

Design Economy

People, Places and
Economic Value

2022

Design Council

Design Council has been the UK's national strategic advisor on design for over 75 years. We are an independent not-for-profit organisation that champions design and its ability to make life better for all. Our work encompasses thought leadership, tools and resources, showcasing excellence and research to evidence the value of design and influence policy. We uniquely work across all design sectors and deliver programmes with business, government, public bodies and the third sector. Our Design for Planet mission aims to accelerate the critical role design must play to address the climate crisis.

Design Economy

Design Economy is Design Council's flagship research to assess the current and future value of design to the UK. A live research programme with a three-year lifespan, the latest iteration runs from 2021 – 2024 and builds on previous reports in 2015 and 2018. For the first time, Design Economy will assess the social, environmental and economic value of design. It is funded by the Department of Business, Energy and Industrial Strategy.

Since 2015, Design Economy has been the most comprehensive assessment of the state of design in the UK, with its world leading approach adopted around the world. Our latest version explores the wider social and environmental value of design, as well as its economic contribution. Over the next three years, the data built up through this research will be combined to create a picture of the holistic value of design to the UK.

This report is the second publication from our latest series. It maps the scale and geographical distribution of the design economy, the demographics of the workforce, and its economic value.

Where possible, in this report we have tracked data from our previous *Design Economy 2015 and 2018* publications. However, due to the evolved methodology developed for this research, some themes will be explored in future publications. These include: **Business and Public Sector Use and Understanding of Design (forthcoming, autumn 2022) and an analysis of the social and environmental value of design.**

Design Economy is supported by a group of ambassadors who have contributed to this research and who help to drive systemic change to maximize the value of design.



Leonie Bell
Director, V&A Dundee



Lord Kerslake
Chair, Peabody Trust



Kamran Mallick
CEO, Disability Rights UK



Lord Bilimoria
President, Confederation of British Industry and Founder of Cobra Beer



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Prof. Mariana Mazzucato
Founding Director, UCL Institute for Innovation and Public Purpose

Foreword



Minnie Moll
CEO, Design Council

We last published Design Economy in 2018. So much has happened since then. The COVID-19 pandemic created a healthcare crisis, from which we are still feeling seismic social effects and will continue to do so for years. Economically, we are faring no better, with the worst cost of living crisis for 70 years.

We still have entrenched regional inequities in growth and access to opportunities, and on the global stage, following the UK's exit from the European Union, we are working to firmly establish ourselves as a leading innovative nation ready to do business. Design has a pivotal role to play in addressing each of these challenges.

One challenge, however, overshadows all others: the climate and biodiversity crisis.

Last year, Design Council launched its new strategy with a singular mission: to Design for Planet. We are galvanising and supporting the UK's 1.97 million-strong design community to address the climate emergency. Why? Because design shapes the world. It has huge power with which comes responsibility. Design Economy is a crucial part of our mission to Design for Planet because it makes clear the influence that design has on our society, and our responsibility to leverage it for the benefit of people and planet.

So how influential is design? We know that the design economy contributed £97.4bn of Gross Value Added (GVA) to the UK economy in 2019. That's almost one in every £20 of the UK's total GVA. Design has always created prosperity. It drives growth, exports, and productivity. We also know that design has significant social, cultural, environmental, and democratic impact. Today, we need to ensure that design is at the heart of a green and equitable economy.

Earlier this year, we published our Design Value Framework¹, which makes these impacts visible and measurable. So, while this report centres on the financial and productivity metrics that most clearly communicate the dramatic impact that design has on the UK, we no longer define the design economy as just the financial value created by those who design. This is simply one part of a far greater, far more inspiring, whole. I encourage all readers to also familiarise themselves with our framework, so we can start to imagine how a future with design value at its heart might look.

Design Economy builds on our pioneering 2018 and 2015 research, which inspired replications around the world. We hope to harness that influence once more as we expand the scope and understanding of the value that design and designers create.

¹ Design Council, *Design value framework*, 2022, designcouncil.org.uk

How to *read* this report

- If you've got three minutes, watch the [film](#).
- If you've got ten minutes, read the [executive summary](#).
- If you've got two hours, dig into the full report.
- For more information, please visit the design economy [webpage](#).



This report is an interactive pdf. This means you can click through to relevant sections of the report based on what you want to find out, rather than scrolling all the way through.

- Use the page headers to navigate to different chapters and to click through the pages.
- Click on this ☰ to go back to the contents page.
- Click on this ○ to go to another relevant section of the report.
- Click on here to go to an external data set referenced in the report.

If you want to find the full data sets behind the infographics in this report, you can find them [here](#).



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“Innovate UK recognises design as one of the six strong foundations for our Plan for Action, which frames the way we support innovation in UK business. This report highlights the significance of the UK design economy and reflects a vision of the future where design skills and talent are used to build a cleaner, safer world and strongly contribute to regional economies and diversity and inclusion.”

Indro Mukerjee
CEO, Innovate UK

“Design should be at the heart of driving jobs, skills and regional prosperity across the UK. Designers bring immense value to the places they are a part of, be it in working with communities to shape our public spaces and services, creating affordable and good-quality homes, or in ensuring that our built environment and transport infrastructure are sustainable and benefit our planet.”

Andy Haldane
Chief Executive, the Royal Society for Arts and
Chair of the Levelling-Up Advisory Council

“Design is crucial whatever you do in the United Kingdom, whether you’re in business, the civil service or education. It effects the economy hugely, which most people don’t realise and plays a role in everything that we do. I’ve seen from my own experience as the founder of Cobra beer, how important design has been from day one. There is a huge opportunity to educate businesses about the benefits of design and to use design more.”

Lord Bilimoria
President, Confederation of British Industry
and Founder of Cobra Beer

“Design is an integral part of flourishing places. Having design jobs as a part of the industrial landscape, and creativity embedded in communities, is incredibly important. When you have a local design economy, you’re not only bringing higher wages and creativity to a place. Well-designed places also attract diversity and have a richness to them that improves everyone’s quality of life.”

Sadie Morgan
Founding Director, dRMM and
Chair at Quality of Life Foundation



Executive *Summary*

Design shapes the world: from the products and services we use each day, to the buildings and places that surround us, and the systems that underpin how we live. Faced with the climate and biodiversity emergencies, and high levels of social and regional inequality, the scale of what we need to design – and re-design – is enormous.

The design economy spans diverse sectors from architecture, product design and fashion, to digital design, craft and graphics. It includes all those working in design industries such as in architecture firms or graphic design businesses. It also includes everyone working in design roles in other parts of the economy, for instance digital designers working in the NHS or financial services. We also look at the value of design skills where these are used by non-designers in their work.

This 2022 report explores the people, places and economic value of design across the United Kingdom. It shows the vital and often hidden role the design economy plays in creating economic prosperity, its ability to address regional inequalities and its potential to support the UK's drive to achieve net-zero by 2050. It also identifies key challenges facing the sector – from slowing design industry exports, to persistent inequalities within the design workforce.

In Autumn 2022, Design Council will publish Part 2: a policy briefing paper outlining the policy and industry-led action needed to maximise the value of design to the UK.

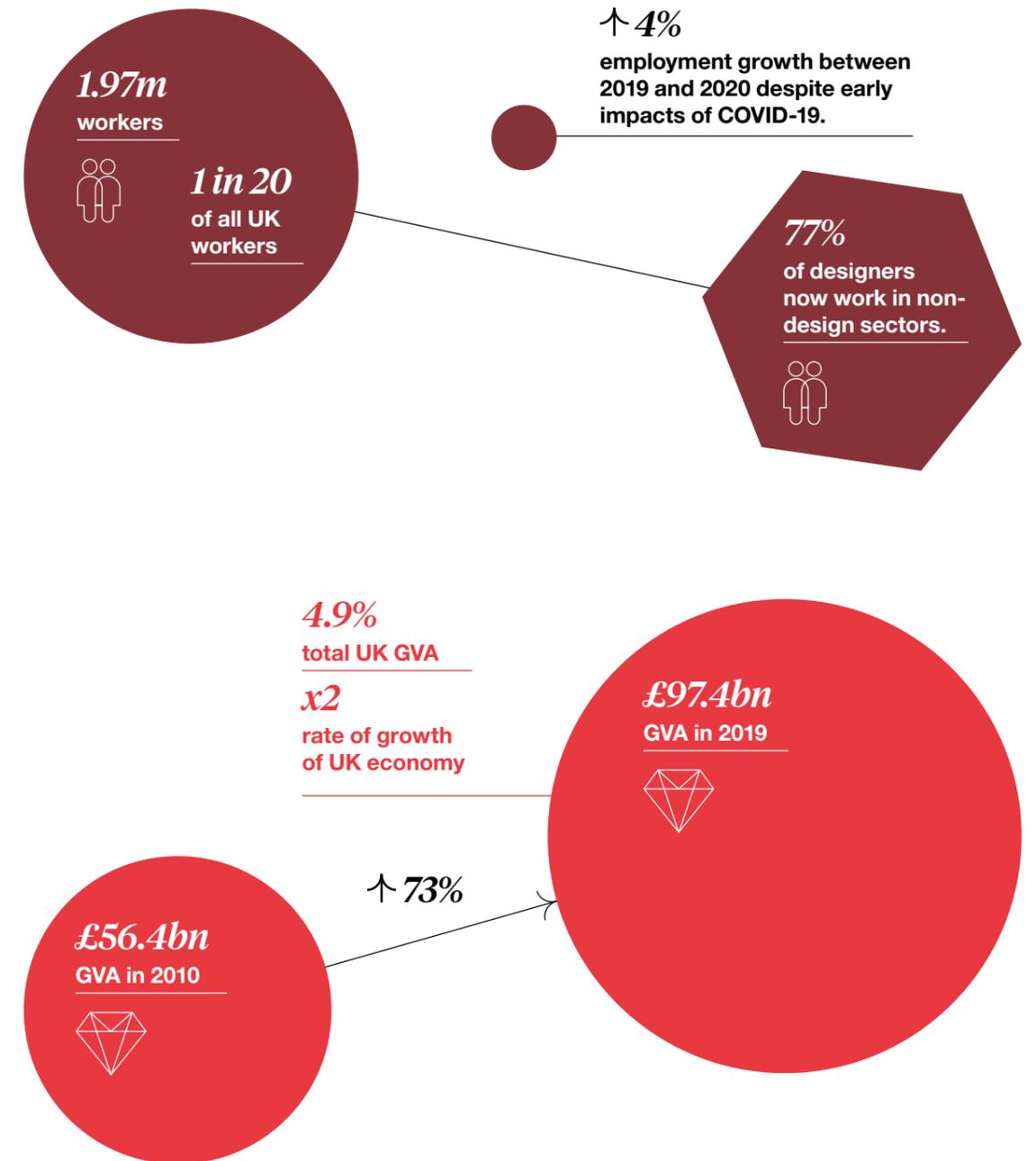
Our key findings are:

Design growth

The design economy is a major – and fast growing – contributor to UK economic growth.

It brings significant value to the wider economy in sectors from finance to retail, which must be harnessed for environmental and social benefit, as well as economic prosperity.

- ➔ In 2019 the design economy contributed £97.4bn in Gross Value Added (GVA) to the UK economy, 4.9% of total UK GVA. This almost matches the value of the hospitality and real-estate sectors combined². It grew at twice the rate of the UK economy between 2010 and 2019.
- ➔ The design economy is a major employer. In 2020 there were 1.97 million people working in the design economy – or one in 20 workers in the UK. Of these, 1.62 million were designers.
- ➔ Design is also growing in importance across the economy: 77% of all designers now work in non-design sectors such as finance, retail, and construction.
- ➔ However, not all design sectors have benefited from high growth. Both craft and clothing have experienced contractions in their GVA contributions between 2010 and 2019: by 59% and 18% respectively.
- ➔ Whilst the impacts of COVID-19 are still unfolding, the design economy saw a 4% increase in employment from 2019 into 2020. Early data from The Department for Digital, Culture, Media & Sport (DCMS) suggests that key design industries have shown resilience through the pandemic, however others, such as multidisciplinary design, have not³.
- ➔ Not all this economic value will have been beneficial for people and the planet. Given its increasing scale, it is vital that the design economy is supported to drive green and equitable prosperity.



² Office for National Statistics (ONS), Annual Business Survey, 2022, ons.gov.uk

³ From DCMS, National economic estimates: 2011-2020, 2022. Between 2019-2020 multidisciplinary design industries experienced a 16.5% GVA contraction, twice the rate of the UK economy. Note this does not include the impact of COVID-19 on designers working in other parts of the economy.

Source: Annual Business Survey, Annual Population Survey

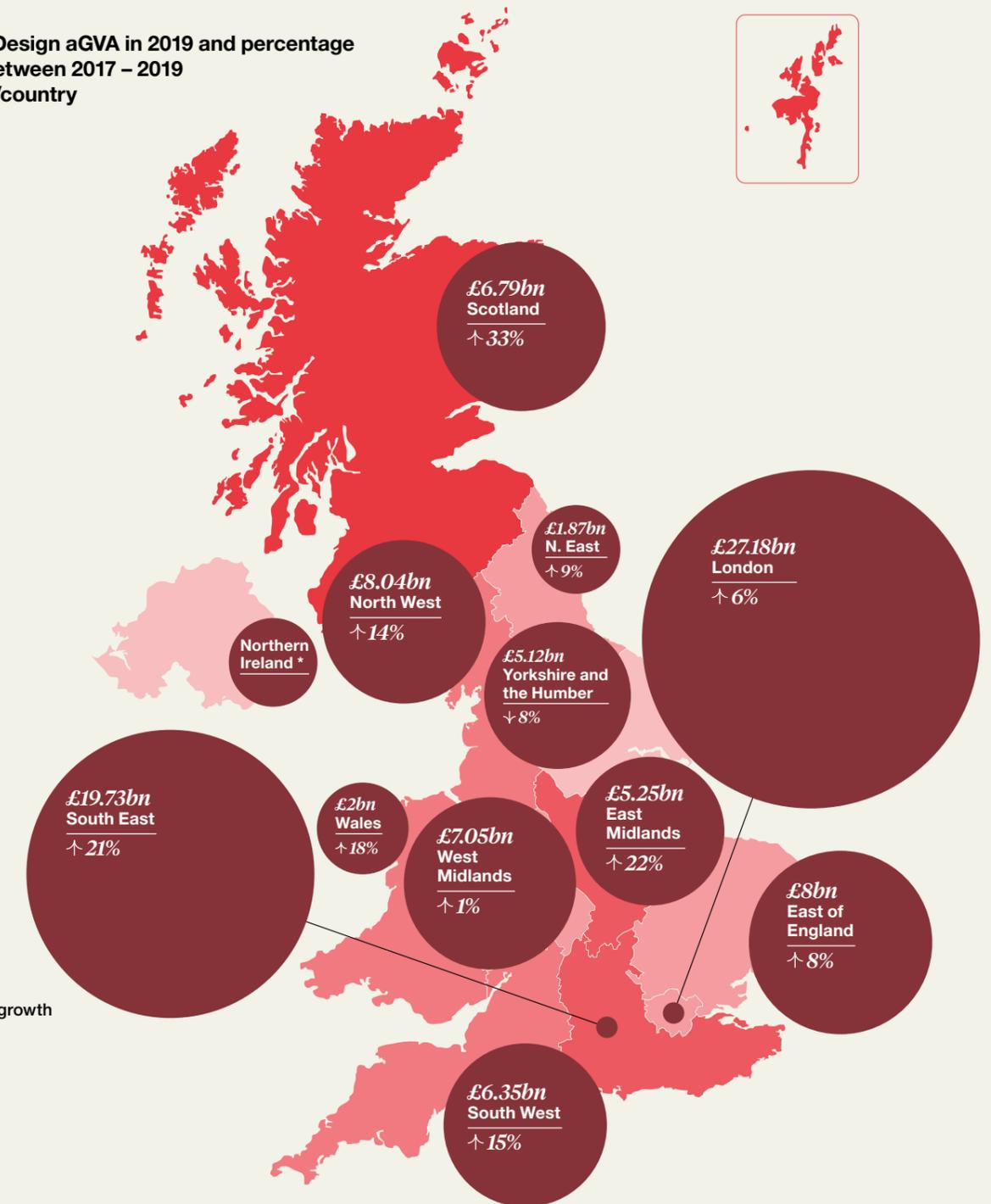
Design places

The design economy improves living standards and has experienced growth across almost the entire UK.

With further support it could play an even greater role in creating flourishing places across the country.

- ➔ Between 2017 and 2019 almost all parts of the UK benefited from growth in the design economy, with each region generating at least £1.87bn in GVA annually. Scotland has seen the fastest growth: its design economy grew five times faster than the Scottish economy.
- ➔ London continues to be a powerhouse for design. It is home to a third of all design businesses, the world's top-two art and design universities⁴, and generates 29.5% of all design economy GVA: £27.2bn in 2019. Part of its success lies in the fact that it has the highest concentration of designers of any regional economy.
- ➔ However, not all parts of the UK have benefitted equally from the design economy. Yorkshire and the Humber has seen an 8% decline in its design GVA between 2017 and 2019. Both the North East and East Midlands have seen a 2% decrease in employment of design roles between 2017 and 2020.
- ➔ Despite this, the UK is home to a rich tapestry of design clusters, from centres of excellence in craft in the Orkney Islands, to expertise in digital design in Northern Ireland, and product and industrial design in Wrexham. These reflect regional histories, expertise and specialisms that help create a sense of place and identity.
- ➔ The presence of design clusters⁵ in local authorities is also positively correlated with higher employment, business growth and wages for key design sectors. Investment in design clusters can unlock wider economic and social benefits for the places they are a part of.

Figure 1: Design aGVA in 2019 and percentage change between 2017 – 2019 by region/country



Percentage growth 2017 – 2019

- -10 – 0%
- 0 – 10%
- 10 – 20%
- 20 – 30%
- 30 – 40%

*Information not available.
Source: Annual Business Survey, Annual Population Survey

Notes: The Annual Business Survey (ABS) provides aGVA figures for design industries. This is apportioned to design and non-design occupations on the basis of their share of gross earnings in design industries. Similarly, an estimate of the contribution to aGVA of designers employed outside design industries is based on their share of gross earnings. Earnings data used in this analysis from 2014 is from the Annual Survey of Hours and Earnings (ASHE). Creative economy comparisons are quoted from the DCMS Creative industries economic estimates.

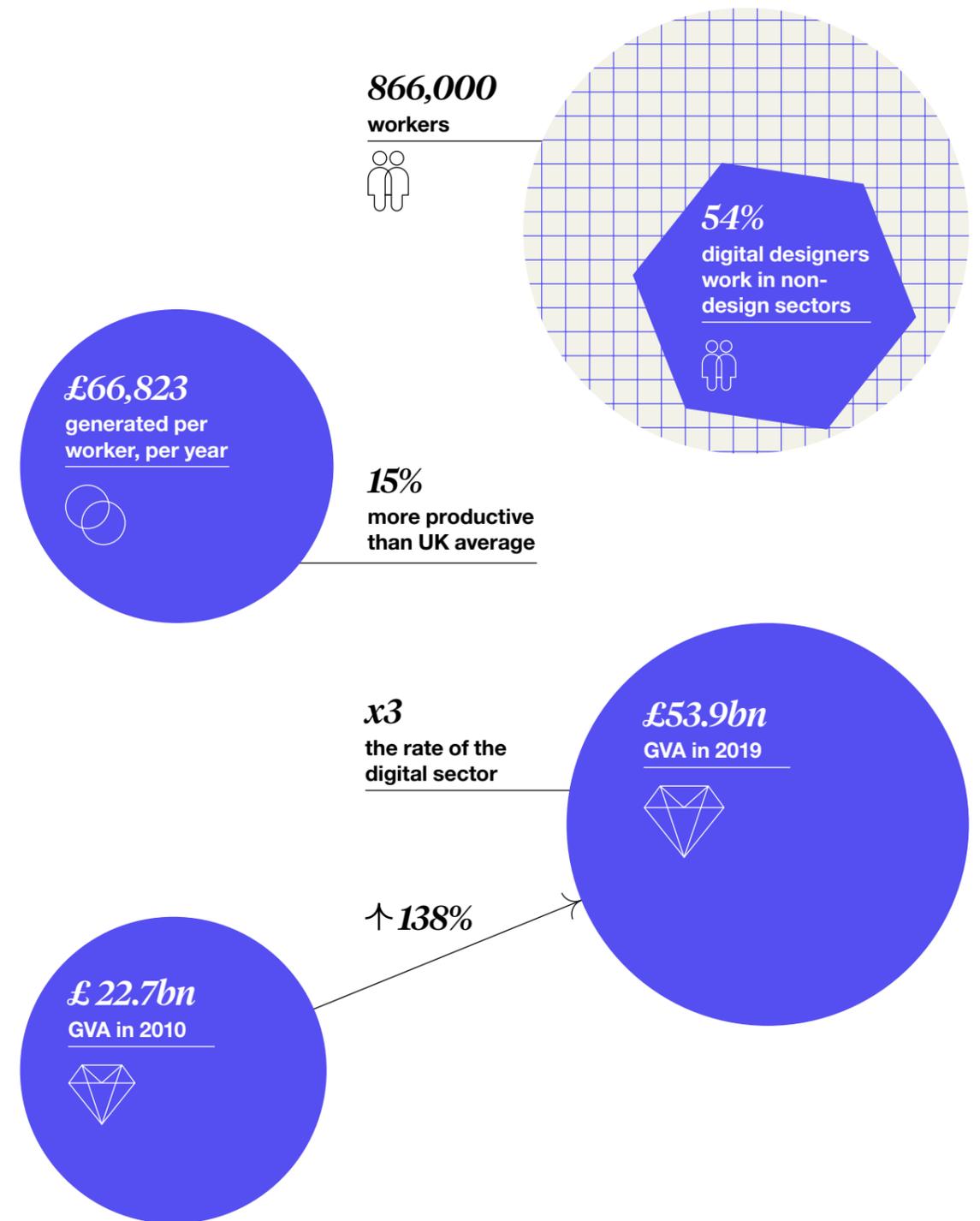
4 QS World University Rankings 2022, [topuniversities.com](https://www.topuniversities.com)
5 Design clusters are areas with above average concentrations of design employment and/or design businesses.

Digital design

Digital design supercharges the digital economy. It is highly productive and one of our greatest exports.

It must be at the heart of a future green economy.

- ➔ Whilst digital tools and methods are used across the design economy, digital design refers to people working in roles such as user-experience design, website and app design, video-games design and other forms of digital production and publishing.
- ➔ In 2019 digital design contributed £53.9bn in GVA, 2.7% of UK total GVA. The largest and fastest growing design sector, it grew by 138% between 2010 and 2019, three times the rate of the UK's digital sector⁶.
- ➔ It accounts for 866,000 jobs. These jobs are highly productive, generating £66,823 each per annum – 15% more than the average UK worker. Over 460,000 are in non-design sectors, demonstrating the high demand for digital designers across the economy.
- ➔ However, 85% of those working in digital design are male, which has implications for inclusive, safe, and representative design. This is especially important when considering the importance of digital technology in our transition to a green economy.
- ➔ Digital design has a key role to play in driving regional prosperity across the UK. In the last five years we have seen rapid growth in digital design employment in the South West (110%), Scotland (88%) and Yorkshire and the Humber (55%). Of the 11,000 designers working in design industries in Northern Ireland, 8,000 of them work in digital design.



6 Our definition of the digital sector is taken from the DCMS Sector economic estimates methodology, 2021, gov.uk

Source: Annual Business Survey, Annual Population Survey, ONS

Design skills

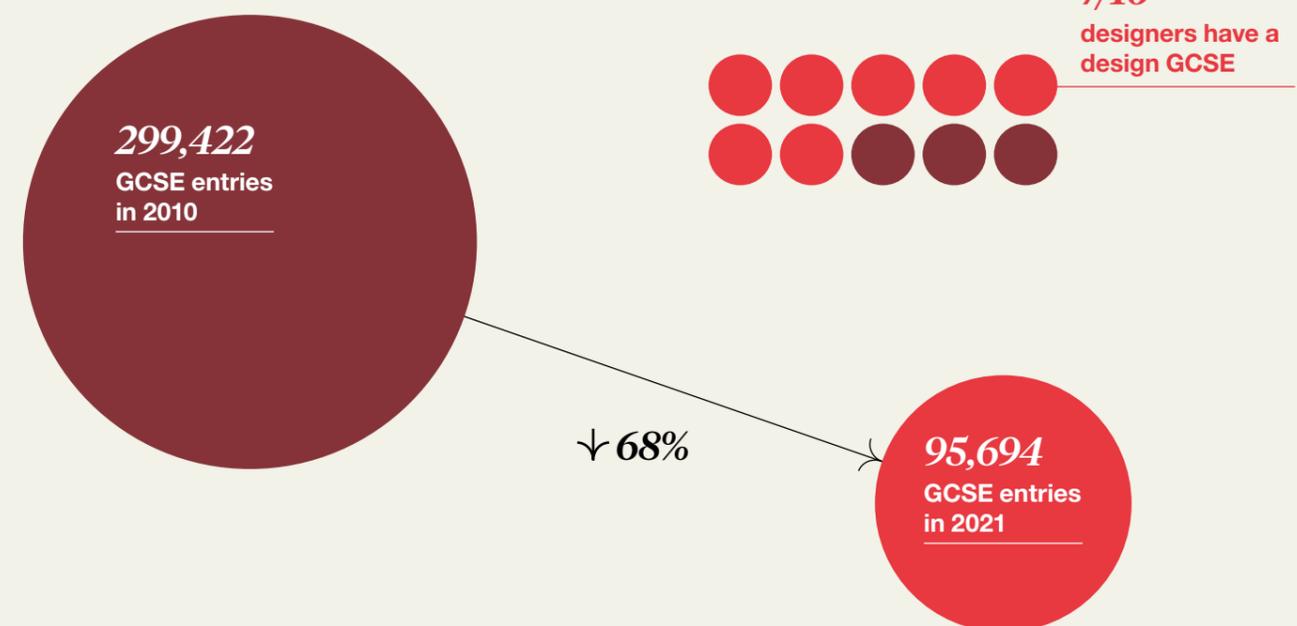
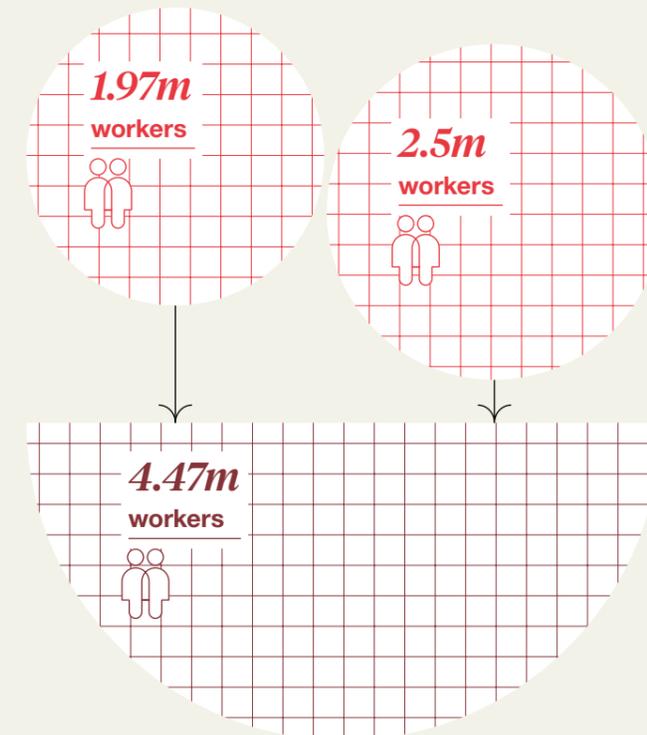
Design skills bring massive economic value to the UK and are relied on by one in seven UK workers.

But without curriculum reform and diversifying career pathways into design, this value is at risk.

- ➔ Design skills include abilities such as creative problem-solving, visualisation and the use of design methods. They are important skills in jobs ranging from civil engineering to electronics manufacturing, many of which are vital as we transition to a more equitable and sustainable economy.
- ➔ In 2019, design skills contributed an additional £179bn in GVA to the UK economy and were important to a further 2.5 million jobs beyond the design economy. When we add the contribution of design skills to the value of the design economy, design is worth £276bn (14% UK GVA) and supports 4.47 million jobs (one in every seven UK jobs).
- ➔ However, our design skills pipeline is at risk. Across the UK, entries to Design and Technology GCSE has seen a 68% decline which has not been offset by increases in take-up of Art & Design GCSE. This is a crucial career pipeline for designers: 69% of designers surveyed in this research had a design GCSE.
- ➔ At the same time, the design economy is becoming increasingly professionalised: 62% of designers now hold a degree, compared to 58% in 2016⁷. Whilst this demonstrates that the design economy is a high-skilled workforce, there is an urgent need to diversify pathways into the design workforce so it can benefit all.

From the design economy

Additional value from design skills



⁷ Design Council, *Design economy 2018*, designcouncil.org.uk

Source: Annual Business Survey, Annual Population Survey, ONS

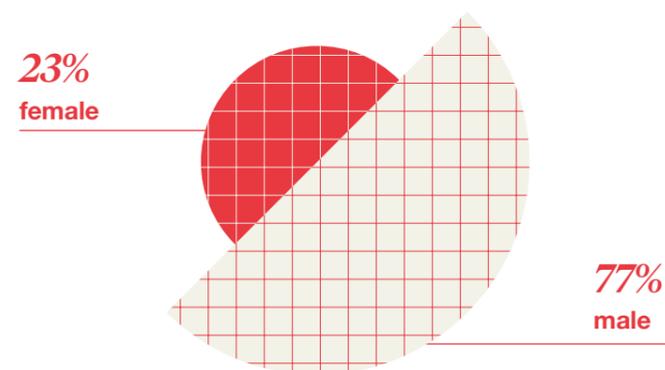
Design diversity

The lack of diversity in the design economy workforce is holding it back.

We need urgent action to change this.

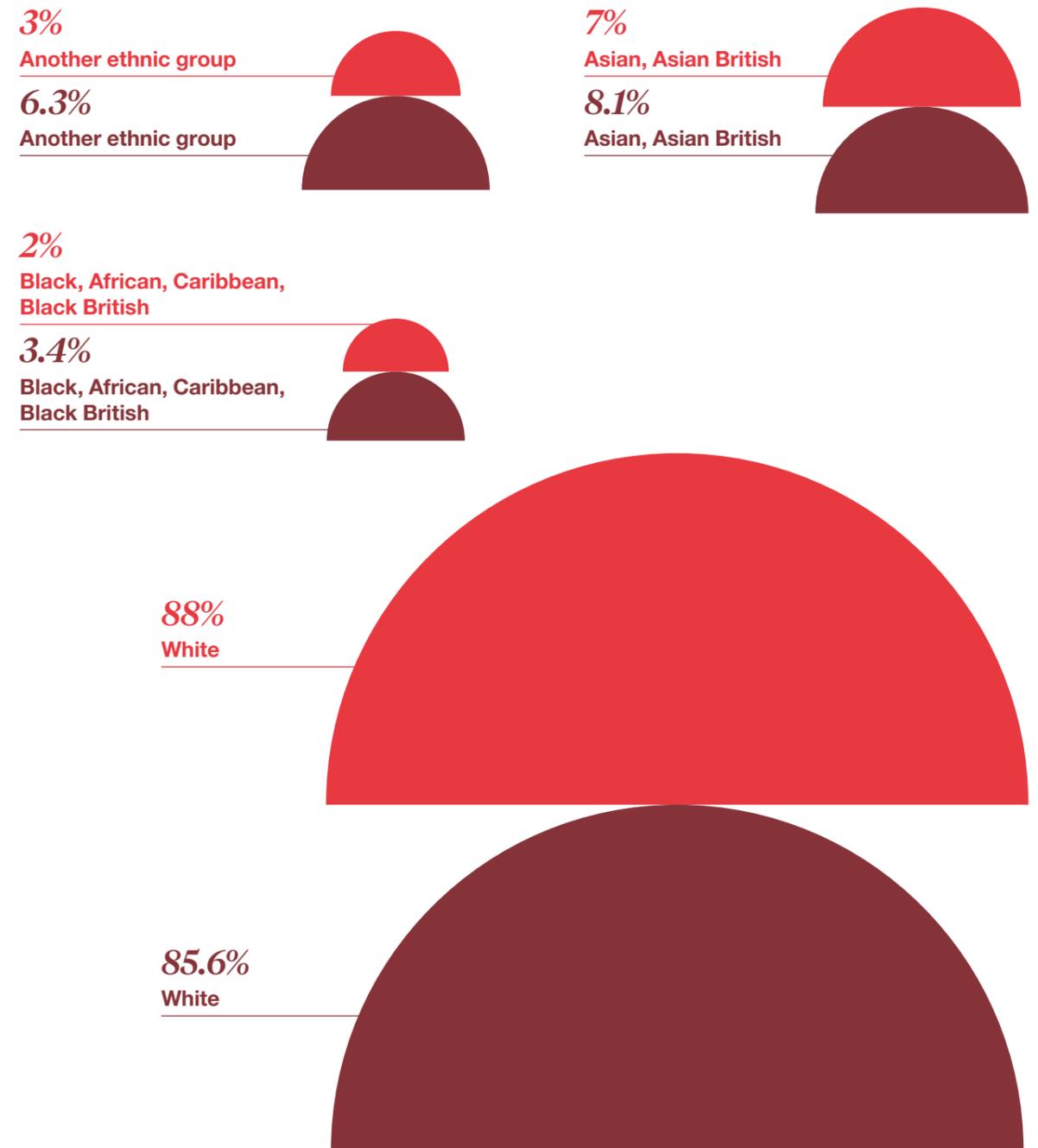
- ➔ The design workforce needs to reflect the diversity of the world it designs for. If it does not, the design of products, places, and services can overlook the aspirations, assets and needs of many people, excluding them and reinforcing existing inequalities and forms of marginalisation.
- ➔ The design economy is still disproportionately male: 77% of designers identified as male in 2020, with hardly any change since 2015⁸. Designers who are female, from an ethnic minority (excluding white minorities) or have a disability are also under-represented at senior and managerial levels.
- ➔ This is skewed by the three largest sectors in the design economy. Only 19% of workers in architecture and the built environment, 12% of product and industrial design and 15% of digital design workers identify as female.
- ➔ There is significant variation in the representation of identities and communities across design sectors. For example, 24% of workers in craft and clothing are disabled or have a long-term work limiting illness, compared to only 10% in advertising⁹. We need more design-wide and sector specific interventions to learn from each other tackle the diversity crisis within the design economy.

Figure 3: Employment of male and female-identifying designers by sector (2020).



⁸ Design Council, *Design economy 2015*, designcouncil.org.uk
⁹ This is compared to a national average of 16% (ONS, Population Census, 2011).

Figure 4: Managers in the design economy by ethnicity compared to UK working-age population



● UK economy (Census 2011) ● UK economy (Census 2011)

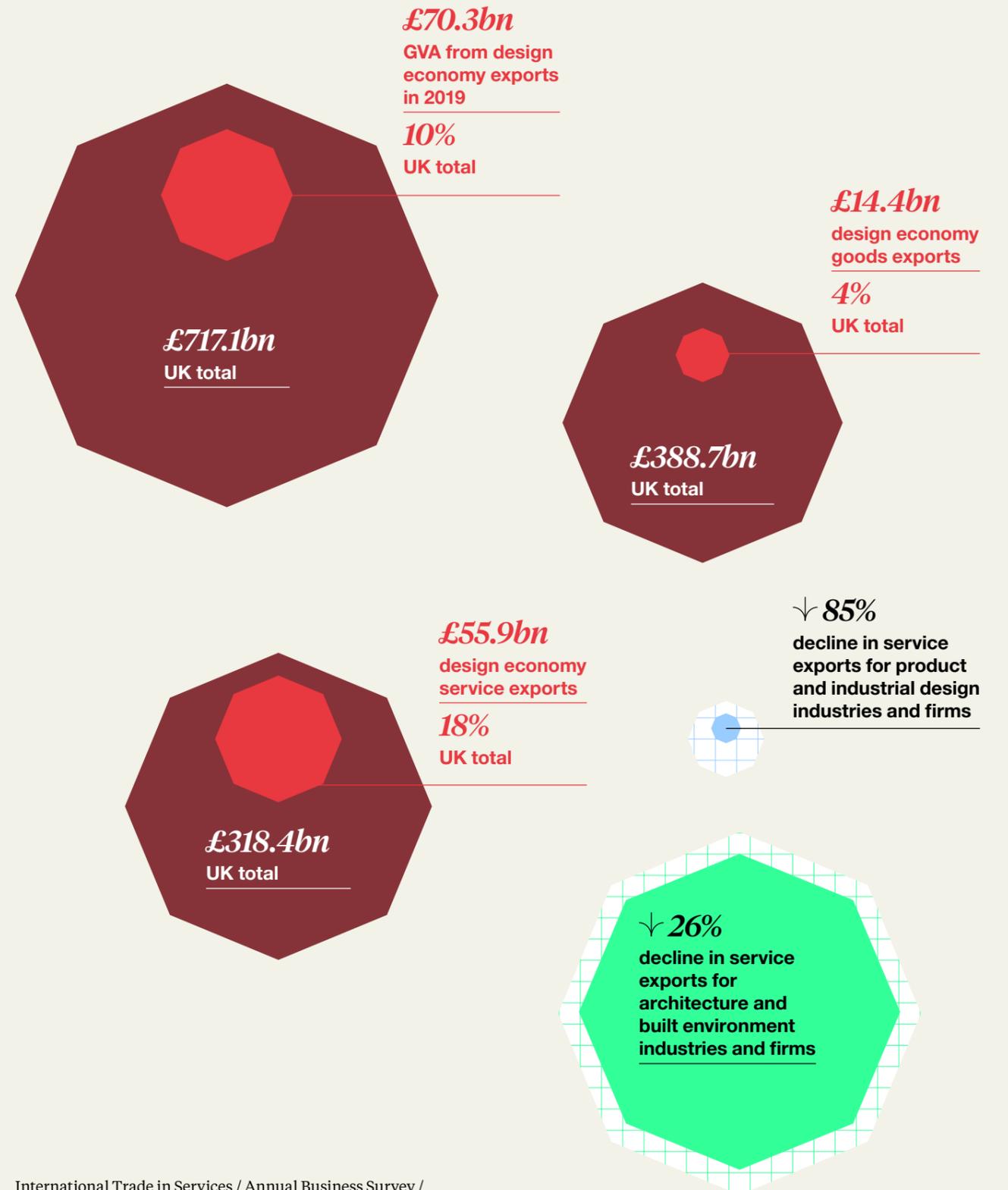
Source: Annual Business Survey, Annual Population Survey

Design exports

The UK design economy has a world-class reputation for good design and is a major driver of exports.

However, our global design strengths are now at risk without the right trade agreements, intellectual property frameworks and immigration routes in place.

- ➔ Design is one of the UK's greatest exports and plays a key role in driving quality across all our export sectors. In 2019 it accounted for over £70bn in exports – one in every ten pounds from all UK exports.
- ➔ The design economy is a vital service export for the UK, worth £55.9bn GVA in 2019 and responsible for 18% of all UK service exports. This includes activity such as an architect being commissioned to design a building by an international firm, or a product designer designing a new piece of furniture for an overseas company.
- ➔ Service exports from designers working in non-design sectors have grown 27% between 2017 and 2019, twice the rate of UK service exports as a whole. This demonstrates the important role design plays in driving value across the UK's export sectors.
- ➔ Whilst exports have grown in the design economy as a whole between 2017 and 2019, especially when we look at designers working in the wider economy, design industries have seen their exports slow significantly following the UK's exit from the European Union. For example, key service exports within design industries such as product and industrial design (-85%) and architecture and the built environment (-26%) have seen severe contractions.
- ➔ Whilst design continues to bring increasing value to UK exports across the economy, our world-leading exports from design industries and firms are at risk without supportive international trade agreements, intellectual property frameworks and immigration routes in place.



International Trade in Services / Annual Business Survey / Annual Survey of Hours and Earnings, ONS / UN Comtrade database



1.0 Introduction

The UK economy faces challenges of a scale not seen in decades, from the ongoing impact of COVID-19 to the biggest cost-of-living crisis in over 70 years. At the same time, the urgency of the climate and bio-diversity crises requires us to re-design almost everything.

How might we decarbonise the homes, office blocks and public spaces which are responsible for 40% of the UK's total carbon emissions¹⁰? How might we design our healthcare systems to support the 3.1 million people who are predicted to be over 85 in 2040¹¹? How might we improve physical and digital connectivity across the UK to improve living standards across urban and rural parts of the country? These are massive design challenges that require the skills of our entire design community.

