Good work innovations in Europe:

Reimagining the social contract

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Acknowledgments

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EXECUTIVE SUMMARY

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Executive summary

The RSA Future Work Programme aims to secure good work for all. Together with the Autodesk Foundation, we embarked on a period of research to understand what good work innovations have emerged in recent years across Europe and Sub-Saharan Africa. Our aim was to build an online directory to help raise awareness of these organisations and support policy making and social investment. In the first part of this report, we detail the key findings of a literature review, secondary data analysis, and horizon scanning exercise that explore how technology and other forces are impacting workers. In the second part, we provide an overview of our innovation mapping research, identifying some of the most promising good work innovations and potential pathways to deepen and scale their impact.

Automation and the jobs of the future

Debates about the future of work have been dominated by attempts to predict the number of jobs that will be replaced by AI and robots. Our review of the literature finds that automation risk varies considerably across European countries and regions. Countries in Southern and Eastern Europe are more at risk than parts of Northern and Western Europe. While rural regions are more at risk than major cities. We examine how the labour market has changed over the last decade to access the extent to which automation has been happening and what new jobs are being created. Several industries that experienced growth over the last decade are resilient to automation. These include both hi-tech sectors such as computer programming as well as hi-touch sectors such as leisure and social care. But this

relationship is far from clear cut and there are other forces that are impacting the structure of European labour markets. Industries such as hospitality and logistics experienced strong growth despite being at high risk of automation, while the fastest shrinking industries were mining and the extraction of oil and gas, signalling a transition to renewable energy. A green jobs revolution is also expected to create hundreds of thousands of jobs across Europe in the next decade.

We find that some regions and demographic groups face particularly acute challenges here. Across Europe, there have been huge disparities around job creation. While most regions were creating new jobs after the financial crisis, some areas which were hit harder by the economic downturn were not. Particularly those in Southern European countries and parts of France. Younger workers are consistently identified as most at risk of automation while women are missing out on some of the best paid hi-tech roles.

Set across a backdrop of rising unemployment, Covid-19 could lead to a different permutation of these trends. The pandemic not only looks likely to create job losses in industries such as tourism and the creative arts that are resilient to automation but unable to turn a profit while adhering to social distancing, there are also signs that it could accelerate the pace of technological change. From e-commerce replacing high street jobs, to remote working reducing the need for office cleaners and security guards, and even robots being deployed in hotels. Remote working could also result in an economic rebalancing away from the major cities that accounted for a disproportionate share of economic growth prior to the pandemic.

The rise of insecure work

In recent decades, the social contract between workers and businesses has frayed, as non-standard work has become more prevalent in many parts of Europe. While **the gig economy** has captured the zeitgeist in this respect, it is a relatively new phenomenon and still not captured well in official statistics. Survey data from various studies suggests that more that while around 10 percent of European workers have used online platforms to find tasks ranging from delivery to graphic design, less than 2-3 percent use them at least 20 hours a week or as their primary source of income.

Temporary fixed-term contracts are widespread across the region, affecting 14 percent of employees. Their growth has been particularly marked in some European countries like Italy, the Netherlands, Poland and Croatia. The UK, Netherlands, Italy and Finland also have high levels 'on call' workers or **zero hours contracts**. These arrangements may give some people freedom to work when they want and the flexibility to fit work around caring or study commitments. But there is a growing concern that such flexibility is 'one-sided' with employers seeking "to transfer all risk onto the shoulders of workers in ways which make people more insecure and make their lives harder to manage". Some of these workers lack certainty about their working hours or have chronic issues with low or volatile earnings.

Self-employed workers are a diverse group, also accounting for 14 percent of the workforce across Europe. In Greece (30 percent) and Italy (22 percent) this figure is much higher. For the majority, self-employment brings with it greater levels of job and life satisfaction. But these workers still face significant challenges relating to their economic security and lack important protections that workers in conventional employment arrangements take for granted. Self-employed workers have been some of the hardest hit during the pandemic due to high levels of employment in sectors such as construction, the arts and entertainment and hospitality. Government support measures were also in many cases introduced later for those employees and were subject to greater conditionality. While the lack of access to sick pay may have contributed to worsening outbreaks in some countries. Some parts of the gig economy appear to have experienced growth in response to the pandemic, particularly those related to home deliveries. But there are also signs that Covid-19 has forced platforms to 'grow up' by accelerating conversations about increased protections for workers. The recent Uber employment status ruling is just the tip of the iceberg here.

Mapping good work innovations

We structure our innovation mapping around three broad themes: l**ifelong learning**, **economic security** and **worker voice**. Across all themes we were particularly interested in innovations that address diversity and inclusion, opening up good work to people on the margins of the economy, regardless of age, gender, race, or mental and physical health conditions.

- **Skills, training and lifelong learning**: programmes which equip people with the skills they need to weather oncoming technological trends or help them transition into the jobs of the future.
- **Economic security**: initiatives that help workers, particularly those in the gig economy and other new forms of employment, to grow and stabilise their incomes, or offer important protections such as sick pay.
- **Worker voice and power**: new kinds of trade unions, cooperatives, or organisational forms which give people greater influence over their working conditions.

Alongside desk research, this exercise involved extensive engagement with key ecosystem players in different global regions, including more than 30 interviews with stakeholders across Europe. We found close to 200 innovations across Europe. Within each theme we aimed to cluster innovations into broad 'intervention sets' that use similar approaches to address similar problems. Our hope is that this starts to provide a common language that innovators, policy makers and social investors can use to spot opportunities for new ways to support workers.

Many grassroots innovators are making a meaningful contribution to addressing future of work challenges. But these innovations will also need to shape – and be shaped by – the regulatory and institutional landscape of different countries before they can have a lasting impact on people's working lives. As well as providing an overview of our innovation mapping research, we illustrate potential pathways to systems level impact, highlighting areas for partnerships between these actors.

