa Eschholz	German Economic Institute	Germany	NETWORK Q 4.0 - Network for the training of vocational training staff in the digital transformation
50	Dr. Christoph Metzler	German Economic Institute	Germany	NETWORK Q 4.0 - Network for the training of vocational training staff in the digital transformation
51	Marco Donner	ÖSB consulting	Austria	Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security
52	Christian Mayer	Business Upper Austria	Austria	Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security
53	Martin Steinbichl	Land Oberösterreich	Austria	Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security
54	Markus Litzlbauer	Arbeitsmarktservice Oberösterreich	Austria	Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security
55	Walter Reitbauer	Arbeitsmarktservice Oberösterreich	Austria	Qualifizierungsverbund Oberösterreich Digitale Kompetenz & IT Security
56	Ulrike Domany-Funtan	Association fit4internet	Austria	fit4internet
57	Heike Leimbach	Federal Ministry of Finance	Austria	fit4internet
58	Thomas Narosy	tn-bildungsinnovation e.U.	Austria	fit4internet
59	Christophe BONDROIT	IFAPME	Belgium	Fonds sectoriels de formation
60	Gauthier De Vos	embuild (THE BELGIAN CONSTRUCTION ASSOCIATION)	Belgium	Fonds sectoriels de formation
61	Spaska Tarandova	Global Libraries - Bulgaria Foundation	Bulgaria	Digital skills for Bulgarian SME's
62	Torsten Asmund Sørensen	Danish Agency for Higher Education and Science	Denmark	"Omstillingsfonden" ("Transition Fund")
63	Kenneth Lehm Nordestgaard	Green Skills	Denmark	Green Skills
64	Christian	Rybners	Denmark	Green Skills
65	Martin Dunlap Svane	Rybners	Denmark	Green Skills
66	Lucia Scopelliti	Municipality Of Milan	Italy	DEVELOP DIGITAL SKILLS under Patto per il Lavoro / Pact for labour

No	First and Last Name	Organisation	Country	Policy initiative title
67	Raffaele Vitulli	President of Basilicata Creativa	Italy 2	House of emerging technologies
68	Camilla Santoro	Support/advisor of Basilicata Creativa	Italy 2	House of emerging technologies
69	Leonardo Rubino	Co-project manager of Municipality of Matera	Italy 2	House of emerging technologies
70	Muneaki Goto	Japan Reskilling Initiative	Japan	Hiroshima Prefecture Reskilling Initiative
71	Katja Mohar Bastar	DIH Slovenia	Slovenia	Digital Knowledge for the Jobs of the Future
72	Nenad Šutanovac	Chamber of Commerce and Industry of Slovenia	Slovenia	Digital coalition of Slovenia - Digitalna Slovenija
73	Ana Pejić	DIH Slovenia	Slovenia	Digital coalition of Slovenia - Digitalna Slovenija
74	Ana Millán	Fundación Accenture	Spain	Digitalízate
75	Carmen Prieto	FUNDAE	Spain	Digitalízate
76	Bengt-Göran Rosen	Halmstad University	Sweden	Ingenjör4.0
77	Tero Stjernstoft	Vinnova	Sweden	Ingenjör4.0
78	Johan Stahre	Chalmers University	Sweden	Ingenjör4.0
79	Min-Seon Park	Program Specialist, National Institute for Lifelong Education (NILE)	South Korea	Partnership between K-MOOC, the National Institute for Lifelong Education and Coursera
80	Jong Oh PARK	Executive Director for K-MOOC division, National Institute for Lifelong Education (NILE)	South Korea	Partnership between K-MOOC, the National Institute for Lifelong Education and Coursera
81	Ines Baer	Agence pour le développement de l'emploi (ADEM)	Luxembourg	Future Skills Initiative
82	Clement Vincette	Luxembourg House of Training	Luxembourg	Future Skills Initiative

Annex E: Workshops 1 and 2 : Summaries and participants

E-1: Workshop 1 summary and participants

Call for tenders EISMEA/2022/OP/0004

Pact for Skills: Analysing of up- and reskilling initiatives and identifying best practices

Workshop 1 (hybrid) Co-designing benchmarking methodology for up- and reskilling initiatives

14/03/2023 10.00-16.00h (including dinner 16.30 – 17.30h)

Thon Hotel EU, Rue de la Loi 75, 1000 Bruxelles, Belgium

Workshop 1 Summary and participants

This document provides a summary of the points discussed during the first stakeholder workshop.

The workshop aimed to engage the relevant stakeholders in co-designing/validating the Key Performance Indicators (KPIs) to be included in the benchmarking framework. The workshop participants were offered a detailed benchmarking methodology for their feedback and validation, and specifically for collecting their practical insights and experiences.

How can we best measure the impact of up- and reskilling initiatives? What are the key factors influencing the impact of up- and reskilling initiatives? Which (combinations of) building blocks allow for creating the most impactful up- and reskilling initiatives? These are examples of questions that form part of the benchmarking methodology for this study and that were addressed at the workshop.