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1.6 Limitations and considerations	37 ○

10 UK Green Building Council, *Whole Life Carbon Roadmap*, 2020, ukgbc.org
11 ONS, *National population projections*, 2020, ons.gov.uk

1.1 Why design economy?

The design workforce is a significant and growing part of the UK's economy. In 2020, it accounted for 1.97 million workers in the UK – one in every 20 UK workers. When the quality of our designed world – from our homes to our social care services – plays such a big role in the health of people and planet, the design economy workforce has a significant role to play in creating a more just, regenerative, and prosperous country.

Much needs to be done to enable our design economy to achieve its potential. The benefits of design are not yet equally spread across the United Kingdom. Our design skills pipeline is at risk, with declining take-up of the subject at secondary level. There are persistent inequities in the design workforce around gender, disability, and ethnicity. And we are still learning about the full impacts of COVID-19 and the UK's exit from the European Union.

Our previous *Design Economy* reports in 2015 and 2018 demonstrated that design is essential to economic growth and innovation¹². However, it is no longer enough to tell the economic success story of design without considering its broader social, environmental, and democratic impact. The recent COVID-19 pandemic, the Black Lives Matter movement, and a cost-of-living crisis have highlighted the importance of taking a more holistic view of the value of design. Our latest Design Economy research programme, of which this report is a part, explores the current and future value of design from social, environmental, economic, and democratic perspectives. Not all profit is good for people and planet. And so this report, which focuses on the people, places and economic value of design, should be read as a part of this larger enquiry.

This report takes a long-term view of the performance of the design economy over the last decade of available data. Due to data limitations, this report does not include the full impact of COVID-19 on the design economy. Where data is available, we discuss this in the report. In Autumn 2022, we will publish Part 2: a policy briefing paper outlining the policy and industry-led action needed to maximise the value of design to the UK.

12 Design Council, The Design economy 2015 report, The Design economy 2018 report, [designcouncil.org.uk](https://www.designcouncil.org.uk)

1.2 Defining the design economy

Design

Design is the shaping of real-world ideas, and the creative problem-solving process for getting there. It can mean shaping the physical world we live in (our places and products), the experiences we enjoy, or the systems that underpin how we live our lives. Design turns ideas into action. It is a critical enabler of innovation. Design fills the gap between invention and application by creating tangible products, services and places that people want to buy and use.

For the purposes of this research, we used a technical definition of design based on the Organisation for Economic Cooperation and Development's *Oslo Manual* (2018)¹³, and the work of Fernando Galindo-Rueda and Valentine Millot in assessing the role of design in business innovation¹⁴.

“Design is a specialist set of skills that combines creative problem-solving, empathy and technical skills. Well-known versions of professional design focus on communications, products, buildings, digital interfaces and services, alongside using design skills to find new solutions to organisational or social challenges. The main applications of design skills are as a human or planet-centred development activity, a way to link new ideas to market and user needs and an organisational capability for applied creativity and innovation.”

Design is an activity that creates products, services, buildings, graphics and systems. It can be undertaken by professional designers, but also design teams or communities using design. You can find a more detailed summary of the challenge of defining design in the methodology papers underpinning this research¹⁵.

Designers

Designers operate across the whole of the economy, from urban planners to digital designers. Some designers work in **design industries** – in businesses such as architecture firms or fashion houses. These designers rely on the support of others working in those businesses, such as administrators or finance assistants, to deliver their design work. In this research, we define a **design industry** as any industry that has 30% or more workers in design occupations, on the basis that this is a good indication that the main outputs of those industries are design.

However, many designers also work in other parts of the economy. For example, healthcare providers such as the NHS now have digital design teams, and financial service providers rely on in-house designers to create new products and services.

The design economy

The design economy therefore encompasses all this design activity, both in design industries and across the wider economy.

13 Organisation for Economic Cooperation and Development, Oslo manual, 2018, [oecd.org](https://www.oecd.org)

14 Galindo-Rueda, F. and Millot, V. *Measuring design and its role in innovation*, OECD Science, Technology and Industry Working Papers, 2015/01, OECD Publishing. For a full discussion of how the definition for design for this research was developed see: Kimbell, L., Bailey, J., Nold, C., Kaszynska, P., Todd, J. and Mazzarella, F. (2021). Design Economy Scoping Project: Introductory Paper. London: Design Council, [designcouncil.org.uk](https://www.designcouncil.org.uk)

15 Kimbell, L., Bailey, J., Nold, C., Kaszynska, P., Todd, J. and Mazzarella, F. (2021). Design Economy Scoping Project: Introductory Paper. London: Design Council, [designcouncil.org.uk](https://www.designcouncil.org.uk)

The design economy includes:



The design economy also includes the following design industries (SIC codes, 2010):



The design economy includes designers working across the following design sectors:



* Whilst service designers are not directly referenced in current ONS data-sets, they are likely captured in sectors such as digital design and multidisciplinary design. See Limitations and Considerations for more information.

1.3 Overview of methodology

This report builds on economic analysis completed for *Design Economy 2015*¹⁶ and *Design Economy 2018*¹⁷, and the methodology developed for *Design Economy 2021-2024* by BOP Consulting and University of the Arts London¹⁸. Its assessment of the size, geography, demographics and economic value of design is primarily based on data from the Office for National Statistics (ONS)¹⁹, with additional data gathered through sources like the US Labor Market's O*Net database and a Design Council survey of over 1,300 designers.

To allow comparisons between different sectors of the economy, the ONS categorizes their data on professional occupations and professional industries, based on internationally agreed definitions and codes. These are called the Standard Occupational Classification (SOC) for occupations and Standard Industrial Classification (SIC) codes for industries. These are set and agreed internationally every 10 years or so.

Our analysis of the design economy is based on identifying and using a selection of SIC and SOC codes that fit into the above design sub-sectors. Our approach to identifying these aligns with the approach undertaken in previous iterations of Design Economy, and the one used by DCMS in their Sector Economic Estimates²⁰.

Methodology steps

Identifying designers:

To identify which occupations are design occupations we reviewed the selection of SOC codes used in *Design Economy 2015* and *2018*, and consulted with designers to find the most appropriate SOC codes to use to identify design occupations in the ONS data²¹.

Identifying design industries:

From this we can then calculate the intensity of design employment in the industries set out in the SIC codes. Any industry which has 30% or more of its employment in a design occupation is a design-intensive industry. From this, we can then work out the proportion of designers and support staff working in those industries. This is an equivalent method to the DCMS approach to the creative industries.

Data analysis and benchmarking:

Once this data was identified and gathered, detailed analysis was undertaken to assess the scale and economic value of the design economy. This was undertaken by the Enterprise Research Centre and BOP Consulting. A detailed methodology is included in the appendices.

Building on ONS data through a survey of 1,300 designers:

To create a richer picture of the demographics of the design economy, and pathways into the workforce, Design Council undertook an additional survey through its networks.

Analysis of the added value of design skills:

In this research, we also wanted to assess the value design skills bring to the wider economy, where these aren't undertaken by professional designers or design businesses. This was done by identifying design skilled occupations and design-active industries and running a similar economic analysis to that used for the design economy, discussed further below.

Consultation through two policy roundtables with the All-Party Design and Innovation Group:

To both interrogate the data and analysis presented, and to ask what implications this might have for policy and industry action, some of which is discussed in the summary sections of this report.

Ongoing consultation with the Design Economy Steering Group and Ambassador Group.

¹⁶ Design Council, *Design economy 2015*, designcouncil.org.uk

¹⁷ Design Council, *Design economy 2018*, designcouncil.org.uk

¹⁸ Kimbell, L., Bailey, J., Nold, C., Kaszynska, P., Todd, J. and Mazzarella, F. (2021). Design Economy Scoping Project: Introductory Paper. London: Design Council, designcouncil.org.uk

¹⁹ Design Council, BOP Consulting and the Enterprise Research Centre are grateful to the ONS and to the UK Data Service for making these datasets available. Neither the ONS nor the UK Data Service bear any responsibility for the analysis or interpretation of the data. This report contains data licensed under the Open Government Licence v.2.0, nationalarchives.gov.uk This report also contains National Statistics data © Crown copyright and database right 2022

²⁰ DCMS, DCMS Sector economic estimates methodology, 2021, gov.uk

²¹ The SIC and SOC codes in this analysis are the same as those identified in *Design economy 2015* and *2018*. This has allowed direct comparisons with the analyses found in these reports. A more detailed discussion of the implications of using these codes can be found in the limitations and considerations section of the report.

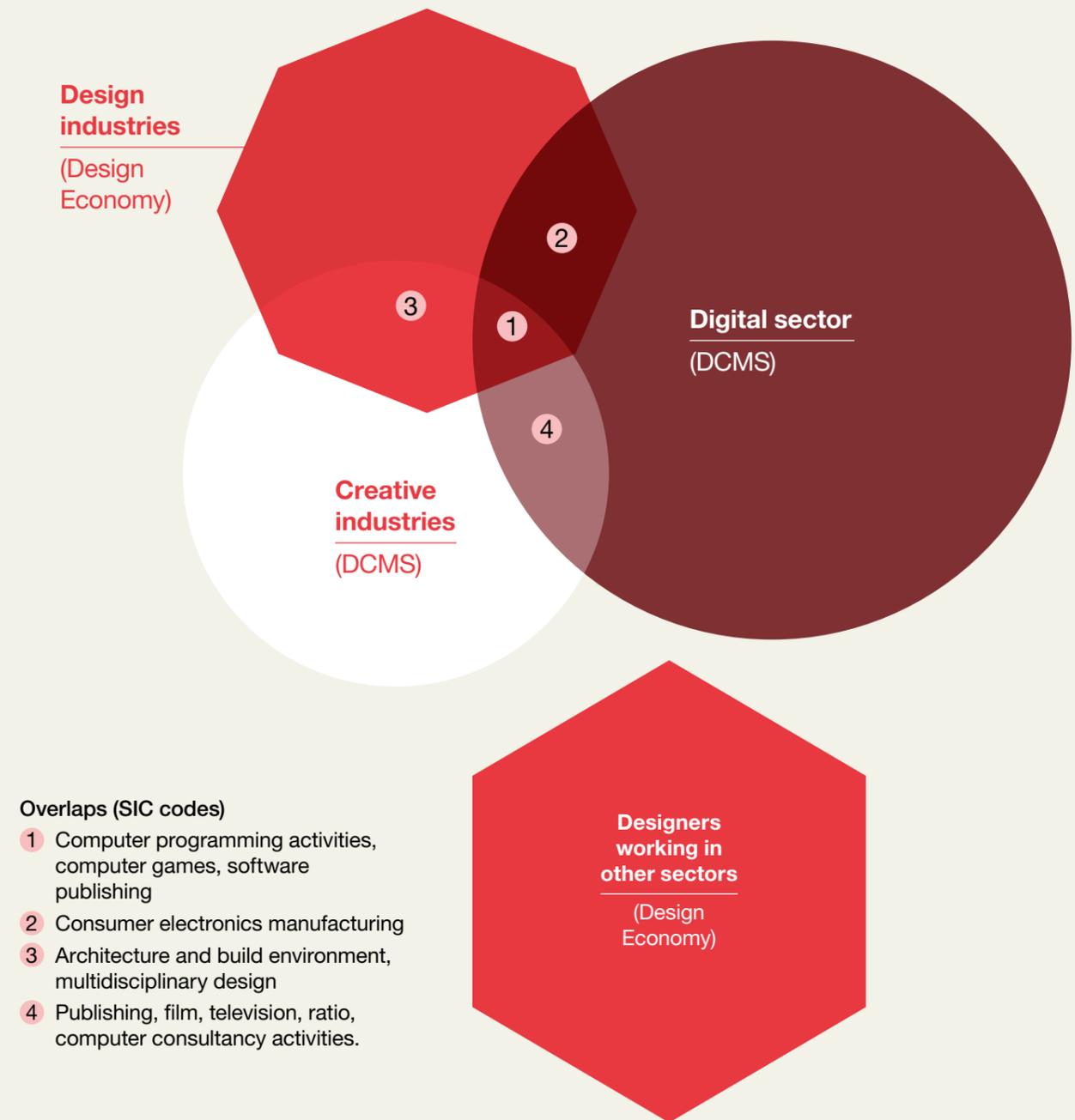
1.4 How the design economy relates to the creative industries

The definitions that underpin the design economy mirror those used by DCMS in the development of their creative economy estimates and, more recently, their estimates of the creative industries.

It is important to note that the approach we take here to the design economy is distinct from that taken to the creative industries, on the basis that we include the contribution of the 77% of all UK designers who are working in other parts of the economy. There is also overlap between our definitions of design industries, and those of the creative industries and digital sector used by DCMS. These are shown in full in the accompanying data tables.

Throughout this report, we distinguish the value that **design industries** contribute to the UK, and **designers working in other parts of the economy** bring, to allow for more accurate comparisons with these overlapping sectors. However, we also provide summaries of the design economy as a whole to show the wider impact design has across the entire economy.

Figure 5: Overlap of standard industrial classifications between design industries, and DCMS creative industries and digital sector definitions



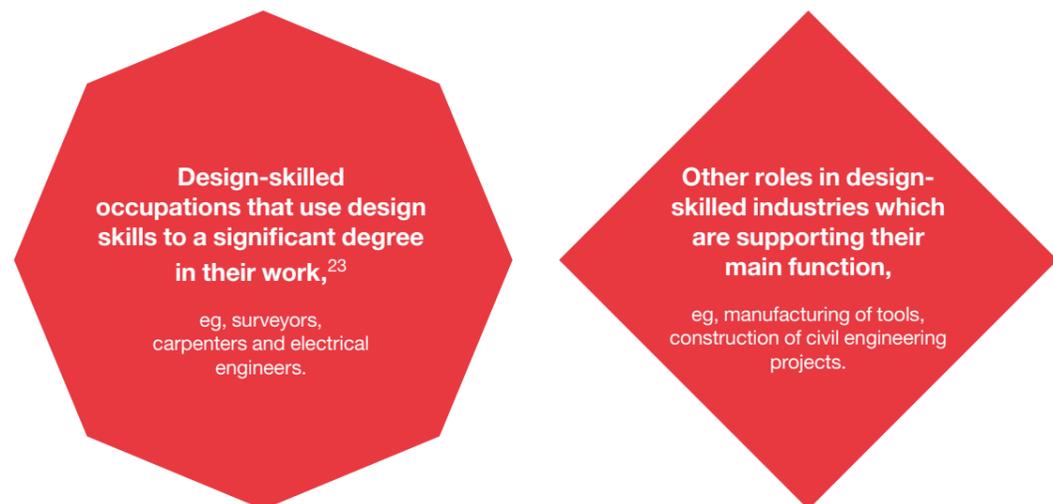
1.5 How design skills are defined and assessed in this report

The design economy focuses on the scale and value of design as both a set of professional occupations and industries. However, design skills are used by people across the economy and society. These skills include: creative problem-solving, visualization abilities, and a knowledge of specific design techniques and methods. As a part of this research, we also wanted to assess the wider value that design skills bring in roles and industries that fall outside the design economy. You can find a full list of these skills, and the occupations and industries that use them, in the accompanying data tables and in *Designing a Future Economy*.²²

In the next section of this report we have provided an assessment of the impact of design skills, where these are used outside the design economy. To do this, we built on our previous methodology from *Designing a Future Economy* to identify non-design occupations and industries that rely heavily on design skills.

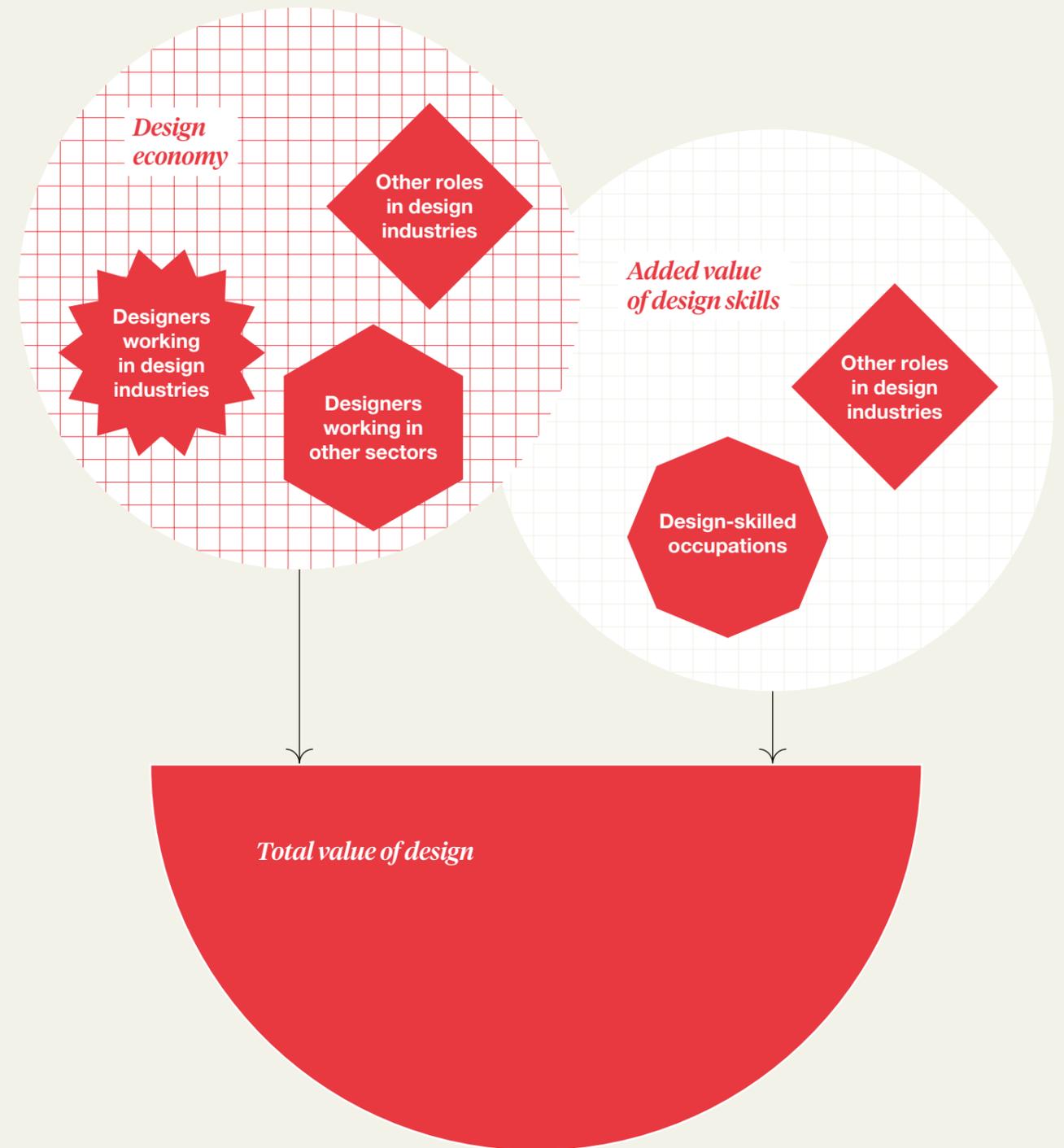
To get the total value of design skills we include all occupations where design skills form a significant part of their work, and the value from all workers in what we call 'design-skilled industries'. These are industries where 30% or more workers are in design skilled occupations.

Figure 6: Definitions of design-skilled occupations and design-active industries.



22 Design Council, *Designing a future economy: developing design skills for productivity and innovation, 2017*, designcouncil.org.uk

23 The full breakdown for these occupations and methodology used for identifying them is included in the accompanying data tables.



1.6 Limitations and considerations

This piece of research is primarily based on data from the ONS, with additional insight gathered through other sources like the US Labour Market's O*NET database. The advantages of using ONS data are that it provides consistency with previous Design Economy reports, allowing us to build a decade long time-series of data, and its credibility and robustness. However, the use of this data also had several key limitations:

1. Not all design occupations map onto existing Standard Occupational Codes (SOC) and Standard Industrial Classification (SIC) Codes.

The design economy is a rapidly evolving set of sectors, with new types of design role emerging each year. At the beginning of this research, we surveyed designers to identify new design occupations that had gained prominence since the analysis in *Design Economy 2015*, when the classification codes for the design economy were first defined. Responses included policy designers, service designers and material designers.

Importantly, roles such as service design and policy design – which are forming an important part of the design workforce – do not neatly fit into the categories set by the ONS, which were last established in 2010. In these cases, the ONS assigns the data based on the best possible fit to their existing definitions. The ONS have responded to this and have updated their SOC codes through the SOC 2020 to reflect newer roles. However, as the latest available data follows the SOC 2010 structure, we have used this to allow comparability with our previous

analyses. This means that we cannot directly analyse the impact of these newer types of design occupation.

In addition, because of how some design occupations are grouped together by these codes, more detailed analysis is limited for specific design disciplines. This is important to note for multidisciplinary design which bundles together fashion designers, product designers, interaction designers and theatre-set designers. It is important to note therefore that clothing also does not include all fashion designers.²⁴

Similarly, as has been noted by DCMS, the full range of craft practices is not captured by existing SIC codes²⁵. As many craft sole-traders also operate below the VAT threshold their economic contribution is not fully visible in total estimates for GVA.

2. Equality, diversity and inclusion data relies on binary categories and is not granular enough to allow for intersectional analysis.

The available ONS data we used to understand the demographics of the design economy limited the categorisations we could use in this research. For example, ONS data on gender is still male/female and does not cover non-binary genders.

When trying to look at this data through an intersectional lens, we faced issues with being able to access data due to statistical disclosure control which requires levels of ONS data to be kept confidential when it could be used to identify an individual.

Due to these limitations, we ran an additional survey of designers to provide an additional source of data on designers' demographics with over 1,300 responses. The responses of the survey are broadly representative of the UK population, but not of the design economy. This was due to the sample being self-selected.

We found that responses to our survey skewed to gender parity (50% female, well away from the 77:33 male to female make-up of the design economy proper) and towards seniority: almost half of respondents (48%) held senior or executive roles, significantly higher than the one in ten people across the UK who occupy manager, director, and senior official positions²⁶.

However, the survey was more regionally representative of the design economy: 42% of responses came from London, which is broadly in line with the 46% of all design jobs being London-based. A further 13% of responses came from Scotland, Wales, and Northern Ireland; 15% from Yorkshire and the North; 17% from the South (excluding London); and 12% from the East and Midlands.

3. The geographical coverage of data means our insight into Northern Ireland is more limited than other parts of the UK.

In Northern Ireland, the Business Register and Employment (BRES) survey, which provides breakdowns on business numbers, employment and GVA, is maintained by the Northern Ireland Statistics and Research Agency and does not publish data by local authorities within Northern Ireland. This has meant that the analysis of design clusters here is more limited than elsewhere.

4. The most recent year of available data varies across ONS data sets such as GVA and employment and does not provide comprehensive data over the COVID-19 pandemic.

A fourth limitation is that the latest year of available data varies between metrics. For example, 2020 is the most recent year of available data on employment, while 2019 is the most recent year of available data for GVA. A significant limitation of this availability is that we are currently unable to fully analyse the economic impact of the COVID-19 pandemic over the full years of 2020 and 2021²⁷. However, with a decade of data for each metric, we can understand longer-term trajectories and shifts in the design economy, and where we have data up until 2020 and 2021 these are included. We have also included qualitative insights throughout this report from design experts, including members of the project steering group.

5. A focus on economic value ignores and potentially masks the wider social and environmental impact that design has.

A fifth limitation with this report is that by focusing on economic value, it does not provide equally important insight into the wider social, environmental, and democratic impacts that design has on the UK. Our previous report, the *Design Value Framework*²⁸, outlines the approach we are taking in this iteration of *Design Economy* to assess the holistic value of design in future research. However, when reading this report it is important to remember that the value of design extends far beyond the economic – whether that is through improving health outcomes or reducing carbon impacts. Equally, profitable design which performs well by narrow economic measures such as GDP, might not always be good design when considered holistically.

²⁴ It should be noted that the definitions used in this report for clothing and multidisciplinary design differ from those used by the British Fashion Council, who take a broader view of the economic impact of the fashion industry. They are due to publish an updated report on the value of fashion in Autumn 2022. For their previous report from 2015, see: Oxford Economics, *The Value of Fashion*, 2015, britishfashioncouncil.co.uk

²⁵ It should be noted that DCMS have expanded their definition of craft following consultation in 2018. See DCMS, *DCMS Sector economic estimates methodology*, 2021 gov.uk

²⁶ ONS, *Employment by occupation*, 2018, ons.gov.uk

²⁷ For additional insight into the potential economic impact of COVID-19 on the design economy, see: Oxford

Economics, *The projected economic impact of COVID-19 on the U.K. creative industries*, 2020, oxfordeconomics.com

²⁸ Design Council, *Design value framework*, 2022, designcouncil.org.uk

2.0

The economic value of design

Over the last decade, the UK’s design economy has grown significantly in its size and economic importance, with designers harnessing the opportunities afforded by larger social and technological forces. With the rise of digital, designers have created healthcare apps to help us cope with the pandemic; used augmented reality to design vehicles; and created novel sustainable manufacturing techniques. New forms of design have also emerged to shape national policy and develop new kinds of consumer experience. We can find designers working with scientists on synthetic biology and with banks and local authorities to create new financial systems.

In this section we explore the economic value of design to the UK economy, the size of the design workforce, the changing composition of design businesses and the productivity of designers.

2.1	The GVA contribution of the design economy	42 ○
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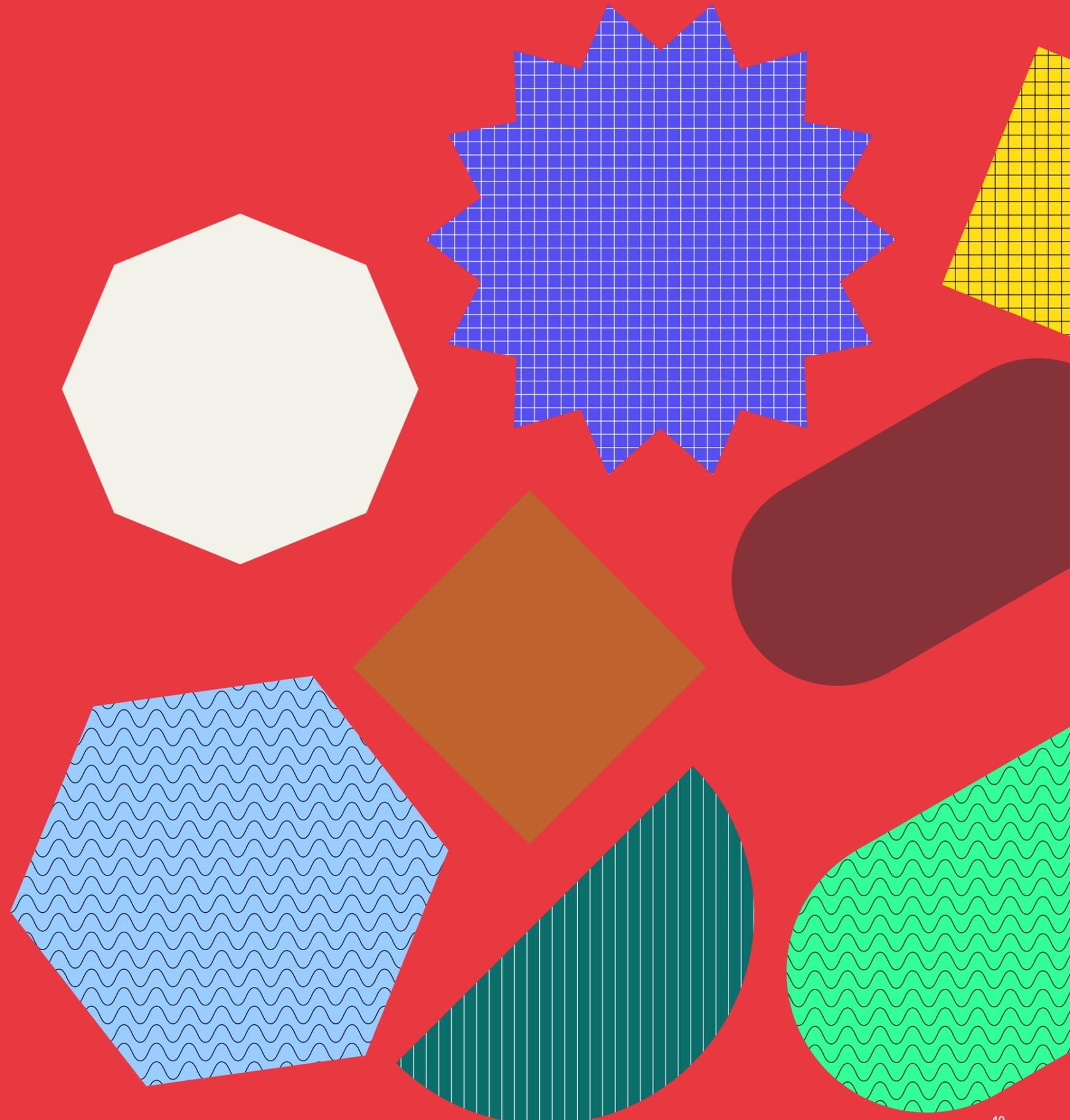
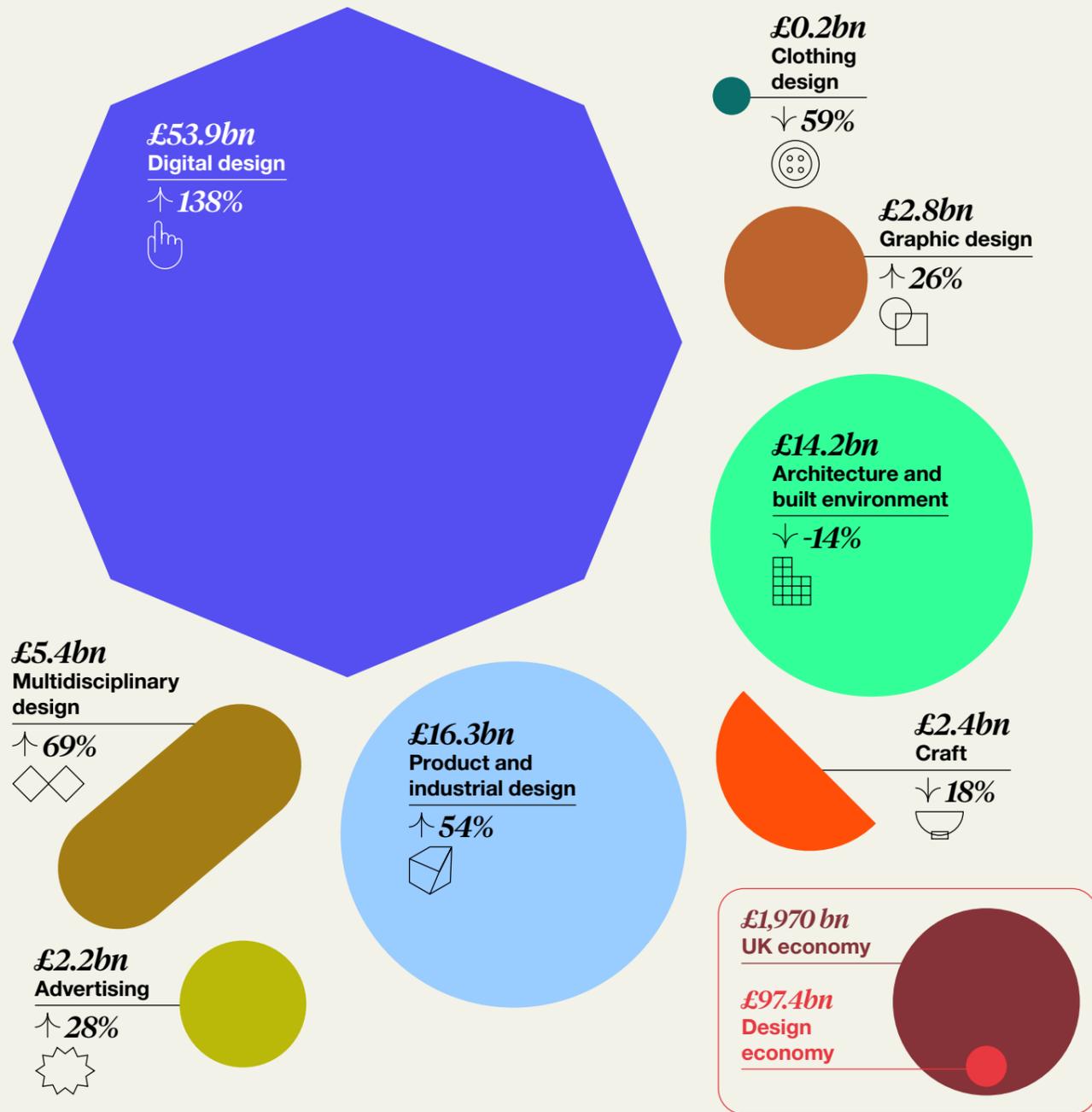


Figure 7: Total design economy GVA broken down by design sector (2019) and growth rate from 2010 to 2019 (£m)



Notes (Applies to figures 7 to 10): The ABS provides aGVA figures for design industries. This is apportioned to design and non-design occupations on the basis of their share of gross earnings in design industries. Similarly, an estimate of the contribution to aGVA of designers employed outside design industries is based on their share of gross earnings. Earnings data used in this analysis from 2014 is from the Annual Survey of Hours and Earnings (ASHE). Creative economy comparisons are quoted from the DCMS Creative Industries Economic Estimates. Creative Economy comparisons are quoted from the DCMS Creative Industries Economic Estimates.

Source: Annual Business Survey, Annual Population Survey

2.1 The GVA contribution of the design economy

Since 2010, the design economy has grown in size and economic importance. In 2019 the design economy contributed £97.4bn in GVA to the UK economy, the equivalent of 4.9% of total UK GVA. If the design economy was a single sector, it would have almost the same value as the hospitality and real-estate sectors combined²⁹. Between 2010 and 2019 the UK design economy grew by 73%, over twice the rate of the UK economy, which grew by 36%. This growth has outpaced other high-growth sectors such as the creative industries (which grew by 68%) and the digital sector (which grew by 46%) over the same time period.

Most designers work in non-design sectors, such as finance, computer programming and retail, showing how much design is valued by the wider economy. These designers have been key drivers of growth, contributing £56.4bn in GVA in 2019, or 70% of the total value of the design economy. Between 2018 and 2019 their GVA contribution grew at a rate of 11%. It was designers working within digital, architecture and advertising occupations that were the strongest drivers of this growth.

The digital design sector has been the most significant driver of growth in the design economy over the last decade of data, increasing its GVA contribution by 138% between 2010 and 2019. In 2019, the digital design group (which includes roles such as games designers and UX designers) contributed £53.9bn in GVA, 55% of the design economy total of that year. This is a significant increase on an equivalent 2010 contribution of 40% of the total design economy.

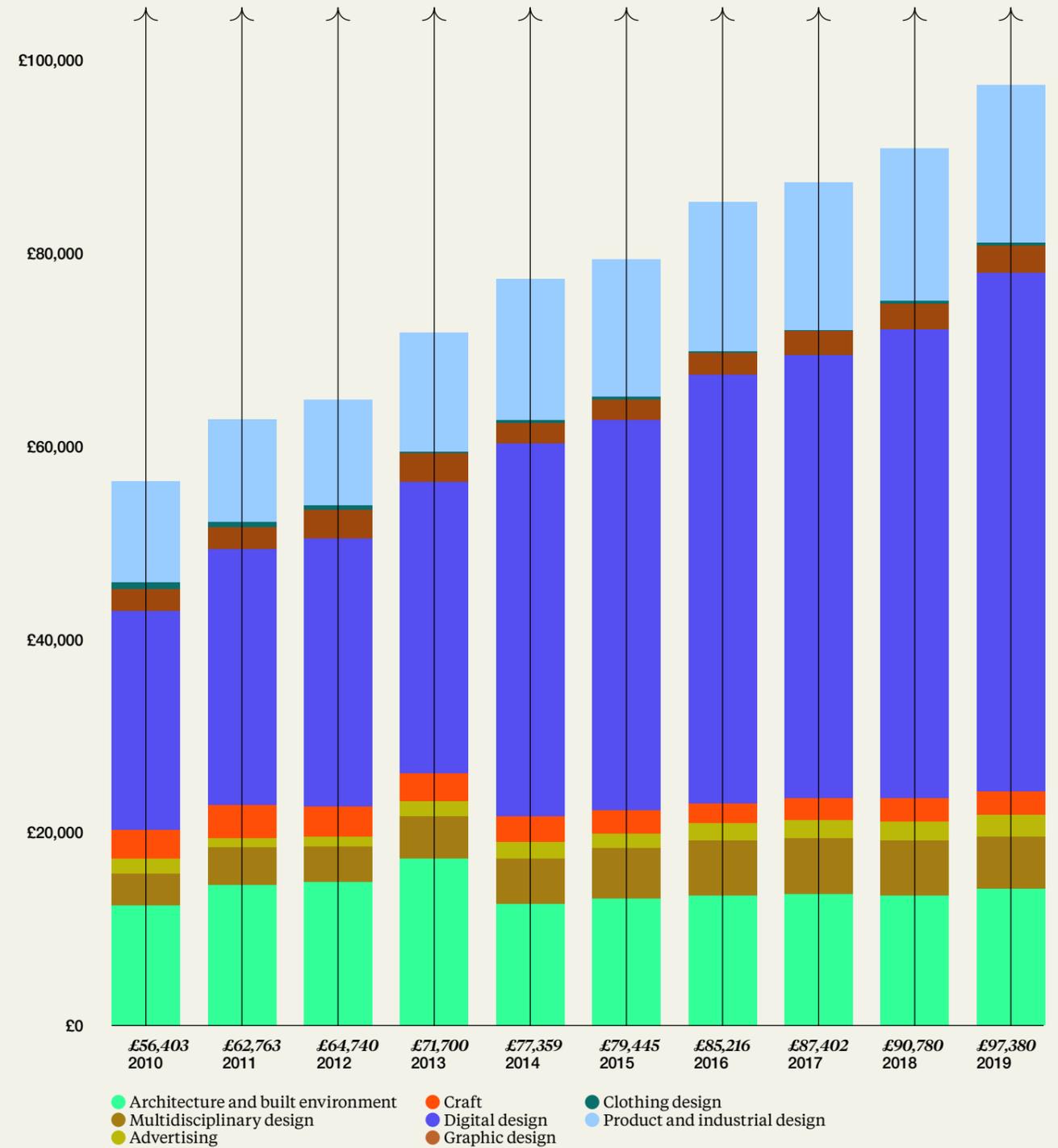
Both multidisciplinary design (which includes roles such as fashion designers, product designers and interaction designers) and product and industrial design were the second fastest growing design groups, experiencing 69% growth and 54% growth between 2010 and 2019 respectively.

²⁹ See: ONS, Non-financial business economy, UK: Sections A to S, 2022. ons.gov.uk

However, growth was not experienced by all sub-sectors in the design economy. Both clothing (-59%)³⁰ and craft (-18%) reduced GVA contributions over 2010 to 2019, although craft has seen a slight recovery since 2017.³¹ This long-term decline is reflective of longer-term trends of large-scale production and manufacturing being outsourced to other parts of the world, although some sub-sectors such as garment manufacturing have seen increases over that time of in-country production³². As we start to understand the longer-term impacts of the COVID-19 pandemic on businesses, it remains to be seen if we might see a reversal of this trend as businesses look within the country for manufacturing opportunities.

When we look at the GVA contribution of the design economy, it is clear that design has become more important to the UK economy over the past decade, both in absolute and relative terms. Its GVA contribution has grown such that it is responsible for a larger proportion of the UK's wealth than was the case a decade ago.