For example, public employment services could partner with innovators to pilot a range of new digital transition services.

Figure 1: Skills, training and lifelong learning intervention sets

Intervention set	Description	Examples
Online learning	Massive Open Online Courses (MOOCs) and other tools that offer learners a flexible, modular approach to upskilling and reskilling.	Digitala jag (Sweden), Kokoroe (France)
Peer learning networks	Programmes where people can connect to support each other to stay motivated through mentoring and peer support.	Enrol Yourself (UK), My Education Club (Bulgaria)
Technology bootcamps	Programmes that teach people digital skills in an accelerated format and connect them with employment opportunities.	New Austrian Coding School (Austria), Konexio (France)
Augmented learning	Augmented and virtual reality systems that enhance the provision of both technical and soft skills in the workplace.	Gleechi (Sweden), Bodyswaps (UK)
Digital credentials and skills profiles	New approaches to recognise and validate skills, including those developed through on-the-job and informal learning.	Credly (global), Tendo (UK)
Digital career coaching	Platforms that use new technologies to offer workers personalised coaching and labour market information.	FutureFit AI (UK), Singularity Experts (Spain)

Executive summary

Figure 2: Economic security intervention sets

Intervention set	Description	Examples
Income smoothing and cash flow management	Platforms that help workers to manage income volatility, including through access to fairly priced credit and loans.	Trezeo (UK), Mansa (France)
Financial capability and wellbeing	Products and services that help people to better understand their financial circumstances or provide advice and mental health support for those in problem debt.	Tully (UK), Sherpa (UK)
Insurance as an employment protection	New insurance products and collective schemes that protect workers against risks such as illness and injury.	Wemind (France), Bread Funds (Netherlands)
Umbrella cooperatives	Organisations that provide independent workers with a hybrid employment status that entitles them to unemployment protections while also providing other support services.	Smart (Belgium), Lilith (Finland)
Fairer gig platforms	Task and job matching platforms that offer workers that are excluded from the labour market with access to flexible working opportunities.	Labour Xchange (UK), The Care Hub (Romania)

While governments could work with innovators to scale access to portable benefits through institutional and regulatory change. In some instances, this will require considerable effort from innovators who must essentially 'hack the system' to scale their impact, by forging strategic partnerships with public sector organisations or other institutions who may be able to help them reach new users, or trying to influence policy or regulatory change, so that their solution can become more widely adopted. In other cases, institutions may be more forthcoming. This is the case for initiatives such as challenge prizes, government investment schemes, accelerators and other scale up programmes.

Building a field

This report follows the launch of the RSA's good work guild, a new endeavor to bring together a global community of practice to amplify good work principles. Over the next year we will bring together social innovators alongside institutional actors such as policy makers and investors to explore opportunities for learning, shared sense-making, collective action and advocacy. As part of our research, we also put forward a series of calls to action around field building for the future of work. Field building is about creating the enabling conditions into which innovations can grow and thrive.

Our recommendations are for policy makers as well as impact investors and social innovators and were informed by a series of interviews and workshops with these different actors. They are structured around three challenge and opportunity areas: access to finance, policy, regulation and procurement, and open data and open sourcing.

Access to finance

Access to finance is frequently identified by innovators as one of the most significant challenges they face when trying to scale their impact. And the funding landscape has reportedly dried up during the Covid-19 pandemic, despite it helping to raise the profile of future of work issues. While there have been some promising enabling innovations in recent years, particularly in challenge prizes and accelerator programmes financing worker centric UK start-ups, similar initiatives are

Figure 3: Worker voice and power intervention set

Intervention set	Description	Examples
New organising models and expanded membership offerings	New approaches to organise insecure workers from both within and outside of mainstream trade union movement.	Liefern am Limit (Germany), IG Metall (Germany)
New kinds of collective agreements	Landmark agreements between unions and businesses that boost the working conditions of insecure workers.	3F and Hilfr (Denmark), Riders Union Bologna (Italy)
Worker data and digital organising platforms	Tools that give workers more control over data about their working lives or amplify worker voice by enabling workers to more easily share information or organise around issues that affect them.	Worker Info Exchange (UK), Earwig (UK)
Platform cooperatives	Cooperatively owned, and democratically governed organisations that use platforms to facilitate the provision of goods and services.	Equal Care Co-op (UK), Mensakas (Spain)
Cooperative federations	Organisations and networks that can help smaller cooperatives reach greater scale.	CoopCycle (various)

few and far between on continental Europe. Where financing is available it is often short-term, and rarely geared towards supporting field building or partnerships between social innovators and institutional actors.

During one of our workshops with innovators, many expressed a desire to collaborate on shared impact measures or KPIs "that help people understand monetary and social impact value in a standardised format and ground people in the challenges of today". This could help create a shared narrative around contemporary future of work challenges and the collective impact of social innovators.

Policy, regulation and procurement

Innovators and institutional actors often don't see each other as natural collaborators. In some European countries there is a bias from institutional actors toward top-down, regulatory solutions and innovations are sometimes seen as ways of legitimising gaps in social protection or government support. On the other hand, innovators want to move quickly and often see the prospect of trying to change regulation or institutions as laborious.

Box 1: Calls to action: access to finance

- Impact investors should collaborate to develop challenge prizes and accelerators that support the development of new innovations in the future of work across Europe, particularly where our innovation mapping suggests there are gaps in intervention sets and demand for new kinds of support.

- Impact investors should collaborate to develop scale up funding mechanisms that are dedicated to field building and supporting partnerships between social innovations and institutions such as trade unions or public employment agencies.

- Social innovators should collaborate on monitoring and evaluation to create a shared narrative around future of work challenges and their collective impact.

Box 2: Calls to action: policy, regulation and procurement

- Social innovators should work together to anticipate potential shifts in the policy and regulatory landscape of the countries they operate in and identify energy for change and opportunities for advocacy.

- Governments and regulators should run regulatory sandboxes to stimulate the development of new future of work innovations across Europe.