The workshop was aimed at the representatives of all the key stakeholder groups actively involved in up- and reskilling, and specifically at the EU and national policy makers, businesses, supporting structures (e.g., industry associations, trade unions, round tables, network organisations, etc.), academia, and vocational and educational training providers. It took place in a hybrid form, with 27 participants in total, from both EU and non-EU countries. 13 participants joined the workshop physically, and the other 14 in a virtual form.

The agenda of the workshop included the following sessions:

1. Workshop opening and introduction of participants
2. Setting the scene: presentation of workshop context and objectives
3. Co-design session for Key Performance Metrics
4. Co-design session for Key Performance Drivers
5. Validation of and feedback on the overall benchmarking framework
6. Conclusions and next steps
7. Workshop closure

Annex to E-1 provides an overview of the workshop participants (both physical and virtual).

1 Workshop opening and introduction of participants

The project team opened the workshop by welcoming all the participants and introducing the title and the agenda of the workshop. The workshop participants were then invited to briefly present themselves.

2 Setting the scene: presentation of workshop context and objectives

The project team proceeded by presenting the workshop context and objectives.

The current workshop took place in the context of the Pact for Skills Analysis study, commissioned by the European Innovation Council and SMEs Executive Agency (EISMEA) to the consortium of PwC EU Services (PwC) and CONSULTORES DE AUTOMATIZACIÓN Y ROBÓTICA S.A. (CARSA). The general objective of the study is to identify the main building blocks of successful up- and reskilling policy actions, and to understand which building blocks can best enable the achievement of the envisaged result.

In total, two full-day hybrid workshops need to be organised in the context of this study. This first workshop was linked to the specific objective of developing a benchmarking methodology for up- and reskilling initiatives. The latter implies conducting an in-depth analysis of success and failure factors and proposing recommendations for designing future up- and reskilling initiatives.

The workshop aimed to provide an interactive setting for exchanging opinions, testing ideas, and co-creating the final methodology solution. The main objective of the workshop was to make sure the final benchmarking methodology is well aligned with the practical observations from the field and optimally meets stakeholders needs and expectations.

The project team presented the draft benchmarking framework, specifically highlighting the difference between the Key Performance Metrics (performance/impact-related indicators) and the Key Performance Drivers (enabling factors leading to the desired performance/impact). The objective of this session was to introduce the workshop participants to the overall approach and benchmarking framework, in order to then look in detail into each of the specific elements of the framework in the subsequent sessions.

3 Co-design session for Key Performance Metrics

The workshop participants were invited to provide their feedback on the proposed indicators for the Key Performance Metrics. The key inputs included the following:

- The focus of the indicators should go beyond the ‘traditional’ economic indicators such as employment growth or nr of people trained. Instead, there is a need to look at the personal wellbeing and the company wellbeing.
- *Personal wellbeing* refers to the indicators such as motivation to work/job satisfaction, self-efficacy, motivation to learn (including the notion of lifelong learning), increase in the quality of skills (i.e., skills mastery) in general, level of mastery of specific skills (e.g., digital, entrepreneurial, etc.), job security, ethics, and job promotion. Personal wellbeing-related indicators allow putting individual to the centre of the analysis, which would be crucial given a central role of individuals in the process of up- and reskilling.
 - Specifically, the level of mastery of digital skills was mentioned as a key priority indicator.
 - Recognition of (informal) learning was mentioned as one of the key factors influencing the individual’s decision to engage in learning activities (including digital badges, microcredentials etc.). Some of those learning activities can serve *short-term* goals.
 - Cost-effectiveness-related indicators should be approached with caution, as those do not address the quality-related side of the up- and reskilling activities.
 - The entrepreneurship competence (defined in a broader sense in line with the competences of the EntreComp Framework⁶⁷) was suggested to be crucial for the ability of the learners to be successful on the labour market. It refers to a broad set of skills including, among others, creativity and vision, spotting opportunities, ethical and sustainable thinking, taking action, and mobilising resources.
 - Emotional intelligence: KPIs could include self-assessment scores on emotional intelligence assessments or peer evaluations of emotional intelligence in the workplace. Data could be collected through surveys or assessments.
 - Creativity: KPIs could include number of new ideas generated or successful implementation of creative solutions to problems. Data could be collected through tracking of idea generation sessions or project outcomes.
 - Healthy habits: KPIs could include number of employees engaging in healthy habits such as regular exercise or healthy eating. Data could be collected through self-report surveys or wearable technology tracking.
 - Metacognition: KPIs could include self-assessment scores on metacognitive assessments or performance improvements based on metacognitive strategies. Data could be collected through assessments or pre- and post-training evaluations.
 - Reflection: KPIs could include frequency of self-reflection or demonstration of reflection skills in performance evaluations. Data could be collected through self-report surveys or performance evaluations.
- *Company wellbeing* refers to the presence of a learning culture (i.e., promotion of lifelong learning at the workplace), employee retention rate, presence of a long-term vision,

⁶⁷ <https://ec.europa.eu/social/main.jsp?catId=1317&langId=en>

company's access to talent (or nr of vacancies that still need to be filled in), level of employee's engagement. Company wellbeing-related indicators are crucial for measuring to what extent their current approaches towards up- and reskilling are sustainable and long-term oriented.