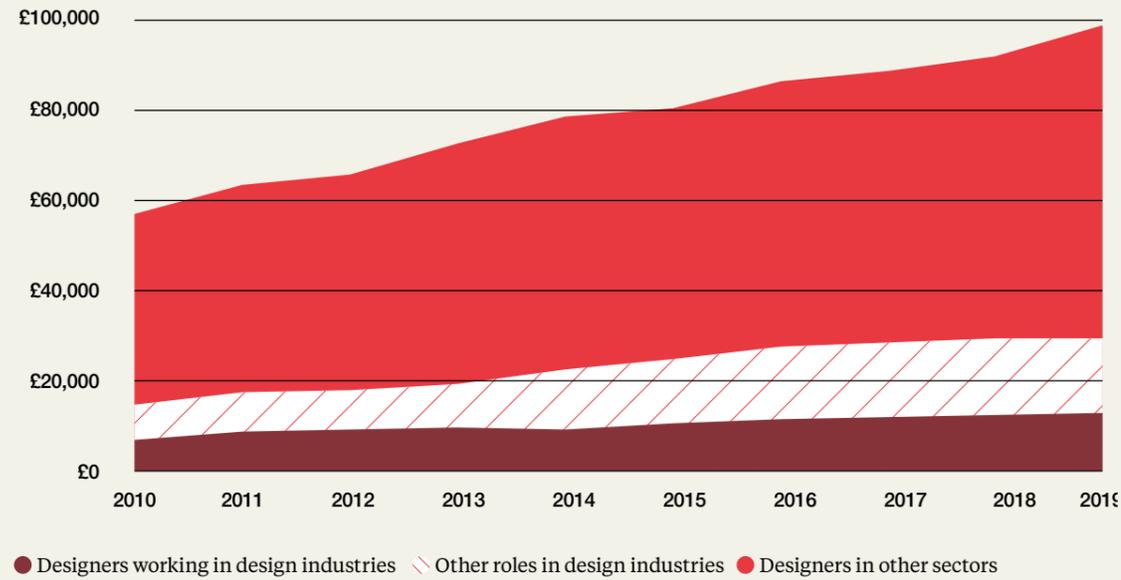
Figure 8: Total design economy GVA by design sector (2010 – 2019) (£m)



30 It is important to note that clothing does not include the work of fashion designers, which are included in multidisciplinary design.
 31 Clothing design does not include all fashion designers, who are also captured in multidisciplinary design. For a broader view on the employment and GVA contribution of the UK fashion industry as a whole, see British Fashion Council's Value of Fashion report (2015). Their next instalment of this research is due to be published in Autumn 2022. britishfashioncouncil.co.uk
 32 UK Fashion & Textile Association, UK Fashion & Textile Association's Compendium of industry statistics and analysis, 2020 ukft.org

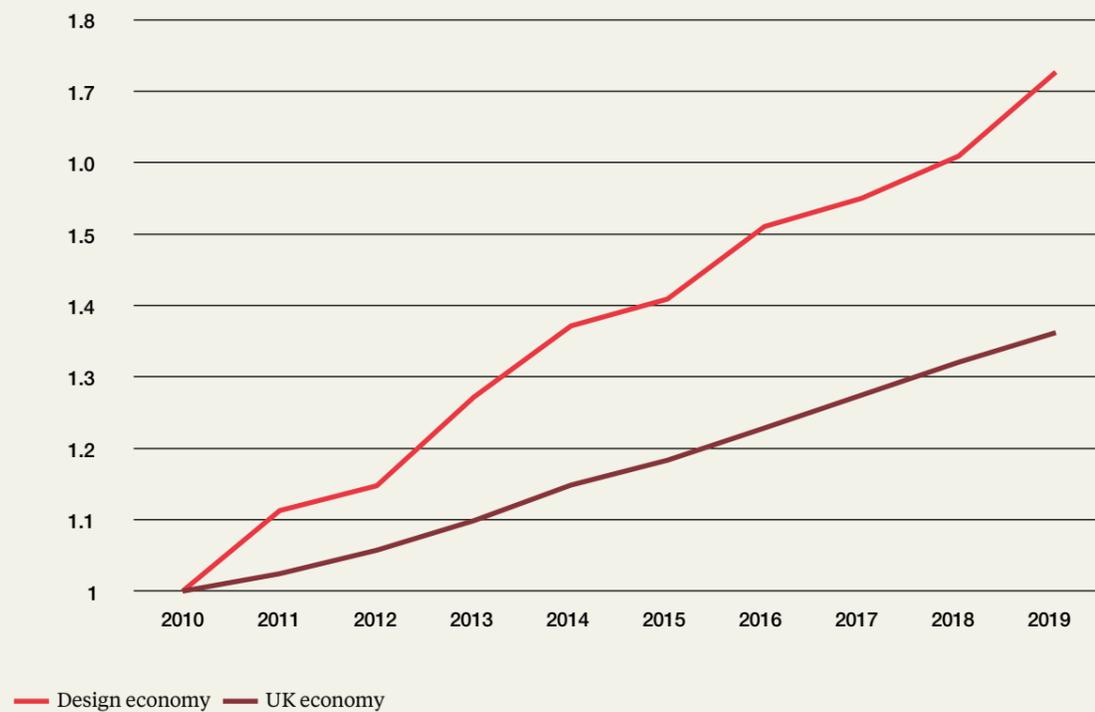
Source: Annual Business Survey, Annual Population Survey

Figure 9: Total design economy GVA broken down by design occupation (2010 – 2019) (£m)



Source: Annual Business Survey, Annual Population Survey

Figure 10: Index of real terms GVA growth for design economy and UK economy (2010 – 2019)



Source: Annual Business Survey, Annual Population Survey



Photo: David Butler

2.2 Spotlight *Octopus Energy*



Using design to decarbonise the UK's energy supply

Octopus Energy was set up in 2015 to address what its founders, who proudly call themselves 'energy outsiders', considered to be a market failure in the energy sector: that consumers didn't trust or wilfully engage with their energy providers. They also saw an opportunity to 'make green electrons cheap electrons'. It is now worth £3.3bn – as much as British Gas owner, Centrica.

With their background in advertising design, and following the ingrained principle of putting the user experience at the forefront of product development, the founding team at Octopus were able to innovate in ways that the energy sector hadn't done in decades.

"We brought a naive view of how it all worked, which let us question things and ask 'why not?'. One of our first ideas was to approach meter readings differently – they're a bit of a faff, but really important to knowing where you stand financially. So, after customers submit their reading, we offer them a spin of our wheel of fortune for the chance of winning up to £512 credit on their account. It started out as a bit of fun, but turned out to be genuinely transformational in how people engage with energy – we now get over a million spins of that little wheel every month. That was an eye opener for us: we knew there was huge opportunity for doing things differently".

Through its technology platform, Octopus is constantly testing and iterating new products directly with its customers. It centres the user experience, and has purposefully created a 'porous organisation', because it knows that consumers have been traditionally disempowered in their energy purchasing.

2.3 The employment contribution of the design economy

The design economy sustained 1.97 million jobs in 2020 – one in every 20 people working in the UK – and employment grew at four times the rate of all UK sectors between 2011 and 2020 at 44% compared to 11%.

Of these, 1.62 million are design-specific roles, and the other 350,000 are in administrative and support functions within design industries. The number of designers working in other industries such as finance, aerospace and retail has also continued to grow. These non-design sectors account for 77% of all UK designers.

When we take a closer look at the non-design sectors we find that 33% of all employment in computer programming and consultancy – one of the 10 largest employers in the UK – is in design roles. In contrast, there is very little design employment in other large sectors such as education, human health activities and social work. Given the wider social and environmental value design can contribute, there is a significant opportunity to drive design employment in these sectors³³.

Digital design is the largest employer by sector in the design economy, and accounted for 866,000 jobs in 2020 (44% of the entire design economy workforce) with architecture and the built environment (425,000) and product and industrial design (225,000) acting as the second and third largest employers respectively. However it was advertising that saw the greatest employment growth over the last decade of data (2011 – 2020) at 116%, followed by digital (76%) and multidisciplinary (51%).

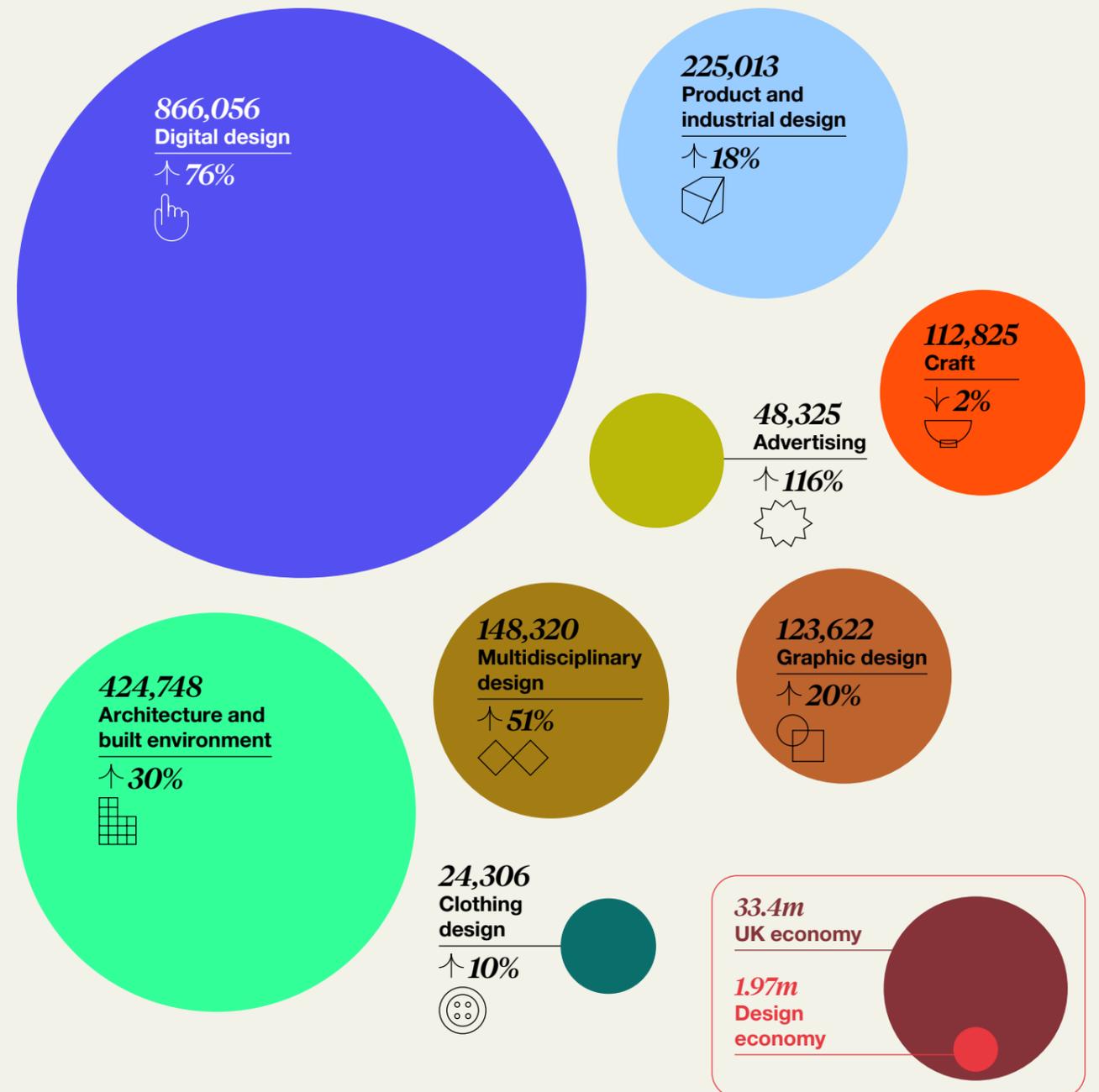
Craft and clothing are the only design sectors to have seen growth levels below that of all UK sectors, with craft contracting by -2% in employment during that time.

In terms of the composition of employment within the design economy, only digital grew its share of employment between 2011 and 2020 (from 33% to 44%). All other design groups maintained a constant share or declined. This shift reflects the rapidly increasing importance of digital design to employment, rather than declining employment importance among other design groups.

Design employment has shown some resilience during the early stages of the COVID-19 pandemic. Between 2019 and 2020 the design economy experienced a 4% increase in employment. The UK economy, meanwhile, contracted by -0.6%. The largest increases in employment over this time were in advertising (17%), clothing (13%) and digital (7%). Multidisciplinary design was the only design sub-sector to experience a contraction in employment in that year (falling by 14%).

That only one design group suffered this contraction reflects the relatively minimal disruption experienced by design groups due to the initial COVID-19 lockdowns. Indeed, as people adapted to more remote working and leisure activities online, new opportunities may have come to designers amid the changed circumstances created by COVID-19.

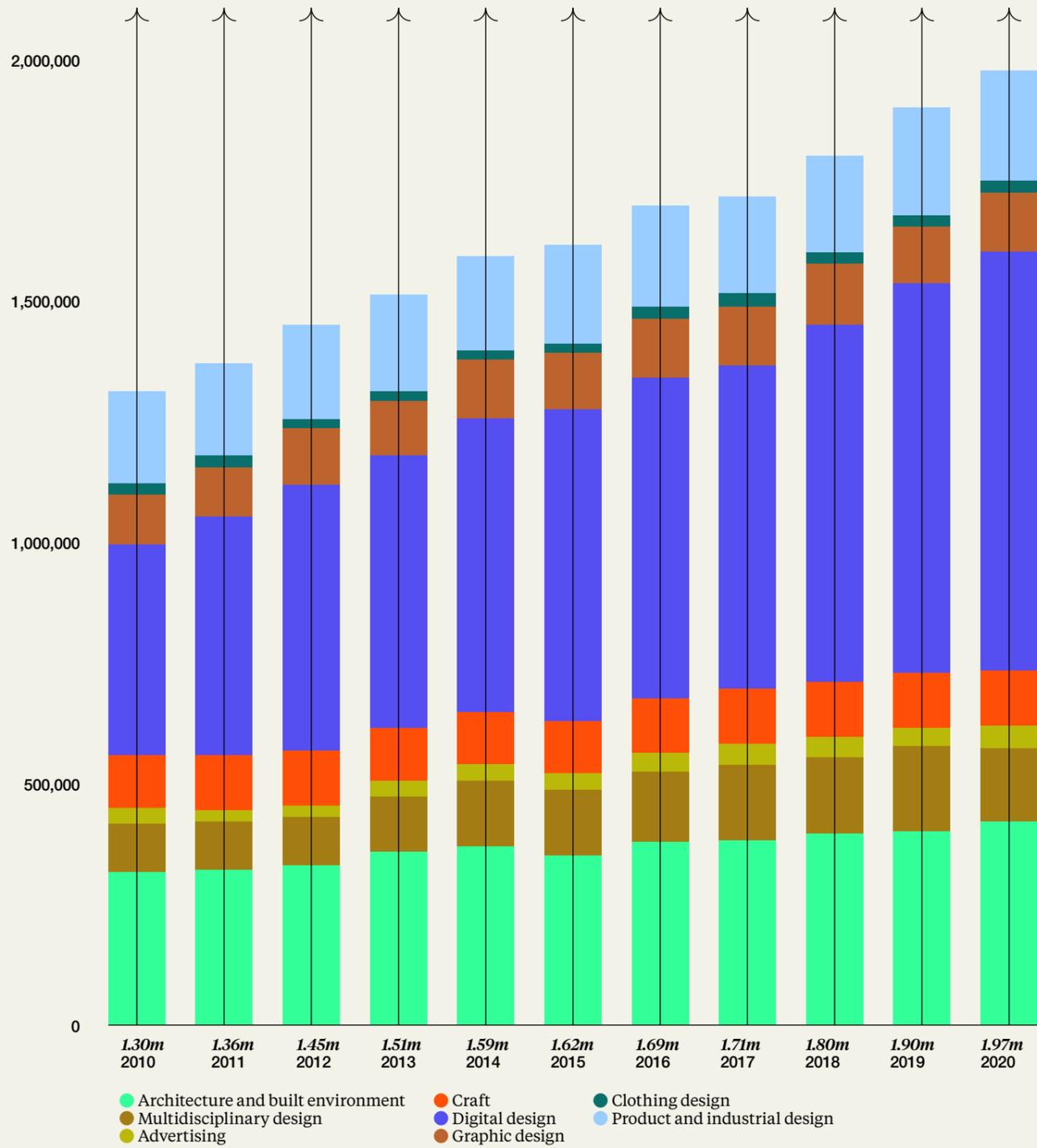
Figure 11: Design employment broken down by design sector (2020) and growth (2011 to 2020)



³³ For more information on how this is assessed in *Design Economy* see Design Council, *Design value framework*, 2022, designcouncil.org.uk

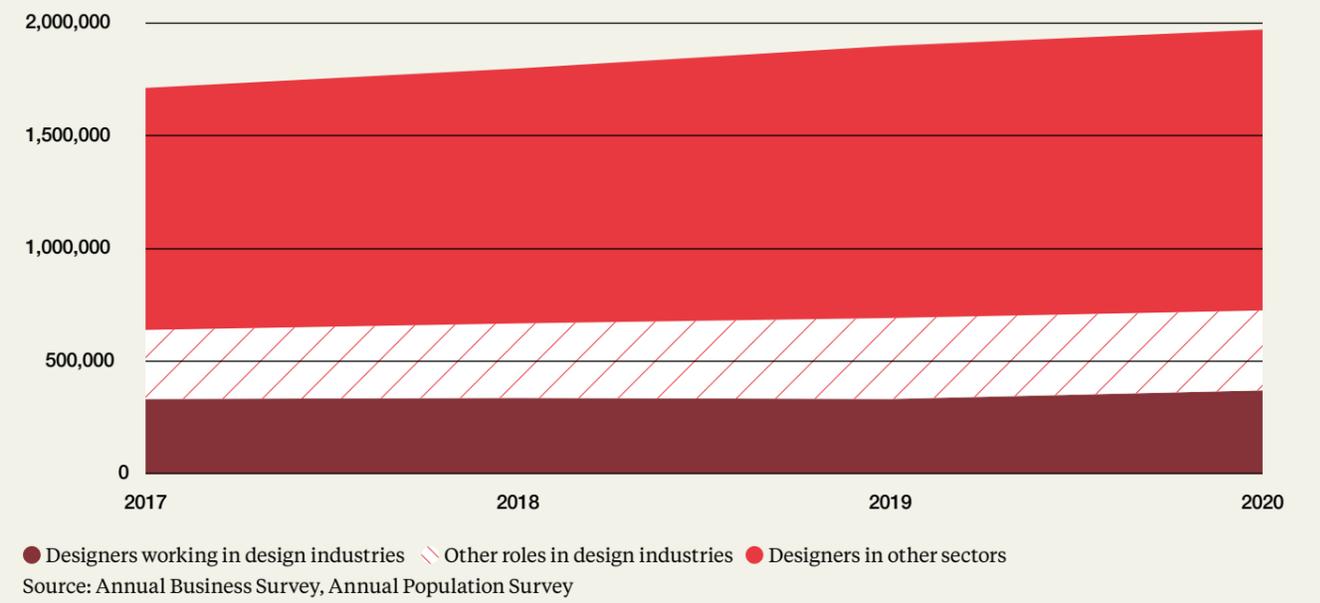
Source: Annual Population Survey
Notes: The creative industries estimate for 2015 and 2016 is calculated directly from the Annual Population Survey.

Figure 12: Employment in design economy by design sector (2010 – 2020)



Source: Annual Population Survey

Figure 13: Growth in employment in design economy by occupation type (2017 – 2020)



Source: Annual Business Survey, Annual Population Survey

2.5 Spotlight *Design on the frontline*



Using human-centred design to support healthcare in the pandemic

Great product and industrial design was critical to meeting the overwhelming challenges presented by the COVID-19 pandemic. For hospitals across the country, designers created new personal protective equipment, ventilators, and even spatial design for socially-distanced hospitals.

One great example of design on the frontline was an oxygen-delivery system developed by product design and technology student, Dominic Leatherland from Loughborough University. The rapidly developed HCH-40 hood adapts to the needs of each patient, and both assists with breathing and delivers oxygen-rich air to patients. It was designed to replace the traditional nose-cup mask which typically wastes large amounts of oxygen, and to provide an alternative to invasive patient intubation. The mask was developed in partnership with senior design engineer, Nick Hunter, at Avon Protection. It was approved for use by the Medicines and Healthcare products Regulatory Agency and has since been produced and distributed to hospitals across the country.

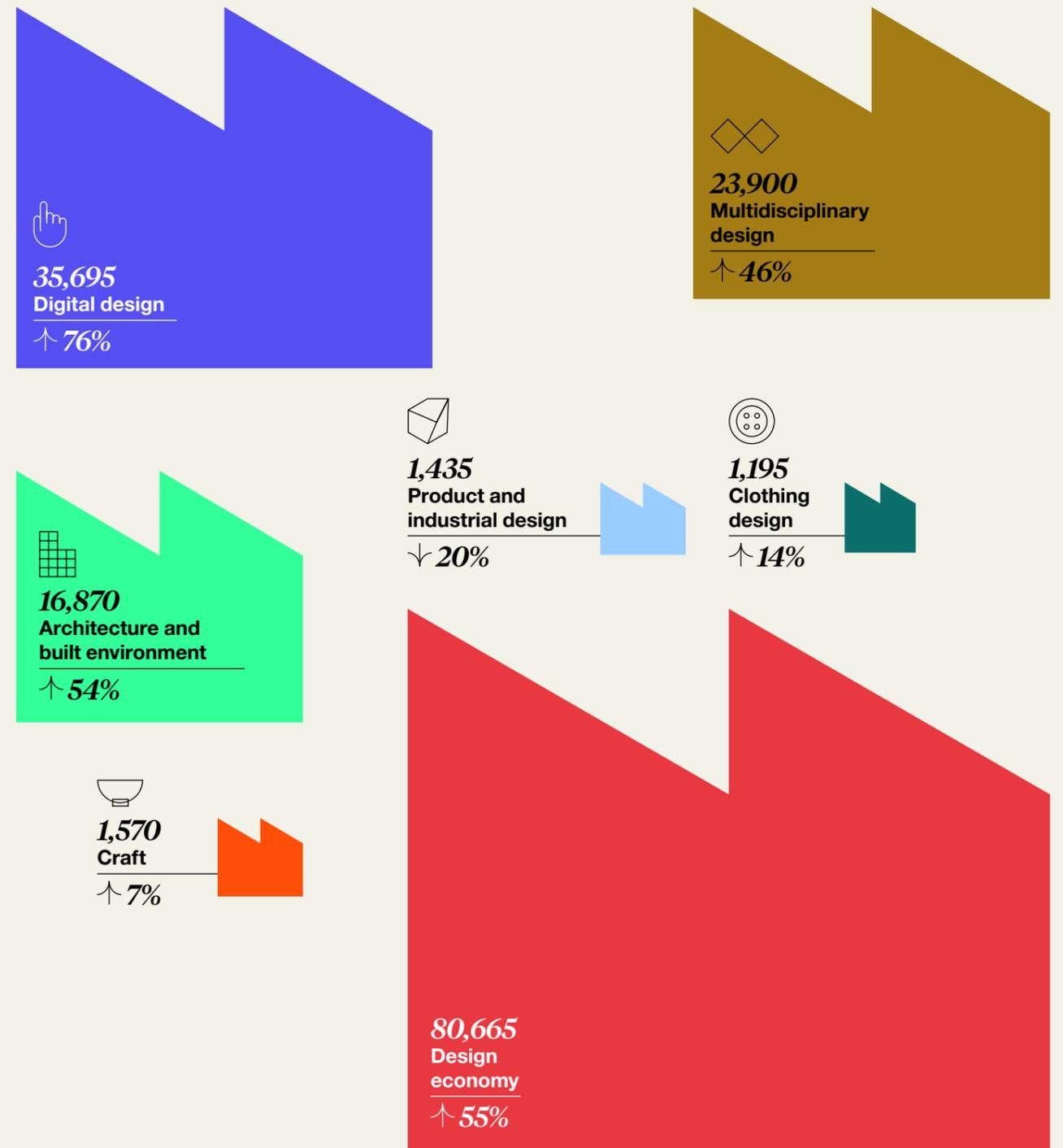
Photo: Avon Protection

“The impact of the pandemic on design businesses varied dramatically depending on the industries their clients were in. Some industries put all spend on hold, while others such as food and beverage experienced an explosion in demand. Those design businesses with digital expertise fared very well as their clients rushed to digitise their offers. The agile nature of design businesses meant the industry adapted overnight to remote working, and with the help of the government furlough scheme cut costs significantly. This meant they were able to keep going and turn to planning for business post-Covid. They survived and are thriving once again.

Perhaps the most powerful impact of design businesses during the pandemic was their ability to exercise their expertise on clients’ businesses. They turned new products around in record time, created bigger impact for brands seeking new ways of targeting their consumer and in a lot of cases, saved small businesses from likely closure.”

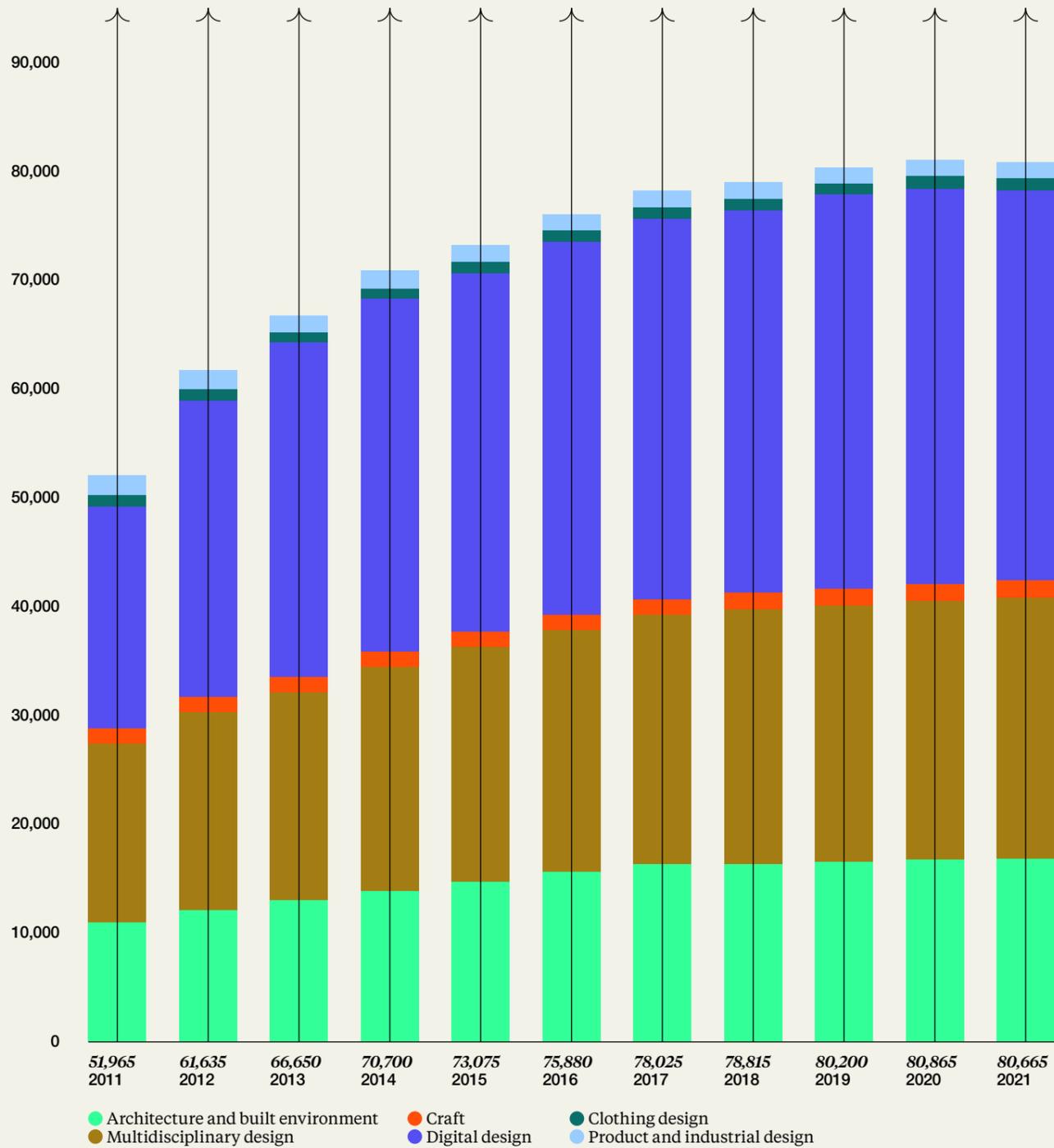
Deborah Dawton
 Chief Executive
 Design Business Association

Figure 14: Number of businesses in design industries (2021) and growth rates (2011 to 2021)



Source: Annual Business Survey

Figure 15: Number of design businesses by sector in the design economy (2011 to 2021)



Source: Annual Business Survey

2.6 Business numbers in design industries

Businesses within the design industries are a significant driver of the value of design to the economy. In 2021 there were 80,665 design businesses in the UK, which is almost three-fifths of the number of all food and drinks businesses, including restaurants³⁶. This number does not include sole-traders and those who fall below the VAT threshold, meaning that some sectors, such as craft, are likely to be under-represented.

The number of design businesses increased by 55% since 2011, twice the rate of the growth of UK businesses³⁷. This increase was strongest in the digital (76%), product and industrial (54%), and multidisciplinary (46%) design groups.

By 2021, the digital design sector was responsible for 35,695 businesses – 44% of the design industry’s total, an increase from 39% in 2011. No other design group grew its share of businesses within the design industries over the same time period. This increased share for digital reflects stronger growth in this design sector, rather than an absence of growth in other design sectors. This is because almost all other design sectors increased their number of businesses, except for product and industrial design which saw a 20% contraction between 2011 and 2021. However, the reduction in firm numbers in product and industrial has occurred at the same time this group increased its GVA contribution, in part due to the increasing proportion of large businesses in this design sector.

The growth of businesses in the design industries has also persisted through the years of the COVID-19 pandemic. Between 2019 and 2021 there was a 1% increase in the number of design businesses, however this growth rate was slightly below the UK average of 1.7% growth during that time.

³⁶ ONS, *UK business: activity, size and location*, 2021, ons.gov.uk
³⁷ Ibid.

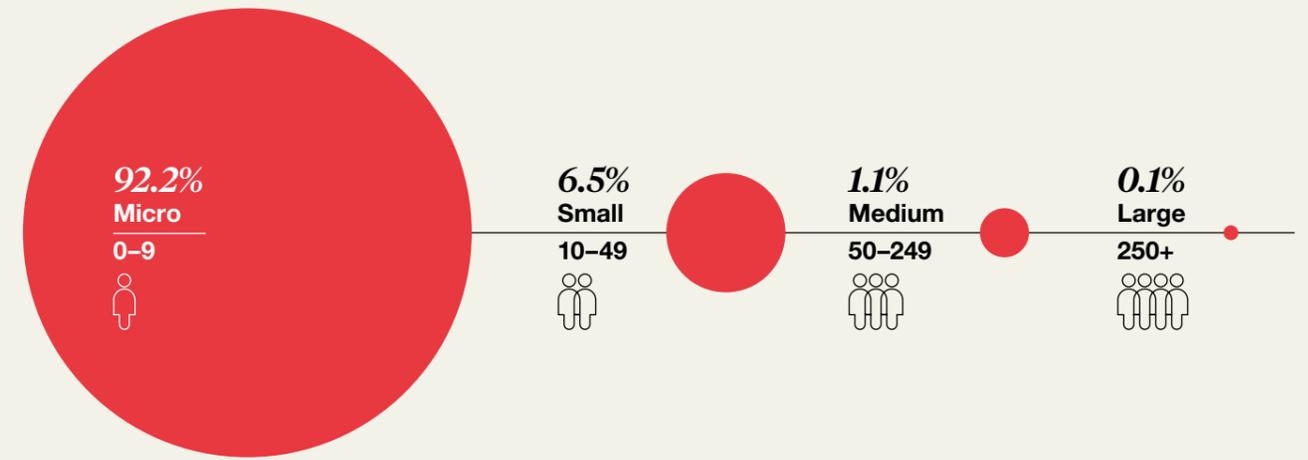
2.7 Business size in design industries

The design economy continues to be overwhelmingly comprised of micro-businesses: businesses that have under 10 employees. In 2020 92% of all design businesses were micro-businesses. In contrast, only 0.1% were large businesses, employing over 250 people.

However, between 2017 and 2020 large businesses employing over 250 people have grown in importance in the design economy. We can see this when we look at the proportion of design economy workers employed by different sized businesses. Over that time, there has been an 11% increase in design industry workers employed by large businesses, and a 20% decrease in the same period by design industry workers employed by micro-businesses employing one to 10 people. These changes suggest a significant shift in the kinds of businesses that comprise the design economy.

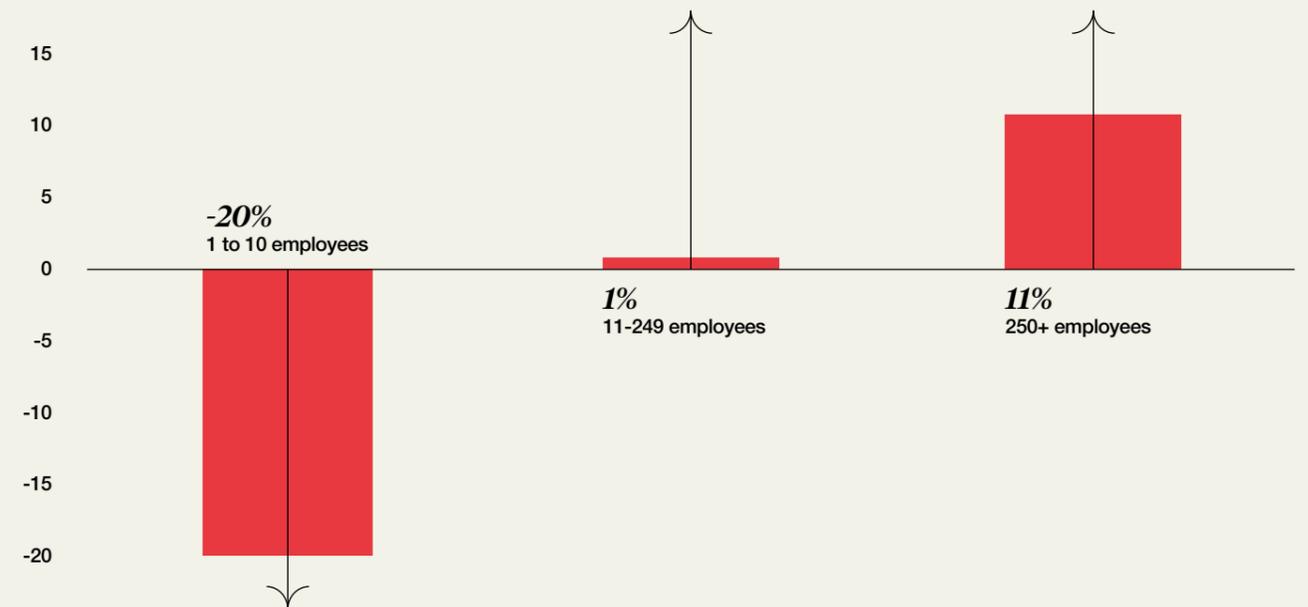
In 2020 this consolidation into large businesses was strongest in digital (44% of all workers in the digital design industry are now working in large businesses), product and industrial design (42% of workers are in large businesses) and architecture and the built environment (26% of workers). As we have already seen, these are also the three largest employers by design sector in the design economy. As we discuss further below, our analysis shows that there is a positive correlation in the design economy between increased business size and worker productivity, especially in digital and product and industrial design.

Figure 16: Proportion of design businesses by employee size bands (2021)



Source: UK Business Counts - ONS

Figure 17: Percentage change in proportion of workers in firms of different sizes (2017–2020)



Source: Annual Business Survey, ONS

2.8 Productivity of design economy workers

Design economy jobs are productive, with over £51,000 of GVA generated per design economy job in 2019. Consistently throughout the decade to 2019, the most productive component of the design economy was designers working outside of design industries in other sectors of the economy. These workers each contributed on average £56,686 in GVA in 2020, compared to £37,993 in design industries. The productivity gains of the design economy therefore spill over into the wider UK economy.

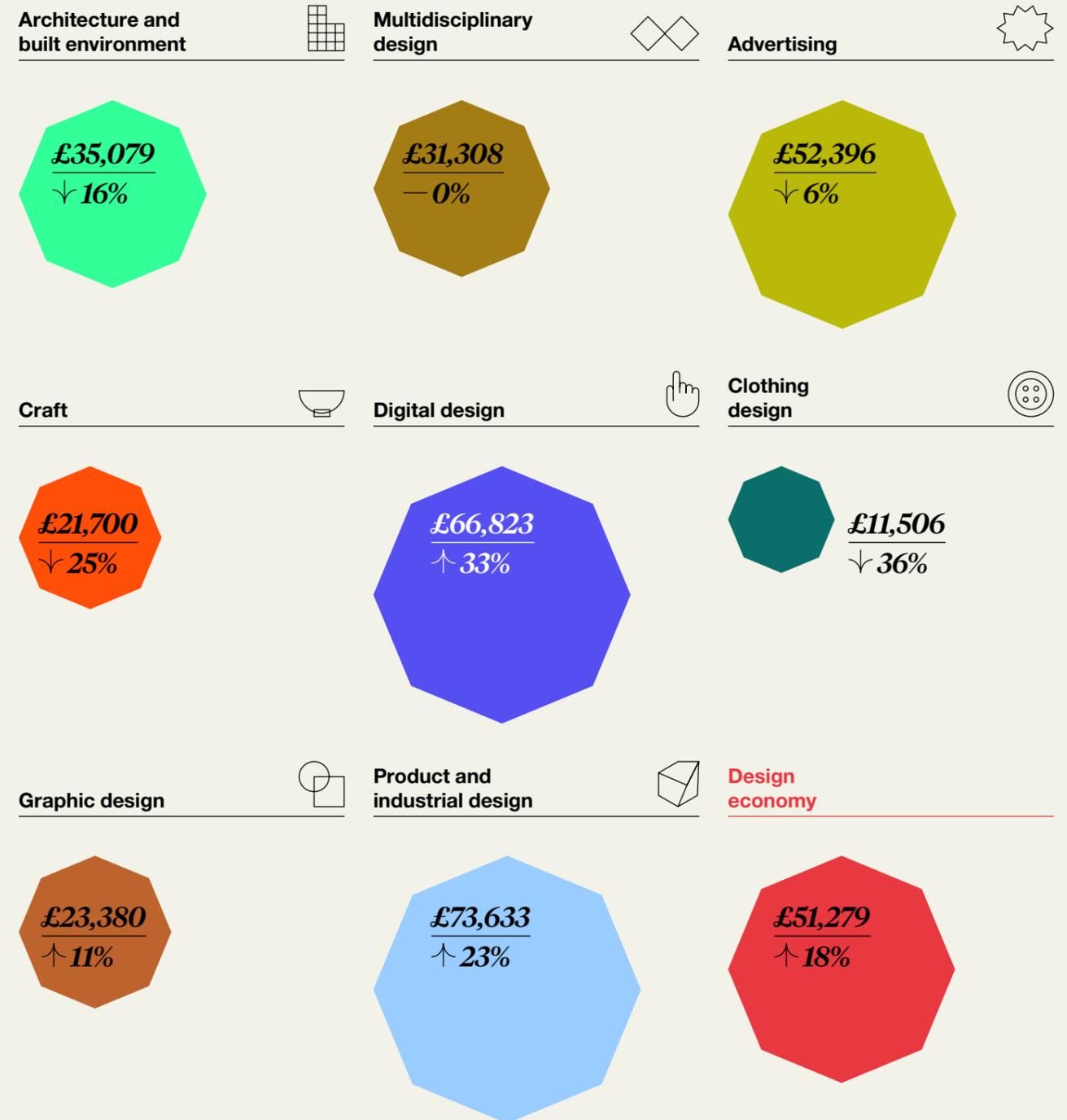
These productive gains in 2019 were largest among the product and industry design group (£73,633 in GVA per design economy worker) and digital (£66,823 in GVA per design economy worker). These design groups significantly outstrip the productivity of the creative industries (GVA per worker of £61,100) and the cultural sector (GVA per worker of £50,200).³⁸ Digital and product and industrial are also the design groups that benefitted from the most rapid increases in productivity between 2009 and 2019 – with productivity in digital increasing by 33% and by 23% in product and industrial over this period.

Significantly, the most productive two design groups – digital and product and industrial – have seen the greatest consolidation into large businesses. This suggests that within the design economy there is a positive correlation between business scale and worker productivity³⁹. In contrast, some design groups suffered declines in productivity over these years – with clothing experiencing a 36% decline and craft seeing a 25% fall. The reasons for productivity decline in these sectors are not immediately evident, but reflect decreases in employment and GVA contribution over this time.

³⁸ DCMS, *Economic estimates 2019 productivity tables*, gov.uk

³⁹ This is in contrast to recent economic literature which has challenged two assumptions about the relationship between firm size and productivity: (i) the existence of a firm size-wage premium; and (ii) a positive relationship between firm size and productivity. See, for example: Berlingieri, G., S. Calligaris and C. Criscuolo, *The productivity-wage premium: Does size still matter in a service economy?* OECD Science, Technology and Industry Working Papers, No. 2018/13, OECD Publishing, 2018, oecd-ilibrary.org

Figure 17: Designer productivity per head (2019) and percentage change (2009 to 2019)



Source: Annual Business Survey, Annual Population Survey

Notes: Productivity estimates are calculated by dividing aGVA by employment. Creative economy comparisons are derived from employment and aGVA figures published in the DCMS Creative industries economic estimates.

2.9 The growing importance of digital design

Digital design is driving the economic growth of the design economy more strongly than any other sector, reflecting wider trends of digitization across the economy. Assessing the full economic value of digital design is challenging. Digital tools and practices have influenced almost all design sectors. Graphic designers rely on digital illustration, animation and photo-editing software. Architects use digital modelling software and renders to show their building proposals. Fashion and product designers use digital fabrication methods such as laser cutting. On top of this, digital technologies are driving the creation of new design roles at a rate faster than national data-sets are defined. Service designers, for instance, are often working in creating digital services such as banking apps or smart-meter services but are not neatly reflected in current occupation codes.