- Governments should reduce procurement barriers and avoid spending public funds duplicating innovations that already exist, instead focus on creating an enabling environment for innovators and prioritising support and investment to scale their impact.

However, changes in the policy and regulatory landscape of different countries can significantly impact the viability of their business model. There is an opportunity for social innovators to work together to anticipate potential shifts in the policy and regulatory landscape of the countries they operate in and to identify opportunities for collective advocacy. Regulatory sandboxes could also give innovators access to regulatory expertise and tools to facilitate testing new products and services with real users, including temporary waivers to regulatory rules.

Strategic partnerships with public sector Strategic partnerships with public sector organisations can provide a pathway to scale the impact of innovators by providing distribution channels for services and helping them reach new users. However, in some contexts, procurement policies and service standards act more as entry barriers than market shaping enablers. There is also a role for government to play in understanding the innovation market, in order to prioritise public funding and investment, and to create the enabling infrastructure to improve the quality, reach and impact of existing innovation markets.

Open data and open sourcing

In some countries, governments have developed tools that open up data sources relating to skills, training and lifelong learning. Innovators can use these tools to develop new products and services that support workers to navigate the labour market. But there is a lack of analogous tools that relate to non-standard workers. The gig economy remains a poorly understood segment of the labour market and more information on their working lives could greatly improve the quality and quantity of products and services that support their needs. The challenge here is that the data is held by private companies rather than the public sector. But this data could be accessed and managed through data trusts.

During our workshops with innovators, the potential for open sourcing tools and sharing best practice was flagged as a key area that participants were interested in exploring. However, they also noted how this can be a particular challenge when many innovators "with social beliefs, but private sector nonetheless" might see each other as in competition.

Box 3: Calls to action: open data and open sourcing

- Governments should play an active role in nurturing a WorkerTech ecosystem which encompasses data trusts, particularly for workers in the gig economy.

- Social innovators should share learnings and open source tools as a route to scaling their impact.

INTRODUCTION

Set across a backdrop of rising unemployment, Covid-19 could lead to a different permutation of future of work trends. The pandemic could not only create job losses in industries that are unable to turn a profit while adhering to social distancing. There are also signs that it could accelerate the pace of technological change. From e-commerce replacing high street jobs, to remote working reducing the need for office cleaners and security guards, and even robots being deployed in hotels in Hong Kong.

Introduction

Across Europe, there are signals that the pandemic is accelerating the pace of technological change. From e-commerce replacing high street jobs, to remote working reducing the need for office cleaners and security guards. To date, the European policy response has primarily focused on job protection schemes. This has enabled governments to prevent rising unemployment and protect livelihoods, but it has left labour markets in suspended animation. More is needed to help workers at risk transition into the jobs of the future, otherwise they could be left behind once these schemes taper out. Meanwhile government support for the self-employed has been patchy at best. Many of these workers are not entitled to sick pay and will have not been able to afford to self-isolate, which may have contributed to worsening outbreaks in some countries.

The pandemic has shone an unforgiving light upon existing vulnerabilities in the labour market. But it also represents a moment of 'collective sacrifice' at which we might reimagine the institutions responsible for work and redraw their respective rights and responsibilities. This is what we mean by a new social contract. Our goal is to ensure that everyone, regardless of background or starting point, has access to good work.

From training boot camps that teach workers at risk of automation how to code, to new unions experimenting with digital organising, and FinTech start-ups providing workers in the gig economy with access to portable benefits – many entrepreneurs and grassroots innovators are demonstrating novel approaches to supporting workers, defining new markets, proving demand and configuring actors and resources in new ways. As technology entrepreneur Nicolas Colin suggests
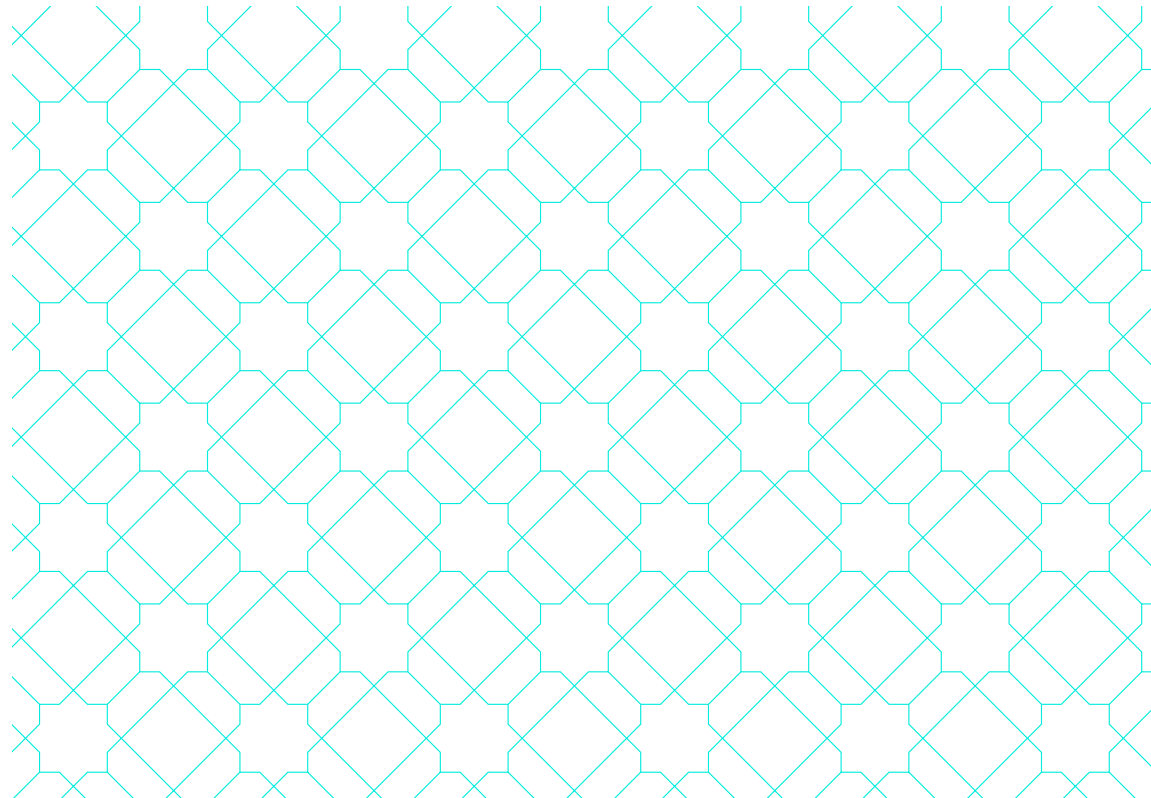
"innovators and activists are the only ones capable of doing the hard work at the early stage, namely spotting the new economic and social challenges of the day and discovering the basics of the new mechanisms that can effectively tackle them".[1]