- At the level of the *whole economy* (regional, national, and international), skills-related competitiveness level can be used as a performance indicator. Another potentially relevant indicator could refer to the level of connections with the learning and industrial ecosystems.
 - To what extent is industry connected to the education and training providers / to what extent are they acting in a team?
 - The demand of companies can be met only if the educational system has the capacity to address this demand. There is a need to teach the teachers.
 - To survive, companies need to work together, and to be connected in an ecosystem.
- Special attention needs to be paid to the reintegration of elderly people into the labour market. It was emphasised that while specific initiatives may help elderly people to get reskilled, in many countries, employers still find it unattractive to hire them afterwards. The latter is related to the fact that national regulations require the employers to apply much higher salary rates for workers representing older age categories. This fact makes the (older) reskilled workers less attractive than the younger ones, and it jeopardises the success of the related reskilling initiatives.
- Green transition is one of the top priorities of the European Commission, and the related indicators need to be included into the benchmarking framework.

4 Co-design session for Key Performance Drivers

The workshop participants were invited to provide their feedback on the proposed indicators for the Key Performance Drivers. The key inputs included the following:

- Awareness raising (i.e., promotion activities including dedicated marketing budgets) about the up- and reskilling initiatives was suggested to be crucial for their success.
- The availability of funding in general, and of the micro-funding for learners in particular (typically provided by the government), was mentioned as a key success factor for up- and reskilling initiatives.
 - Different funding types need to be aligned to increase their effectiveness.
 - Special attention needs to be paid to supporting SMEs (Small and Medium-sized Enterprises) when it comes to funding up- and reskilling activities. Smaller firms often cannot afford sending employees to an external training or inviting a specialised trainer because it is highly costly for them.
 - Sustainability of funding was mentioned as being particularly crucial.
 - Co-funding by learners was suggested to increase the motivation for learners to finish the training course.
- Whether the learning activities need to be trained in a mandatory or voluntary form is likely to depend on the context, type of skills and the nature of individuals. To this end, any general conclusions regarding the preferred format need to be made with caution. It was suggested that flexibility of learning within a defined timeframe could be an effective approach for most individuals.

- The presence of individual learning plans was also mentioned as a potential success factor. Career guidance and assistance with learning (including self-assessment opportunities) were mentioned as crucial enabling factors for learning as well.
- Digital infrastructures including the tools and trainers with sufficient digital skills are needed to facilitate transferability and increase learning and professional opportunities were suggested to be important. This includes modernising work environments that prioritise performance data and incorporating augmented reality and embedded intelligence in some workplaces to allow for upskilling while working.
- When it comes to the regulatory framework, cross-border collaboration was mentioned as being highly beneficial for the success of the initiatives. Additionally, the alignment of a specific policy initiative with the overall skills strategy is expected to considerably increase the chance of success of that initiative.
- The continuity of policies was suggested to be fundamental for long-term effects.
- A prominent/leading role of policy makers in launching, funding, and coordinating the up- and reskilling initiatives was suggested to be one of the determinants of success. Policy makers, universities, VET providers and companies need to work hand in hand. Companies can identify the required skills for their specific sector; universities together with VET can draft a sectorial curriculum programme for teaching and training those skills; while policy makers can promote and impact the implementation of the curriculum programme.
- The integration into the digital and green regulatory frameworks needs to be kept on the list, as digital and green skills become increasingly relevant, and their role is expected to grow even further in the years to come. However, first there is a need to identify the specific green and digital skills needed for each industrial sector, then to identify the professional profiles and to develop sector-specific training courses.
- The up- and reskilling of policy and business leaders was mentioned as being of fundamental importance to achieve the paradigm shift and to move from the focus on traditional growth and economic wealth-related indicators towards personal, company and country wellbeing and sustainable skills economy.
- Indicators should be designed to allow for flexibility in assessing the Pact for skills in different contexts. Furthermore, specific indicators could be included to assess the contribution of the regional as well as sectoral pacts for skills.
- Drivers will most likely vary considerably according to the type of re/upskilling initiative.

5 Validation of and feedback on the overall benchmarking framework

The project team proceeded by presenting the options for the visualisation of the results of the benchmarking exercise. The purpose of the visualisation will be to make the results easily understandable and user-friendly. The results will be included in the Final Report that aims to be publicly accessible.

Since the sample for the analysis can be considered relatively small (50 initiatives in total), while the detail of the analysis aims to be high, the project team addressed the associated methodological considerations. Specifically, the limitations of the proposed approach for the statistical analysis (Partial Least Squares Regression) were briefly addressed.

6 Conclusions and next steps

The project team briefly summarised the key outputs of the workshop.

There is a need to reconsider the 'traditional' approach of focusing on the economic performance of the up- and reskilling initiatives. Specifically, it is important to keep in mind personal well-being (i.e., well-being, motivation, and job security of learners), and the well-being of companies (i.e., company culture and employee retention, ethical aspects, lifelong learning culture). Rather than looking exclusively at the numerical performance indicators (e.g., nr of people trained), it is also crucial to understand the impact of initiatives on the quality of skills.