In the ONS data used for this research, digital design includes roles such as user-experience design, video games-design, app design and forms of digital production and publishing. These roles combine creativity and more technical digital skills such as coding, computer-aided design (CAD) and the use of visual effects (VFX) software. In recognition of the distinctive blend of skills held by digital design, some universities in the UK have recently launched specialist teaching and research institutions, such as the University of the Arts London's Institute for Creative Computing, and the Creative Informatics Cluster in Edinburgh.

By 2020, digital design was responsible for 44% of all employment in the design economy, compared to a 33% share in 2010. Employment in the sector grew more rapidly than almost any other design sector, with a 76% increase between 2011 and 2020 and accounting for 866,000 jobs at the end of the decade. These jobs are highly productive, generating £66,823 GVA per annum, 15% more than the UK average worker.

Digital design generated 55% of the design economy's total GVA in 2019 – £53.9bn, which is a significant growth from 38% just nine years earlier. Clearly, digital design is growing in economic importance, both to design itself, and to the wider economy. In fact, the number of digital designers working in other sectors (over 460,000), helping to create new apps, services and computer games, shows that digital designers are particularly valued by the wider economy.

The rising digitisation of the design economy shows no signs of slowing down and is shaping the design economy across the UK. While three of the top-five digital design clusters in the UK are based in the South East of England, in the last five years we have seen rapid growth in digital design sectors in the South West (110%), Scotland (88%) and Yorkshire and the Humber (55%). Of the 11,000 designers working in design industries in Northern Ireland, 8,000 of them also work in digital design which is likely due in part to business from the thriving film and production sector there. With digital designers also some of the most productive in the design economy, it is a significant driver of growth and wider value to the UK as a whole.

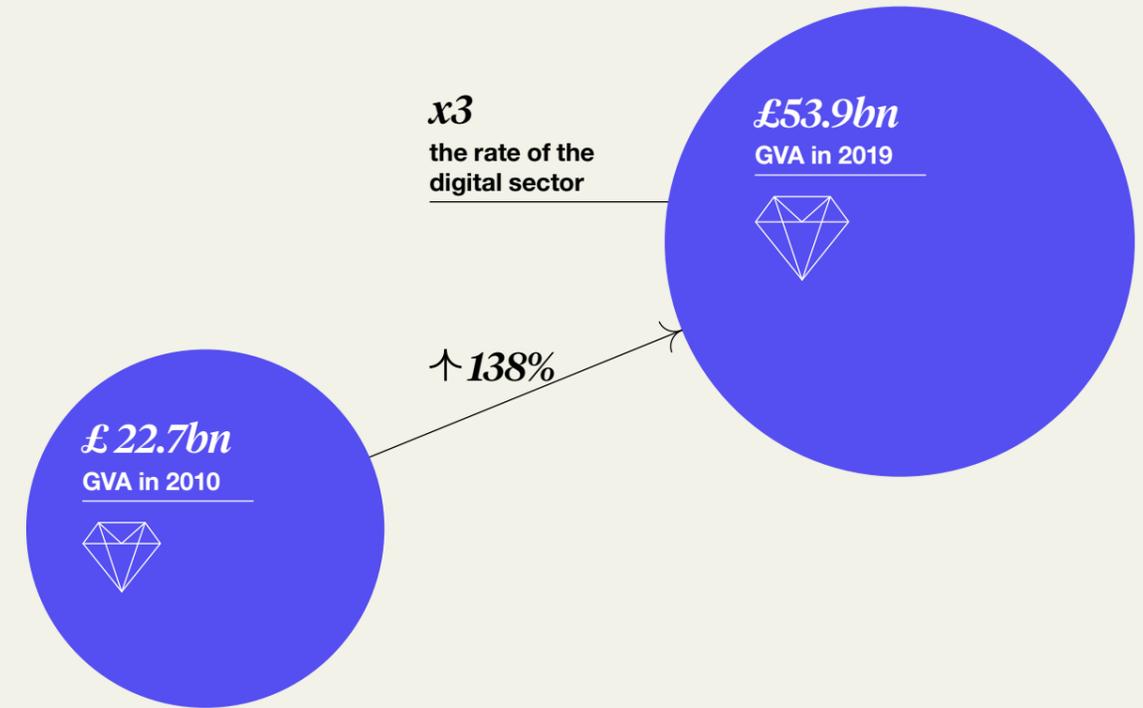
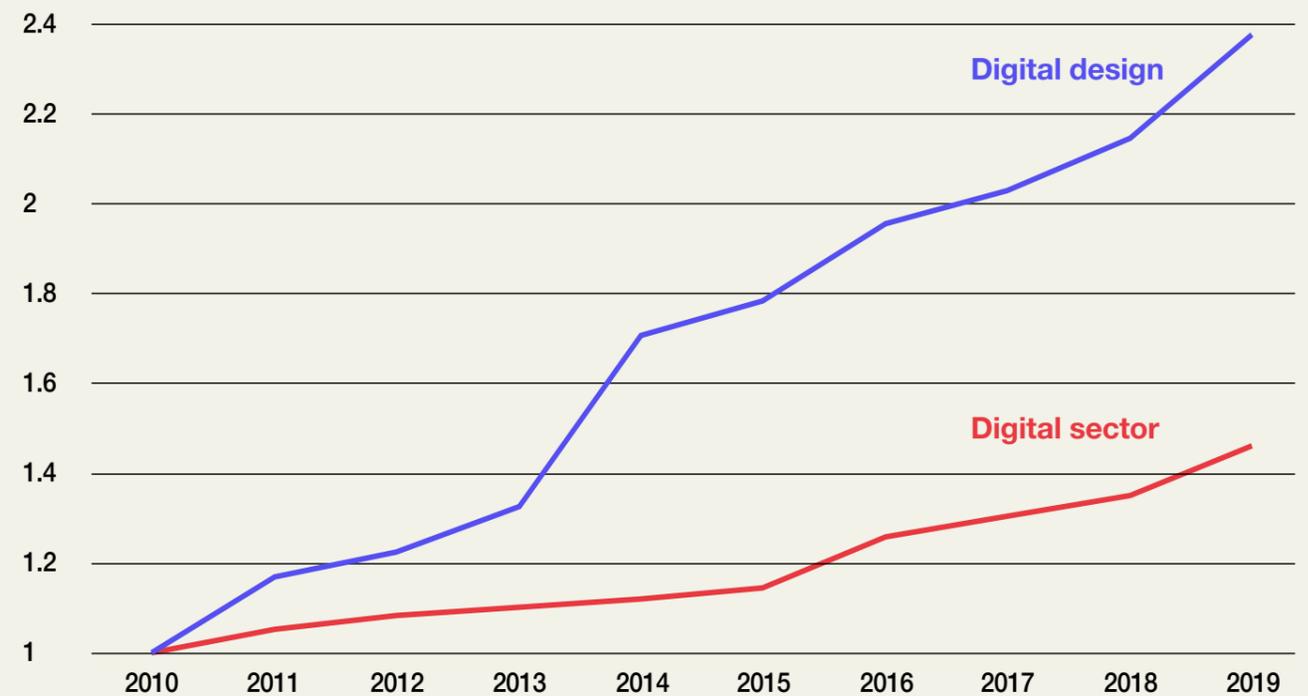


Figure 18: Real terms indexed growth for digital design and DCMS digital sector



Source: Annual Business Survey/ Annual Population Survey



“Whilst digital tools and practices have come to influence almost all parts of design, digital designers in roles such as UX design and games design are playing an increasing role in the economy. However, we need more investment in training designers with the distinctive blend of creative and tech skills these roles require, particularly in harnessing these to create a more sustainable and regenerative economy.

Digital tools are also becoming essential to promote and sell design of all kinds. Dealing with e-commerce platforms, building simple and secure websites and promoting a design on social media has become part of every designer’s toolkit but has yet to translate into skills building in education. I expect there to be much more collaboration between digital marketing, industrial research and design in the future which will help practitioners find their place in the market.”

Alexandra Deschamps-Sonsino
Internet of Things author, consultant and entrepreneur

2.10 Spotlight *OLIO*



Harnessing digital design to tackle food waste

OLIO is a mobile app designed to reduce food waste by facilitating food sharing. It connects people with each other, and volunteers with local businesses, so that surplus food and unwanted items can be given, not thrown away.

Design is about being user-centred and iterative, principles that OLIO founder Tessa Clarke took to heart when the company started developing the app.

“I think a lot of people would have jumped straight into building an app. But for us, the design process was an essential prerequisite to building. We had a core hypothesis that we had to test first: that people would share food with a stranger. We needed to prove that, before we could invest our life savings into building an app that quite possibly nobody would want. We ran a proof of concept using a Whatsapp group. Making sure to test your hypotheses via a minimal viable product (MVP) saves time and money in the long run, which is especially critical when you don't have much access to capital. We've also had to think a lot about the user experience and behavioural psychology, as we couldn't just create something and expect people to use it.”

In 2015, OLIO received support from its first investor, Simpleweb, a web design and development agency hired to build the MVP. The app has grown and iterated from covering five postcodes in North London to a community of 5.9 million users, in 62 countries. It has saved 52.9 million portions of food in only seven years.⁴⁰

2.11 The added value of design skills

Design skills, such as creative problem-solving, visualization and the use of design methods, are used by many people across the economy who aren't designers. In the context of the 'fourth industrial revolution' and the rising digital economy, they are also in high-demand and at lower risk of obsolescence⁴¹. Through our analysis, we have sought to estimate the economic contribution these skills bring to the wider economy. We discuss the potential risks in declining design skills within the economy in section 5.1 of this report.

In 2017 we published the *Designing a Future Economy* report⁴², which identified 17 occupations in the economy that use design skills to a significant degree but aren't themselves professional design roles. These include roles such as electronics engineers, carpenters and directors in construction. From this, we identified industries where 30% or more workers were in these occupations. These included industries such as manufacturing, construction, civil engineering, and landscape services. For this research we re-ran this analysis and found no change in the occupations or industries that fall under this definition.

Design skills' employment contribution to the UK

Based on these definitions, the UK benefits from the following additional economic contributions and employment from design skills beyond the design economy:

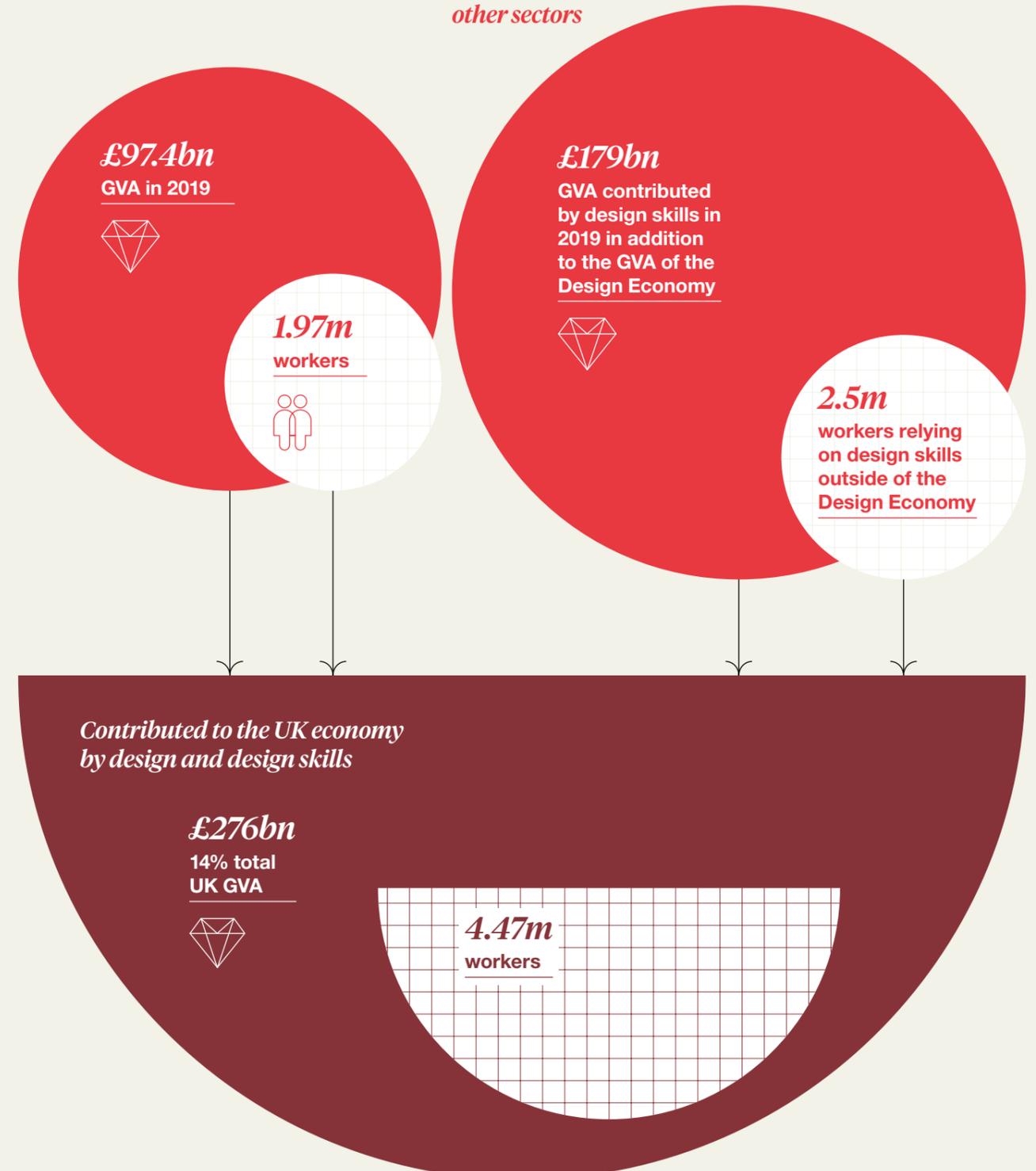
The total number of workers for these categories is around 2.5 million, representing a 7% increase between 2017 and 2020. This means that the total number of people working in the design economy, design-active industries or in design-skilled occupations in 2020 was 4.47 million people, or one in every seven UK workers⁴³.

Design skills' economic contribution to the UK

In 2019 the combined GVA contribution of design skills was £179bn – a 6% increase since 2017. This GVA is additional to the economic contribution of the design economy.

This means that the total value of design skills and the design economy combined was £276bn⁴⁴, the equivalent of 14% total GVA in the UK economy that year.

From the design economy



41 The 10 skills you need to thrive in the fourth Industrial Revolution, 2016, weforum.org and Nesta, Creativity vs Robots, 2015, nesta.org.uk

42 Design Council, *Designing a future economy*, 2017, designcouncil.org.uk

43 ONS, Population estimates, 2021, ons.gov.uk

44 Please note that these figures cannot be directly compared to those reported in *Designing a future economy*, 2017, because they are irreconcilable. These latest figures discount the GVA of those with design skills working within the design economy – a methodological step that was not applied to the 2017 figures.

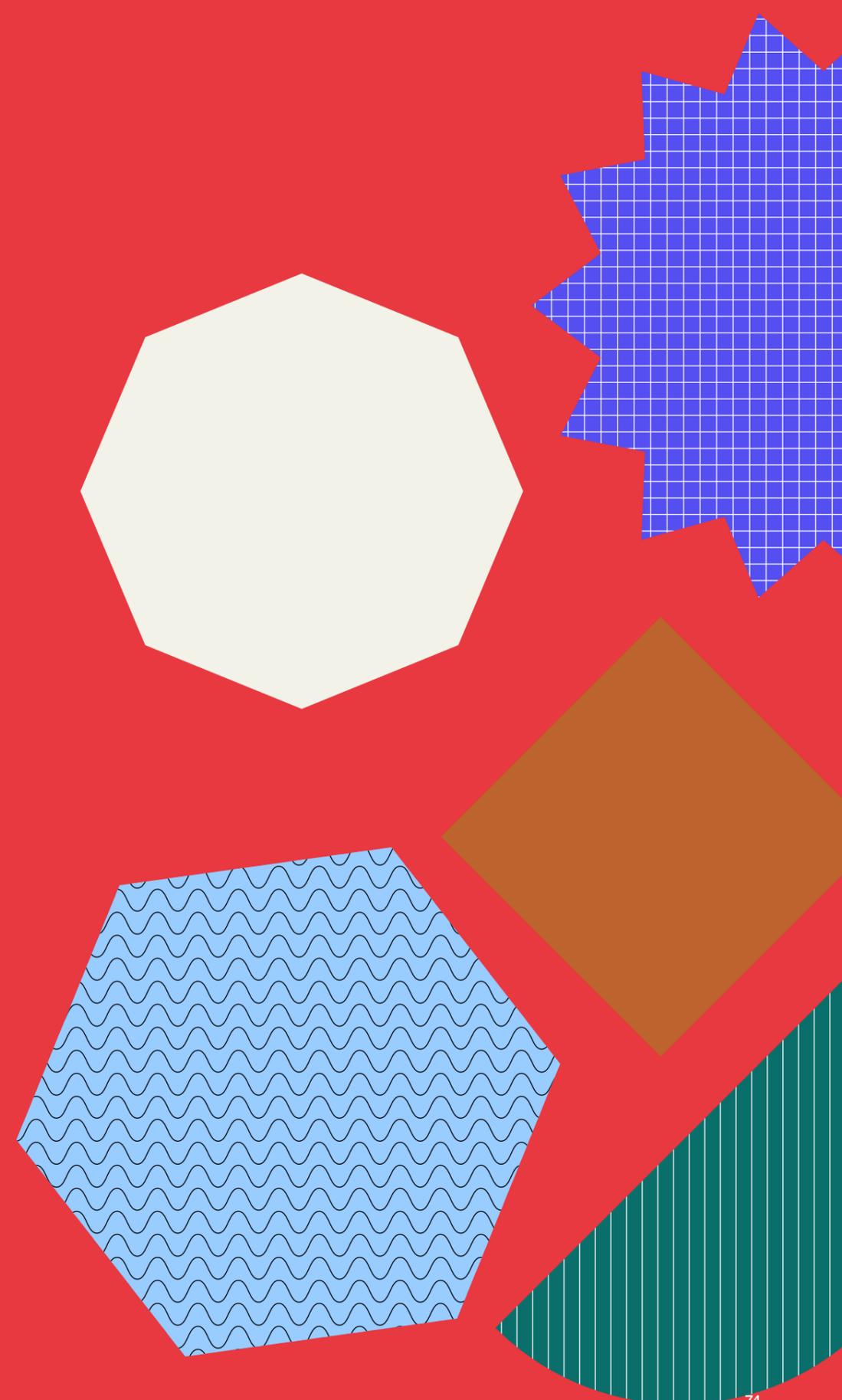
2.12 Summary

Design is a major, and fast-growing, contributor to the UK economy, accounting for £97.4bn in GVA and 1.97 million jobs. Over the last decade, it has also grown in importance to the wider economy, bringing high-productivity jobs to industries from retail to computer programming and we have seen design skills increasingly taken up by non-designers. Not all design sectors have benefitted from high-growth in recent years, and some have been disproportionately impacted by COVID-19, highlighting the need for a balance of design-wide and sector specific support.

Whilst design is already playing an important role in the country, it could be supported to do more to maximise its social and environmental value, as well as its regional economic impact. Despite a recent increase, still only 68% of UK businesses currently use design⁴⁵. Barriers to greater use include design awareness, access to the right design skills, and its exclusion from the government’s current research and development tax credit system⁴⁶. Updating commissioning frameworks and standards to ensure they demand robust social and environmental returns, as well as economic benefits, can help to support designers to ensure their creativity has a more holistic impact. Through innovation funding, design capability support and by creating the right design commissioning standards and R&D tax credits, we can further unlock the benefits of design as a driver of innovation, productivity and jobs for a regenerative economy.

⁴⁵ Design Council, *Design economy: business use and understanding of design*, forthcoming.

⁴⁶ For an in-depth discussion of this, see: Creative Industries Policy & Evidence Centre, *The Art of R&D*, 2022, pec.ac.uk



3.0 Design across the United Kingdom

The United Kingdom is home to a rich tapestry of design expertise, from the craft traditions of the Orkney Islands in Scotland and the West Midlands – to thriving digital design industries in the South East of England and Northern Ireland. Many cities and regions across the country possess world-leading centres of design research, education and industry. The world’s top two art and design universities are based in London, with other top research institutions based in Glasgow and Loughborough⁴⁷. Internationally renowned architecture and design firms whose work is highly sought around the world, can be found in cities from Belfast to Cardiff.

However, not all parts of the country experience the same benefits from the UK’s design economy. Often, these inequalities reflect deeper social and economic challenges that determine people’s quality-of-life, productivity, employment opportunities and longevity⁴⁸. At the same time, local design cultures and industries have been impacted by these wider trends affecting the country. When the design of our places determines the quality of the homes we live in, the green spaces we have access to, and the character of our social services and health-care applications, it is clear supporting the right kinds of design at a local level is central to creating flourishing places for everyone⁴⁹.

In this chapter we map the design economy and its economic value across the UK to better understand the distribution of design across the country, to explore what we can learn from successful regional design economies and to identify areas in need of additional support. As a productive, high-growth part of the economy, we have also built on this analysis in section 4, to explore the role design clusters play in driving local wages, employment and growth.

3.1	Regional distribution and growth of GVA	77 ○
3.2	Regional distribution and growth of employment in design occupations	81 ○
3.3	Spotlight: Snook	85 ○
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3.6	Summary	94 ○

47 QS World University Rankings 2022, [topuniversities.com](https://www.topuniversities.com)
 48 For further discussion of this, see uk2070.org.uk
 49 Commission for Architecture and the Built Environment, The Value of Urban Design, 2001, [designcouncil.org.uk](https://www.designcouncil.org.uk)

3.1 Regional distribution and growth of GVA

In 2019 the design economy contributed a total of £97.4bn in GVA to the UK economy. Every region and nation in the country benefitted from at least £1.87bn in GVA in that year, from £1.87bn in the North East, to £27.2bn in London. However, London and the South East continue to contribute the largest proportion of GVA to the UK's design economy, together accounting for almost 50% of all design economy GVA. This reflects a long-term trend of design concentrating in this part of the country. In GVA terms the design economy is more concentrated in London and the South East than the wider economy (48.2% of all design economy GVA is in these regions, compared to 38.4% of all UK economy GVA).

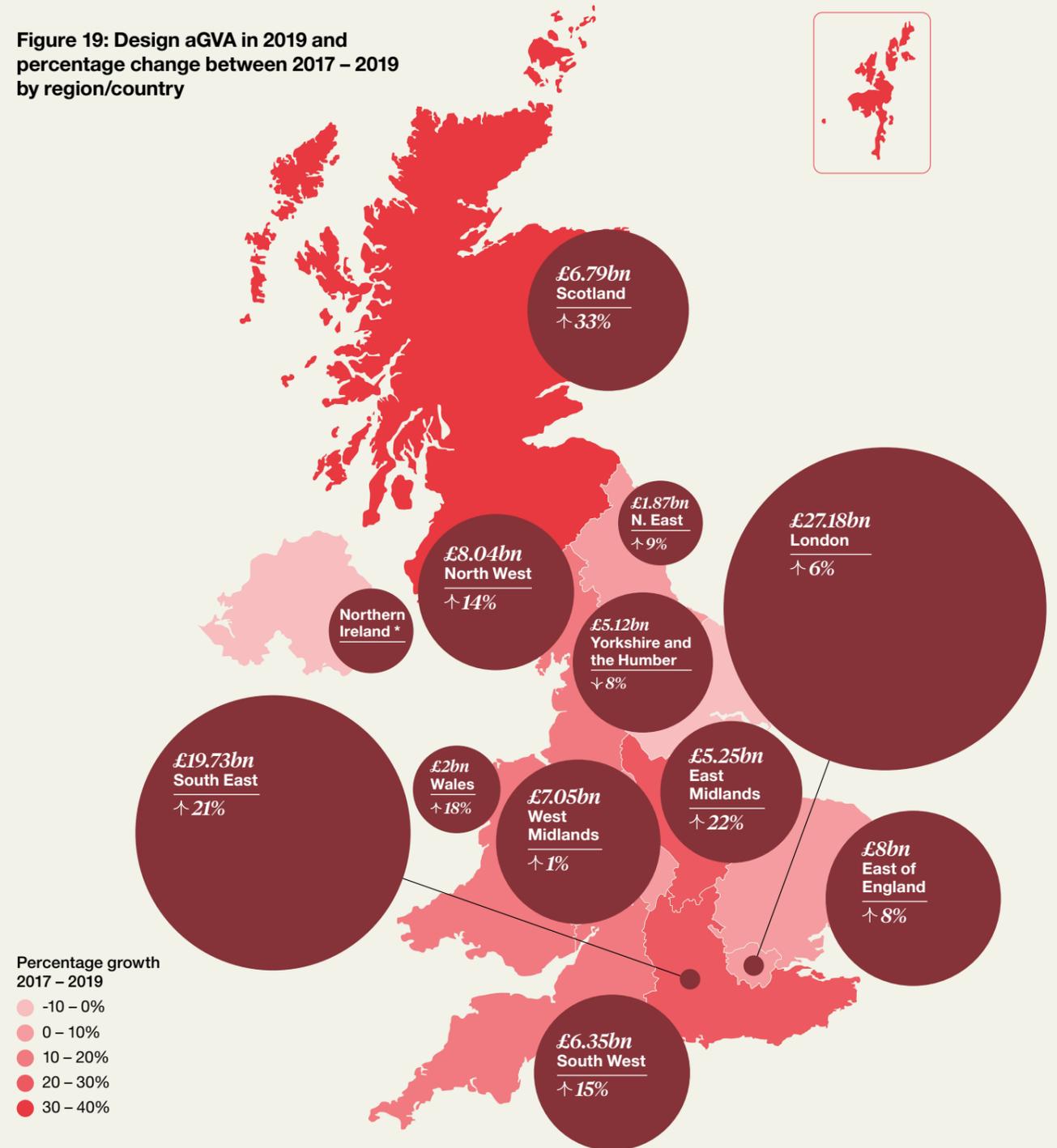
Despite the high concentration of design in London and the South East, almost every part of the UK has benefited from recent GVA growth, with particularly high rates of growth occurring in other parts of the country. While the UK design economy grew by 7% between 2018 and 2019 in GVA terms, this was significantly outstripped by growth in Scotland (27%), the West Midlands (19%) and the North West (16%).

In both Wales and Scotland, design is a rapidly growing part of the economy. Scotland's design economy grew at five times the rate of the Scottish economy between 2017 and 2019, while Wales experienced an 18% growth in GVA terms over that timeframe, three times the rate of the Welsh economy. In both nations, we have seen major new design initiatives over the same time period, from the opening of Scotland's national museum of design in 2018, to the launch of a digital creative cluster in Cardiff in the same year.

Almost all parts of the UK have benefitted from GVA growth in their regional design economies that has outstripped the economy average in that place. After Scotland, the second and third strongest growth rates were found in the East Midlands (22%) and the South East (21%). The exception to this was Yorkshire and the Humber, which experienced an 8% reduction in GVA between 2017 and 2019. However, this was driven by a significant decline in 2018, and is showing signs of recovery in the last year of data.

While the design economy remains concentrated in London and the South East in GVA terms, it has grown rapidly across the country in recent years, especially in places such as Scotland, Wales and the North West of England.

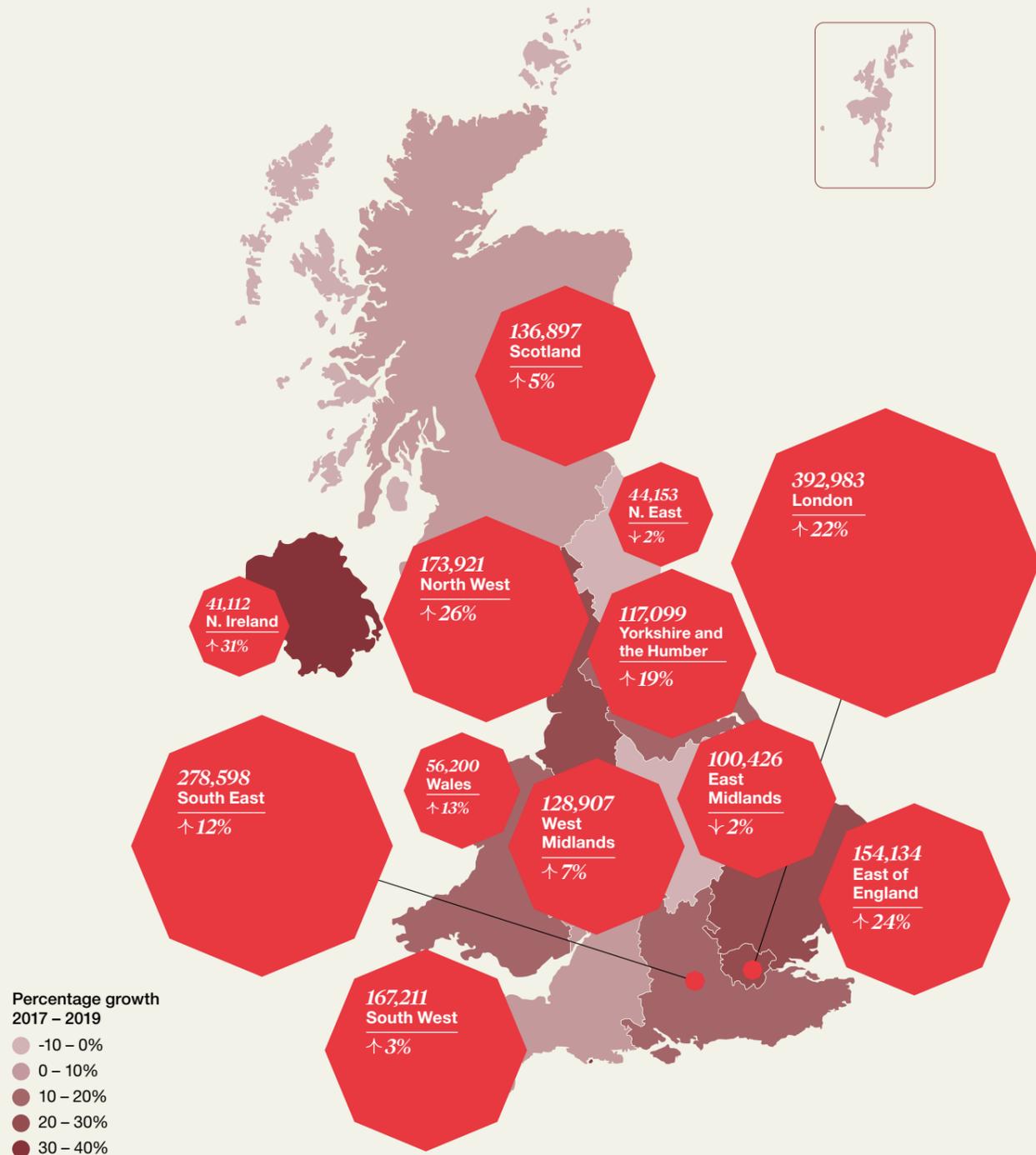
Figure 19: Design aGVA in 2019 and percentage change between 2017 – 2019 by region/country



*Information not available.
Source: Annual Business Survey, Annual Population Survey

Notes: The ABS provides aGVA figures for design industries. This is apportioned to design and non-design occupations on the basis of their share of gross earnings in design industries. Similarly, an estimate of the contribution to aGVA of designers employed outside design industries is based on their share of gross earnings. Earnings data used in this analysis from 2014 is from the Annual Survey of Hours and Earnings (ASHE). Creative economy comparisons are quoted from the DCMS Creative industries economic estimates.

Figure 20: Employment in design occupations by region (2020) and percentage growth (2017 to 2019)



Source: Annual Population Survey

Notes: This relates to design employment in design occupations (SOCs) and does not cover the whole design economy (because they miss other roles in the design industries).

“Our design economy in Wales has grown significantly in recent years. Valued at £2bn GVA in Wales, our design economy is a key enabler of economic prosperity and social value. Its importance must not be under-estimated, particularly given the central role that we play in the journey to net-zero. Hence why we will continue to champion good design with the aim of making Wales a better place for all.”

Carole-Anne Davies
Chief Executive, the [Design Commission for Wales](#)

3.2 Regional distribution and growth of employment in design occupations

In 2020, employment in design occupations within design industries and across the whole economy⁵⁰ accounted for 1.97 million jobs across the UK. More than two-thirds of that employment (37%) was in London and the South East (over 670,000 jobs), and 13% was outside of England in Wales, Scotland and Northern Ireland. The North West of England is the third largest employer of people in design occupations by region, with over 173,000 jobs⁵¹.

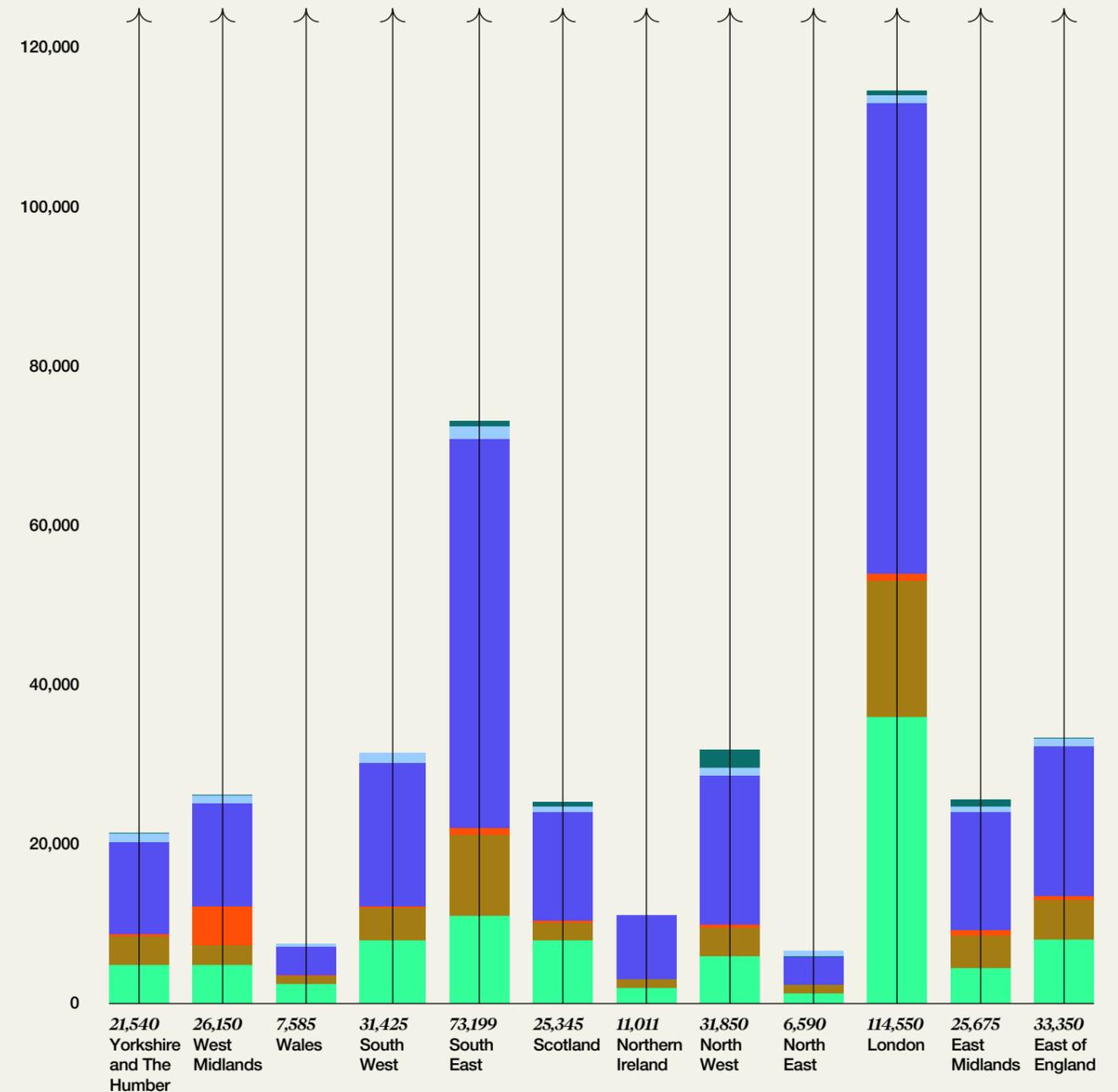
There has been growth in design economy employment in almost all UK regions and countries over 2017 to 2020. This has been particularly strong in Northern Ireland with a 31% increase in employment in design occupations, accounting for 40,000 jobs in 2020.

In all parts of the UK, the design industries sustain only a fraction of design economy employment: 23%, of the total employment contribution of the design economy. London benefits from the highest proportion of designers working in design industries and businesses (29%), whereas in Wales only 13% of designers work in design industries, demonstrating the importance of designers working in non-design industries to the Welsh economy⁵².

When we look more closely at the number of designers working in design industries, we can see that design industries are sustaining jobs across the countries and regions of the UK, with 114,550 jobs in London (2.2% of all employment in the capital) and 6,590 jobs in the North East (0.6% of employment in the North East). The rate of employment growth in design industries has outstripped that of the economy in almost every part of the UK.

In 2020, almost half of all jobs in design industries were in London (28%) and the South East (18%). London is an important centre for architecture and the built environment, holding 37% of all employment in this group. The South East greatly benefits from digital design and is home to 21% of all UK employment in this sector. However, the South of England is not the largest employer across all design industries: 39% of all UK workers in clothing are based in the North West, and 51% of all workers in craft are based in the West Midlands.

Figure 21: Employment in design industries by region/country and sector (2020)



50 Design occupations are jobs that fall under specific Standard Occupations Classification (SOC) codes. Employment in design industries, however, refers to those working in industries that fall under specific Standard Industry Classification (SIC) codes.

51 Estimates of designer employment in the regions and countries of the UK are grossed up from survey responses to the Annual Population Survey maintained by the ONS. Grossing up within each region/country is a form of estimation that contains rounding errors. Consequently, the summed total of these regional/country employment estimates does not fully reconcile with the employment totals for designers reported in section 2.3 of this report.

52 For more detail on this, see the data tables accompanying this report.

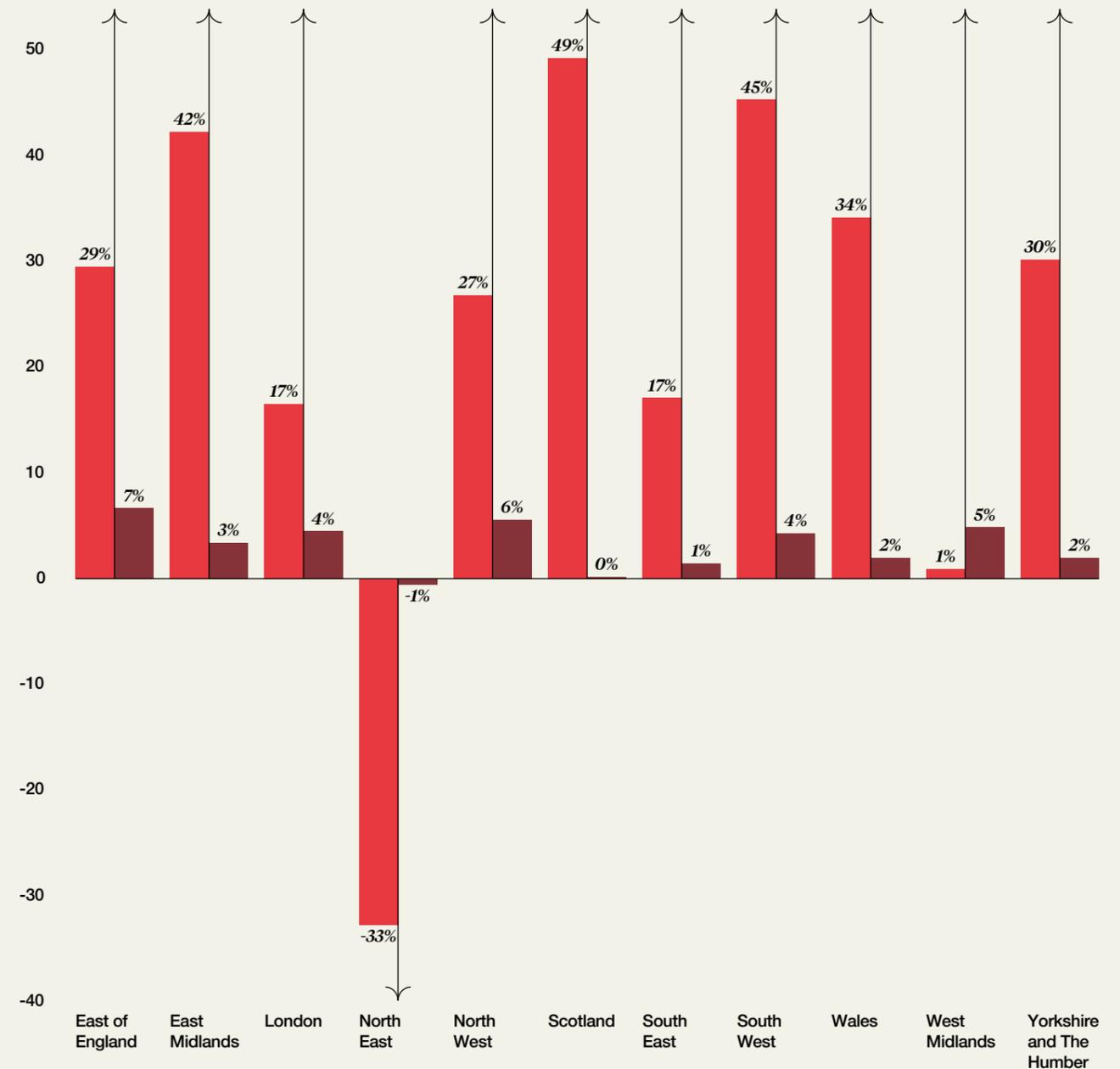
Source: Business Register and Employment Survey (BRES), ONS

In Northern Ireland, digital design accounts for 72% of all design industry employment, or 8,000 jobs. Digital is also a major source of employment in Scotland and Wales, which also have a high proportion of workers in architecture and the built environment, at 32% and 33% of all regional workers in design industries respectively.