But we should also be careful to avoid 'solutionism' and overstate the potential of these organisations or ignore the difficulties of rapidly scaling new ideas, particularly those that aim to address systemic challenges. Many of these innovations might need to shape – and be shaped by – the regulatory and institutional landscape of different countries before they can have a lasting impact on people's working lives. This idea is captured well by social innovators Mona Mourshed and Maryana Iskander's suggestion that "having the impact of a unicorn means embedding practices and interventions that nonprofits like ours have proven will work better into complex, hard-to-change government systems".[2]

The first part of the report explores how technology and other forces are impacting workers across Europe, reviewing historical trends as well as the emerging evidence on how the future of work is playing out in the pandemic context. Chapter 1 examines how the labour market has changed over the last decade to access the extent to which automation has been happening and what new jobs are being created. While chapter 2 documents the rise of insecure work. Both chapters illustrate how these challenges vary across different European countries which helps to illustrate where there is demand for some of the innovations profiled later in this report.

1   Colin, N. (2018) Hedge: A greater safety net for the entrepreneurial age. California: CreateSpace Independent Publishing Platform

2   Mourshed, M. and Iskander, M. (2021) Memo to Silicon Valley: Here's what 'blitzscaling' looks like in the nonprofit world. Fast Company [online]. Available at: www.fastcompany.com/90611533/memo-to-silicon-valley-heres-what-blitzscaling-looks-like-in-the-nonprofit-world

The second part of the report, chapter 3, details the results of our innovation mapping exercise, which spans three broad themes of **skills, training and lifelong learning, economic security**, and **worker voice and power**. Within each theme we aimed to cluster innovations into broad intervention sets that use similar approaches to address similar problems. Our hope is that this starts to provide a common language that policy makers and social investors can use to spot opportunities for new ways to support workers. In the final chapter we put forward some broad recommendations to help deepen and scale the innovators' impact. Our recommendations centre around a**ccess to finance, open data and open sourcing, and policy, regulation and procurement**.

AUTOMATION AND THE JOBS OF THE FUTURE

Set across a backdrop of rising unemployment, Covid-19 could lead to a different permutation of future of work trends. The pandemic could not only create job losses in industries that are unable to turn a profit while adhering to social distancing. There are also signs that it could accelerate the pace of technological change. From e-commerce replacing high street jobs, to remote working reducing the need for office cleaners and security guards, and even robots being deployed in hotels in Hong Kong.

3

Automation and the jobs of the future

Over the last decade, debates about the future of work have been dominated by attempts to predict the number of jobs that will be replaced by AI and robots. The MIT Technology Review found that more than 18 separate studies have been published since Frey and Osborne estimated that 47 percent of US jobs could be automated in the next 10 to 20 years.[3] The best available evidence on automation risk across Europe is provided by a handful of OECD studies. The most recent suggests that across most major developed economies, 14 percent of jobs are at high risk of automation while a further 32 percent could experience significant change due to new technologies.[4]

This prospect should not engender fatalism. Technology could liberate some workers from tasks that are dirty, dull and dangerous and free up their time to focus on activities that cannot be performed by robots or algorithms. While new jobs could be created, from robot maintenance engineers to virtual zoom hosts, which may offer workers improved pay, scope for progression and sense of purpose, if they are able and supported to reinvent themselves. Indeed, we believe that technology can help usher in a future where good work is enjoyed for all. But this is something we must work towards rather than blindly hope for. Reimagining the social contract will require that we find new ways of upskilling and reskilling to support workers who are at risk, adapt to a changing labour market.

In this section we explore how technology is impacting workers across Europe and why workers in some countries are more at risk. We examine how the labour market has changed over the last decade to access the extent to which automation has been happening and what new jobs are being created. We also illustrate how Covid-19 could lead to different permutations of these trends. Finally, we highlight what regions and demographic groups face the most acute challenges here.

Automation risk across Europe

Automation risk varies significantly across different European countries. For example, 33 percent of jobs in Slovakia are highly automatable, compared to 6 percent of jobs in Norway. More generally, jobs in the Nordic countries and northern Europe are much less automatable than those in Eastern and Southern Europe.[5] Within European countries, different regions are also more exposed to automation than others. The share of jobs at high risk is almost 40 percent in West Slovakia but as low as around 4 percent in the region of Norway around Oslo. While the difference between the best and worst performing regions in Spain is 12 percentage points.[6]

There is also clear divide between urban and rural regions. For example, in France, the Île-de-France region that includes Paris is least at risk while the largely agricultural Champagne-Ardenne region is most at risk. Similarly, in Czechia, Prague has a considerably lower share of jobs at risk than Central Moravia. In almost every European country for which data exists, capital cities are found in the regions least at risk of automation.[7]

3   Winick, E. (2018) Every study we could find on what automation will do to jobs, in one chart. MIT Technology Review [online]. Available at: www.technologyreview.com/2018/01/25/146020/every-study-we-could-find-on-what-automation-will-do-to-jobs-in-one-chart/