The overall approach presented by the project team, including the proposed statistical analysis method and the visualisation options, was concluded to be appropriate for the purpose. The potential challenges associated with finding the relevant data were highlighted throughout the workshop. These will be addressed by the project team when fine-tuning the sources for collecting the data, identifying the relevant stakeholders and particularly when formulating the survey and interview questions.

When fine-tuning the benchmarking framework, the project team will aim at accommodating the needs and priorities of all key stakeholder groups. At the same time, the framework will need to focus on the key priorities, and not all relevant indicators can thus be included into it.

Once fine-tuned and approved by EISMEA/Commission, the benchmarking framework will be translated into the survey questionnaire and interview questions, to enable data collection activities on 50 initiatives from the sample. The collected data will then be used for measuring the hypothesised relationships between the Metrics and the Drivers. In addition to the statistical test, qualitative analysis will also be performed, to accompany the statistical findings. The outputs of the analysis will be used for drafting policy recommendations. The latter are aimed at both policy makers to design future actions, and the participating stakeholders themselves (businesses, education and training providers, etc.) to better estimate the costs, benefits, and timeframes needed for implementing up- and reskilling actions.

7 Workshop closure

The project team thanked all the participants for their valuable contributions and provided an update on the timeline of the study.

The next workshop is planned for the end of September 2023, and it will have a validation purpose for the results of the benchmarking analysis and draft policy recommendations. The study is scheduled to finish in December 2023, and the outcomes of the study are expected to be published on Europa Portal in January 2024. The project team will keep the workshop participants informed about the progress and aim at engaging them in the related future activities.

Annex to E-1: Workshop 1 participants

no.	Name	Position	Organisation	Country
Physical participation				
1	Andrei Bunis	Policy officer	DG GROW, European Commission	Belgium/EU
2	Miguel Fernandez Diez	Policy officer	DG EMPL, European Commission	Belgium/EU
3	Joanna Pruszyńska-Witkowska	Co-founder & VP Future Collars	Future Collars	Poland
4	Olha Hunchak	Policy and Projects Officer	CECIMO (European Association of the Machine Tool Industries and related Manufacturing Technologies)	Belgium
5	Ondrej Cejka	CEO	Czechitas z.ú.	Czech Republic
6	Diem Tran	Project Communications Manager	DIGITALEUROPE	Belgium
7	Martin Vitek	President	Asociace podnikavé Česko	Czech Republic
8	Thierry Lescrauwaet	Co-Founder	Digital Skills & Jobs Platform Belgium	Belgium
9	Stefano Selleri	Project Officer	European Commission - DG CONNECT	Belgium
10	John Edwards	Secretary-General	EURASHE (European Association of Institutions in Higher Education)	Belgium
11	Anna Taimr	Trainee	DG GROW – European Commission	Belgium/EU
12	Kristina Dervojeda	Senior Manager	PwC	The Netherlands
13	Melanie Jong	Senior Associate	PwC	The Netherlands
Virtual participation				
14	Artur Benedyktowicz	Policy officer	EISMEA	Belgium
15	Anna Valouchova	Impact Evaluation Specialist	Czechitas z.ú.	Czech Republic
16	Stefan Humpl	Co-founder 3S Research & Consulting	3s (Research & Consulting for Lifelong Learning)	Austria
17	Eman M Alyami	Assistant Professor	Saudi Electronic University	Saudi Arabia
18	Tonya Amankwatia	Asst. Vice Provost Distance Education and Extended Learning	North Carolina Agricultural and Technical State University	United States
19	Saskia van Uffelen	Expert Be The Change	Agoria (belgian employers' organisation)	Belgium
20	Anna Zaremba	Policy Officer	DG REFORM	Belgium
21	Željko Pazin	Executive Director	EFFRA (European Factories of the Future Research Association)	Belgium

no.	Name	Position	Organisation	Country
22	Julia Mühlhausen	Senior Associate	PwC	Germany
23	Fabio Rougier	Associate	PwC	Germany
24	Flora Slager	Senior Associate	PwC	The Netherlands
25	Lotte van Dongen	Associate	PwC	The Netherlands
26	Mariana Helysh	Associate	PwC	Poland
27	Stephanie Jüstel	Consulting manager	CARSA	Spain

E-2: Workshop 2 summary and participants

Call for tenders EISMEA/2022/OP/0004

Pact for Skills: Analysing of up- and reskilling initiatives and identifying best practices

Workshop 2 (hybrid) Benchmarking results for up- and reskilling initiatives and policy recommendations

26/09/2023 10.00-16.00h (including dinner 16.30 – 17.30h)

Thon Hotel EU, Rue de la Loi 75, 1000 Bruxelles, Belgium

Workshop summary and participants

This document provides a summary of the points discussed during the second stakeholder workshop (W2). W2 took place in the context of the Pact for Skills Analysis study, commissioned by the European Innovation Council and SMEs Executive Agency (EISMEA) to the consortium of PwC EU Services (PwC) and CONSULTORES DE AUTOMATIZACIÓN Y ROBÓTICA S.A. (CARSA). The general objective of the study is to identify the main building blocks of successful up- and reskilling policy actions, and to understand which building blocks can best enable the achievement of the envisaged result.