Most parts of Great Britain experienced employment growth in design industries between 2015 and 2020. The only exception to this was the North East, which has experienced a severe 33% decline, far ahead of the 0.6% decline in employment across the region over that time. When we look more closely, we can see that employment in product and industrial design has increased over this period in the North East, but this was offset by declines in other design sectors, especially a 35% fall in digital design jobs. Elsewhere in the UK, growth in digital design correlated with overall design industry growth, but the North East has not benefitted from this.

Almost all nations and regions experienced employment growth in design industries beyond employment growth levels in their respective workforces. The strongest employment growth in design industries between 2015 and 2020 was experienced in Scotland (49% increase), the South West (45% increase), and Yorkshire and Humber (30% increase). In all these places, employment within the digital design group grew strongly over this period – a 110% growth in the South West, an 88% growth in Scotland, a 55% growth in Yorkshire and Humber. This indicates that securing employment growth within the digital design group is important to sustaining the strongest possible increases in employment across the design industries.

Figure 22: Percentage change in employment in design industries by region/country and sector compared to regional average (2015 to 2020)



● Designers industries total ● Total regional employment
Source: Business Register and Employment Survey (BRES), ONS

3.3

Spotlight

Snook



Using design to support local industries through a community-led approach

Safety Net Technologies (SNT) has developed a light-emitting device that attaches to fishing nets to attract or repel certain fish species in order to avoid overfishing. Despite being a simple and affordable product, the device wasn't being bought by fishermen.

By working with Snook, a Scottish-founded service design agency, SNT was able to listen to fishermen and understand that they often bought from the same places their fathers and grandfathers did. It also learnt about their need for practicalities such as how the product could be repaired over its lifetime and how the accompanying app could be safely used onboard a working fishing vessel.

Snook took a systemic design approach and helped SNT build a service around the product which attracted more interest from buyers and investors. SNT is now working with fishing families in Peru, using the same approach to design to ensure the technology fits with their culture and is adopted.

“Design plays a big part in the Scottish economy, but its impact could be even bigger. And as we face the challenges of climate emergency, pandemic recovery and rampant inflation, it’s never been more important to bring creative thinking to bear.

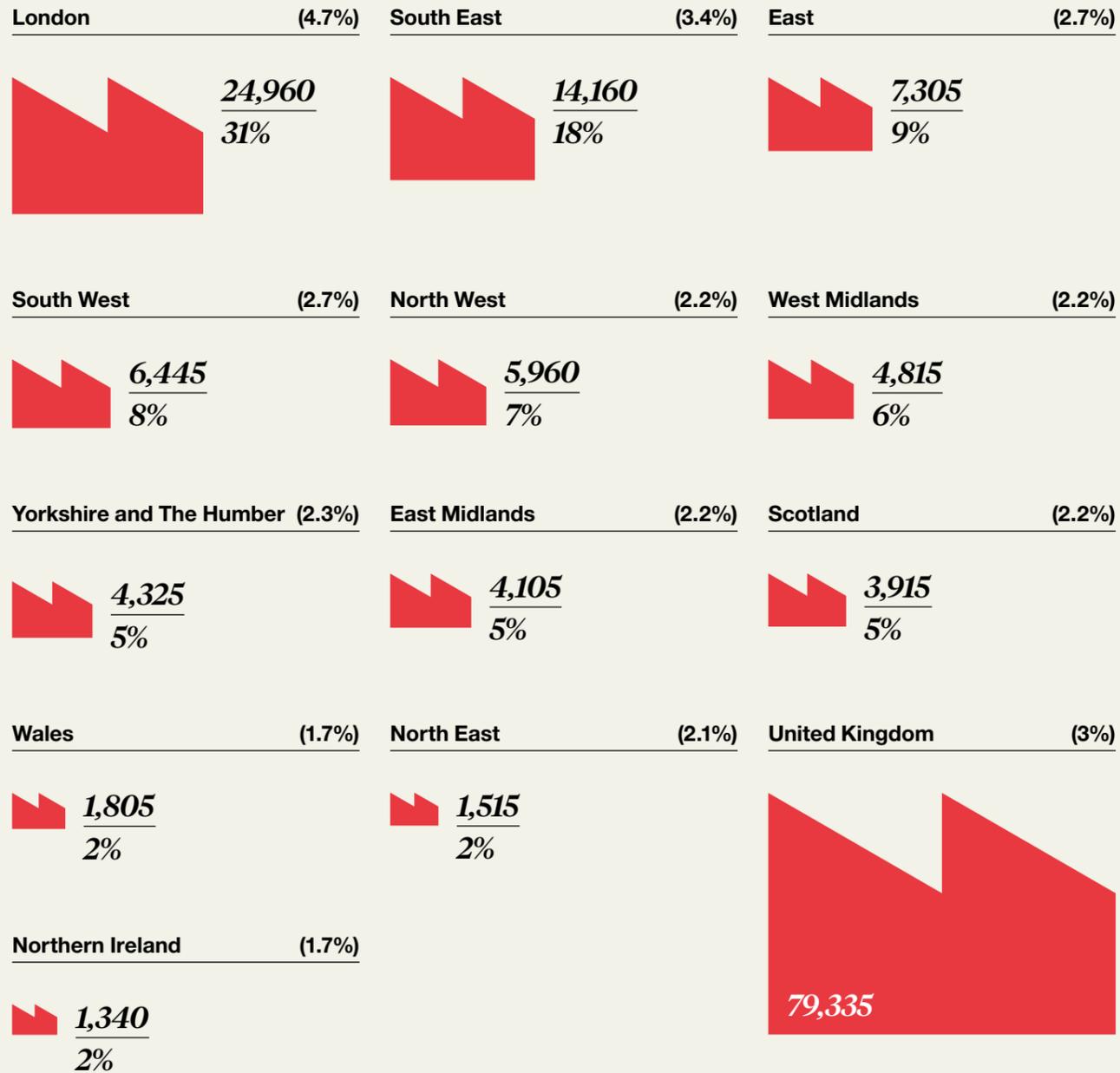
Design needs to focus on people and places, the twin pillars of our work which are reflected in everything we do. To highlight just one example, at Architecture and Design Scotland we are working with communities across Scotland to develop local responses to the climate emergency. This perfectly captures the potential of bringing people together and using design to generate creative but deliverable solutions to their challenges. If it can work for us, it can work for everyone.”

Jim Macdonald
Chief Executive, [Architecture and Design Scotland](#)



Credit: Snook, Pisces

Figure 23: Number of businesses in design industries in countries and regions of the United Kingdom (2021)



Source: UK Business Counts, ONS

3.4 Regional distribution and growth of employment in design businesses

London continues to be home to the greatest proportion of design businesses of any region or nation in the UK, with almost 25,000 businesses, or 31% of all businesses in the design economy, located there. London's strength as a global design centre is also reflected in the fact that 4.9% of all businesses within the capital are in design, which is the highest proportion of design businesses in any regional economy. The concentration of design businesses in London is also higher than that of UK businesses as a whole. While London is home to 19% of all businesses in the UK, 31% of design businesses are concentrated there.

Whilst we find that some design sectors have higher employment numbers in other regions and countries of the UK, London and the South East also hold the largest number of design businesses in all design sectors. This distribution has not changed since our last analysis in *Design Economy 2018*.

However, between 2016 and 2021 we have seen an increase in the number of design businesses in almost every region and country in the UK. The only exception to this was Scotland which saw a 1% decrease in business numbers over that time, however high growth in employment suggests that this is due to existing businesses growing. Northern Ireland experienced the greatest relative growth in its number of design businesses at 17%, which was ahead of business growth in the wider economy (11%). This reverses a period of decline between 2010 and 2016 which was found in our previous analysis⁵³. The largest contributor to this growth was a 25% increase in the number of digital design businesses over that period, again demonstrating the importance of digital design to the design economy of Northern Ireland.

Most regions saw an increase in the number of businesses generally – and many at a rate higher than design industries. The exceptions to this are Northern Ireland, the South West, Wales, and Yorkshire and the Humber. This growth appears to be driven by substantial growth in the clothing industries.

53 Design Council, *Design economy 2018*, designcouncil.org.uk

3.5 Spotlight *Big Motive*



A Belfast design consultancy creating digital products with social purpose

One of the 595 design businesses in Northern Ireland, Belfast-based design consultancy Big Motive creates digital products and services with social purpose.

Human-centred design is at the heart of everything it does, with its commitment to 'radical collaboration' and iteration key to creating informed, effective, and intuitive products that make people's lives better. Commissioned by Health & Social Care in Northern Ireland, the consultancy used a citizen-centred approach to designing the country's digital contact tracking app, which

was the world's first cross-border solution. The development team have released an updated version, following in-depth user testing and research, and it is now also the world's first contact tracing app that is intuitive and useable by young people aged 11-17.

Photo: Sarah Pannasch



“There is an unprecedented need for outstanding design contributions across the UK to be applied to best effect as we address the profound challenges of climate change and inequalities in the quality of life through our communities. Those design responses are required across sectors and importantly need to be collaborative. Yes, design has a huge part to play, but only through improving the quality of design will that challenge be met. The importance of driving better design decisions cannot be overstated. Promoting diversity of entry into the design sectors, encouraging lifelong improvement of skills and then challenging each other to ‘do better’ through structured processes such as design reviews is critical. Together we urgently need to redouble our efforts to deliver the required impacts for people and the planet.”

Andrew Hayley
Chair of the Ministerial Advisory Group on Architecture and the Built Environment, Northern Ireland

3.6 Summary

The design economy has experienced growth across almost the entire UK, with particularly high growth outside of the South East of England where design continues to be concentrated. Whilst London continues to be a powerhouse of design, accounting for 29.5% of all design economy GVA, we have seen high growth in areas such as Scotland, Wales and the East Midlands. Other regions, such as Yorkshire and the Humber, have experienced declines that reflect wider economic challenges and need sector-specific support.

As shall be discussed further in the next section, design can help to drive regional prosperity and create flourishing places. Investment in regional and place-based design initiatives and training can help to build on existing design capabilities across the country,

learning from recent successes like Dundee’s status as a UNESCO city of design (currently the only such city in the UK)⁵⁴, or the impact of UK Research and Innovation’s Creative Industries Clusters programme⁵⁵. However, we also need to ensure that communities are more deeply involved in the design of their places and able to reap the value that comes from their participation.

In the next section we look in more detail at the regional distribution of design, by focusing on an analysis of design clusters at local authority level.

54 Cities of Design Network, designcities.net

55 ukri.org

4.0

The value of design clusters to the UK

To deepen our understanding of the distribution and benefits of design across the country, we undertook an analysis of design clusters. These are areas where there is a higher-than-average concentration of design businesses and workers in a specific geographical location. Clusters bring significant wider value to local areas and businesses. They promote knowledge exchange between different businesses, foster innovation and drive local employment and regional growth⁵⁶. As such, they are vital assets in helping to create prosperity across the whole of the UK.

Due to data limitations, our cluster analysis focuses on those found in Great Britain and does not include design clusters in Northern Ireland. Our analysis of clusters also focuses on design industries, rather than looking at the added-value designers bring when working in clusters of other sectors such as manufacturing.

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⁵⁶ For a systematic overview of the current literature on creative clusters: Science Policy Research Unit at the University of Sussex Business School, *Evolution and trends of creative cluster research: A systematic literature review and future research agenda*, 2020, pec.ac.uk

For more information on the distinctive spillover benefits of creative clusters: Tom Fleming Creative Consultancy, *Cultural and creative spillovers in Europe: Report on a preliminary evidence review*, 2015, artscouncil.org.uk

4.1 Why examine design clusters?

In the context of transitioning to a net-zero economy, clusters also provide key opportunities. Clusters drive local economic activity through engaging with local supply chains; they build local skills and work opportunities that require shorter commutes, and they drive local innovation. As we seek to create more circular economies at a local, national and international level, clusters can help to provide the conditions we need for this to happen. International initiatives, such as the World Economic Forum’s Industrial Clusters to Net-Zero challenge, are also already looking at how we can support high-carbon emitting clusters in industry to reduce their carbon impacts⁵⁷. At a national level, initiatives such as Civic Square in Birmingham are exploring how we can create more local and regenerative economies, using the donut economics model⁵⁸.

Economic clusters can be assessed by looking at high concentrations of employment in a particular location, and through concentrations of businesses. Our research builds on the methodology developed in Nesta’s *The Geography of Creativity* (2016) and that undertaken in *Design Economy 2018*. We have mapped both types of design cluster at the level of local authorities and local enterprise partnerships (LEP), but have focused our analysis primarily on employment.

While there is a growing body of research on creative industries clusters⁵⁹, there is less understanding of the specific benefits that design clusters bring to local economies and places.⁶⁰ In this report we have focused on identifying design employment clusters and design business clusters across the UK, before exploring how the presence of these correlates to local employment growth, wages, and longevity of design businesses.

57 initiatives.weforum.org

58 Kate Raworth, *Donut economics*, Random House: London, 2017 and Civic Square civicsquare.cc.

59 See, for example the work being undertaken at Nesta’s Policy and Evidence Centre, part of the Creative Industries Clusters Programme, led by UK Research and Innovation.

60 You can find our previous analysis of design clusters in our *Design Economy 2015* and *2018* reports. designcouncil.org.uk



Credit: Featherstone Young, Ty Pawb

4.2 Design employment clusters at the regional level

Employment clusters are usually most identifiable within smaller geographic areas, for example local authorities, Local Enterprise Partnerships, or single high-streets or villages. In this research these are identified using location quotients (LQs). These tell us how concentrated design employment is in a particular area, compared to the national average. For example, a location quotient of over one for an area tells us that the concentration of employment in that place is higher than what is found when we look at the UK as a whole. A location quotient of two would mean it is twice as concentrated as the UK, and so on.

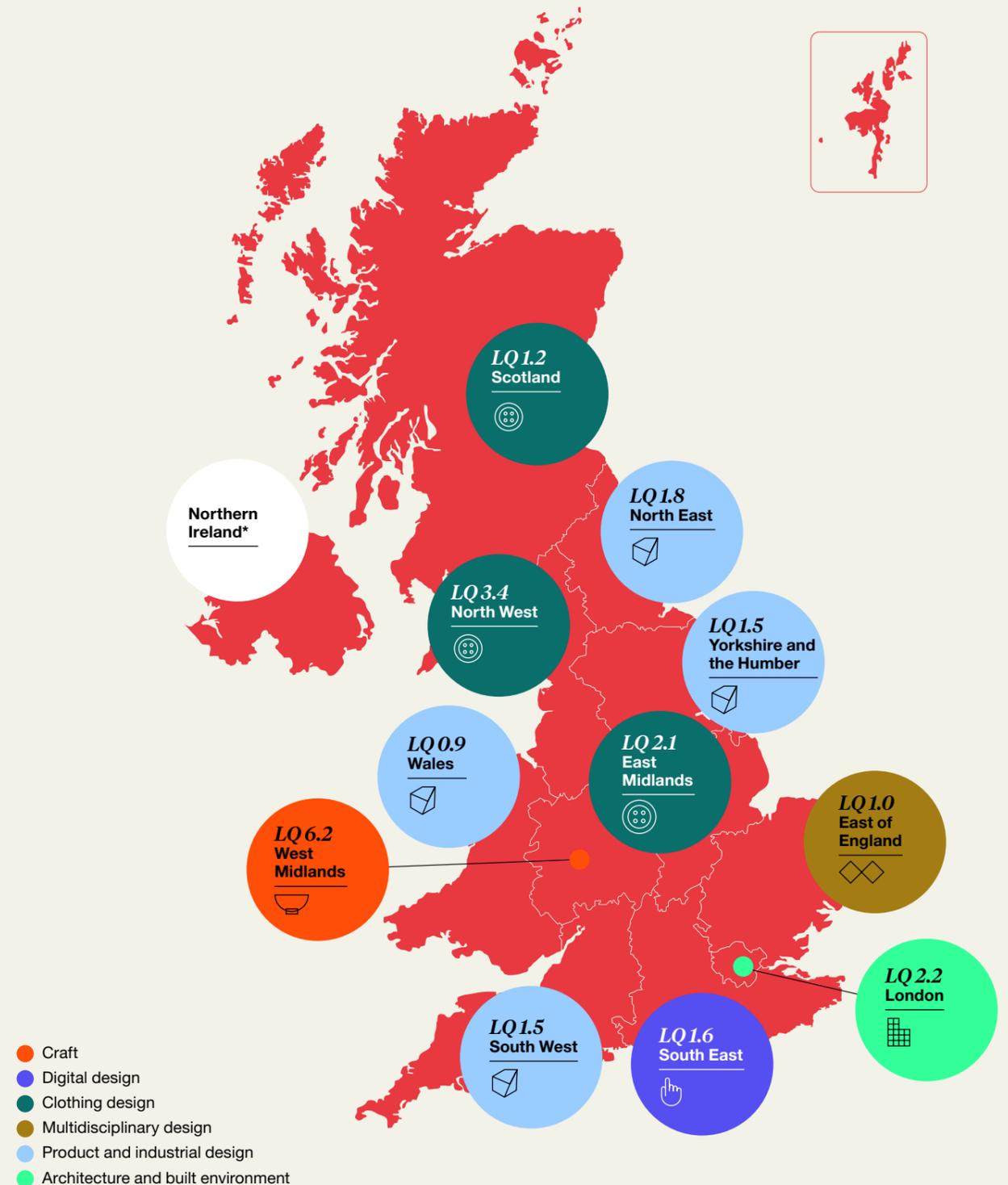
When we find a location quotient over 1.0 at a regional level, it indicates that there is a combination of deep localised clustering and/or a broad presence of those activities across the region. These can reflect deeper local histories and practices of design, but also emerging sectors and economies.

At a regional level, only London and the South East sustain LQ's above 1.0 across multiple design sectors. This particularly reflects their regional strengths in architecture and the built environment (where London has an LQ of 2.2) and digital (where the South East has an LQ of 1.6). As we have seen, these regions experience the benefits of relatively high levels of design employment, business numbers and GVA contributions.

However, we can also find pockets of regional specialism in other parts of the country. The North West and East Midlands have high concentrations in clothing (with LQs of 3.4 and 2.1 respectively). The North East has clustering in product and industrial design (LQ of 1.8). This, coupled with growth in employment for this sector in the North East in recent years, suggests this is a sector with increasing importance to the North East as it grapples with declining employment in other design sectors. We can find that the West Midlands has high concentrations of craft (LQ of 6.2). These numbers reflect regional design histories: from the presence of textile works in the North West from the rise of the Industrial Revolution to the pockets of crafting practices in the West Midlands, such as Birmingham's Jewellery Quarter.

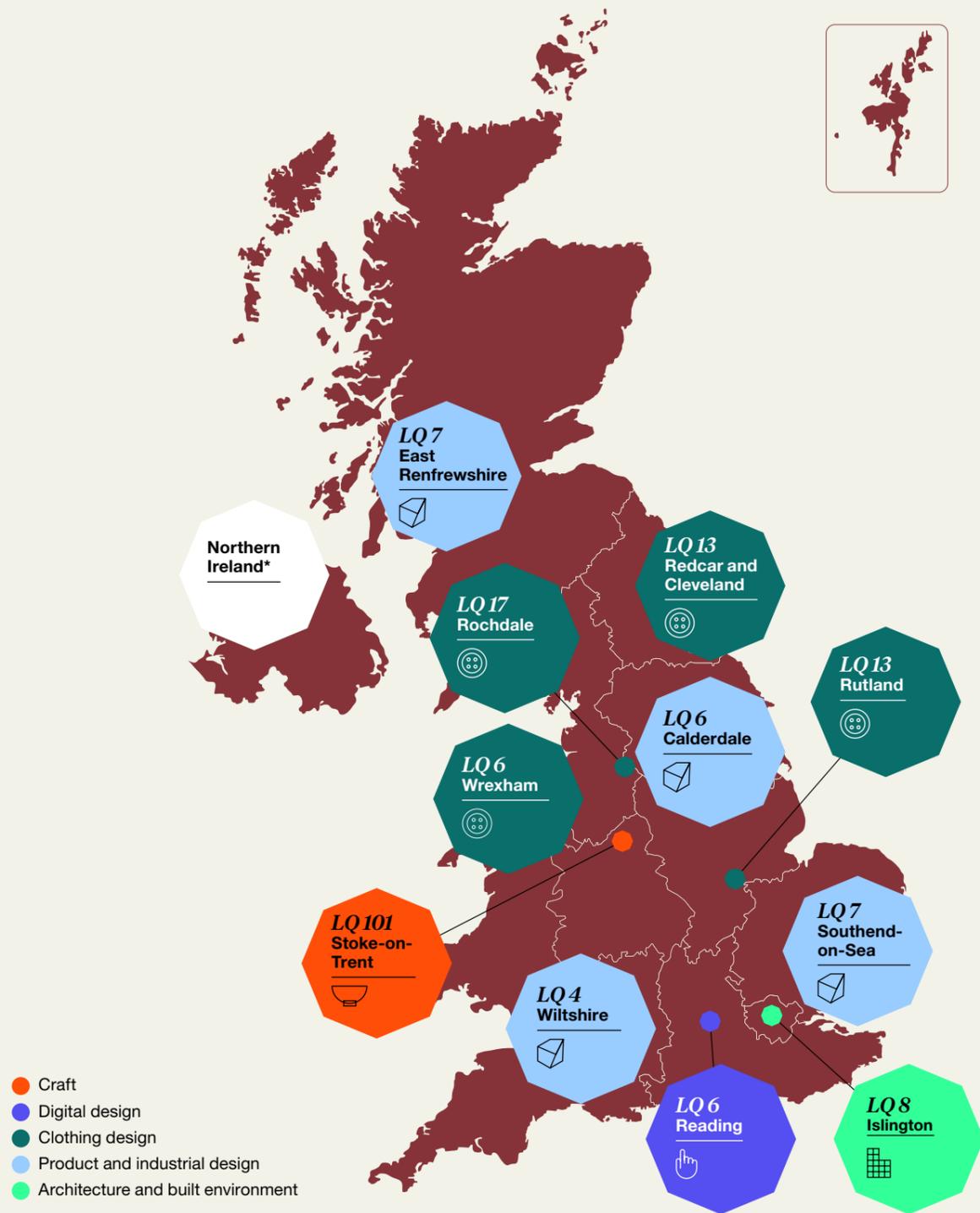
The legacy strengths of these regions provide clusters of activity and specialism that can and should be built upon in the design economy of the future.

Figure 24: Strongest design concentration by sector for each UK country and region (2020)



* Information not available.
Source: Business Register and Employment Survey (BRES), ONS

Figure 25: Strongest design concentration by sector for each UK country and region (2020)



* Information not available.
Source: Business Register and Employment Survey (BRES), ONS

4.3 Design employment clusters at a local authority level

When we look at the local authority level, we can see that every region and country of Great Britain has at least five design employment clusters. These are captured in the figure overleaf.

These local authority level clusters reflect both regional histories and specialisms in design and emerging local design economies. For instance, all five of the strongest employment design clusters in Yorkshire and the Humber are in product/industrial; four out of five in the East Midlands are in clothing; and three out of five in Wales and the North East are in product and industrial design.

Many clusters demonstrate specialisms that contribute to local economies and sense of place. For example, Stoke-on-Trent has an extraordinarily high concentration in craft (101), showing the persistence of the potteries. The persistence of Birmingham's Jewellery Quarter and the flourishing craft traditions of the Orkney Islands are also driving high concentrations of design activity in these locations.

While we can see the significant concentration of design activity within parts of the country, the economic performance of these clusters varies. In Birmingham we have seen a decline in craft employment by 33% between 2015 and 2020, driven by rising rents and other competitive pressures in the area that have affected the Jewellery Quarter. Despite the significant concentration of employment in craft in Stoke-on-Trent, we have seen no change in employment numbers over that time.

In contrast, the Orkney Islands have seen 50% growth in employment over that time, reflecting a thriving craft culture in the area. Research dating back over 15 years has explored both the local and global importance of craft in culture⁶¹. This demonstrates the long-standing strength of this cluster, which has

also benefited from ongoing support, including more recently through the Orkney Creative Future arts development strategy, developed by the Arts Council and Arts Forum.

Not all clusters reflect long-standing design histories, however. In other parts of the country, newer design clusters have emerged that harness emerging opportunities. For example, three of five clusters in the South East are now in digital. In Scotland, Dundee has become a centre for digital design (1.9), driven in part by the flourishing video games industry located there.

All design sectors show a tendency towards employment clustering. This re-iterates the importance of co-locating businesses and design activities to experience the benefits that clustering can bring.

However, some design sectors exhibit a tendency to clustering more than others. The five strongest clusters in clothing all have LQs above 10, indicating that this sector has a strong tendency towards clustering. Craft also exhibits very high levels of concentration in particular places, from Stoke to the Orkney Islands.

In recent years, however, it has been other design sector clusters that have contributed most strongly to employment and productivity growth. When we review the clustering of design groups that have done the most to contribute to this growth, we find that they are skewed to London and the South East. The five strongest multidisciplinary design clusters are in London. The five strongest digital clusters span London and the South East. And four out of five of the strongest architecture and built environment clusters are also in London.

⁶¹ Dr Andrew McAuley and Dr Ian Fillis, *The Orkney based craft entrepreneur: remote yet global?* Journal of Small Business and Enterprise Development, 2005.

4.4 Design microclusters

Our analysis focuses on design clusters at a local authority level. However, by looking at design clusters at this level we do miss some levels of granularity. While there are high levels of design activity in Manchester, for example, it might be concentrated in a particular part of the city, such as the Northern Quarter. When we look at more rural areas, there might be small pockets of design concentration that don't show up at a local authority level due to the low population density across the local authority as a whole⁶².

Microclusters are formed by geographically smaller units than local authorities – while, for example, there are relatively high levels of creative and design activity across Manchester, there is a microcluster of creative businesses within the city's Northern Quarter. In autumn 2020, the Creative Industries Policy and Evidence Centre (PEC) undertook a big data exercise, which scraped web data from 200,000 websites of creative industries organisations and ran an algorithm to identify microclusters⁶³. Design was included in this analysis, although it is important to note that their definition of design follows the narrower definition developed by DCMS.

We have identified overlaps between our results and PEC's. For example, we found that the UK local authority with the strongest cluster of Architecture and Built Environment employment is in Islington, while PEC reported that 205 design businesses form distinct microclusters within four Islington postcodes. We found that Reading is the local authority with the strongest cluster of Digital design employment, while PEC reported that 88 design businesses form distinct microclusters within 12 Reading postcodes. We found that Hackney is the local authority with the strongest cluster of Multidisciplinary design employment, while PEC reported that 235 design businesses form distinct microclusters within four Hackney postcodes.

Clusters are the foundation of stronger design growth across the UK. Microclusters – the neighbourhoods with the deepest concentrations of design activity – are the beating heart of design clusters. Efforts to support clusters should seek to sustain microclusters and ensure that their benefits are dispersed across their local authorities.

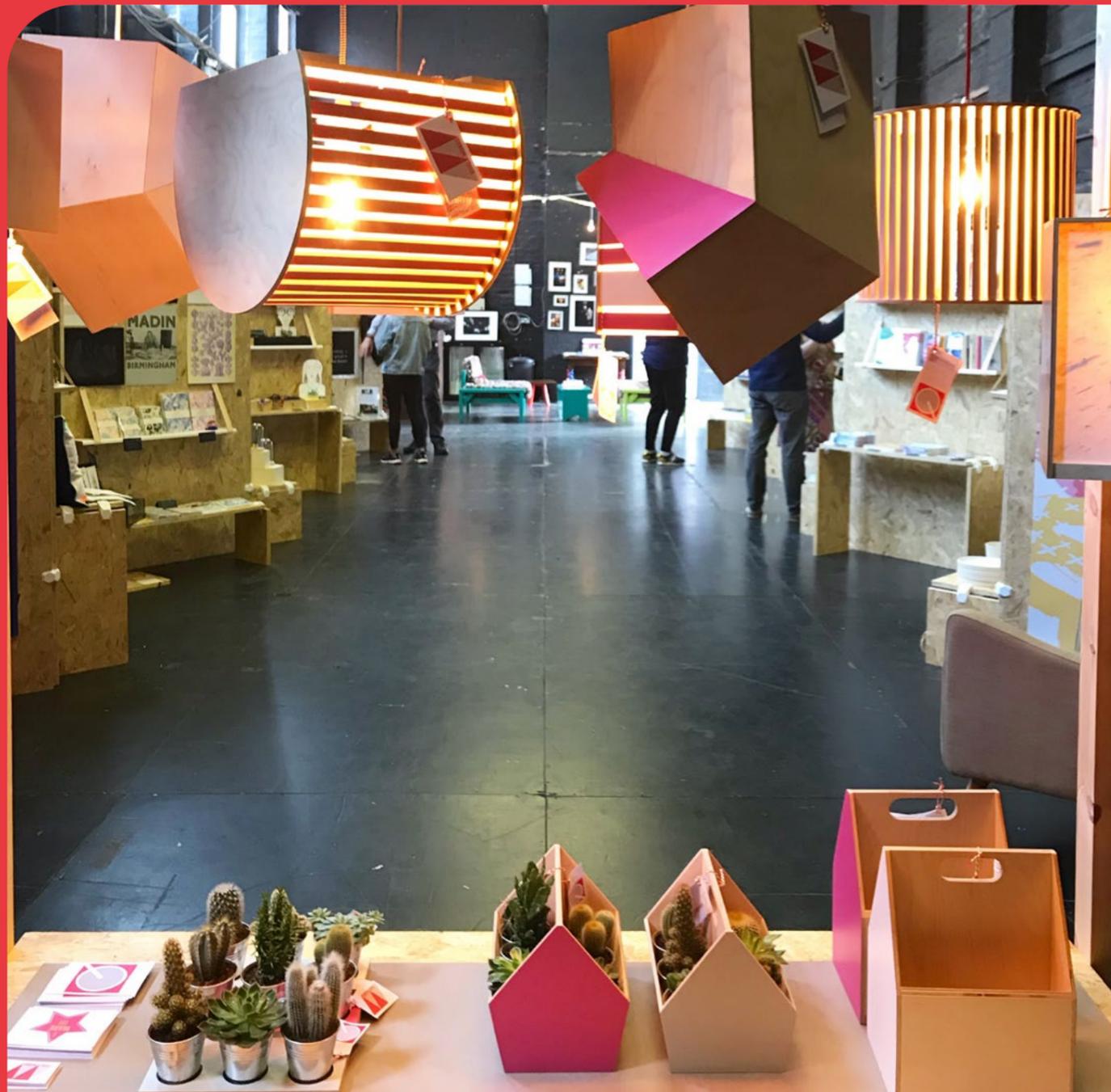
⁶² Creative Industries Policy and Evidence Centre, *Creative radar: Mapping the UK's creative clusters and microclusters*, 2020, pec.ac.uk

⁶³ Ibid.



Photo: Kennedy Woods

4.5 Spotlight *Craft in Birmingham*



Quartermasters: A makers' collective in the Jewellery Quarter

Against a backdrop of declining employment in local craft in the last five years, the Birmingham Jewellery Quarter's (JQ) Business Improvement District (BID) is currently leading on a heritage-led regeneration scheme, funded by the National Lottery Heritage Fund. It aims to regenerate the Jewellery Quarter, the heart of making in Birmingham, through restoration and repair of historic buildings and community-engagement activities to create a high quality, attractive environment for people to live, work and invest in.

Helping to stimulate designers and design businesses in the area are activities like the annual maker's central exhibition at the NEC, which positions the Jewellery Quarter as a leading hub for creativity and manufacturing. There is also grassroots action being taken to preserve the design identity of the area: Quartermasters is a collective of makers in the JQ who champion locally made and independent craft and design through events, showcases, pop-ups and markets. One such activity is the annual 'Spotlight on the Street', in which local children work with creatives to design and engage deeply with the heritage of an important street in the city.

Credit: Qtrmstrs at Birmingham Design Festiva, © Qtrmstrs

4.6 The impact of design clusters on local wages

Through our analysis, we have sought to understand some of the benefits design clusters bring to local places, economies and people. We found that there is a correlation between the presence of a design cluster in a place, and higher than average local wages. While many factors contribute to this, meaning we cannot directly attribute the presence of high wages to the cluster, we know that design contributes relatively high wages and services that spill-over into other sectors. This can happen through designers working in other parts of the economy, or through other firms commissioning design services.

Our analysis found that the five strongest design clusters in both digital and multidisciplinary design were in local authorities with average wages above the UK average. Similarly, four out of five of the strongest design clusters in architecture and the built environment were in local authorities with average wages above those of the UK.

Importantly, this positive relationship between design clusters and higher wages is not shown for clusters in craft, clothing and product and industrial design. However, the design clusters in these sectors tend to be found in parts of the country facing larger economic challenges and inequalities. The challenge – and the opportunity – is to support these design clusters to help address these regional challenges. High quality design jobs can be both high-wage and highly productive, helping to drive local economic development.

Figure 26: Five strongest design clusters by sector with average wage in those local authorities compared to national average in Great Britain

Design sector	Average gross weekly wage in local authority	Above ⊕ UK average	Below ⊖ UK average	
Architecture and built environment	Islington (London)	£824.00	⊕	
	Wandsworth (London)	£842.90	⊕	
	Hackney (London)	£705.30	⊕	
	East Lothian (Scotland)	£594.00		⊖
	Camden (London)	£785.70	⊕	
Craft	Stoke-on-Trent (West Midlands)	£519.20		⊖
	Orkney Islands (Scotland)	£565.20		⊖
	Bracknell Forest (South East)	£727.70	⊕	
	Derbyshire (East Midlands)	£587.10		⊖
	Birmingham (West Midlands)	£564.10		⊖
Clothing design	Rutland (East Midlands)	£710.40	⊕	
	Leicester (East Midlands)	£515.50		⊖
	Rochdale (North West)	£529.60		⊖
	South Ayrshire (Scotland)	£670.70	⊕	
	Redcar and Cleveland (North East)	£510.50		⊖
Digital design	Reading (South East)	£658.60	⊕	
	Wokingham (South East)	£743.70	⊕	
	Hackney (London)	£705.30	⊕	
	Windsor and Maidenhead (South East)	£733.40	⊕	
	Slough (South East)	£646.70	⊕	
Multidisciplinary design	Hackney (London)	£705.30	⊕	
	Kensington and Chelsea (London)	£976.20	⊕	
	Islington (London)	£824.00	⊕	
	Southwark (London)	£819.10	⊕	
	Hammersmith and Fulham (London)	£782.90	⊕	
Product and industrial design	East Renfrewshire (Scotland)	£809.40	⊕	
	Tameside (North West)	£527.00		⊖
	Southend-on-Sea (South East)	£555.80		⊖
	Calderdale (Yorkshire & Humber)	£535.00		⊖
	Sunderland (North East)	£483.80		⊖
UK average weekly wage	£610.70			

Source: Business Register and Employment Survey (BRES), ONS and Annual Survey of Hours and Earnings/NOMIS, ONS on earnings

“The design economy is not only at the heart of successful economies but quality of place is also critical to the wellbeing of communities. This is reflected in the poverty of environment in which many of the poorest communities currently live. This reinforces the deep-rooted inequalities across the UK that divide the UK. Design goals around environmental conditions and the quality of places are therefore a key part of tackling the inequalities in economic performance and social conditions.”

Professor Vincent Goodstadt
The University of Manchester and [UK2070 Commission](#)



Credit: Robert Bray Associates, Bridget Joyce Square,
© Robert Bray Associates

4.7 The impact of design clusters on local design employment

As with local wages, we can also find positive correlations between the presence of design clusters and above-average employment growth. In all but two of the regions/countries of the UK (East of England, East Midlands), the average rate of employment growth in the five strongest design clusters also outpaced growth in their respective regions and countries, and the national average. The one exception to this was the East Midlands, which is dominated by craft and clothing clusters. The strongest increase was in the North West, with an employment increase of over 500% in that time

When we look at clusters by design sector, all sectors are correlated with employment growth ahead of the economy wide average. The exception to this was craft, where the five strongest clusters experienced a slight contraction in employment between 2015 and 2020. Architecture and built environment clusters saw the greatest employment increase at 251% between 2015 and 2020. A significant majority of design clusters therefore exhibit a tendency to high employment growth and provide a key mechanism for increasing jobs in local areas.

It should be noted that some design clusters experienced extremely rapid percentage increases in employment between 2015 and 2020. These rapid increases are explained by growth from relatively small levels of employment in 2015 to more substantial employment in 2020. For example, by 2020 Tameside in Greater Manchester benefitted from one of the strongest design clusters across the UK in the product and industrial design group. This strength is based upon a cluster of 225 workers locally in 2020, an increase from 75 in 2015. This is an increase likely to be explained by a combination of local business expansion and relocations into Tameside – illustrating the potential of design to drive rapid local employment growth.

Figure 27: Percentage change in relevant design industries employment located in strongest design clusters by design sector (2015 to 2020)

	Design sector	Location	Percentage increase	Percentage decrease
Architecture and built environment	Islington	London	20%	
	Wandsworth	London		-11%
	Hackney	London	14%	
	East Lothian	Scotland	1233%	
	Camden	London		0%
	Average			251%
Craft	Stoke-on-Trent	West Midlands		0%
	Orkney Islands	Scotland	50%	
	Bracknell Forest	South East		0%
	Derbyshire	East Midlands		-23%
	Birmingham	West Midlands		-33%
	Average			-1%
Clothing design	Rutland	East Midlands		-33%
	Leicester	East Midlands		0%
	Rochdale	North West	1150%	
	South Ayrshire	Scotland	50%	
	Redcar and Cleveland	North East		0%
	Average			233%
Digital design	Reading	South East	12%	
	Wokingham	South East		-23%
	Hackney	London	17%	
	Windsor and Maidenhead	South East	25%	
	Slough	South East	15%	
	Average			9%
Multidisciplinary design	Hackney	London	17%	
	Kensington and Chelsea	London	98%	
	Islington	London		-14%
	Southwark	London	20%	
	Hammersmith and Fulham	London	14%	
	Average			27%
Product and industrial design	East Renfrewshire	Scotland		-25%
	Tameside	North West	200%	
	Southend-on-Sea	South East	43%	
	Calderdale	Yorkshire and the Humber		-14%
	Sunderland	North East	92%	
	Average			59%
Great Britain wide employment change over this period			2%	

Source: Business Register and Employment Survey (BRES), ONS, BOP Consulting analysis

4.8 The impact of design clusters to local design businesses

Design clusters also play a key role in sustaining and growing businesses within the design economy. We can see this by looking at the percentage change in business numbers within a design cluster over a period of time and comparing it to the UK average.

Between 2016 and 2021, the five strongest clusters in architecture and built environment saw a 16% growth in the number of businesses. In the strongest clusters for craft and digital, growth was at 10%. These all outpaced the average growth in businesses across the UK economy of 8%.

Surprisingly, given the strength of digital design across multiple economic indicators, we did not find the same trend in digital design clusters. However, this is due to the importance of large businesses in digital and their role sustaining employment. In three of the top five digital clusters in Hackney, Reading, and Windsor and Maidenhead, there are five businesses that employ over 250 people across these local authorities. Here the strength of these clusters is less about increasing the number of businesses, but about the continued growth of large ones.

At a regional level the picture is more mixed. In three of the regions and countries of the UK, the strongest design clusters sustained business growth above the UK economy average. Scotland saw the greatest growth (27%), followed by London (17%) and the South West (12%).