4   Nedelkoska, L. and Quintini, G. (2018) Automation, skills use and training. [online] Paris: OECD. Available at: www.oecd-ilibrary.org/employment/automation-skills-use-and-training_2e2f4eea-en

5   Ibid.

6   OECD (2018) Job Creation and Local Economic Development 2018: Preparing for the Future of Work. [online] Paris: OECD. Available at: www.oecd-ilibrary.org/employment/job-creation-and-local-economic-development-2018_9789264305342-en

7   Ibid.

Figure 4: Variation in percent of jobs at high risk of automation risk across and within selected European countries (OECD)

	Min region		Max region	
Slovakia	Bratislava Region	30	Western Slovakia	39
Slovenia	Western Slovenia	24	Eastern Slovenia	28
Greece	Attica	22	Central Greece	27
Spain	Castile-La Mancha	15	Murcia	27
Poland	Mazovia	18	Swietokrzyskie	22
France	Île-de-France	12	Champagne-Ardenne	19
Austria	East Austria	16	West Austria	18
Ireland	Southern and Eastern	15	Border, Midland and Western	17
Belgium	Flemish Brabant	13	West Flanders	17
Czech Republic	Prague	10	Central Moravia	17
Italy	Lazio	14	Marche	16
Denmark	Capital R.	10	Southern Denmark	13
United Kingdom	London	8	Northern Ireland	11
Sweden	Stockholm	6	Smaland and the Islands	9
Finland	Helsinki-Uusimaa	5	Eastern and Northern Finland	8
Norway	Oslo and Akershus	4	Hedmark and Oppland	6

According to the OECD, workers in manufacturing and agriculture are most at risk of automation, as well as those in some service sectors such as postal and courier services, land transport and food and beverage activities. The industries that are least at risk of automation include both hi-tech sectors such as computer programming as well as hi-touch sectors such as education, health and social care. Many professional services sectors such as law and management consultancy are also least at risk. These jobs often require high levels of creativity, emotional intelligence and other skills that have been characterised as 'engineering bottlenecks' because they cannot currently be performed by robots or algorithms.[8]

However, the OECD have suggested that the variation in automation across Europe is mostly due to differences in the task composition of jobs, rather than differences in the sectoral composition of the economy. This means that since European countries tend to have broadly similar overall sectoral composition, workers in countries that are less exposed to automation are likely to be employed in different occupations and/or spend more of their time on tasks that require skills that are resilient to automation. According to the OECD around 30 percent of cross-country variation is due to differences in sectoral composition, with around 70 percent due to the task composition of jobs.[9] Nonetheless, sectoral composition is likely to remain critical to understanding automation risk in some specific local contexts. For example, rural economies with high levels of employment in agriculture.

8   Nedelkoska, L. and Quintini, G. (2018) Op Cit.
9   Ibid.

A related explanation for this variation in automation risk could be the extent to which new technologies have already been adopted, automation has taken place and jobs have adapted as a result. Laggard countries and regions may be more at risk of automation because workers spend more of their time carrying out easily automatable tasks due to a lack of digital technologies. For example, a warehouse manager in a more digitally developed country could be using sophisticated digital inventory management software while a similar worker in a less digitally developed country could still be reliant on paper-based systems and thus spend more time on routine administrative tasks.
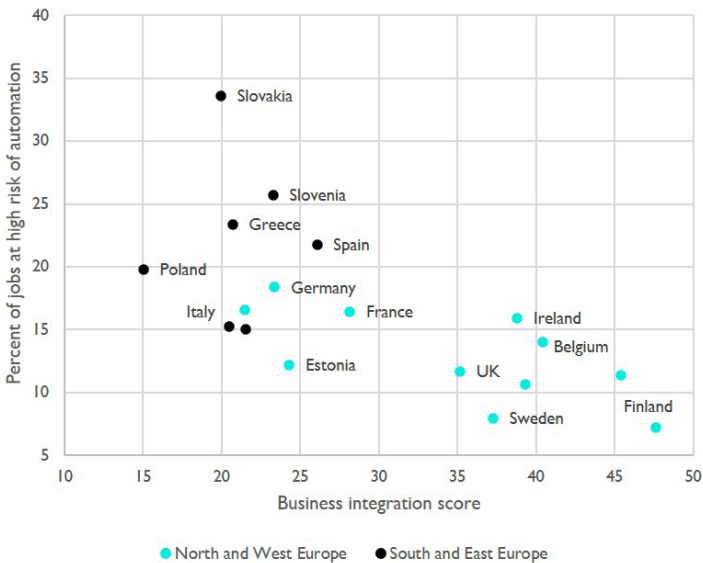
The Digital Economy and Society Index (DESI) provides a range of indicators on the digital competitiveness of European countries, including the extent to which businesses have successfully integrated new technologies including big data analytics and cloud computing.[10] RSA analysis of the DESI alongside OECD automation risk data finds that countries with a higher level of business digitisation are more resilient to automation, while those in laggard countries are more vulnerable.

The last decade of structural change and the impacts of Covid-19

Predictions about automation draw on expert opinion to understand what jobs could technically be automated. But they can often feel speculative and out of touch with economic reality. As the above analysis shows, they rarely account for factors that will influence the pace and breadth of technological adoption.

In the period after the 2008 financial crisis but prior to the Covid-19 pandemic, Europe experienced a decade of employment growth. By 2019, the employment rate had reached a record high of 74 percent.[11] Although there are signs that jobs may have been lost to automation in some industries. RSA analysis of the European Labour Force Survey shows that across all 27 EU countries and the UK, many of the most at-risk industries experienced a significant decline over the last decade, particularly those involved in agriculture and some forms of manufacturing. Meanwhile several industries that experienced growth over

Figure 5: Relationship between jobs at high risk of automation and business integration of digital technologies (RSA analysis of OECD and DESI data)

10 European Commission (2020) The Digital Economy and Society Index (DESI) [online]. Available at: ec.europa.eu/digital-single-market/en/digital-economy-and-society-index-desi

11 RSA analysis of European Labour Force Survey.

the last decade are resilient to automation. These include both hi-tech sectors such as computer programming as well as hi-touch sectors such as leisure and social care. Professional services also experienced strong growth.