W2 aimed to engage the relevant stakeholders in validating the results of the preliminary analysis including the global benchmarking exercise, the key success factors, and the corresponding policy recommendations for all key stakeholder groups. The workshop participants were offered a detailed overview of the results for their feedback and validation, and specifically for collecting their practical insights and experiences. How do the analysed up- and reskilling initiatives compare with each other in terms of their performance at the individual, company, and economy levels? What are the key factors influencing the impact of up- and reskilling initiatives? Which (combinations of) building blocks allow for creating the most impactful up- and reskilling initiatives? What are the roles of specific stakeholder groups in maximising the success of up- and reskilling initiatives? These are examples of questions that need to be covered by the analysis performed by the project team and that were addressed at W2.

W2 provided an interactive setting for exchanging opinions, checking solutions, and fine-tuning the research outcomes. The main objective of W2 was to make sure the final analysis and policy recommendations are well aligned with the practical experiences from the field and optimally meet stakeholder needs and expectations. The workshop thus offered an opportunity to get a unique insight into the latest study results and to provide practice-based inputs and opinions for further

advancement of the analysis. The outcomes of the workshop will be taken onboard for fine-tuning the analysis and for developing the Final Report containing the benchmarking exercise and the corresponding policy recommendations.

W2 was aimed at the representatives of the key stakeholder groups actively involved in up- and reskilling, and specifically at the EU and national policy makers, companies, supporting structures (e.g., industry associations, trade unions, round tables, network organisations etc.), academia, and vocational and educational training providers. The workshop took place in a hybrid form, with 35 participants in total from both EU and non-EU countries. 14 participants joined the workshop physically, and the other 21 in a virtual form.

The agenda of the workshop included the following sessions:

8. Workshop opening and introduction of participants
9. Setting the scene: presentation of workshop context and objectives
10. Results of the global benchmarking exercise for up- and reskilling initiatives
11. Key success factors for up- and reskilling initiatives
12. Policy recommendations
13. Conclusions and next steps
14. Workshop closure

Annex to E-2 provides an overview of the workshop participants (both physical and virtual).

1 Workshop opening and introduction of participants

The project team opened the workshop by welcoming all the participants and introducing the title and the agenda of the workshop. The workshop participants were then invited to briefly present themselves.

2 Setting the scene: presentation of workshop context and objectives

The project team proceeded by presenting the workshop context and objectives.

In total, two full-day hybrid workshops needed to be organised in the context of this study. The first workshop (W1) was held in Brussels on 14 March 2023. W1 implied co-developing a benchmarking methodology for up- and reskilling initiatives and obtaining stakeholder validation for both the conceptual framework and the specific Key Performance Indicators (KPIs) to be included in the analysis.

When selecting the relevant KPIs, it was crucial to distinguish between Key Performance Metrics and Key Performance Drivers. Key Performance Metrics refer to the actual performance of initiatives (i.e., the impact that has been created). Key performance drivers, in turn, refer to the factors that determine/influence this performance (i.e., key success factors in case they have a positive impact and key failure factors in case their impact is negative). Key Performance Metrics represent dependent variables, and Key Performance Drivers represent independent variables for the analysis. The benchmarking framework needed to contain both sets of variables with an objective to explore their relationship, thus allowing to extract the necessary conclusions. The suggested benchmarking

framework was presented in detail at W1. The audience of W1 consisted of the representatives of different key stakeholder groups including policy makers, companies, education & training providers and supporting structures (e.g., industry associations) from both EU and non-EU countries.

During W1, it was concluded that the focus of performance-related indicators for specific initiatives should go beyond the 'traditional' economic indicators such as employment growth or the number of people trained. Instead, there is a need to also look at the personal wellbeing and the company wellbeing. Personal wellbeing refers to the indicators such as, for example, motivation to work/job satisfaction, self-efficacy, motivation to learn (including the notion of lifelong learning), increase in the quality of skills (i.e., skills mastery) in general, level of mastery of specific skills (e.g., digital, entrepreneurial, etc.), job security, ethics, and job promotion. Personal wellbeing-related indicators allow putting individual to the centre of the analysis, which would be crucial given a central role of individuals in the process of up- and reskilling. Company wellbeing, in turn, refers to the presence of a learning culture (i.e., the promotion of lifelong learning at the workplace), employee retention rate, the presence of a long-term vision, company's access to talent (or nr of vacancies that still need to be filled in), level of employee's engagement etc. Company wellbeing-related indicators were suggested to be crucial for measuring to what extent their current approaches towards up- and reskilling are sustainable and long-term oriented.