Figure 28: Percentage change in design businesses located in strongest design clusters by sector (2016 to 2021)

Design sector	Location	Percentage increase	Percentage decrease
Architecture and built environment	Islington	9%	
	Wandsworth		0%
	Hackney	28%	
	East Lothian	33%	
	Camden	11%	
Average			16%
Craft	Stoke-on-Trent		44%
	Orkney Islands	100%	
	Bracknell Forest	*	
	Derbyshire		0%
	Birmingham		8%
Average		10%	
Clothing design	Rutland	*	
	Leicester		6%
	Rochdale		0%
	South Ayrshire		0%
	Redcar and Cleveland		0%
Average		1%	
Digital design	Reading		12%
	Wokingham		2%
	Hackney	11%	
	Windsor and Maidenhead		5%
	Slough		3%
Average		1%	
Multidisciplinary design	Hackney	11%	
	Kensington and Chelsea		1%
	Islington	9%	
	Southwark		5%
	Hammersmith and Fulham		3%
Average		4%	
Product and industrial design	East Renfrewshire		0%
	Tameside	100%	
	Southend-on-Sea		50%
	Calderdale		0%
	Sunderland		0%
Average		10%	
UK wide change in businesses over this period		8%	

*Data not available

Source: Business Register and Employment Survey (BRES), ONS, ONS Business Counts, BOP Consulting analysis

4.9

Spotlight *Tŷ Pawb in Wrexham, by Featherstone Young Architects*



Using design to build on existing assets and create vibrant local economies

Great design builds with and on what already exists, to maximize our existing natural and community assets, and create vibrant local economies.

In 2021, Sarah Featherstone's design for repurposing an unloved and underused multi-story car park and market hall in Wrexham, North Wales, won the Royal Society of Architects in Wales (RSAW) Welsh Architecture Award. Following extensive consultation with the local community and local council in Wrexham the design reimaged the space, previously named the People's Market.

The architect challenged the brief, whose mixed art and retail use was already raising local concerns. The resultant 'baggy space' concept is a solution that allows flexible use, providing a framework within which stalls, food outlets, exhibitions and arts programmes operate. The flexible design of Tŷ Pawb, as it is now known, has already shown itself to be the kind of resilient design that we need: throughout the COVID-19 pandemic, the space was able to be quickly and easily remodelled to respond and adapt to current restrictions. Materials were chosen for the ease with which they could facilitate temporary re-configurations.

When 40% of the UK's total carbon emissions come from the built environment⁶⁴, reusing buildings, rather than demolition and building from scratch, is critical to addressing the climate emergency and reducing the carbon impact of the built environment. Tŷ Pawb demonstrates the potential of taking a local approach to economic, social and environmental regeneration.

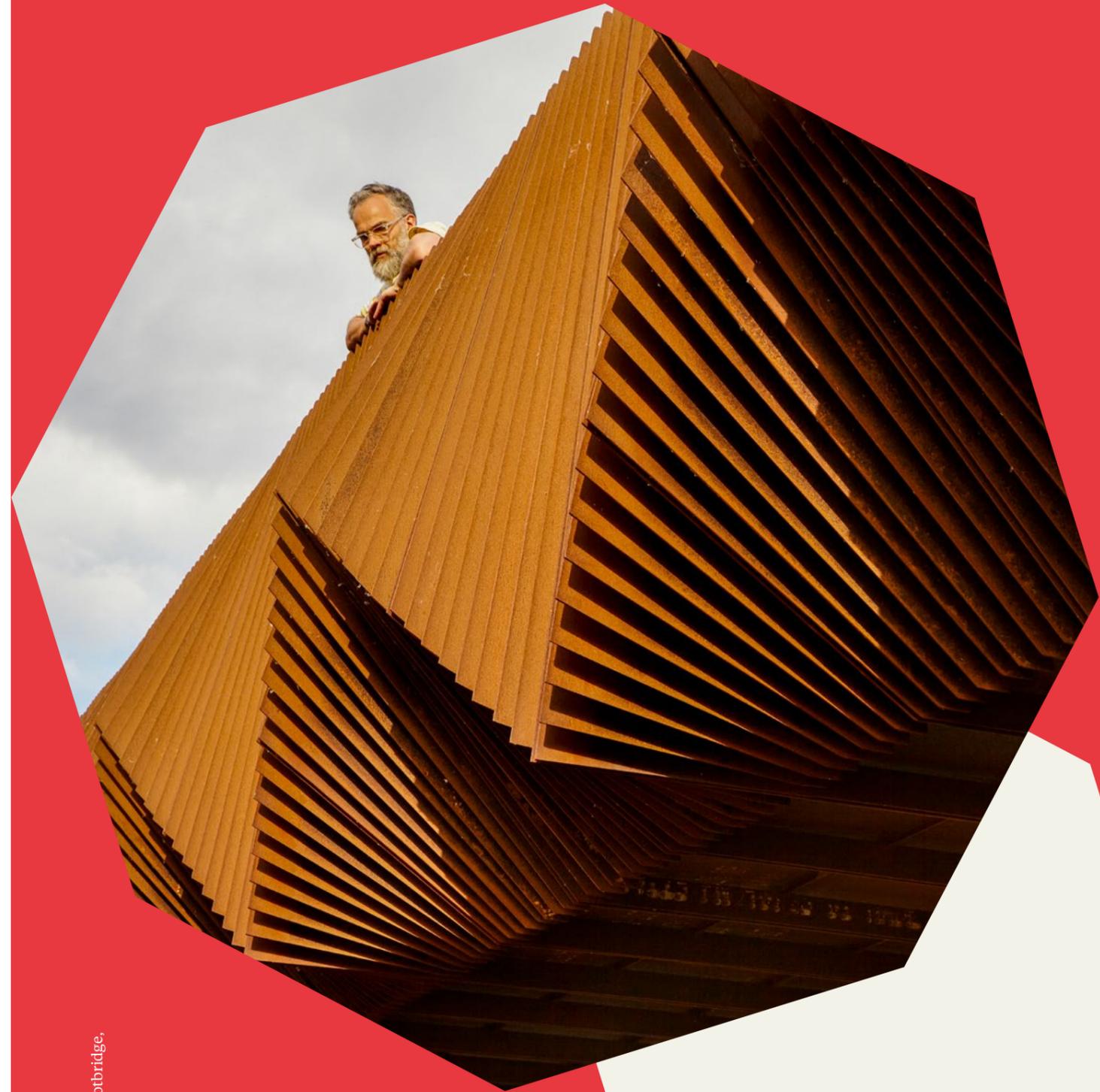
Credit: Featherstone Young, Tŷ Pawb

64 UK Green Building Council, *Whole life carbon roadmap*, 2020, [ukgbc.org](https://www.ukgbc.org)

4.10 Summary

The United Kingdom is home to a rich tapestry of design clusters. These drive the development of locally and globally celebrated design, from the ceramics of Stoke-on-Trent to the multidisciplinary design expertise of fashion and product designers in Hackney, East London. They also demonstrate the rich design expertise and skills that span the entire country, supporting local economic growth, local wages, and business numbers. However, not all clusters are experiencing the same economic benefits and some are even at risk of stagnation or decline due to wider societal and economic factors, as we are seeing with the effects of rising rents on Birmingham's Jewellery Quarter.

Just as there is no one-size-fits-all model for investing in design clusters, targeted and tailored support is needed to ensure that they thrive and create flourishing places across the country. Investment and design skills training should be targeted in specific places and at sectors most in need (for instance, design clusters in craft and clothing which are experiencing slower growth or stagnation). In addition, embedding design into place-based clusters (be it in design-led clusters or using design to support innovation across other industries) can be a strategy to drive local employment, wages and cross-sector innovation around net zero.



Gagarin Studios, Leeds Footbridge,
© Gayle Appleyard

5.0

Who is a designer today?

How things are designed plays a fundamental role in determining who they benefit and who they exclude. A website which relies on text and imagery alone will not be accessible to someone who is visually impaired. A vehicle that has been tested with crash dummies based on an ‘average’ male body will not be safe for people whose bodies do not conform to that shape⁶⁵. If our designed world is to be inclusive, our design workforce needs to reflect the society it serves and shapes, and enable people from different backgrounds, identities, and worldviews to flourish.

As this chapter shows, the design economy still isn’t diverse enough. Over three quarters of designers identify as male, and while people living with disabilities and those from ethnic minorities are increasingly better represented in the design workforce, they are still under-represented at more senior decision-making levels and in large design sectors. This isn’t helped by the fact that, while designers on average receive higher wages, there are still issues with low paid and un-paid internships across the sector.

However, it is not all bad news. Since our last report, grassroots organisations such as Black Females in Architecture, Sound Advice, Unequal Stories and Design Can have been advocating for a more diverse sector, and we have seen some positive change, particularly in sectors such as architecture, happening over this time. It is crucial for us to learn from these successes as we seek to address the inequalities embedded across the wider design economy.

In this chapter, we explore who is a designer today, the skills and qualifications designers hold and skills-gaps facing the sector, the kinds of work they undertake and the salaries they receive and issues of equity within the sector. While our insights are based primarily on ONS data, they are complemented by a survey run by Design Council over January to March 2022, which received over 1,300 responses from designers.

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⁶⁵ For this and other examples see: Vintage Books, Caroline Criado Perez, *Invisible women* 2020, and Sara Hendren, Penguin Random House, *What can a body do? How we meet the built world*, 2020.

5.1 Qualifications

The design economy is a highly qualified sector, with 62% of all designers holding a degree level qualification in 2020. This marks a significant increase in the proportion of university-educated design economy workers over the last decade, up from 41.9% of the design economy workforce in 2010. This proportion is significantly above the percentage of the working age population holding a degree. While this increase suggests that the design economy workforce are highly-skilled and well-trained, a rising proportion of degree qualifications in the workforce risks excluding those who choose not to go to university, and potentially narrows the potential career pathways available to young people who want to enter the profession.

In addition, qualification levels vary significantly across different design sectors. The sectors with the highest proportion of graduates in 2020 were advertising (84%), graphic design (80%) and digital (72%). Our previous report noted that this suggests that sectors that trade in intangible assets are driving greater demand for designers with higher levels of formal qualifications⁶⁶. However, it is interesting to note that these sectors also have lower levels of professional regulation and certification when compared to others such as architecture and the built environment. In contrast, craft and clothing were the lowest (22%).

Whilst this ONS data helps us to understand the highest qualifications held by designers, it does not give us insight into the education pathways they took to get those qualifications. Alongside analysis of ONS data, we ran an additional survey of over 1,300 designers to understand this further – 96% of respondents held a higher education degree, and of these 84% held a design-specific degree while 69% of all respondents had a GCSE (or equivalent) in design.

However, our design skills pipeline is currently at risk. Across the UK, Design and Technology GCSE entries declined by 68% between 2010 and 2021.⁶⁷ Across the UK, Design and Technology accounted for only 1.7% of all GCSE entries in 2020, compared to 5.4% of all entries in 2010: a decline which has not been offset by increases in take-up of Art & Design GCSE⁶⁸. Scotland's entries at National 5 level for equivalent subjects⁶⁹ have declined by 23%. Given the clear correlation between taking design at GCSE and carrying this through to higher education and a career, there is potentially a threat to the future design skills pipeline. This is particularly the case in England⁷⁰, where the proportion of young people entering Design and Technology GCSE's has declined from 44.2% of all students in 2009, to 21.8% of students in 2020.

⁶⁶ Design Council, *Design economy 2018*, designcouncil.org.uk

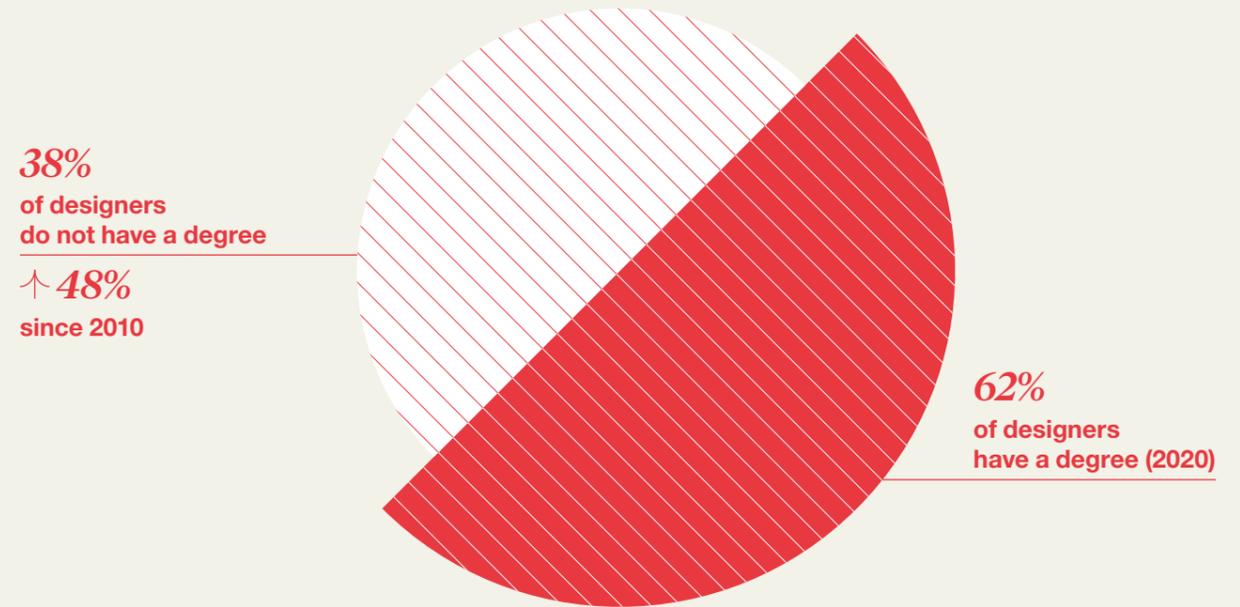
⁶⁷ The Office of Qualifications and Examinations Regulation (Ofqual), gov.uk

⁶⁸ Ibid

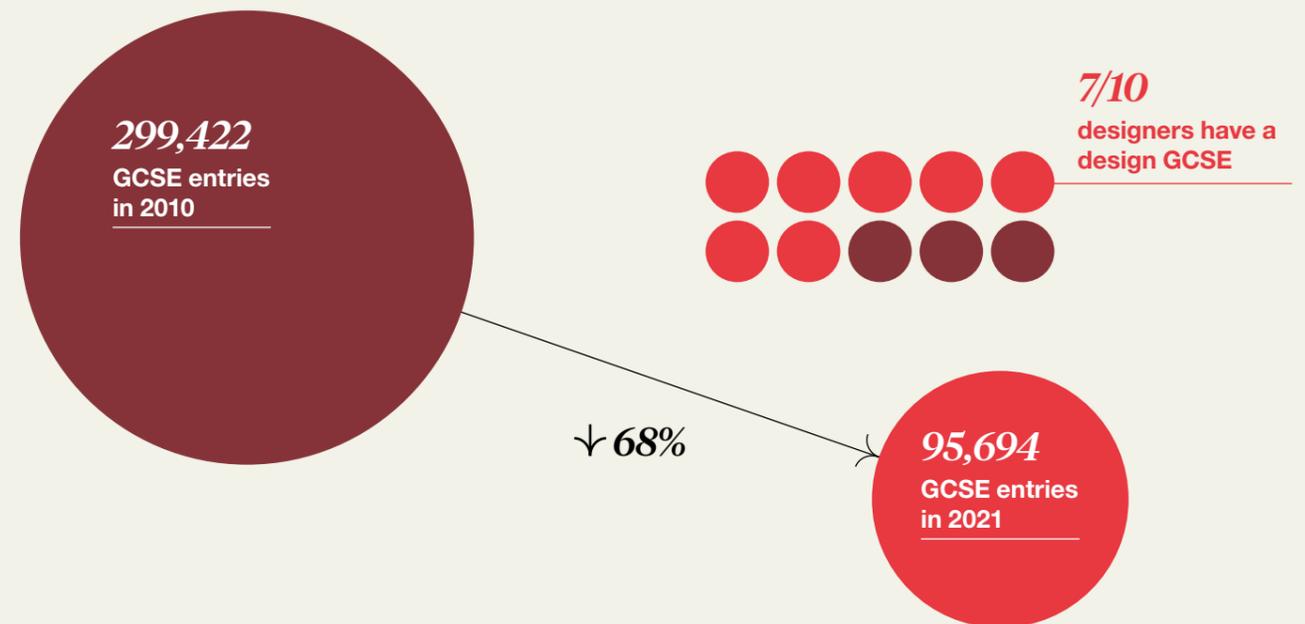
⁶⁹ For Scotland, we have included: Design and Manufacture, Practical Cake Craft, Practical Cookery, Practical Electronics, Practical Metalworking and Practical Woodworking, at National 5 level. For 2010 comparisons, we have included: Craft and Design, Graphic Communication, Home Economics, and Technological Studies.

⁷⁰ The Education Policy Institute, *A spotlight on Design and Technology study in England, 2022*, epi.org.uk

Figure 29: Comparison of the proportion of designers with a degree or equivalent in 2010 and 2020

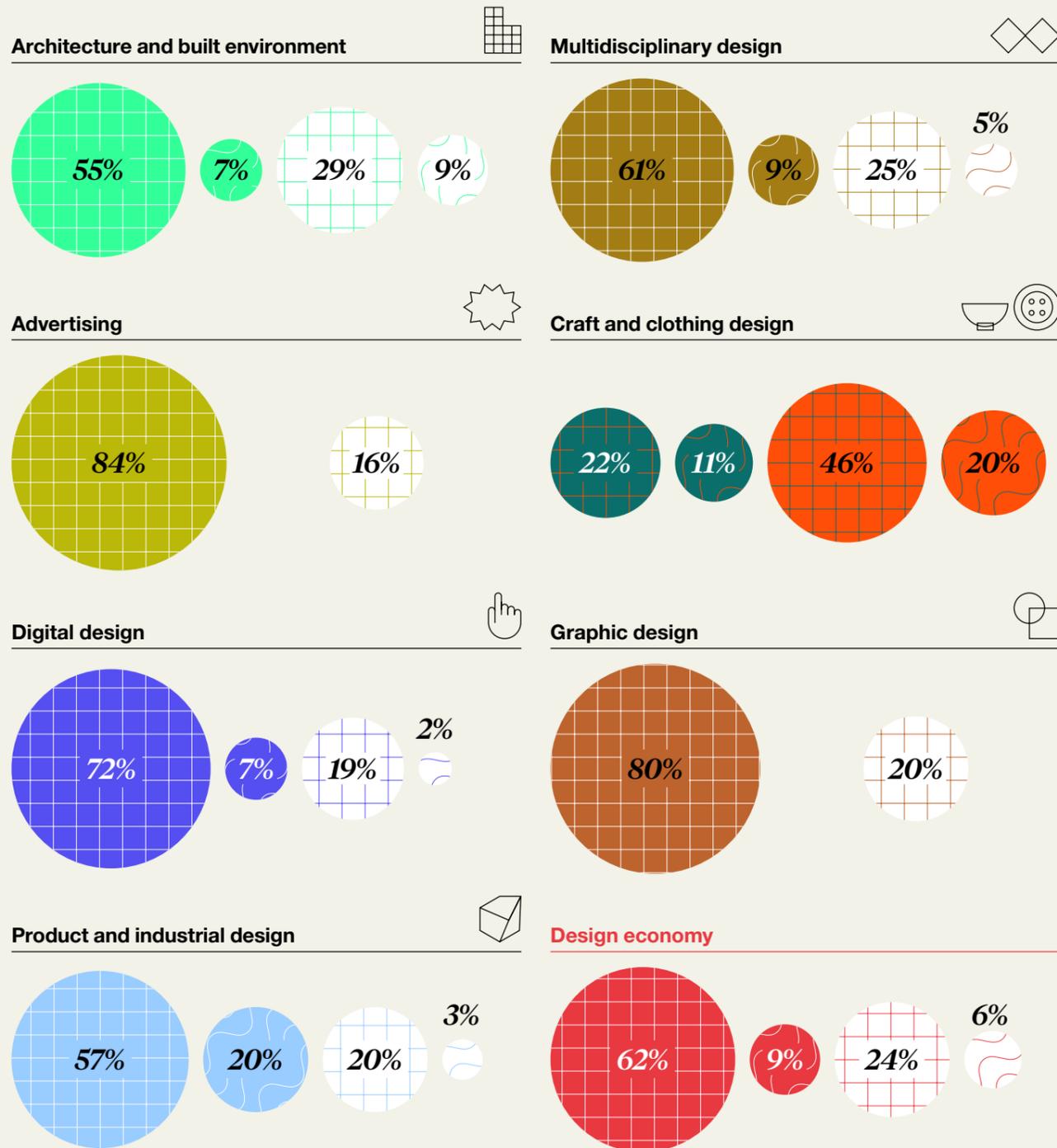


Source: Annual Population Survey



Source: Annual Business Survey/ Annual Population Survey, ONS

Figure 30: Highest qualification for designers by design group (2020)



Degree or equivalent
 Higher education below degree level
 GCSE (A*-C), GCE, A-Level or equivalent
 Other or no qualifications

Source: Annual Population Survey

Design and Technology is also a highly gendered subject at GCSE-level, with 71% of 2020 entries being male in England, Northern Ireland, and Wales. In Scotland, it is closer to 65% male, but this jumps to 83% when discounting cake craft and cookery, which are both majority female. Design and Manufacture as a subject is three-quarters (74%) male. The subject is somewhat more popular in Northern Ireland, accounting for 2.4% of all entries. Nevertheless, the relatively low entry rates across the board indicate that this is a skills pipeline problem shared by all four nations.

Educators in Wales and Scotland, however, have been embedding creative capacity at the heart of the wider curriculum, meaning that design skills are used across a variety of subjects like maths, science, and citizenship. In Wales, the *Lead Creative Schools Scheme* has more than 1,200 participating schools – 83% of all schools in the country – who have access to professional creatives’ time and skills, and other resources⁷¹. This aims to support teachers to improve learning opportunities for children and young people. Scotland’s *Creative Learning Plan* sets out a vision for embedding creativity in the centre of education, widening access to formative cultural experiences, improving wellbeing, and creating a collaborative and empowering learning experience⁷².

Informal learning opportunities also have a key role to play in addressing this, from national design competitions such as the V&A’s Innovate Design Awards or the Design Museum’s Design Ventura competition. The rise of social media and platforms for content creation has also given greater access to self-directed learning for young people across the country.

71 Arts Council of Wales, *Creative learning through the arts*, arts.wales
 72 *Creative Scotland and Education Scotland – Action plan 2021-22*, creativescotland.com

“Exams are not always a suitable method for learning. As the UK education system continues to fail some young people, many of them have turned to self-learning to develop skills specifically in design and art.

This is important for young people to have some independence and flexibility to their learning and what they teach themselves, rather than a pre decided syllabus created without their input.

The best way to support young people is to encourage these opportunities and create more of them. Either that or completely reform the way education works, which seems a lot more difficult. Encouraging learning in any way is important and giving guidance may be helpful.”

Anita Okunde
Youth and Climate Activist

“Design is increasingly a professionalised career offering high value employment opportunities, a significantly ‘in demand’ skill set to employers and the prospect to develop leaders, thinkers and innovators.

If policy makers place greater emphasis on the value of creative design skills within all key stages of education and particularly at GCSE level, design could be a profession open to all, with multiple entry points and possibilities to progress through flexible lifelong learning. The capacity for applied imagination within the workforce will increase exponentially.

Any curb on creative subjects at school, which limits engagement and entry points, will have a disproportionate impact on the diversity of the talent pipeline. We need more entrants from a broad provision of arts subjects which generally appeal to many types of learners. Opportunities to co-design curricula across school, college and university design education providers will increase access and inclusivity via progression pathways, T levels, higher technical qualifications and applied A levels, including a reimagination of the way design could be integrated across other subject areas to inspire better engagement across more diverse groups.”

Sandra Booth
Director of Policy and External Relations
Council for Higher Education in Art and Design

5.2 Skills gaps in design industries

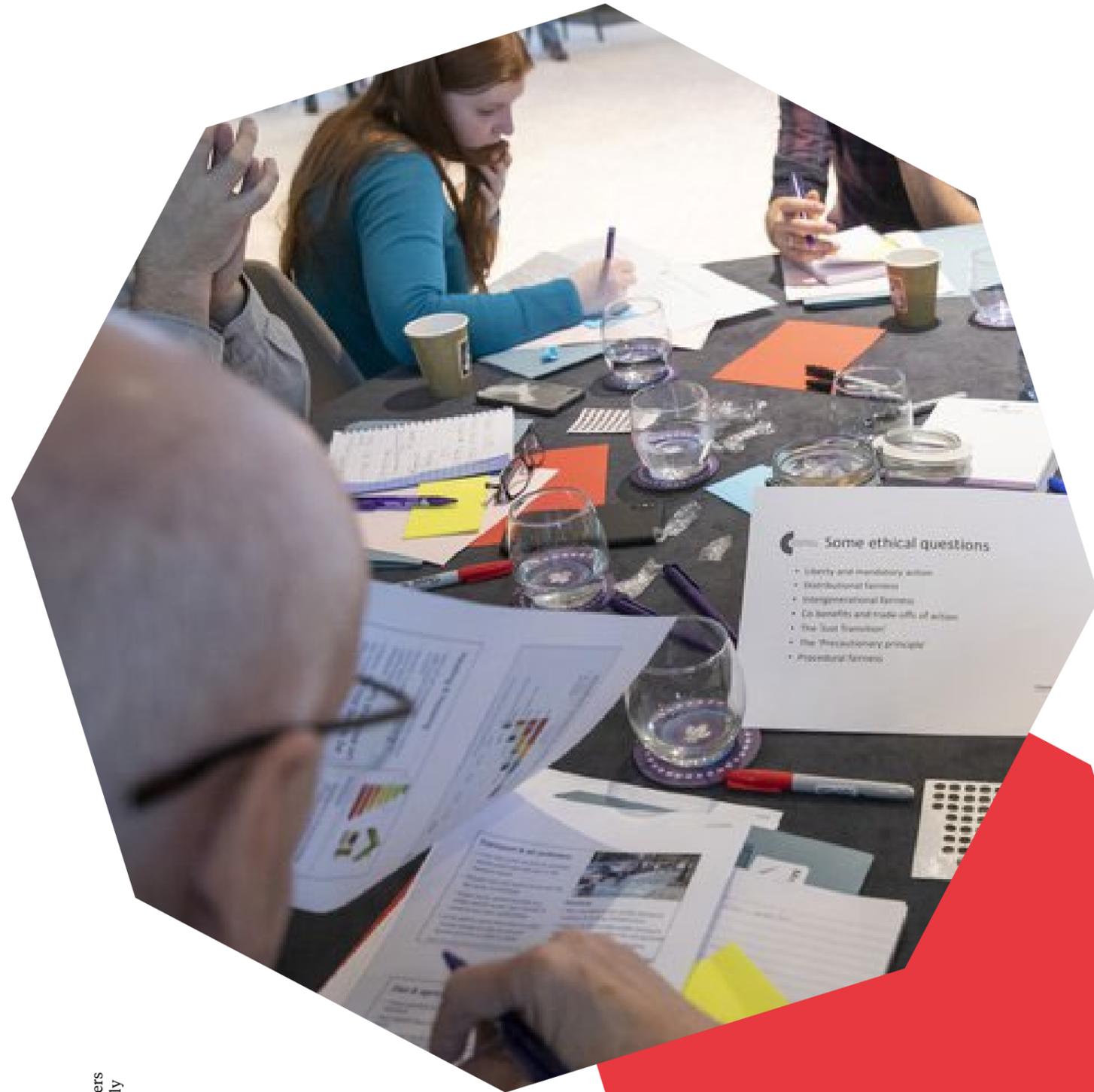
Design is experiencing a skills gap, with some design sub-sectors more affected than the UK economy more widely. Data from DCMS has reported on the skills shortage and skills gaps experienced by businesses in DCMS sub-sectors⁷³. Of those sectors, those that were of interest to us were (as defined by DCMS): advertising and marketing, architecture, crafts and design and fashion design. This data does not include Scotland, and the SIC definitions used by DCMS differ slightly from those used to assess the design economy, particularly in relation to craft and advertising and marketing⁷⁴.

Skills shortages vary across design sub-sectors. A third (33.3%) of businesses in the architecture sub-sector reported that they had at least one vacancy that was proving hard to fill due to applicants not having the right skills, qualifications, and experience. A similar proportion (36.8%) was reported in design and fashion design businesses. Crafts was the most impacted, not only among design sectors but across all DCMS sectors, with one in two businesses (48.1%) reporting skills-shortage vacancies.

The advertising and marketing sub-sector was the least affected, but still relatively high, with the skills shortage affecting almost one in five businesses (19.1%). This is, however, still a few points better than the average across all DCMS sub-sectors of 21.4%, and across all sectors in the economy, of almost one in four businesses reporting a skills-shortage vacancy (24.4%).

Businesses also reported that they were facing a skills gap within their current workforce: an average of 13.2% of businesses in DCMS sub-sectors, which reflects the same proportion in all sectors of the UK economy. For the sub-sectors we were interested in, however, the skills gap is much lower. Of those, architecture reported the lowest skills gap (7%) – likely attributable to its high standards of accreditation and regulation by industry bodies. Not far above that, however, are design and designer fashion with only 7.5% of businesses reporting a skills gap and crafts at 7.9%. Advertising and marketing had the highest skills gap at 8.1% – albeit still five points clear of the national and DCMS sub-sector average.

Faced with the increasing professionalisation of design, and decline in take-up of design at secondary level, the skills gaps experienced by some design sub-sectors highlights the urgency of increasing access to design employment, and diversifying pathways to gain the skills, talent and knowledge design businesses need.



Credit: Climate Change Overs
© Climate Change Assembly

73 DCMS, [DCMS Sectors skills shortages and skills gaps: 2019, 2022, gov.uk](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/101111/DCMS_Sectors_skills_shortages_and_skills_gaps_2019_2022.pdf)
74 For more information on the overlap, please see the appendices.

5.3 Spotlight *Fashion-Enter Ltd*⁷⁵

75 fashion-enter.com



The value of investing in design skills within changing industries

In 2020, through its Economy Futures Fund, the Welsh Government provided funding to Fashion-Enter Ltd to hire 77 former Laura Ashley employees. Fashion-Enter is a social enterprise specialising in training and manufacturing excellence. CEO Jenny Holloway said of the highly skilled workforce: “many of the stitchers we have hired had loyally worked at Laura Ashley for more than 35 years. I couldn’t rest knowing they were going to lose their jobs. You also don’t find experienced stitchers of that number anywhere anymore, they are like gold dust.”

The Welsh Government’s Economic Contract is designed to promote fair work and help to future-proof companies. In collaboration with the social enterprise, it will establish a textile academy in Newtown with the aim of increasing local employment and investing in local skills, as well as committing to environmentally sustainable practices, reducing the carbon footprint of textile manufacturing, and promoting ethical employment and supply chains.

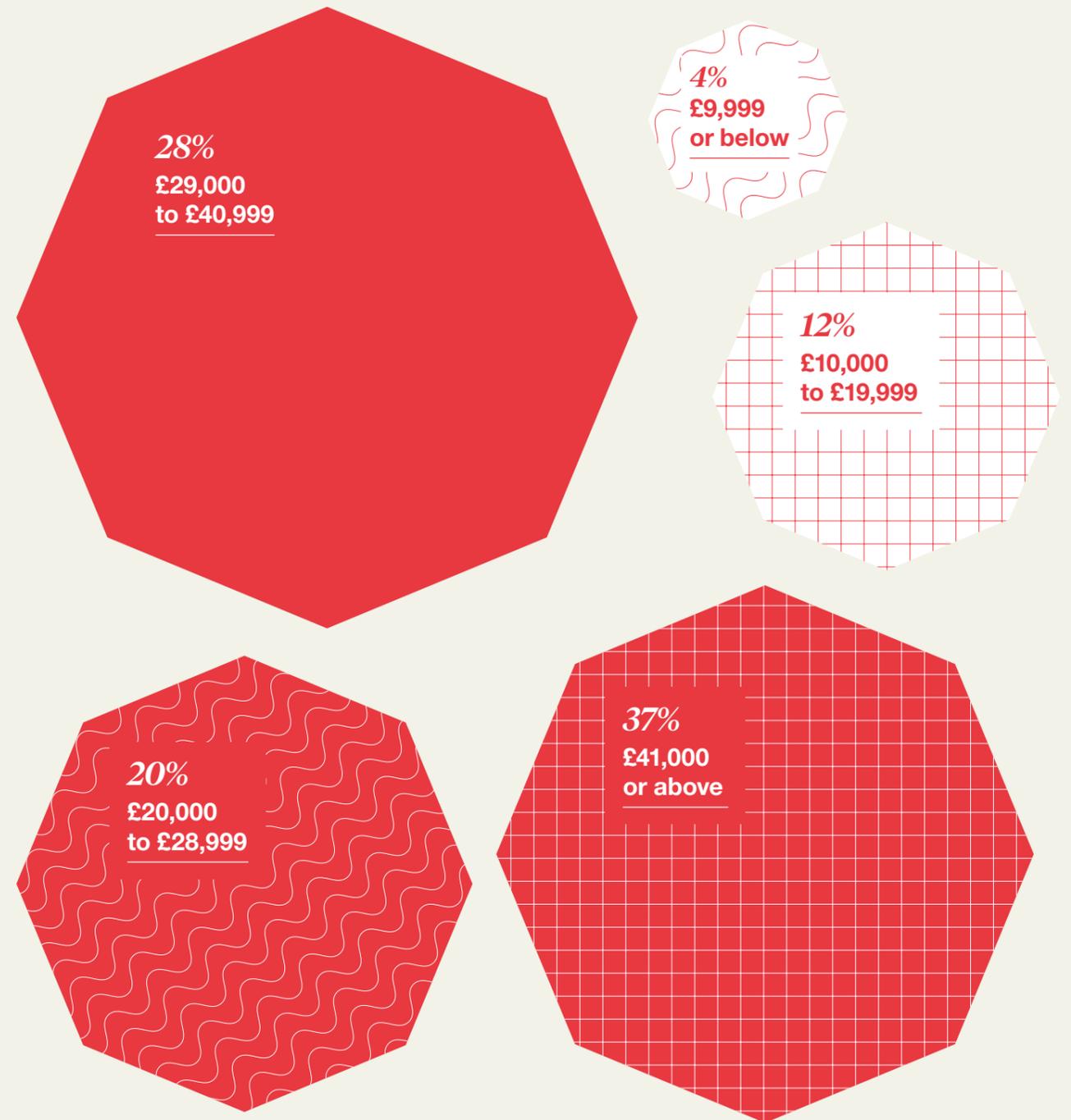
Photo: Getty

5.4 Designers' wages

Taken as a whole, designers on average enjoy well-paid jobs with 37% of them earning above £41,000 per annum, which was £10,000 over the median annual pay for full time-employees in the UK of that year. However, there are significant variations in annual salaries across the design economy, with 16% of designers earning less than £20,000. The annual wage considered to be 'low-paid' is

roughly £17,000, and this accounted for 16.2% of all employee jobs in the UK in 2019. This data also does not indicate the full proportion of people undertaking un-paid internships within the design economy.

Figure 31: Distribution of gross annual salary for designers (2016)



Source: Annual Population Survey

Figure 32: Employment status of designers in 2020



Source: Annual Population Survey

Figure 33: Employment status by sector of designers in 2020

	Percentage full-time/part-time	Percentage permanent/non-permanent	Percentage with a second job/no second job	Percentage employee/self-employed
Architecture and built environment	85 / 15	97 / 3	7 / 93	66 / 34
Multidisciplinary design	75 / 25	56 / 44	9 / 91	54 / 46
Advertising	94 / 6	76 / 24	10 / 90	80 / 20
Craft	35 / 65	53 / 47	14 / 86	*
Digital design	95 / 5	96 / 4	4 / 96	*
Graphic design	83 / 17	55 / 45	10 / 90	*
Product and industrial design	93 / 7	96 / 4	4 / 96	92 / 8
Design economy	86 / 14	96 / 4	6 / 94	75 / 25

* Indicates no data due to statistical data disclosure issues. In 2019, the levels of self-employment in these sectors were: craft (45%), digital, (11%), clothing (47%), and in 2017 graphic design (41%)

Source: Annual Population Survey

5.5 Working patterns and job security

In addition to pay, we also sought to understand the working patterns and conditions of those working in the design economy in the time since *Design Economy 2018*. In 2020, most design jobs were full-time (86%), however there is wide variation between design groups. While 95% of design jobs in digital were full-time, in craft only 35% were. There were minimal changes in proportions of part-time to full-time jobs across the design economy between 2017 and 2020.

Designers are more likely to be employees (75%) than self-employed, however there are a higher proportion of designers who are self-employed (25%) compared to the UK average of 15.3%⁷⁶. This reflects in part the often specialised roles that designers have, which allows them to deliver specific services (such as graphic design work) to multiple businesses. Those working in product and industrial, craft, and digital are most likely to be employed⁷⁷, whereas those working in multidisciplinary design (54%) and clothing (41%) are most likely to be self-employed.

Since 2017 there has been an 8% reduction in the proportion of self-employed designers, representing only a quarter of designers in 2020. We have seen reductions in self-employment within sectors including digital and graphic design between 2017 and 2020. Given the increased vulnerability that self-employed workers have to wider shifts in the economy, and the reduced access they have to professional training and support, it is crucial that these designers continue to be supported in the sector.

Designers are more likely to be in permanent employment rather than temporary employment (96% of all designers), for instance through agency contracts. However, this varies significantly between design sectors. Those working in craft and clothing (53%), multidisciplinary design (56%) and graphic design (55%) are almost as likely to be in a temporary role as they are in a permanent role.

There is also significant variation across design sectors in the proportion of designers who have second jobs. Those working in digital and product and industrial design are the least likely to have a second job at 4%, whereas those in craft are the most likely to have a second job (14%).

⁷⁶ ONS, Annual Population Survey.

⁷⁷ The numbers reporting as self-employed in the ONS Annual Population Survey (APS) were too small to be disclosed. Thus, we do not know exactly what percentage of them are self-employed, but these data indicate that it is a small proportion.

“The Crafts Council welcomes this report and its recommendations, in particular the need for increased support for design and technology education to mitigate the sharp decline in students and the importance of simplifying the protection of design rights. It makes the case for a fuller reflection of craft in international codes and government data than is currently the case, which would capture the true economic contribution of craft. As this report illustrates, craft is a sector with a high number of part-time portfolio workers. Many work below the VAT threshold and are subject to a similar lack of visibility in data and business support as other freelancers, which may impact on the employment findings in the report. The Crafts Council continues to provide business support across the sector.”

Julia Bennett
Head of Research and Policy
[Crafts Council](#)



Photo: Aerende

5.6 Diversity in the design economy

To be inclusive, design must reflect the rich make-up of society and to allow people from different backgrounds and worldviews to thrive. People of different ages, genders, social, ethnic, or cultural backgrounds, abilities, sexual orientation, faith or life experience all should be able to play a role in shaping our world.

In the years since our last report there has been progress to address this across the design economy. But right now, design isn't inclusive enough.

We have compiled a list of resources and organisations who are improving access and championing diversity in the design economy. This list is not exhaustive:

Black Females in Architecture aims to increase the visibility of black and black mixed heritage women in architecture.

Part W is an action group calling for gender equality in the built environment, running campaigns, meet-ups and producing resources.

Design Can is a manifesto and call to action campaigning for more diverse representation in the design sector, and a free library of resources and news on relevant initiatives.

Sound Advice is a platform for exploring spatial inequality through publications and music.

Design Diversity is a project that is asking UK examination boards to address the diversity imbalance in specifications and is working with a community of teachers to improve the representation of women and people of colour in Design and Technology GCSE to be more aspirational, fair, and representative of the classroom.

The Disabled List is a community-driven project challenging language in digital design, and using disability as a creative practice to reach all users.

Diversity in Design Collaborative is pushing for systemic change to increase diversity and improve representation in design.

Unequal Stories is a research project exploring narratives around equality, diversity and inclusion within the design industries of the UK and South Africa.

FAME (Female Architects of Minority Ethnic) Collective is a research network exposing the barriers for female architects of colour.

United in Design is a charity working to promote diversity within interior design through a campaign, pledge, resources and a schools outreach programme.

Kerning The Gap are a collective seeking to drive diversity in design leadership roles through resources, events and mentoring.

Womenfolk is celebrating and giving visibility to female design entrepreneurs in Northern Ireland.

Paradigm Network is a professional network for construction industry professionals to increase representation of Black and Asian representation in the built environment.

5.7 Gender

As of 2020, the design economy remains male dominated, with 77% of designers identifying as male. This proportion has hardly changed since our first *Design Economy* report in 2015 (78%)⁷⁸. However, there is significant variation in representation across sectors. While 80% of workers in clothing identify as female, 88% of workers in product and industrial design identify as male, making it the most male-dominated design sector⁷⁹.