But this relationship is far from clear cut and there are other forces that are impacting structure of European labour markets. Industries such as hospitality and logistics experienced strong growth despite being at high risk of automation, likely due to changing patterns of consumer behaviour. While the fastest shrinking industries was mining and the extraction of oil and natural gas, signalling a green transition.[12] The growth of social care roles is a response an ageing, ailing population – a trend which is almost certain to continue into the next decade and beyond.

Figure 6: Fastest shrinking industries, bottom quartile for total and percentage change in employment since 2011 (RSA analysis of OECD data and European Labour Force Survey)

	Net job creation (000s)	Percent change in employment	Automation risk	Risk rating (quartile rank)
Mining and extraction of crude petroleum and natural gas	-120	-24%	0.44	Low-medium
Crop and animal production	-1211	-14%	0.58	High
Telecommunications	-134	-13%	0.43	Low-medium
Printing and reproduction of recorded media	-99	-13%	0.51	Medium-high
Manufacture of wearing apparel	-143	-12%	0.58	High
Fishing and aquaculture	-13	-9%	0.61	High
Repair of computers and personal and household goods	-36	-8%	0.53	High
Manufacture of textiles	-54	-8%	0.53	High
Manufacture of coke and refined petroleum products	-13	-7%	0.40	Low
Electricity, gas, steam and air conditioning supply	-82	-6%	0.46	Medium-low
Manufacture of basic metals	-52	-5%	0.52	Medium-high
Insurance	-48	-5%	0.39	Low
Financial service activities	-139	-4%	0.42	Low
Manufacture of wood and cork products, except furniture	-42	-4%	0.54	High
Civil engineering	-39	-3%	0.47	Medium-high
Employment activities	-18	-2%	0.38	Low
Manufacture of other non-metallic mineral products	-24	-2%	0.54	High

12 Due to small sample sizes, the analysis groups together industries related to mining and the extraction of crude petroleum and natural gas.

Figure 7: Fastest growing industries, top quartile for total and percentage change in employment since 2011 (RSA analysis of OECD data and European Labour Force Survey)

	Net job creation (000s)	Percent change in employment	Automation risk	Risk rating (quartile rank)
Activities of head offices; management consultancy activities	413	40%	0.33	Low
Computer programming, consultancy and related activities	696	31%	0.41	Low
Warehousing and support activities for transportation	600	27%	0.54	High
Sports activities and amusement and recreation activities	248	24%	0.43	Low-medium
Other professional, scientific and technical activities	202	22%	0.46	Low-medium
Manufacture of motor vehicles, trailers and semi-trailers	533	19%	0.53	Medium-high
Architectural and engineering activities	377	17%	0.42	Low
Manufacture of machinery and equipment n.e.c.	451	16%	0.50	Medium-high
Services to buildings and landscape activities	511	16%	0.55	High
Accommodation	311	15%	0.51	Medium-high
Residential care activities	565	15%	0.44	Low-medium
Social work activities without accommodation	585	15%	0.42	Low
Food and beverage service activities	864	14%	0.53	High

Set across a backdrop of rising unemployment, Covid-19 could lead to a different permutation of these trends. The pandemic could not only create job losses in industries that are unable to turn a profit while adhering to social distancing. There are also signs that it could accelerate the pace of technological change. From e-commerce replacing high street jobs, to remote working reducing the need for office cleaners and security guards, and even robots being deployed in hotels in Hong Kong (see Box 5). This poses distinct challenges for policy makers who need to consider both the short- and longer term viability of jobs when supporting workers. Previous RSA research has put forward a data driven analysis that provides insight into the risk profiles of different UK industries:

- High Covid-19, high automation risk industries include non-essential retail, hospitality, leisure and parts of manufacturing.
- High Covid-19, low automation risk industries include air travel and tourism, creative arts and entertainment, film production, museums and culture.
- Low Covid-19, high automation risk industries include many 'key work' or essential service industries such as supermarket retail, food production, and postal and courier activities.
- Low Covid-19, low automation risk industries include scientific research, computer programming as well as healthcare and education.[13]

13   Wallace-Stephens, F. and Morgante, E. (2020) Who is at risk? Work and automation in the time of Covid-19? [online]. London: RSA. Available at: www.thersa.org/reports/work-automation-covid

Box 4: Will Covid-19 accelerate the pace of automation?

Public health considerations have created the business case for increased automation in some industries. Minimising human contact has been at the heart of attempts to manage the pandemic and social distancing will persist until vaccines are fully rolled out. As futurist Blake Morgan puts it, "customers now care more about their safety and the safety and health of workers… moves towards automation can keep them all healthier and customers will reward companies that do this".[14]

New technologies are being deployed in this way in hotels and restaurants in what has been described as a shift to 'touchless hospitality'. According to Korean tech company Yanolja, demand for their self-service check-in kiosks has more than doubled since the Covid-19 outbreak. Customers can use these systems to collect their room keys by scanning a QR code provided when they make a reservation. Meanwhile the L'hotel Group, which operates seven hotels across Hong Kong, has introduced a team of robots to serve food and drinks to guests under quarantine.[15] According to a global survey by EY, 36 percent of consumers reported that the pandemic is changing the way they dine out, with many suggesting they are more likely to choose restaurants that offer digital ordering.[16]

A report by Bain & Company argues that the pandemic will mean consumer-orientated companies will either have to "reduce the risks of human proximity by reconfiguring physical spaces and setting up tailored safety protocols, or bypass the risks of proximity by adapting products or experience for use in the home".[17] In many sectors there has been a huge rise in businesses providing services to customers online, using platforms s uch as zoom. Particularly in health and education but also in sectors such as real estate and leisure. In June 2020, more than 45 percent of UK businesses in these sectors reported an increase in the use of online services to communicate with customers.[18]