With regard to the Key Performance Drivers *or* factors enabling the performance of specific initiatives, it was concluded that awareness raising (i.e., promotion activities including dedicated marketing budgets) about the up- and reskilling initiatives could be crucial for their success. The availability of funding in general, and of the micro-funding for learners (typically provided by the government), was also mentioned as a key success factor for up- and reskilling initiatives. Special attention needs to be paid to supporting SMEs (Small and Medium-sized Enterprises) when it comes to funding up- and reskilling activities. Smaller firms often cannot afford sending employees to an external training or inviting a specialised trainer because it is highly costly for them. The sustainability of funding was mentioned as being particularly crucial. Digital infrastructures including the tools and trainers with sufficient digital skills are needed to facilitate transferability and increase learning and professional opportunities were suggested to be important. Additionally, the alignment of a specific policy initiative with the overall skills strategy is expected to considerably increase the chance of success of that initiative.

After collecting stakeholder inputs during W1, the project team upgraded the benchmarking framework, and then the data collection activities were launched for up- and reskilling initiatives spread across 36 EU and non-EU countries. The data collection took place by means of an extensive online survey accompanied by in-depth stakeholder interviews and desk-research, followed by stakeholder validation. In total, the data on 44 individual initiatives was collected by means of desk-research, a dedicated online survey and accompanying in-depth interviews. The obtained data was then systemised and processed to perform a dedicated benchmarking exercise. The latter implies performing comparisons between the initiatives in the sample in terms of both their performance and the factors enabling that performance, and deriving corresponding practical conclusions and policy recommendations. The recommendations primarily aim to serve as inputs for future policy making. At the same time, the project team aims to address not only the role of policy makers, but

also all other relevant key stakeholder groups including companies (both large and SMEs); education & training providers; as well as supporting structures and learners themselves.

3 Results of the global benchmarking exercise for up- and reskilling initiatives

The global benchmarking exercise implies comparing the analysed EU and non-EU initiatives based on various components of the benchmarking framework, namely:

- Total Average Key Performance Metrics;
- Average Key Performance Metrics Dimension I: Individual;
- Average Key Performance Metrics Dimension II: Company;
- Average Key Performance Metrics Dimension III: Economy;
- Total Average Key Performance Drivers; *and*
- Average Key Performance Metrics vs. Average Key Performance Drivers.

The benchmarking exercise included all 44 initiatives from the sample, and the results present top 10 countries per framework component. All initiatives participating in the analysis can be considered as good practice examples, and only the best 10 are displayed per benchmarking component, to minimise the risk of ‘blaming & shaming’ approach for those with the lowest scores. The objective of this exercise is to identify the best of the best, and to further explore the underlying reasons of their success.

Benchmarking based on the Total Average Key Performance Metrics implied comparing the initiatives based on the average across all performance indicators from the model. The leading initiatives here included, among others, Skillnet Ireland (Ireland), Digitalízate (Spain), and FutureSkills Prime (India). Similar results were observed when performing benchmarking based on the Average Key Performance Metrics Dimension 1: Individual. In case of Average Key Performance Metrics Dimension 2: Company, besides Skillnet Ireland (Ireland) and Digitalízate (Spain), several other initiatives with the highest scores included High Road Training Partnership (USA), SkillsFuture Movement driven by SkillsFuture Singapore (SSG) (Singapore), Digital Skills for Bulgarian SMEs (Bulgaria), and TechnoGirl (South Africa).

For Average Key Performance Metrics Dimension III: Economy, the leaders included Skillnet Ireland (Ireland), Digitalízate (Spain), and FutureSkills Prime (India), together with Training Aid / FNE-Formation (France). In case of Total Average Key Performance Drivers (or factors enabling the performance of the analysed initiatives), the leading initiatives included Skillnet Ireland (Ireland), Digitalízate (Spain), High Road Training Partnership (USA), SkillsFuture Movement driven by SkillsFuture Singapore (SSG) (Singapore) and Hiroshima Prefecture Reskilling Initiative (Japan).

Finally, plotting Average Key Performance Metrics vs. Average Key Performance Drivers showed that multiple initiatives from the sample scoring high on performance have relatively low scores on performance drivers (enabling factors). It suggests that the factors included in the benchmarking framework are likely to be not the only (key) predictors of performance, and that there is a need to explore in detail the collected qualitative data to identify other possible predictors.

The workshop participants were invited to provide their feedback on the presented results. The key inputs included the following:

- The duration of initiatives may have impact on their performance, and it would be important to control for that.
- The project team could consider applying weights to the model and explore the weighted results for both drivers and metrics.
- The project team needs to check how many of the analysed initiatives explicitly focus on digital skills, as that may create a bias towards 'digital' in the sample.
- The role of intrinsic motivation of learners should not be overlooked, in line with the approach of the project team.
- Multiple initiatives from the sample confirm an increasing focus on greenification, the trend that has been confirmed by both the EU and non-EU participants.