The other conspicuously gendered sectors are digital design (85% male) and architecture and the built environment (81% male), despite gender parity among students accepted onto architecture course.⁸⁰ Within a context of rising employment in digital design, the proportionate employment of women in this sector declined by 9% between 2017 and 2020. As the three largest employers in the design economy, the gender ratio found in these sectors skews representation across the whole of the design economy. Digital alone accounts for almost half of total design economy employment.

Since our last report, it has been heartening to see the progress made in addressing the gender disparities across some sectors of the design economy. While driven by multiple factors, there has recently been a proliferation of grassroots and self-organised initiatives championing greater diversity. The sector that has experienced the greatest change over the past five years has been product and industrial design, where the proportion of women has increased from 5% to 12% between 2016 and 2020.

In our complementary survey we hoped to gather data on gender identity that is currently not captured by the ONS, namely how many designers are transgender and non-binary. Currently no robust comparative UK population-level data exists⁸¹, but tentative government estimates put the likely proportion at between 0.3% and 0.7% of the UK population. In our survey, 2% of all respondents described themselves as non-binary (compared to the 0.4% from the 2018 sexuality survey), and 0.8% as transgender.⁸²

78 Design Council, *Design economy 2015*, (p.42), designcouncil.org.uk

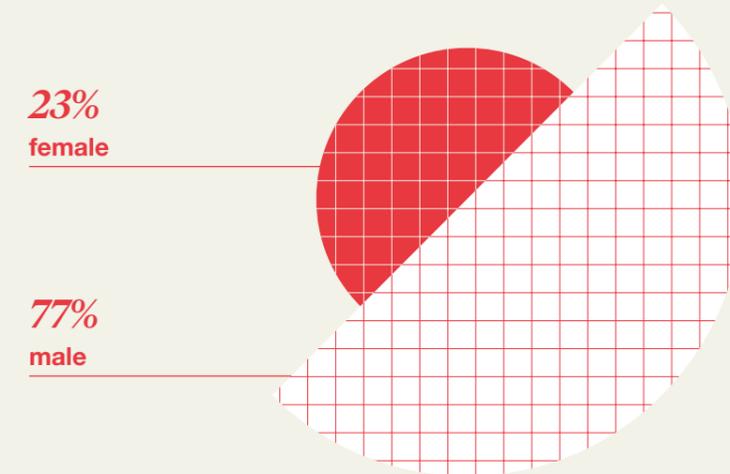
79 This section includes reporting on binary gender categories because of the ONS data used. Our designer survey included a broader range of gender categories which we discuss above.

80 UCAS undergraduate sector-level end of cycle data resources 2020. ucas.com

81 Transgender estimates: Government Equalities Office, *Trans people in the UK*, 2018, assets.publishing.service.gov.uk

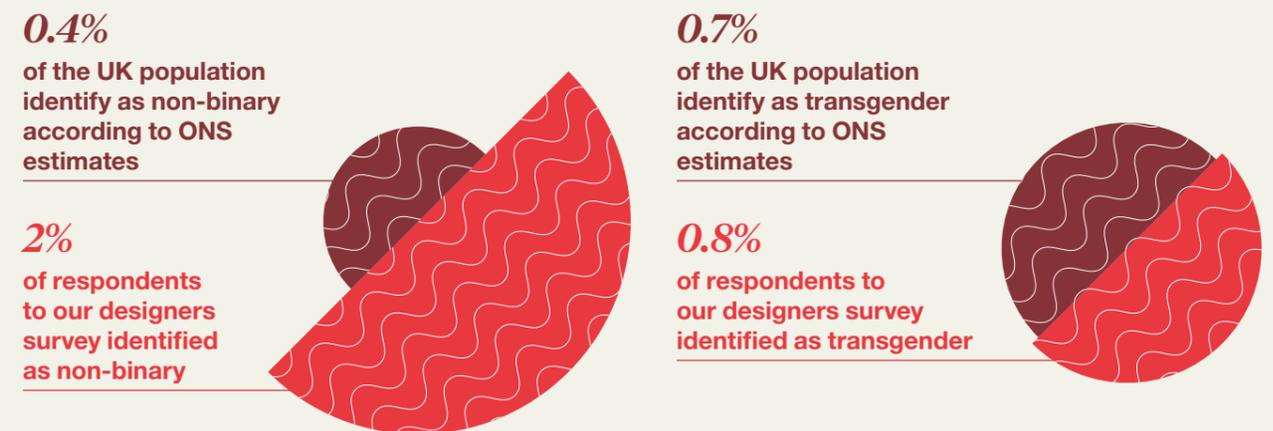
82 Non-binary estimates: Government Equalities Office, *National LGBT survey: Research report*, 2018 gov.uk, ONS, *Sexual orientation*, UK, 2018, ons.gov.uk

Figure 34: Employment of male and female-identifying designers by sector (2020) and percentage change between 2017 and 2020



Source: Annual Population Survey

Figure 35: Infographic on the proportion of non-binary and transgender identifying designers, according to our survey (1,300 respondents, April 2022), compared to UK government estimates, sector (2020) and percentage change between 2017 and 2020



Source: Design Council, 'Who is a designer today?' survey (April 2022).

5.8 Spotlight *Womenfolk*



Photo: ©Esther Mogada

Creating a platform for Northern Irish female design

Belfast Design Week co-founders, Christine James and Karishma Kusrkar, set up Womenfolk in 2018 in response to the findings in *Design Economy 2018* that 78% of designers were male.

Womenfolk has gone on to create a wealth of resources including a directory for female designers and runs Dig Deep – a creative enterprise support programme for women from diverse backgrounds. It also published an extensive collection of case studies focussing on female designers in the country. These cover the full range of design disciplines, from shesaid design and branding studio who collaborated on the new Ulster Bank polymer notes, to Jump the Hedges, a multidisciplinary

design studio that centres sustainability, functionality and local manufacturing. The collection also featured Tactility Factory – an innovative company whose ‘infused concrete’ has been used in the built environment internationally, and has won its founders, Trish Belford and Ruth Morrow, numerous awards.

5.9 Gender and seniority

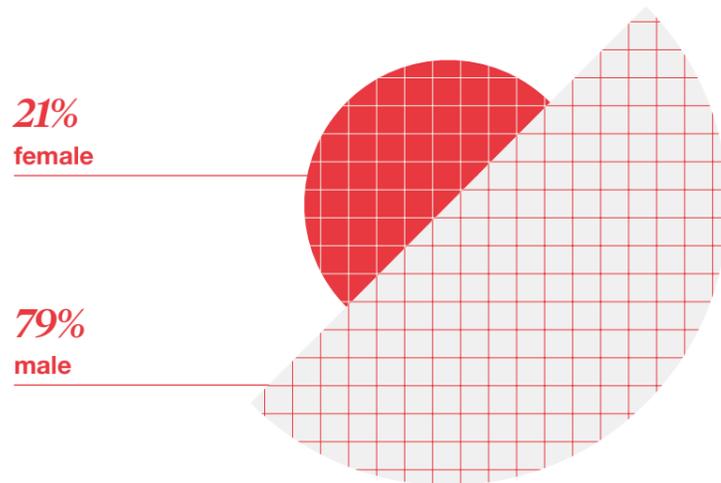
Gender inequality within the design economy is even starker when we consider the seniority of workers. In 2020, only 21% of managers identified as female, compared to 79% identifying as male. To address the gender representation crisis in the design economy we need not only to address the imbalance in representation across the sector, but also ensure that those identifying as women or non-binary are also fairly represented in managerial and senior positions.

This is broadly in-line with trends in the UK economy, with higher earners experiencing a much larger difference in hourly pay between men and women⁸³.

“As an industry, it’s our responsibility to understand the people we design for. I believe the best way of doing that is through diverse teams which fully represent those people. There is currently too much willingness to accept the current status quo and have ‘conversations’, without actionable change. There are many ways the industry could deliver greater positive impact. For example, with structured programmes such as Kerning the Gap and Ethnic Diversity Excellence being more broadly adopted industry wide, alongside an openness to challenge, partnership and transformation.”

Merle Hall, CEO, Kinnier Duffort

Figure 36: Proportion of male to female managers in the design economy (2020)



83 ONS, [Gender pay gap in the UK: 2021, ons.gov.uk](https://www.ons.gov.uk/peoplepopulationandcommunity/inequalityandpoverty/articles/genderpaygapintheuk/2021)



Photo: Transform Ageing, (C) Design Council

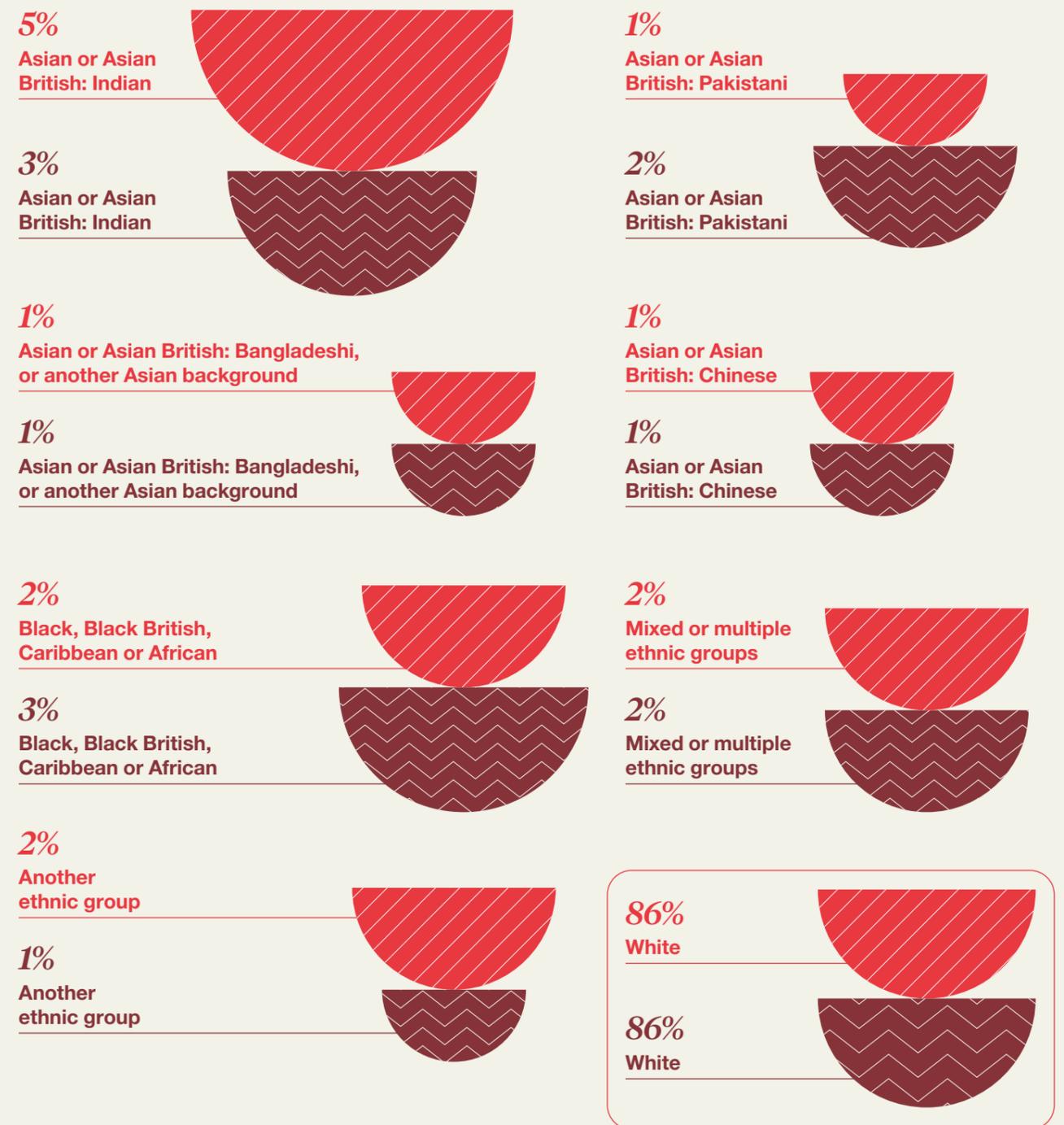
5.10 Ethnicity

The ethnic diversity within the design economy has changed slightly since our last report, with a slight increase in the number of designers from a mixed ethnic group or ethnic minority background (excluding white minorities) from 12.3% in 2016 to 14% in 2020. This representation is in line with ethnic diversity in the UK working age population⁸⁴ and reflects a decade long trajectory to 2020.

When we look at individual design sectors where data is available⁸⁵, representation is less reflective of the UK working age population. Between 2017 and 2020 there has been no change in the representation of Chinese (1%) and Pakistani (1%) ethnic groups. The proportion of designers who identify as black has doubled over this time period, increasing from 1% in 2017 and 2018 to 2% in 2019 and 2020, although this is still below the proportion of black ethnic groups in the UK working age population as a whole (3.4%).

Design sectors have shown significant change in the representation of ethnicities between 2017 and 2020 where data is available. The number of Asian designers has increased by 106% in product and industrial design over this period. The proportion of designers from black and mixed ethnic minority groups has increased in architecture and the built environment by 96% in that same time frame. However, both of these sectors still disproportionately represent white designers, who make up 90% of all designers in those sectors.

Figure 37: Ethnicity status of designers (2020) compared to UK working-age population



Design economy UK Economy (Census 2011)
Source: Annual Population Survey, 2011 Census

84 The UK government report that 85.6% of the UK's working age population is white, ethnicity-facts-figures.service.gov.uk.

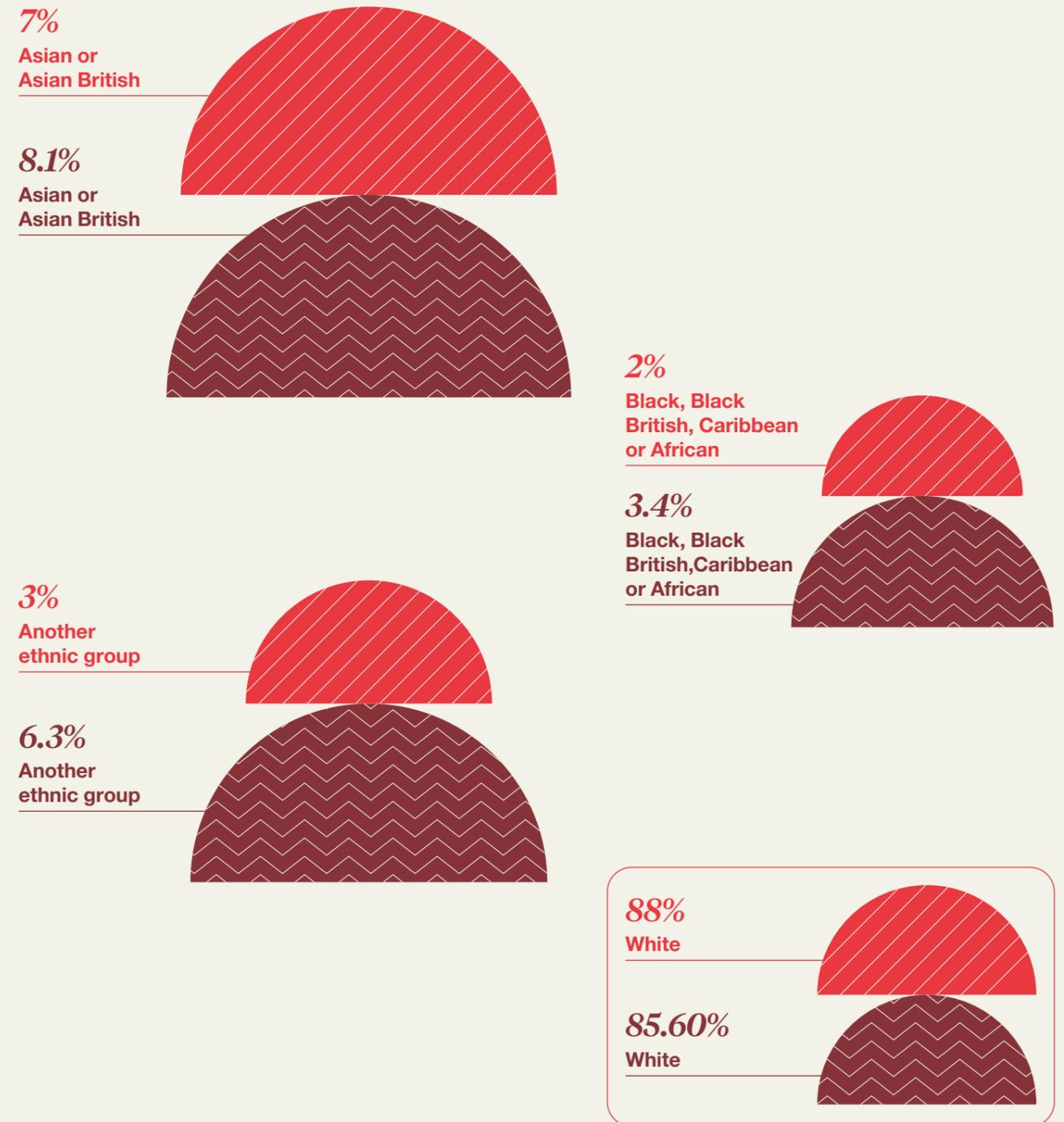
85 Unfortunately, due to statistical disclosure issues we were unable to gather data for all design sub-sectors and to break down data by all ethnicities. For an explanation of why this is the case, please see the Limitations and Considerations section of this report.

5.11 Ethnicity and seniority

Our last report found that in 2016 there was a significant under-representation of ethnic minority groups (excluding white minority groups) in managerial and senior positions in the design economy⁸⁶. Unfortunately, this has not changed since our last analysis with white people still making up 88% of all managers in the design economy. People from an Asian background only make up 7% of all managers (compared to a UK working age population of 8.1%), and those from a black ethnic group make up 2% of all managers, despite making up 3.4% of the UK working population.

This unequal representation is reflected in the UK labour force across sectors⁸⁷. While not unique to design alone, urgent action is needed to address this lack of representation, especially at senior levels within organisations.

Figure 38: Managers in the design economy by ethnicity compared to UK working-age population



⁸⁶ Design Council, *Design economy 2018*, designcouncil.org.uk
⁸⁷ ethnicity-facts-figures.service.gov.uk

5.12

Spotlight *FAME (Female Architects of Minority Ethnic) Collective*



Research and advocacy for diversity in design

FAME Collective is a research network exposing the barriers for female architects of colour. In 2021, they published the first instalment of their four-part research series on how race and gender affect designers from diverse backgrounds, from established practitioners to students. Using participatory research methods, they are interrogating the barriers to success that exist in architecture, with the aim of overcoming gender and racial disparities that persist in the discipline.

They found that three in five female students of colour felt uncomfortable or like they did not belong on their course, citing the lack of representation and the European-centric attitudes of their institutions as contributing factors. Only one in five had a role model or mentor who was a female person of colour, and over half had considered leaving their course altogether.

There continues to be inequalities in the design sector because after the proclamations, noise, and black-squares fade, there is the genuine hard work that must be committed to by organisations in ensuring sustainability in diverse representation.

While groups like The Paradigm Network⁸⁸ have been formed out of necessity, I strongly believe that fundamentally, it is those companies, organisations, and groups beyond diverse-led groups like ours, that are already in positions of authority and power, who must take on the challenge and burden of ensuring diverse representation within the built environment. That is because it is these organisations which have most benefited from the talent and ingenuity of diverse workforces. Where these companies and organisations have committed to genuine change, research such as McKinsey's Diversity Report⁸⁹, have shown an increase in profitability and positive workplace cultures, where people are able to bring their authentic selves and ideas to the table.

Companies who fail to implement real, sustainable change by ensuring diverse workforces are in positions of leadership will miss out on the talent and innovation that can allow them to adapt and pivot in a fast-changing world.

Tara Gbolade
Co-Founding Director, Gbolade Design Studio
Co-founder of the [Paradigm Network](#)

⁸⁸ See: paradigmnetwork.co.uk

⁸⁹ McKinsey, Diversity Wins: How inclusion matters, 2020, mckinsey.com



Photo: Creative High Streets Project
© Jack Offord

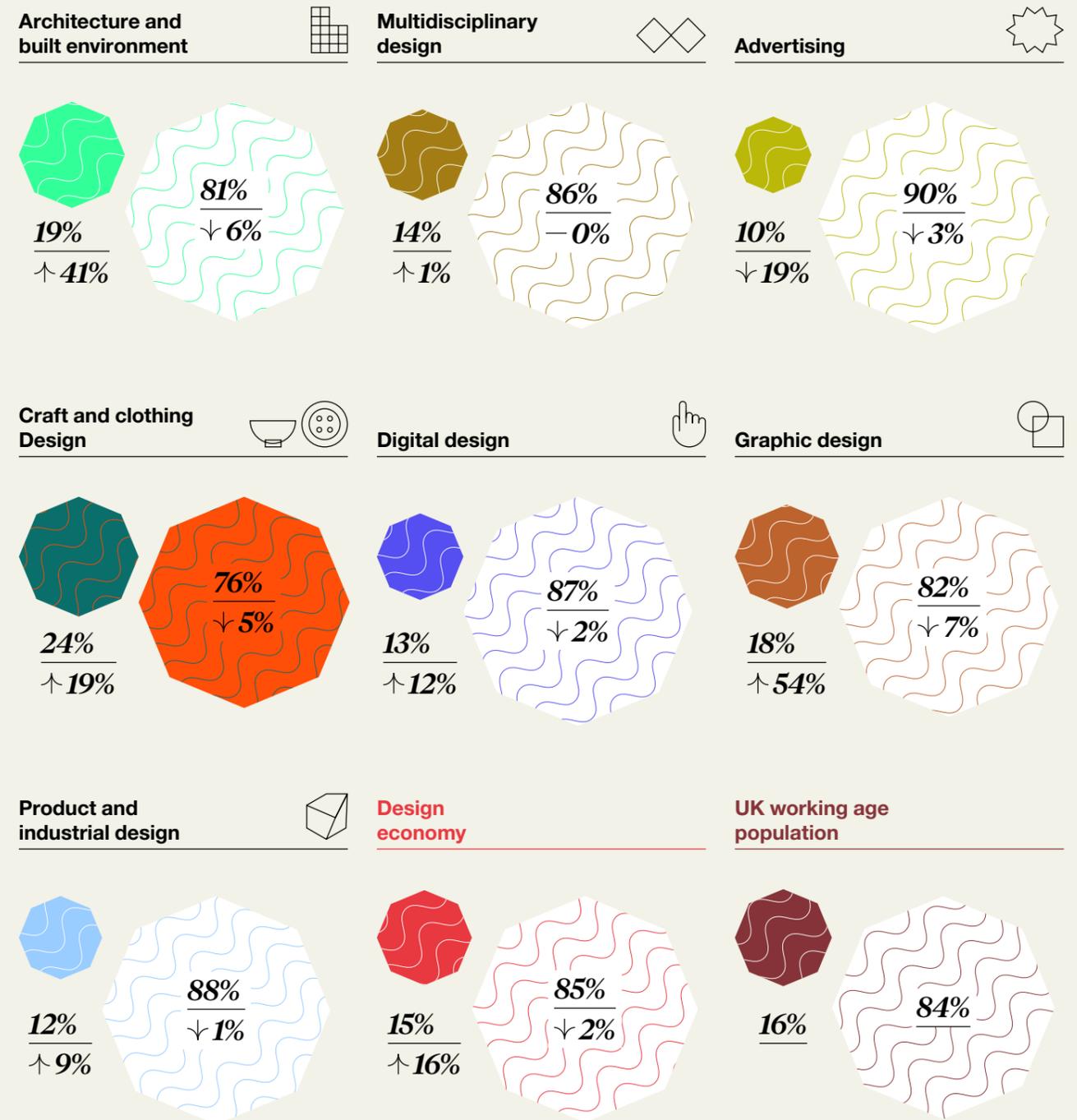
5.13 Disability

In 2020, 15% of workers in the design economy reported having a disability or a long-term work-limiting health condition, with the proportion of designers reporting as disabled having increased by 16% between 2017 and 2020. The proportion of workers reporting as disabled in the design economy now almost matches the proportion of disabled people in the UK population (19%).⁹⁰ However, this does not give us insight into the salaries, status, or seniority of these roles, and there is variation in representation across design sectors.

In our complementary survey of designers, we found that 45% of respondents living with a disability had a senior-level role, compared to 49% of respondents generally. We acknowledge that among the limitations of the Design Council survey is that the respondents are self-selecting, and skew towards higher seniority and greater levels of diversity than we see across the design economy proper. Nevertheless, within our sample of 1,300 designers, we can conclude that those living with a disability are less likely to occupy senior positions.

Within the ONS data, craft and clothing, architecture & built environment, and graphic design have the greatest representation of those who report as disabled at 24%, 19%, and 18% respectively, above or in line with the UK average. Advertising (10%), product and industrial (12%), multidisciplinary (14%) and digital (13%) have below average representation compared to the UK population of 19%.

Figure 39: Disability status of designers by sector compared to UK working population (2011) and percentage change between 2017 and 2020



● Disabled ◌ Not disabled
Source: Annual Population Survey, UK Census 2011.

⁹⁰ UK population statistics on disability referenced here are from the annual Family Resources survey, which puts working age disability at 19% for 2019/20. gov.uk

5.14 Spotlight *Design Age Institute*



Convening design, research and business to support an ageing population

The Royal College of Art's Design Age Institute is the UK's national strategic unit for design and the healthy ageing economy. A network of designers, businesses, researchers, and communities, they use design-led innovation to create commercially viable and beautiful products and services that meet people's needs as they age. The Institute also provides a directory for design and healthy ageing, showcasing UK design talent, and connecting leaders and innovators interested in inclusive design.

One of the institute Pathfinder projects, in partnership with Northumbria University and Karbon Homes, is to co-design flexible housing that can adapt and respond to the challenges of ageing, enabling people to stay in their homes and communities for longer. The project started with design research with older people, expert bodies, and healthcare practitioners, from which blueprints, The Flexible Living Prototypes, were developed, and funding for seven homes to be built in County Durham. Co-designing housing is critical in ensuring that everybody – regardless of how ageing impacts on our wellbeing – can stay active and continue to thrive in our chosen homes and communities. A house that is developed through conversation with diverse people, with different needs and desires, is more likely to be a house that we would all want to, and are able to, grow old in.

“It is good to see that the numbers of disabled people in the design economy are rising. This is positive, as bringing in lived experience should result in more inclusive thinking and outcomes. Diversity in teams is positive and brings different perspectives.

However, we must continue to take steps to remove the barriers to entry and progressing in the sector. I want to see disabled people in positions of power and leadership. Monitoring is vital if we are to measure progress. We all benefit from diversity in the sector – it will result in better outcomes for all of us.”

Kamran Mallick
CEO, [Disability Rights UK](#)



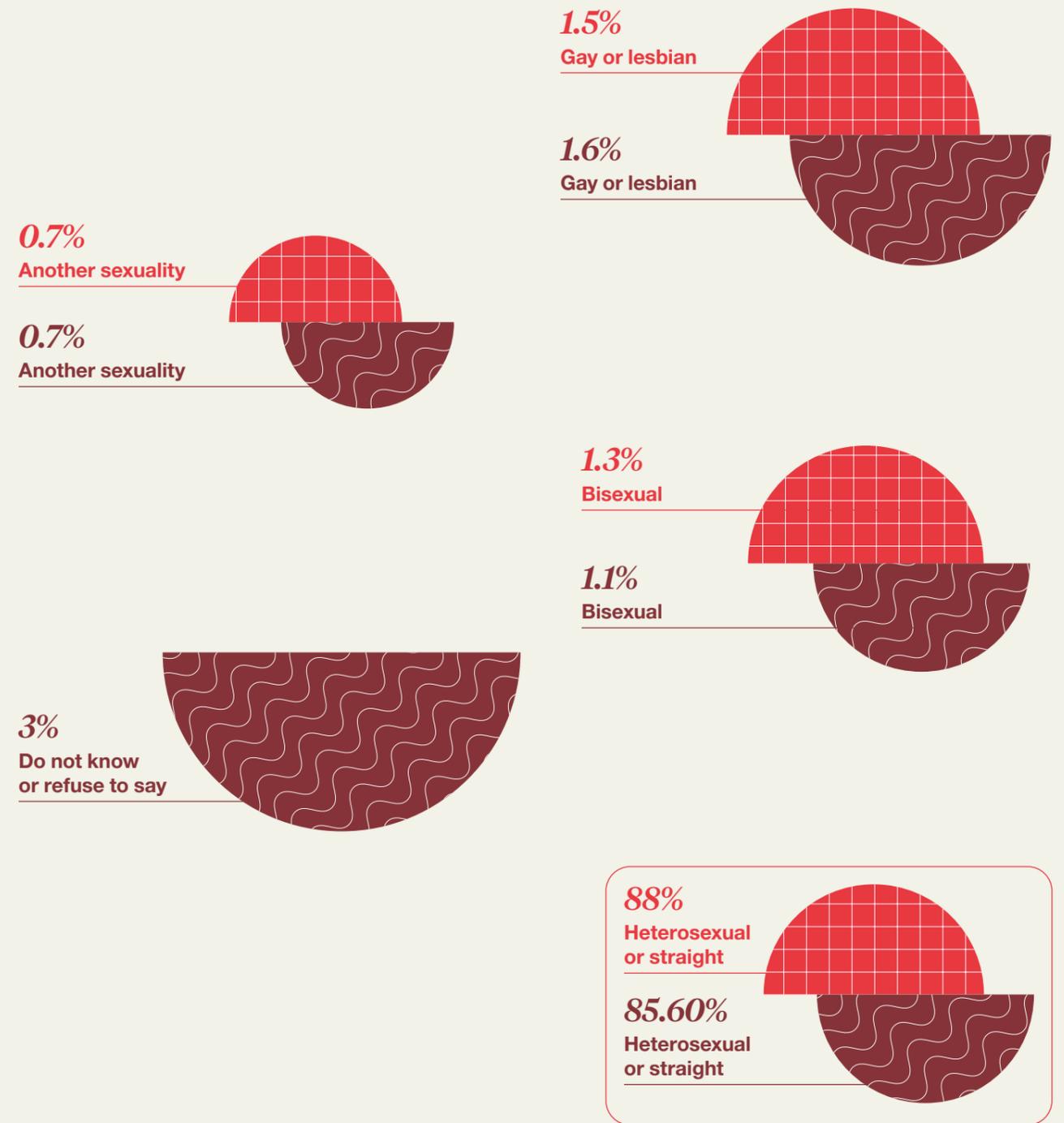
Photo: Archio Architects, Angel Yard Norwich
©Mellis Haward

5.15 Sexuality

In 2019, 96.5% of workers identified as heterosexual, slightly higher than the UK population.⁹¹ While this has fluctuated slightly since 2017, this proportion has largely stayed the same, with people who are lesbian, gay or bisexual under-represented in the design economy.

However, there have been variations in the proportion of workers of particular sexualities over the last three years in the design economy. In 2019, 1.3% of workers identified as bisexual (increase from 1% in 2015). During this time, 1.5% of workers identified as gay or lesbian (decrease from 1.9% in 2017). The current representation of sexual identities in the design economy largely mirrors that of the UK population.

Figure 40: Sexuality of workers in the design economy compared to UK population (2019)



■ Design economy ■ UK Economy (Census 2011)
Source: Annual Population Survey

⁹¹ The latest ONS data reports that 93.7% identify as heterosexual. [ons.gov.uk](https://www.ons.gov.uk)

5.16 Age

The design economy is a youthful sector. Over half of all design economy workers were under 44 throughout the 2017 to 2020 period, with the age distribution largely remaining the same across the period.

Graphic design is the youngest design group with 45% of workers aged 16-34 in 2020. Craft and clothing are the oldest design group, with over 31% of workers aged over 55 in 2020. Currently those who are 55 and over are the least represented in the design economy, with only 16% of designers within this group.

In 2020, more managers in the design economy were 35 to 44 years old than any other age group – with 34% of workers positioned within this age range. This was closely followed by 28% of workers being in the 45 to 54 age range, and 25% of workers reporting the 25 to 34 age-range.

In contrast, 12% of managers across the design economy were 55 years old or older – indicating that those who are working as managers in the design economy are relatively young.

Figure 41: Age of designers by design sector (2020)

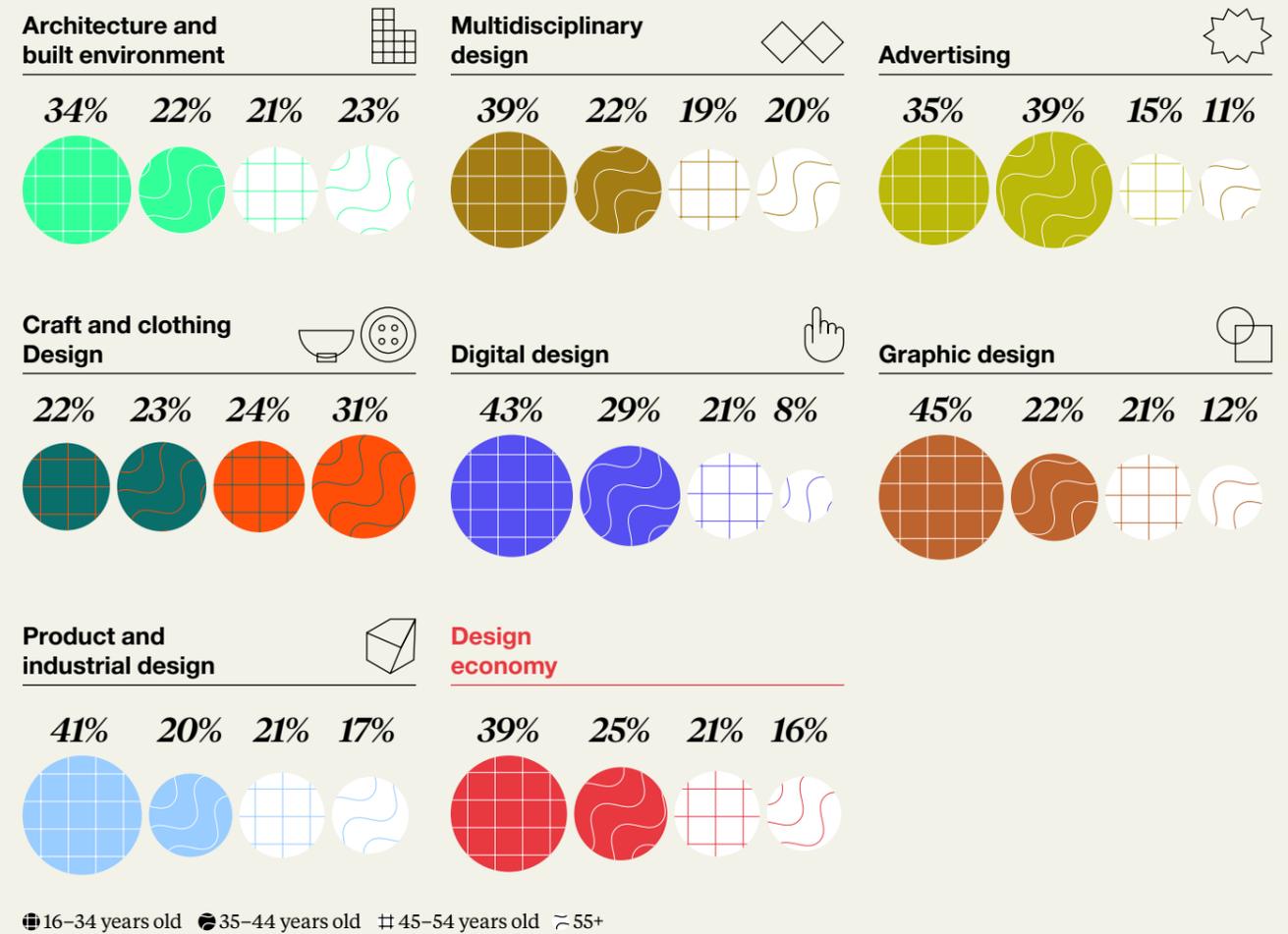
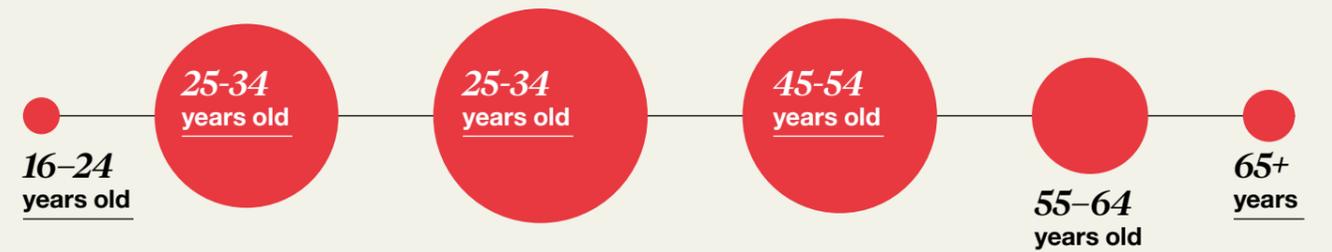


Figure: Managers in the design economy by age (2020)



Source: Annual Population Survey

5.17 Socio-economic class

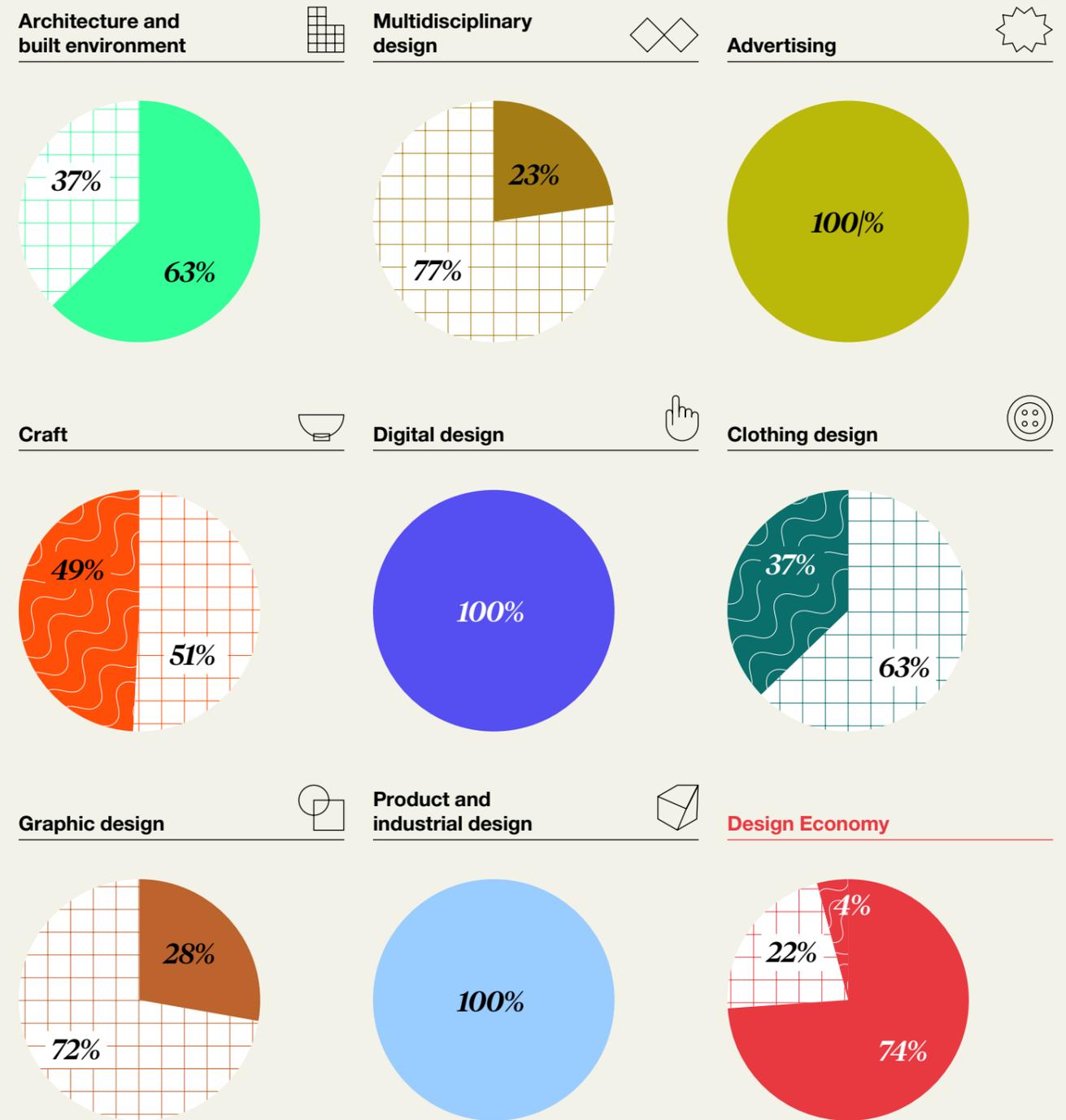
According to national economic estimates from DCMS, people from more advantaged backgrounds held the largest share of jobs in sectors such as the creative industries, digital sector and design (54.5%), which as we've explored so far overlap with the design workforce discussed here⁹². This was considerably higher than the UK average (46.8%), with social mobility – where people enter higher socio-economic class occupations from less advantaged backgrounds – lower than the UK average.