This shift to online services is an example of digitisation, where technologies turn physical goods, knowledge a nd experiences into data that can be easily replicated, shared and stored. Like automation, this can have an impact on the number of jobs available. Indeed, the economists David Autor and Elisabeth Reynolds have recently suggested that 'telepresence' – where technology enables people to accomplish tasks remotely – is a form of automation. This shift to online services and consumption patterns, not to mention remote working more generally, could reduce the need for cleaning, security and building maintenance staff, along with a "myriad other workers who feed, transport, clothe, entertain, and shelter people when they are not in their own homes".[19]

There has been significant growth in e-commerce since the Covid-19 pandemic. According to the OECD's analysis, online retail sales across the EU-27 saw year-on-year growth of almost 30 percent in May 2020.[20] Previous RSA research has demonstrated that the rise of e-commerce has changed the sector's occupational profile dramatically in the UK, with a shift away from customer service roles and towards warehousing and logistics jobs. This in turn has tilted the gender profile of jobs more towards male employment, thus further entrenching gender inequality.[21]

14 Ibid.

15 Ibid.

16 Srinivasan, P. and EYQ (2020) In a touchless world, how will you embrace technology? [online] EY. Available at: www.ey.com/en_it/disruption/in-a-touchless-world-how-will-you-embrace-technology

17 Darnell, D., Faelli, F., Almquist, E. and Bhardwaj, S. (2020) The Great Reluctance. [online] Bain & Company. Available at: www.bain.com/insights/the-great-reluctance/

18 RSA analysis of the ONS Business Impacts of Coronavirus Survey, Wave 8.

19 Autor, D. and Reynolds, E. (2020) The Nature of Work after the COVID Crisis: Too Few Low-Wage Jobs. [pdf] The Hamilton Project. Available at: www.hamiltonproject.org/assets/files/AutorReynolds_LO_FINAL.pdf

20 OECD (2020) E-commerce in the time of COVID-19. [online] Paris: OECD. Available at: www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-covid-19-3a2b78e8/

21 Wallace-Stephens, F. and Lockey, A. (2019). Retail therapy: Towards a future of good work in retail. [online] London: RSA. Available at: www.thersa.org/reports/retail-therapy-future-good-work
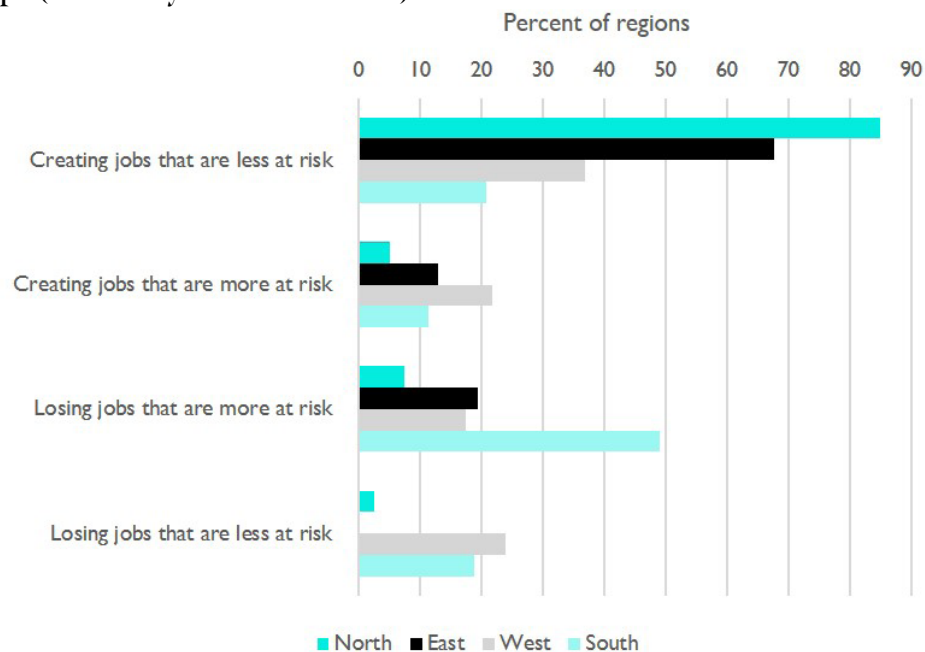
Regional disparities in job creation

A dominant narrative in future of work debates is that we might not need to worry too much about the impact of automation because more new jobs will be created, and others will evolve in a way that complement new technologies. But less comfort can be found here when taking a regional perspective. Workers located in regions experiencing a decline in agricultural, manufacturing, or energy production may not be able to benefit from growth in new hi-tech roles, which not only require different skills but are often created in a different part of the country. Across Europe, there have been huge disparities around job creation. Most regions were creating new jobs after the financial crisis but some areas which were hit harder by the economic downturn were not. Particularly those in Southern European countries and parts of France.[22] According to recent analysis by McKinsey the 48 most dynamic cities accounted for 43 percent of EU's GDP growth and 35 percent of net jobs growth, despite only accounting for 21 percent of the population.[23]

The OECD has classified regions across Europe into four categories depending on their changing employment profile between 2011-16, specifically whether they are gaining or losing jobs at risk of automation. While most regions are transitioning towards a lower risk profile some are shifting in the other direction, creating more jobs that are at high risk of automation. Bratislava in Slovakia for example, is on this trajectory due to its strong automotive manufacturing clusters. Some parts of Europe face even more challenging circumstances. The Champagne-Ardenne in France experienced a 6.5 percent decline in the number of jobs over the period 2011-16 and the jobs that were lost were predominantly at low risk of automation.[24]

Figure 8: Distribution of changing regional employment profiles across Europe (RSA analysis of OECD data)