4 Key success factors for up- and reskilling initiatives

The project team emphasised that due to the aim to ensure a full country coverage of the compulsory sample (including countries like China, Japan, and South Korea), there was a need to extend the duration of the data collection activities for two more weeks. As a result, the data analysis activities had to start later than initially planned, leading to the fact that the PLS analysis (actual relationships between the components in the model) will only be available later in the process. At the moment of W2, only the correlations overview could be shared, with some hypotheses that still need to be checked by the actual PLS analysis. **The correlations and the associated hypotheses should therefore by no means be treated as conclusions**, and those serve only as illustrations of the first step of the analysis and as an indication for specific directions to explore.

Some of the strongest positive correlations so far included the following (*preliminary findings*):

- b.1 <-> i.3 Opportunity to determine own learning path <-> Motivation to work and to continue learning (lifelong learning);
- c.5 <-> i.1 Sustainability of funding <-> Level of mastery of specific skills;
- d.2 <-> i.1 Integration into the digital regulatory framework <-> Level of mastery of specific skills (individual);
- d.5 <-> i.2 Availability of learning infrastructures <-> Attractiveness for the labour market (individual);
- d.2 <-> ii.1 Integration into the digital regulatory framework <-> Development of a long-term company vision for skills;
- d.2 <-> iii.2 Integration into the digital regulatory framework <-> Contribution to the digitalisation of the economy;
- d.3 <-> iii.3 Integration into the green regulatory framework <-> Contribution to the greenification of the economy.

Some of the strongest negative correlations so far included the following (*preliminary findings*):

- c.2 <-> i.1 Role of public funding <-> Level of mastery of specific skills (individual)
- c.2 <-> i.2 Role of public funding <-> Attractiveness for the labour market (individual);
- d.3 <-> i.2 Integration into the green regulatory framework <-> Attractiveness for the labour market (individual);

- c.2 <-> ii.3 Role of public funding <-> Company attractiveness on the labour market;
- c.3 <-> iii.1 Role of private funding <-> closing the skills supply and demand gap in terms of nr of trained and reintegrated people;
- c.4 <-> iii.2 (Co-)funding by learners <-> Contribution to the digitalisation of the economy;
- c.3 <-> iii.3 Role of private funding <-> Contribution to the greenification of the economy -> privately funded initiatives are less oriented towards greenification.

The project team will further explore the potential underlying reasons for these correlations and perform an in-depth PLS analysis of the actual relationships.

In addition, illustrations from insights from multiple specific initiatives were provided regarding the examples of Key Performance Drivers, accompanied by the overall global status quo analysis of up- and reskilling initiatives for illustrating the background of the analysed sample.

The workshop participants were invited to provide their feedback on the presented (preliminary) results. The key inputs included the following:

- Caution was expressed due to the preliminary nature of results. Correlations presented may cover some underlying relevant elements still to be factored in.
- Internal trainings may have better results than paid external training. For internal training, people learn from peers, remain closer to peers asking them questions, thus learning more effectively. It may be less dependent on the type of funding.
- Additional research is needed to explore the relationship between private funding, the involvement of the private sector and company motivations on the one hand and company attractiveness on the labour market on the other hand, as well as with the focus on greenification.
- There is a need to align the needs of individuals and companies to ensure a win-win situation; short-terms needs need to be combined with long-term orientations.
- Previous experiences and the level of qualification of individuals is likely to have impact on their willingness to engage in up- and reskilling and their level of skill mastery.
- Due to a high diversity in the sample, clustering per type of initiative may be helpful to identify specific patterns. Specific combinations of success factors may differ depending on the context. The education system is an important element of context for such clustering.
- It could be valuable to explore the motivation of companies to engage in up- and reskilling programmes.

5 Policy recommendations

Since the in-depth PLS analysis is yet to take place, the presented policy recommendations should be treated as indicative directions for further research rather than definite conclusions. The key findings discussed during this session included the following:

- There is no one best way to organise up- and reskilling initiatives.
- Different funding models, different target groups, different types of activities and different duration can all lead to strong performance. At the same time, some common principles can still be distilled.

- The up- and reskilling initiatives need to put learners in the centre (supporting freedom of choice, offering an opportunity to determine an optimal learning path, encouraging intrinsic motivation and willingness to learn).
- The involvement of private funding may positively impact the attractiveness of companies on the labour market. The same holds for the attractiveness of learners following privately funded up- and reskilling activities.
- It is not enough to reskill people; reintegration of learners into the labour market needs to be ensured as well. This is typically achieved by partnering with employers.
- The sustainability of funding is crucial for achieving the desired quality of skills (quantity should not be the only priority).
- The presence of the overall digital (and skills) strategy at the national level is positively associated with the level of mastery of specific skills at the individual level.
- The presence of the overall digital (and skills) strategy at the national level is also positively associated with the development of a long-term company vision for skills.