When we look at the current design workforce, we see that 74% of designers work in higher managerial, administrative and professional occupations – with this figure reaching 100% in digital, advertising and product and industrial design groups. These high percentages reflect the relatively high labour market status of design economy jobs in these sectors. Other sectors hold a higher proportion of jobs classed as routine or manual occupations: 49% of all craft jobs and 37% of all clothing jobs.

However, this data does not tell us much about social mobility within the design economy. To help to address this, we asked respondents in our designer survey to tell us the occupation of the main household earner in their home growing up and the type of school they attended at age 14, to help identify their socio-economic background. As discussed in previous sections, there are limitations with this data due to the small sample size, but it still provides additional insight.

In Britain, 7.5% of people are privately educated⁹³. In our survey, we found that 13% of respondents had been. Almost half of all respondents (49%) were in a senior-level position rising to 53% among those who attended a fee-paying school. However, when controlling for age (younger than 44), the type of education received doesn't appear to account for seniority: 38% of all young respondents occupy a senior position, compared to 37% among those who attended an independent school.

Figure 42: Design occupations by socio-economic class, broken down by design sector (2020)



● Higher managerial, administrative and professional occupations ▨ Intermediate occupations ● Routine and manual occupations
Source: Annual Population Survey

92 DCMS, DCMS Sector national economic estimates: 2011 – 2020, 2021, gov.uk
93 Social Mobility Commission, Elitism in Britain, 2019, gov.uk

5.18 Summary

The most representative design sector was digital, with 6% being privately educated, although this jumped up to 11% when accounting for UX designers (who would be categorised as a digital designer in national datasets). The architecture and built environment cohort was the least representative, with 16% attending an independent school, and a further 24% going to a selective state school.

According to research by PEC⁹⁴, however, architecture (while still a way off the national average of 38% of people from a privileged background) was the most socio-economically diverse of the design sub-sectors: 49% of architects are from a privileged background and 25% from a working-class background. Multidisciplinary design had a similarly privileged profile, with only a quarter of people from a working-class background (25%) and over half (53%) from a privileged background.

To try to understand social mobility, we can identify the proportion of designers in senior roles ('high-class' occupations) who came from less advantageous backgrounds. In other words, whose parents held intermediate or lower status occupations, compared to the national average. Again, this was a self-selecting survey of some 1,300 designers and not representative of the broader design economy, but it gives some indication. For comparison, 37% of the UK population had a parent working in a professional occupation, 24% in intermediate roles, and the final 39% were working class.

Of those designers now in senior roles, almost half (49.7%) had a main household earner in a professional occupation, which is well above the national average. Only 8% had a parent in an intermediate role, while the proportion of designers from a working-class background is roughly in line with the national average, at 39.8%. When compared to the creative and cultural industries as covered by DCMS data, we can see that some design sectors are possibly more upwardly socially mobile than other related occupations, but further research needs to be undertaken, especially to understand differences between sub-sectors.

Designers and people using design skills bring massive value to the UK, and represent one in seven UK workers. However, while we have seen some progress towards creating a more representative design economy in recent years, it is still far from reflecting the diversity of the people it should serve. The design workforce is still disproportionately white, male, hetero-sexual and from more affluent socio-economic backgrounds. The increased professionalisation of design, and declining take-up of design at secondary level, also risk reducing the available pathways into design, and thereby intensify the diversity crisis facing the sector.

In order to address this, the sector needs to work together to tackle under-representation of women and those from ethnic minorities and with disabilities in key sectors and levels of seniority, both through advocacy and support such as design leadership training. It should build on and amplify the many incredible initiatives that are already effecting change, taking design wide and sector-specific approaches. Through curriculum reform, apprenticeships and the support of informal learning, we can also help to ensure that we have a rich and diverse pipeline continuing to enter the workforce, and to ensure that design can benefit all.

⁹⁴ PEC, *Social mobility in the creative economy: Rebuilding and levelling up?*, 2021, pec.ac.uk

6.0 Design in a global UK

The United Kingdom is a global leader in design. The world's top two art and design universities are based in the country⁹⁵. UK designers have created award-winning buildings, products and services across the globe, with international companies seeking collaborations with British designers. The international market is a vital part of the design economy: 72% of all design economy GVA comes from exports, and the design workforce relies heavily on international talent joining the workforce.

As the UK's global position in the world evolves following its departure from the European Union, it is vital we secure the right international trade and immigration agreements. This chapter explores international exports and design registrations within the design economy.

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6.2. Service exports	171 ○
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95 QS World University Rankings 2022, topuniversities.com

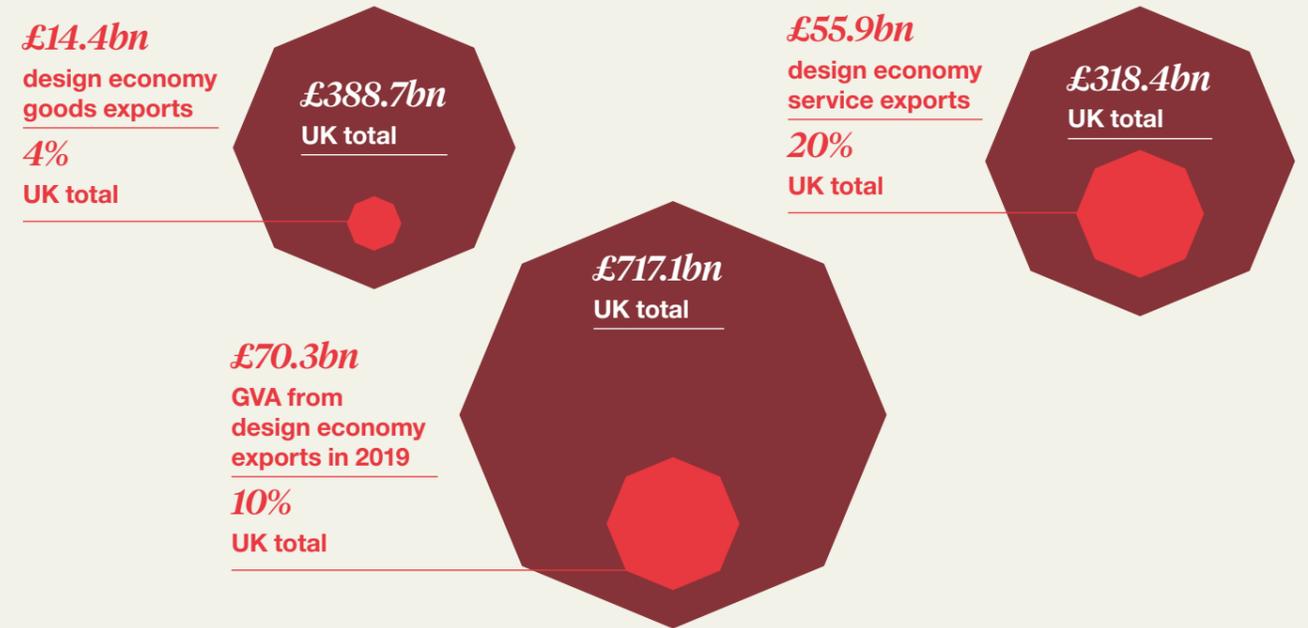
6.1 International exports

The total value of design economy exports in 2019 was worth £70.3bn to the UK, which equates to one in every 10 pounds of the nation's exports that year, and 72% of all UK design economy GVA. This had increased by 15% since 2017, slightly higher than the total UK export increase of 14%. Exports are categorised as either a 'good' or a 'service' – design creates value in both categories.

The value of design economy service exports totalled £55.9bn in 2019, representing 80% of all design exports – a proportion that has not changed since 2017. It has increased by 15% in that same period, near equivalent to growth in UK service exports across the economy (16%). But goods, which represent the final 20% of all design economy exports, also grew by almost 15% in the years 2017-2019, faster than the UK average of 6%. It is this fast-growing goods export value that tips the design economy into slightly higher than average growth of total exports.

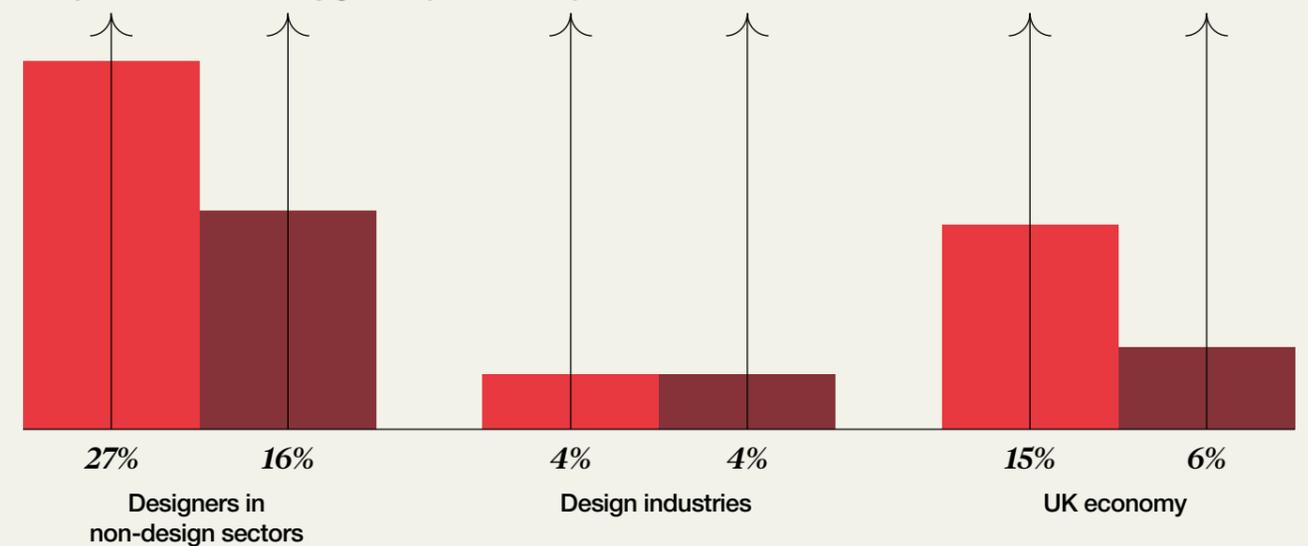
The greatest value in design exports, both in services and goods, is from non-design industries. Between 2017 and 2019, the growth in value of design service exports from non-design industries was 27% – by far the highest rate of growth in any category of export from the design economy, and 13 points higher than the export growth rate for total UK exports.

Figure 43: Overview of design export GVA in relation to UK totals (2019)



Source: International Trade in Services, Annual Business Survey, Annual Survey of Hours and Earnings – ONS, UN Commtrade Database.

Figure 44: Growth rates of exports for design industries and designers working in non-design sectors compared to UK economy growth (2017 to 2019)



Service export growth (2017-2019) Goods export growth (2017-2019)

Source: International Trade in Services, Annual Business Survey, Annual Survey of Hours and Earnings – ONS, UN Commtrade Database.

6.2 Service exports

The design economy is a major exporter of services across the globe. This includes things like architects being commissioned to design buildings by international firms, or a product designer creating the plans for a new furniture range for a company overseas to manufacture and sell. In 2019 international service exports equated to 57% of the total GVA of the design economy, or £55.9bn. This was larger than the digital sector (£51.9bn) and the creative industries (£37.9bn). It accounts for almost a fifth of the UK's total service exports.

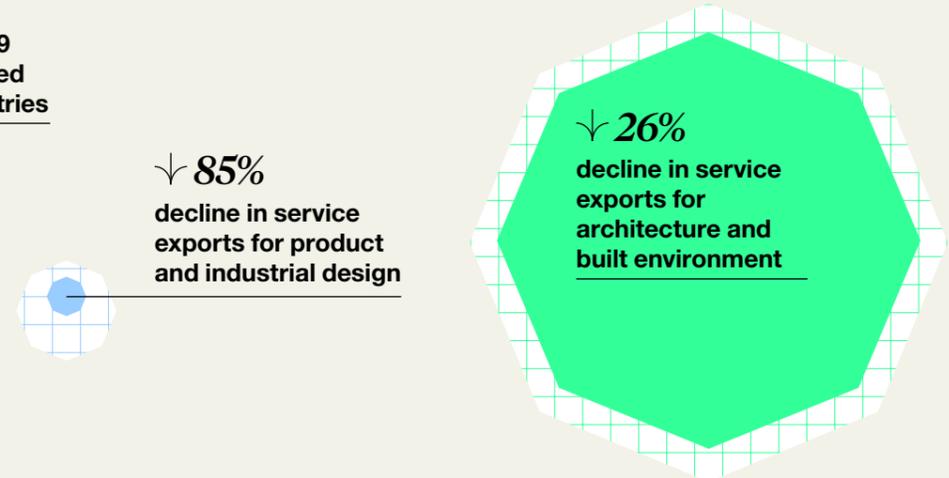
When we look at the performance of the design economy between 2017 and 2019, it tracks the growth of total UK service exports over that time, at around 16%. This is unsurprising given the high proportion of designers that work in other parts of the economy. Indeed, designers working in other parts of the economy outside of the design industries grew their export contribution at almost twice the rate of the UK economy (27%), showing the importance that design quality plays in service exports across the economy.

However, for design industries the story is far less positive. Design industry service exports only grew 4% between 2017 and 2019, four times slower than UK service exports as a whole. The product and industrial design industries experienced a -85% decrease in service exports. Architecture and the built environment industries, which were our second largest design service export by sector in 2017, experienced a -26% contraction over this time. The uncertainties following the UK's departure from the European Union, coupled by the need for new trade agreements, will likely be contributing to this downturn in key sectors. This presents a significant risk for the future prosperity of the design economy, and our international reputation as a world-leading centre for design.

Digital design is the largest service export in the design economy in both absolute and relative terms, accounting for 68% of all design economy exports in 2019. However, growth in digital design industry exports has also slowed below the UK average in the last three years of available data.

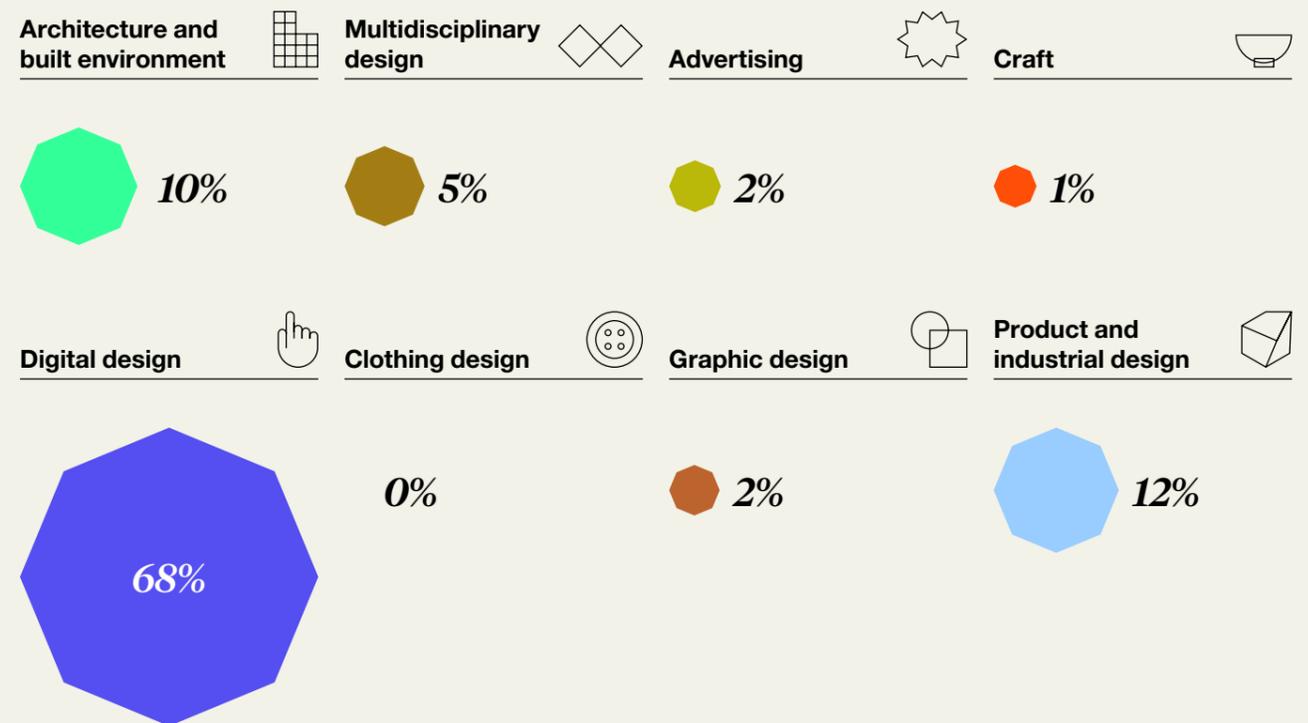
Figure 45: Percentage decline of service exports from key design industries (2017 to 2019)

Between 2017 and 2019 service exports declined for some design industries



Source: International trade in services, Annual Business Survey, Annual Survey of Hours and Earnings – ONS

Figure 46: Design sector contributions as a proportion of total design economy service exports (2019)



Source: International trade in services, Annual Business Survey, Annual Survey of Hours and Earnings – ONS

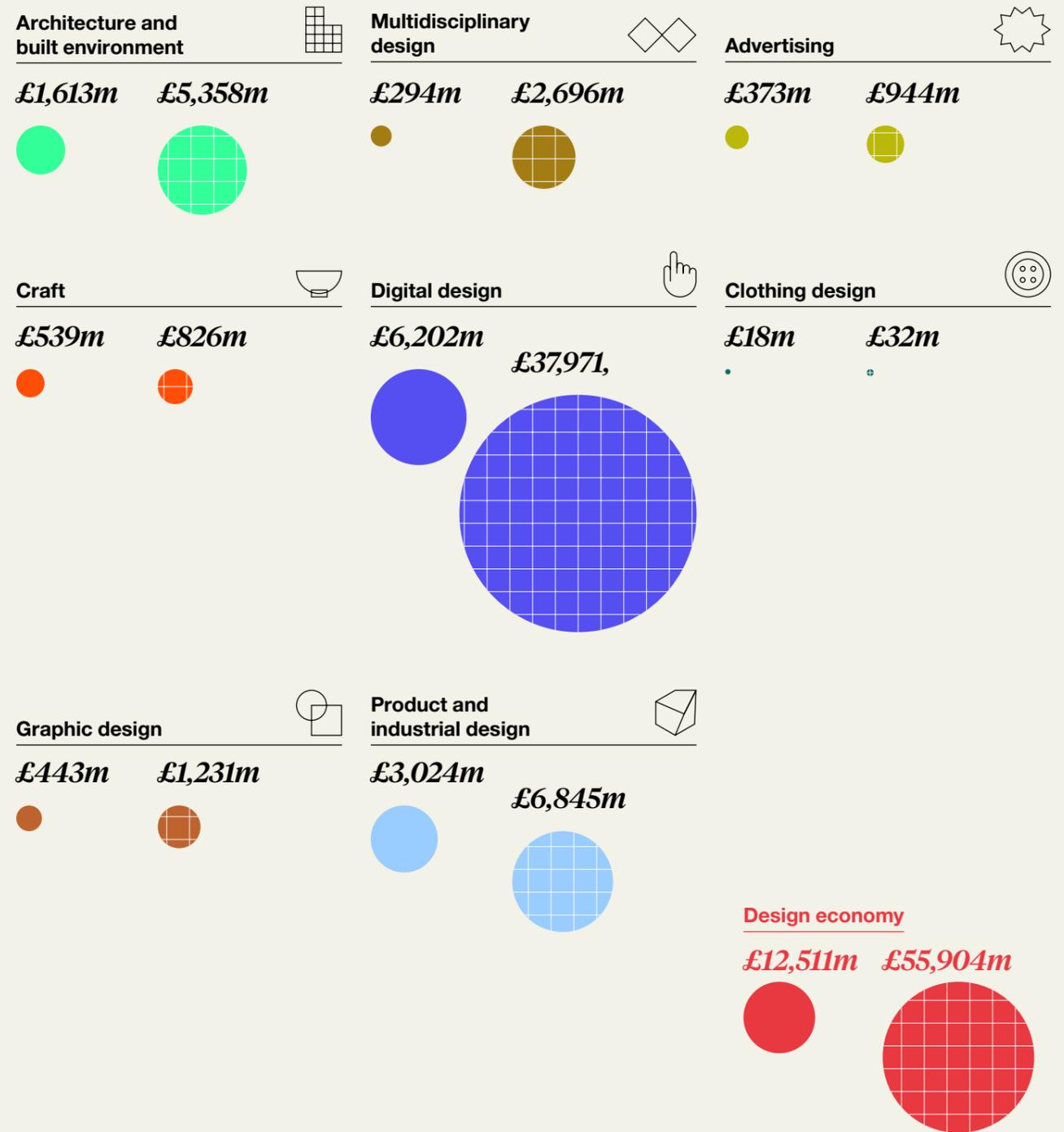
6.3 Goods exports

Exported goods from the design economy includes products designed and manufactured in the UK. The value of these design goods is £14.4bn, and 90% of the value of exported design goods is being created in non-design industries. The design groups that are creating the most value in goods exports are: digital, which is responsible for just over half of that value, at £6.7bn; product and industrial design, with 23% or £3bn; and architecture, at 13% or £1.7bn. Craft had the highest proportion of design goods coming out of design industries, accounting for 39%. This is three times the average of 13%, and almost four times greater than digital, the design group with the next highest proportion of value coming from its design industries (10.5%). All goods exports from product and industrial, clothing, advertising, and multidisciplinary design came from non-design industries.

Goods exports coming from digital design are driving the higher-than-average growth, having grown by 22% since 2017. Surprisingly, however, they are not the fastest growing design group, which is multidisciplinary: the total value of their design goods exports in 2019 was comparatively small (second only to clothing) at £380m but has seen a growth of 29%. The export value of clothing design was £14m in 2019, having contracted a sizeable 25% since 2017, and the only design group to report a contraction across both design and non-design industries.

Given that 80% of design's exports are services, not goods, it is unsurprising that every design group has a higher proportion of export value from the services they provide. On average, the value of services exported from the design economy are three times higher than the value of goods, with two notable outliers: multidisciplinary design, whose exported services generate seven times the value of its goods; and digital, whose services generate £38bn more than its goods – a five-fold difference.

Figure 47: The proportion of service and goods' export value for the different design groups, £m (2019)



● Total good exports (£m) ■ Total service exports (£m)
 Source: International Trade in Services, Annual Business Survey, Annual Survey of Hours and Earnings – ONS, UN Commtrade Database.

“The UK is a global hub for great design, buoyed by the talent already living and working here, as well as our exceptional educational institutions. However, there are several challenges facing the sector should it want to retain this reputation. The impact of COVID-19 may have masked the impact of Brexit but our research at the [Creative Industries Policy and Evidence Centre](#) suggests that the sector is yet to completely adjust to Britain’s new place in the world. One particular worry is the immigration system which has few routes for skilled freelancers. As self-employed people make up about half of the workers in the design sector, I believe that unless we build a route fit for these skilled workers we may see a continued decline in UK design exports.”

Eliza Easton
Head of Policy Unit
Creative Industries Policy and Evidence Centre



Photo: Birmingham New Street Station, AZPML
©Valerie Bennett

6.4 Design applications

As the design economy continues to evolve and grow, this will continue to generate new innovations and Intellectual Property (IP). For designers to be able to create value from their work, and exchange ideas freely and securely to drive innovation, they need an IP framework that is simple to use, but which can also keep pace with the wider contexts of fast-changing technology and the urgency of designing in the context of the climate and bio-diversity emergencies.

To build on our previous report, our analysis looked at both the absolute number of design registrations made by G20 countries with the World Intellectual Property Office (WIPO) and apportioned these per million in the population. This does not provide a full picture of the design IP landscape in the UK, as many designers rely on unregistered rights due to the high cost of securing registrations (and subsequently informing them). The UK's Intellectual Property Office (IPO) is already exploring these issues in its latest review of the UK's design IP framework⁹⁶.

As in both 2015 and 2018, South Korea has the top ranking in relative terms, with 2,614 registrations per million, a 6% increase since our last report. China, however, continues to top the absolute rankings and far outstrips other G20 countries in design registrations (over 11 times those of South Korea) and in terms of its rate of increase in design registrations.

While UK registrations have declined in the last decade between 2000 and 2020, in the time since our last report it has experienced the highest proportional increase in design registrations of any G20 country: 88% growth between 2017 and 2020. This marks a reversal of the long-term decline in registrations found in our previous report. However, this growth reflects changes to the UK's IP landscape following its departure from the European Union, which brought with it the loss of automatic unregistered design rights production in the EU27. In June 2018 the UK joined the Hague system for international designs, which meant applicants could start designating the UK through the international system (which previously could be achieved in the UK by designating 'EU'). Applicants looking to secure international protections for new designs who would have previously sought this through the EU system are now starting to file in the EU and UK separately.

Figure 48: WIPO design applications made by G20 countries (2020)

Country	Total number of WIPO design applications (2020)	Rank (absolute)	% change (2000–2020)	Population (2020)	Design applications (per million population)	Rank (relative)
Republic of Korea	67381	2	99%	51836239	2614	1
China	770362	1	1437%	1410929362	546	2
Australia	7359	9	73%	25693267	286	3
Japan	30475	4	-21%	125836021	242	4
Canada	6187	12	81%	38037204	163	5
United States of America	48030	3	163%	331501080	145	6
Turkey	11319	6	361%	84339067	134	7
United Kingdom	7882	7	-16%	67215293	117	8
France	6001	13	-45%	67379908	89	9
Germany	6331	10	-58%	83160871	76	10
Russian Federation	7568	8	230%	144104080	53	11
Argentina	2099	16	68%	45376763	46	12
Brazil	6263	11	74%	212559409	29	13
South Africa	1708	17	39%	59,308,690	29	14
Saudi Arabia	948	19	-	34813867	27	15
Mexico	3499	15	82%	128932753	27	16
Italy	1304	18	-79%	59449527	22	17
Indonesia	3520	14	-	273523621	13	18
India	12793	5	299%	1380004385	9	19

96 IPO Press release, *IPO launches call for views on designs system, 2022*, [gov.uk](https://www.gov.uk)

“The government’s ambition is for the UK to be the best place in the world for innovation and creativity to call home, and intellectual property is central to this. The designs framework enables rights holders to protect designs and enforce their rights. We want it to be a powerful enabler for our design economy. To remain fit for the future, it must be responsive to the evolving needs of the designers, businesses, and consumers it serves – which is why we are carrying out a review and looking for opportunities to improve it.

We have recently published the government’s response to our call for views on how the designs framework could be made better for those using it.⁹⁷ We look forward to continued engagement with the Design Council and Britain’s world-leading design professionals on the vital issues raised, helping great British design flourish.”

97 IPO, Designs framework call for views, 2022, [gov.uk](https://www.gov.uk)

6.5 Summary

The UK design economy has a world-class reputation for good design, and accounts for 10% of all UK exports and 18% of all service exports. Designers working in non-design sectors have been key drivers of design export growth in recent years. However design businesses, which are often small organisations with limited budgets and resource, have seen slowed exports and, for some sectors, declines since 2017. Following the UK’s departure from the European Union – and ongoing disruption to international trade brought about by global conflicts and COVID-19 – it is vital that the design economy is provided the right support so it can continue to flourish.

While the UK continues to attract some of the world’s best design talent to our leading art and design universities, our immigration policies need to ensure that we can retain this talent after graduation. Research by Nesta’s Creative Industries Policy and Evidence Centre has, for instance, highlighted the important role that EU workers play in the UK design workforce⁹⁸ and the lack of suitable visa options and support for international design graduates and high-skilled freelancers⁹⁹. To enable the exchange of ideas and international innovation needed to tackle issues like the climate crisis, we also need a design protection framework that is suited to Britain’s shifting position in the world. Design protection needs to strike a balance between enabling the free and secure exchange of ideas, while providing confidence to designers that they can do this without fear of infringement.

98 PEC, *The migrant and skills needs of creative businesses in the UK*, 2019, pec.ac.uk

99 PEC, PEC’s Representation to the autumn spending review, 2021, pec.ac.uk



7.0 Conclusion

The design economy has a central role to play in the coming decade as we address the climate crisis, tackle inequalities at home and foster a new global Britain. Whilst one in 20 people working in the UK are in the design economy, even more rely on design skills as a part of their work. It is a vital asset and capability for the country as it aims to address today's complex challenges.

But the design economy must also overcome significant difficulties if it is to maximise its full potential to create a more just, regenerative and prosperous UK. Ensuring that growth is at the service of social and environmental justice, that design economies outside of London and the South East are better supported, addressing the significant lack of diversity in the sector and a declining skills pipeline are just some of the issues that need to be tackled to unlock its potential. Whilst early data suggests that the design economy has shown resilience through COVID-19, with signs of recovery in some sectors, we also do not yet know the long-term impacts of the pandemic on the sector.

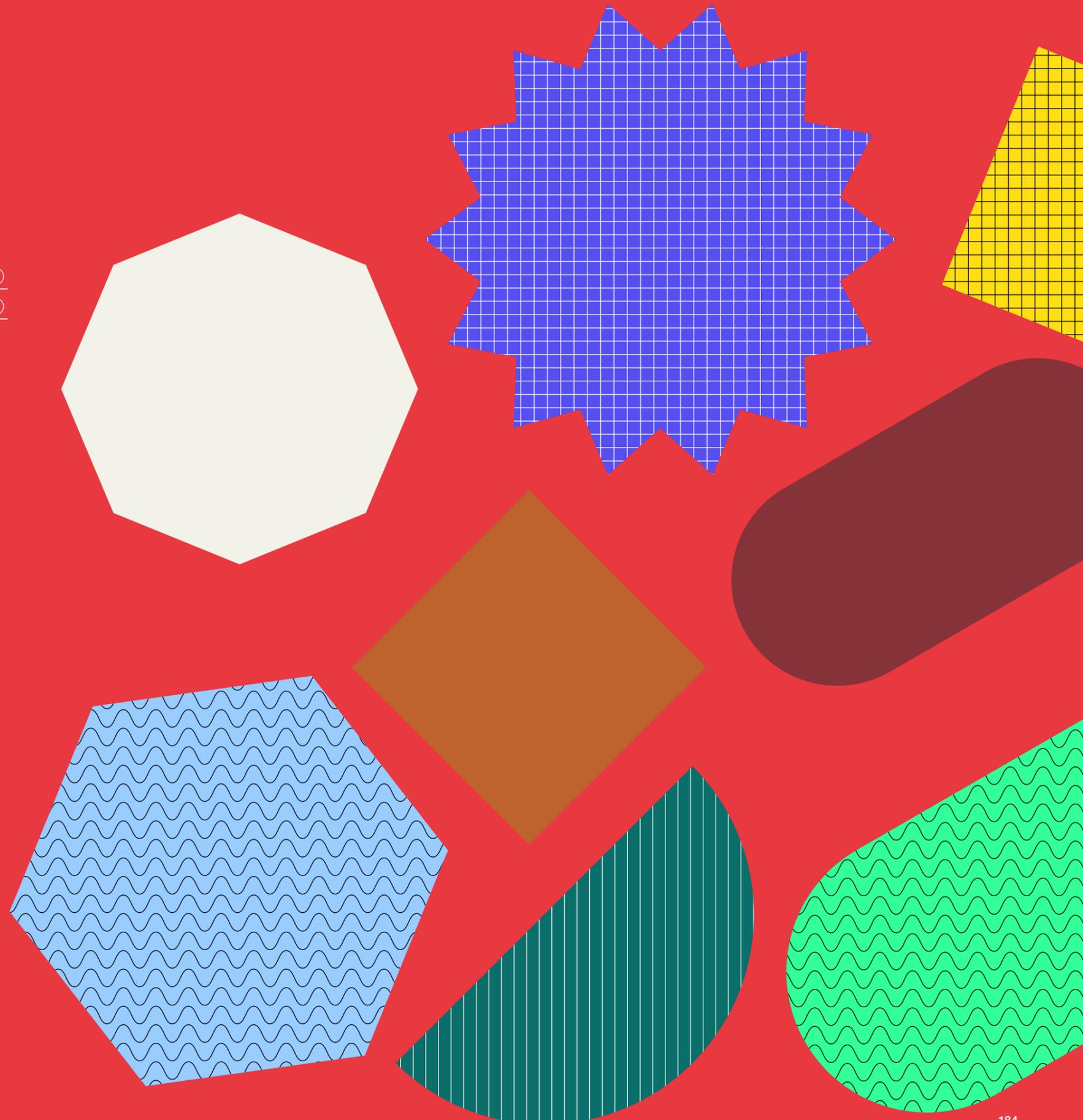
A thriving design economy has the potential to have a transformative effect on our country. Imagine if the 1.97 million strong design community became a driving force for environmental and social regeneration, creating sustainable and regenerative homes, products and services that allowed us to live sustainably. Imagine if communities were deeply involved in co-creating their towns and high-streets in ways that fostered civic pride. Imagine if young people from across the entire country and from all backgrounds were excited to pursue well-paid, productive and innovative design careers. Imagine if around the world the UK was seen as a global leader in regenerative design, sharing ideas, working with and learning from other countries around the world to enable us to globally achieve net-zero and restore biodiversity loss.

Whilst this report provides insight into the people, places and economic value of design, in Autumn 2022, Design Council will publish a policy briefing paper outlining the policy and industry-led action needed to maximise the value of design to the UK and help us to realise these potential futures. Further reports will explore the wider social and environmental value of design; and the use of design in business, the public sector, and communities.



8.0 Appendices

8.1. Appendix 1: Data sources	185 ○
8.2. Appendix 2: Technical methodology summary	186 ○



8.1 Appendix 1: Data sources

To view the data tables used in this report, see [here](#).

Northern Ireland Statistics and Research Agency (NISRA) (2021), Business Register and Employment Survey (BRES), 2015-2020, <https://www.nisra.gov.uk/statistics/annual-employee-jobs-surveys/business-register-and-employment-survey>

Office for National Statistics. (2021). Annual Business Survey, 2005-2019: Secure Access. [data collection]. 15th Edition. UK Data Service. SN: 7451, <http://doi.org/10.5255/UKDA-SN-7451-15>

Office for National Statistics. (2021). Annual Survey of Hours and Earnings, 1997-2021: Secure Access. [data collection]. 19th Edition. UK Data Service. SN: 6689, DOI: 10.5255/UKDA-SN-6689-18

Office for National Statistics. (2021). International Trade in Services, 1996-2019: Secure Access. [data collection]. 10th Edition. UK Data Service. SN: 6711, <http://doi.org/10.5255/UKDA-SN-6711-11>

Office for National Statistics, Social Survey Division. (2021). Annual Population Survey, 2004-2021: Secure Access. [data collection]. 21st Edition. UK Data Service. SN: 6721, <http://doi.org/10.5255/UKDA-SN-6721-20>

Office for National Statistics (2021), Business Register and Employment Survey (BRES), 2015-2020: NOMIS Access

Office for National Statistics (2021), UK Business Counts, 2015-2021: NOMIS Access

Siepel, J., Camerani, R., Masucci, M., Velez Ospina, J., Casadei, P. and Bloom, M. (2020) Creative Radar: Mapping the UK's creative clusters and microclusters. Multiple: Creative Industries Policy and Evidence Centre and The University of Sussex. Available from: <https://pec.ac.uk/assets/publications/PEC-Creative-Radar-report-November-2020.pdf>

UN Comtrade database, Department of Economic and Social Affairs, United Nations

8.2 Appendix 2: Technical methodology summary

This research builds on the methodologies implemented on behalf of Design Council in *Design Economy* (2018) and *Designing a Future Economy* (2017). These methodologies were reviewed and extended in Design Economy 21 Discussion Paper 2 and Discussion Paper 6¹⁰⁰. Full detail on the approaches applied in this research can be found in those discussion papers.

This note summarises those approaches. When implementing these approaches, some challenges were encountered. These are detailed in the section on limitations and considerations in the introduction. Design is not a single sector with a distinct value chain – rather it is a set of creative practices and skills applied across industries and contexts that are wide ranging across the economy. Many of the challenges relate to identifying the presence and impact of these practices and skills within datasets that are not structured around them. Instead, these datasets are structured around occupations and industries.

This research began by consulting on the contemporary form of these practices and skills and seeking to map them to occupations and industries. This consultation, therefore, considered which occupations are utilising design in day-to-day work. This consultation was followed by updated analysis of the industries in which these occupations are working.

This analysis assesses the intensity of design employment in industries as set out in ONS individual SIC codes. The intensity is the proportion of people employed within an industry that are working within one of the design occupations. Any industry with a design intensity of 30% or above is a design industry. All employment within a design industry is included in the analysis on the basis that those employed in non-design roles will be supporting the core design function. This approach allows us to identify designers who are working in design-intensive sectors, but also the large number of designers working in other sectors across the UK economy.

The design economy, therefore, is formed by three components:

- ➔ designers in design industries (eg, digital design, architecture and built environment)
- ➔ other roles in design industries (eg, support functions such as administration, finance, distribution)
- ➔ designers in other sectors across the economy (eg, aerospace, finance, retail, etc).

These components, as well as the methodology that generates them, mirror those of the creative economy definition used by DCMS and NESTA.

In addition, there are workers outside the design economy that utilise design. We have identified occupations which sit outside the original design economy definition of designers, but for which design skills form an important part of the role. There are 17 additional occupations in this category.¹⁰¹

We have identified other industries – outside the design economy – where 30% or more of employment is in occupations that are considered to have design skills and classify these as design-active industries.

There are three components to the economic contribution of design skills:

- ➔ workers in occupations that utilise design skills (eg, surveyors, carpenters, electrical engineers)
- ➔ other roles in design active industries (eg, support functions such as administration, finance, distribution)
- ➔ design skilled workers in other sectors across the economy (eg, aerospace, finance, retail, etc).

The full economic contribution of design combines the design economy and the three contributions from design skills and design active industries – while taking steps to avoid double counting between these components. Some of the economic contribution of design skilled workers in other sectors will occur within the design economy and is, therefore, not additional to the economic contribution of the design economy. In this analysis, we have taken steps to avoid this double counting.

This research has, in addition, analysed the impact of design and design skills to local and regional economies, building on the approaches detailed in discussion paper 6¹⁰². This analysis of local and regional economies has been grounded in the design industries and the design-skilled industries. It was necessary to ground this analysis in industries, rather than occupations, because disclosure issues prevented us accessing data at sufficiently granular geographies on designers working outside the design industries and design skilled workers outside the design skilled industries.

Our approach to assessment of local and regional economic impact is grounded in assessment of employment and business clusters. Location Quotients (LQs) are a tool for measuring the extent of clustering. They compare the numbers of relevant workers and firms within defined geographies against the national averages of such workers and firms. Where localities have a stronger density of workers and firms than the national average, this is taken as an indicator of clustering.

The Policy and Evidence Centre (PEC) at NESTA has also investigated micro-clusters, i.e., clusters within local authority boundaries. PEC identify 709 creative microclusters in the UK, a significant number of which (247) are found outside the 47 clusters which have been identified in earlier NESTA research at the commuter level.¹⁰³ Of these 709 creative microclusters, 141 are design related. We established overlaps between the design clusters identified on our analysis at local authority level and that undertaken by PEC within local authority boundaries.

Acknowledgements

Thank you to the experts and stakeholders who participated in consultation sessions, steering group meetings, roundtables and webinars between March 2021 and June 2022, providing invaluable expertise and insight to support with the development of this report. Thanks also to those that provided speaker provocations at workshops and consultation sessions: Dr Jane Davidson, Lord Deben, Indy Johar, Professor Vincent Goodstadt, Imandeep Kaur and Dr Elizabeth Tunstall. Thank you to the Design Economy Steering Group and Ambassadors for their ongoing support and contributions to this report, and to Harry Kerr,

Ben Griffin, Fiona Walker, Adam Fennelov, and Eliza Easton who all reviewed early drafts of this report. Finally, thank you to our colleagues at BOP Consulting, The Enterprise Research Centre at Aston University, The Social Design Institute at University of the Arts London, The All-Party Parliamentary Design and Innovation Group and colleagues at Design Council for all of their contributions and support to produce this report.

101 Design Council, *Designing a future economy*, 2017, [designcouncil.org.uk](https://www.designcouncil.org.uk), details the identification of these 17 occupations.

102 Design Council, *Scoping Project: Regional Use of Design*, 2021, [designcouncil.org.uk](https://www.designcouncil.org.uk)

103 Nesta, *The Geography of creativity in the UK*, 2016, [nesta.org.uk](https://www.nesta.org.uk)

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