The workshop participants were invited to provide their feedback on the presented (preliminary) recommendations. The key inputs included the following:

- With regard to putting learners in the centre, it would be important to also keep in mind companies and their needs, and how both can be aligned.
- The motivation of learners is likely to always be crucial for the success of up- and reskilling initiatives, and thus needs to be kept in mind when designing those.
- Some learners may need extra support to enable their involvement in up- and reskilling, as they are not equally equipped for learning in terms of experience, previous knowledge, access to infrastructure, ability to determine an optimal learning path etc. As a result, some may need guidance and other types of support.
- Co-funding by learners may be a strong extra motivator to finish the training course; although it may not be applicable to all target groups.
- It is not only funding but rather general company involvement that matters. Different other forms of company involvement can be relevant including the provision of equipment and materials, preparing, and organising training, offering employment opportunities.
 - Active company involvement increases company buy-in/commitment for up- and reskilling activities and is likely to positively influence the quality of the trained skills.
 - For learners, it may not always be clear if training is funded publicly or privately, as companies may build on public funding to provide training (i.e., by means of grants).
- Business dissatisfaction with recruitment based on formal qualifications, as not matching skills needs, is driving the search of alternatives, such as microcredentials, but this faces the challenge of identifying future skill needs.
- Reintegration of learners into the labour market (if applicable) is crucial for considering the initiative a success.
- Sustainability of funding may be crucial for achieving the high quality of skills as it implies the continuity of investment in skills throughout multiple years. If a certain learner can benefit from this opportunity for longer, his or her quality of skills is likely to increase.

6 Conclusions and next steps

The results presented at W2 were of preliminary nature and should by no means be treated as final conclusions. W2 allowed to project team to collect stakeholder reflections on potentially interesting directions for further research and to fine-tune the analysis perspective. The inputs collected during W2 will thus be considered by the project team when progressing with the analysis and drafting the Final Report. The deadline of the Final Report (D5) is 24 November 2023. The study is expected to be finished in December 2023, followed by a publication of the Final Report on Europa portal in early 2024.

7 Workshop closure

The project team thanked all the participants for their valuable contributions.

Annex to E-2: Workshop 2 participants

no.	Name	Position	Organisation	Country
Physical participation				
1	Joanna Pruszyńska Witkowska	VP	Future Collars	Poland
2	Jaakko Hyytiä	Project manager	Helsinki Vocational College and Adult Institute (Virittäjä)	Finland
3	Tapani Martti	Senior Lecturer	Metropolia University of Applied Sciences	Finland
4	ONDREJ CEJKA	Consultant (Freelance), ex CEO of Czechitas	Working with #Holky z Marketingu, Czechitas Endowment Fund, Entercom skills Association	Czech Republic
5	Martin Vitek	Director	Asociace podnikavé Česko	Czech Republic
6	Miguel Fernandez	Policy Officer-Pact for Skills team	European Commission-DG EMPL	Belgium
7	Kenneth Lehm Nordestgaard	Head of secretariat	Green Skills	Denmark
8	Martin Svane	Chief Vision Officer	Rybners	Denmark
9	Andrei Bunis	Policy Officer	European Commission	Belgium
10	Artur Benedyktowicz	Project Adviser	EISMEA	European Union
11	Jakub Kubryński	CEO	DevSkiller	Poland
12	Prof. Rachid Hourizi	Director	Institute of Coding	UK
13	Kristina Dervojeđa	Senior Manager	PwC	The Netherlands
14	Melanie Jong	Senior Associate	PwC	The Netherlands
Virtual participation				
no.	Name	Position	Organisation	Country
15	Anna Valouchova	Evaluation Specialist	Czechitas	Czechia
16	Eman Alyami	Assistant Professor	Saudi Electronic University	Saudi Arabia
17	Tonya Amankwatia	Assistant Vice Provost, Distance Education and Extended Learning	North Carolina A&T State University	USA
18	Mariella Vella	Department Manager	Jobsplus	Malta
19	Jean-Pierre Patry	Previously: Director, Business Development	Previously: Seneca College	Canada
20	Christian Nørup	Consultant	Green Skills	Denmark
21	Sofia Gutierrez Dewar	Training expert	Fundacion Estatal para la Formación en el Empleo (Fundae)	Spain
22	Ana Pejić	Project Manager	Digital innovation Hub Slovenia	Slovenija
23	Katja Mohar Bastar	Director	Digital Innovation Hub Slovenia	Slovenia
24	Mateja Baebler	Consultant	ICT Association of Slovenia	Slovenia
25	Eva Revilla	EU policy officer for	European Commission	Belgium

no.	Name	Position	Organisation	Country
		EIT strategy and impact		
26	Felix Rohn	Policy officer	European Commission, DG Employment, Social affairs & Inclusion	European Union
27	Noel Baldwin	Director, Government and Public Affairs	Future Skills Centre	Canada
28	Muneaki Goto	Representative Director & Chief Reskilling Officer	Japan Reskilling Initiative	Japan
29	LUCIA SCOPELLITI	Direttrice di Area	Comune di Milano	ITALIA
30	Elisa Ceroni	Public Administrator - Work and Training Unit	Municipality of Milan	Italy
31	Justyna Jasiewicz	Manager	PwC	Poland
32	Julia Mühlhausen	Senior Associate	PwC	Germany
33	Lotte van Dongen	Associate	PwC	The Netherlands
34	Stephanie Jüstel	Research Consultant	CARSA	Spain
35	Alvaro Perez	Research Consultant	CARSA	Spain

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