22 OECD (2018) Job Creation and Local Development 2018: Preparing for the Future of Work. Op cit.

23 Smit, S. et al. (2020) The future of work in Europe [online] McKinsey Global Institute. Available at: www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-in-europe

24 OECD (2018) Job Creation and Local Development 2018: Preparing for the Future of Work. Op cit.

Automation and jobs of the future

Many regions in Southern Europe face a particularly daunting challenge because they also tend to have lower levels of labour market participation. For example, 26 percent of workers in the Western Macedonia region of Greece are at high risk of automation and 25 percent of the labour force are unemployed. Similarly, 26 percent of workers in the Extremadura region of Spain are at high risk while 22 percent are unemployed.[25] In many cases these regions were also hit harder than others during the Covid-19 pandemic due to their reliance on tourism and higher concentration of SMEs.[26]

Prior to the pandemic there were important systematic differences in net migration flows. Whereas urban regions recorded persistent inflows, migration was balanced in intermediate regions and rural regions recorded persistent outflows.[27] There are however signs that the pandemic could reverse this long-term trend due to the rise of remote working. Estimates by Eurofound suggest that more than 40 percent of the workforce worked from home in June and July. In 2019, only 15 percent of workers had ever worked from home and just 5 percent did so on a regular basis.[28]

Former Twitter Vice President Bruce Daisley suggests that firms will need to decide between returning to traditional office culture, fully decentralised organisations or hybrid 'hub and spoke' models.[29] A common perspective is that the 'new normal' will be some version of the latter, meaning less office space will be required and workers may have more freedom to decide where in the country (or world) they will live. But the verdict is still out on what this will mean for local economies – and whether any meaningful economic rebalancing away from major cities will take place.

Something of a 'doughnut effect' appears to be playing out in UK and the Confederation of British Industry (CBI)

has warned of "ghost towns" if people do not return to the office.[30] While German regional minister Birgit Honé has suggested that the pandemic is creating opportunities to improve rural areas "by coming up with incentives for start-ups and other businesses to move the countryside".[31] Some economists have suggested this could instead represent a win-win for both cities and less wealthy regions. According to Michel Serafinelli, rather than become ghost towns, cities will remain hubs of innovation in Europe but become less congested, with falls in commercial rents helping to drive innovation.[32]

25 RSA analysis of European Labour Force Survey and OECD data.

26 Sapir, A. (2020) Why has COVID-19 hit different European Union economies so differently? [pdf] Bruegel. Available at: www.bruegel.org/wp-content/uploads/2020/09/PC-18-2020-22092020-final.pdf

27 OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

28 Eurofound (2020) Living, working and COVID-19. [pdf] Luxembourg: EU. Available at: www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20059en.pdf

29 Daisley, B. (2020) The three options of 2021. Make Work Better [online] 1 December. Available at: makeworkbetter.substack.com/p/2021

30 BBC News (2020) Warnings of 'ghost towns' if staff do not return to the office. BBC [online] 27 August. Available at: www.bbc.co.uk/news/business-53925917

31 Hernandez-Morales, A., Oroschakoff, K. and Barigazzi, J. (2020) The death of the city. Politico [online] 27 July. Available at: www.politico.eu/article/the-death-of-the-city-coronavirus-towns-cities-retail-transport-pollution-economic-crisis/

32 Serafinelli, M. (2020) How working from home could revitalise rust belt cities. Essex Blogs [blog] 6 November. Available at: www.essex.ac.uk/blog/posts/2020/11/06/how-working-from-home-could-revitalise-rust-belt-cities

Box 5: The green jobs revolution

Many countries are investing in green jobs as a strategy for post-Covid recovery. The UK's Ten Point Plan aims to mobilise £12bn government investment to create and support up to 250,000 highly skilled, high paid green jobs by 2030, including 90,000 this parliament.[33] While research commissioned by the Local Government Association (LGA) estimates that as many as 700,000 jobs could be created in the low-carbon and renewable energy economy in the UK, rising to over 1.2m by 2050. [34]

Some commentators have expressed scepticism around the net employment gains of the green jobs revolution. [35] Although according to the LGA's research there is some evidence to suggest that renewable energy technologies are more labour intensive compared to fossil fuel-fired electricity generation.[36] Many of these jobs will be in the construction and manufacturing sectors. Currently these sectors acco unt for 31 and 34 percent of total employment in low carbon and renewable energy economy respectively, according to the Office for National Statistics,[37] the Local Government Association's research provides the following breakdowns of where new green jobs will be created:

- Nearly half (46 percent) of low-carbon jobs will be in clean electricity generation and providing low-carbon heat for homes and businesses. These jobs will range from manufacturing wind turbines, deploying solar panels, constructing nuclear reactors, installing heat pumps and maintaining infrastructure.

- Over one-fifth (21 percent) of jobs by 2030 will be involved in installing energy efficiency products ranging from insulation, lighting and control systems.

- Around 19 percent of jobs in 2030 will be involved in providing low-carbon services (financial, legal and IT) and producing alternative fuels such as bioenergy and hydrogen.

- A further 14 percent of jobs will be directly involved in manufacturing low-emission vehicles and the associated infrastructure such as batteries and charging points.[38]

Similar initiatives are also being introduced across Europe. In October 2020, the European Commission announced its Renovation Wave Strategy which aims to improve the energy performance of buildings. Their aim is to renovate 35 million buildings by 2030, creating an additional 160,000 green jobs in the construction sector. The strategy is aiming to double renovation rates in the next 10 years. This is considered as a key strategy for reducing emissions and will focus on decarbonisation of heating and cooling, tackling energy poverty and worst-performing buildings, and renovation of public buildings like schools, hospitals, and administrative buildings.[39]

The impacts of the green jobs revolution will likely vary across Europe. Research from the European I nvestment Bank suggests that job gains are expected in many regions, while job losses will be concentrated in few, particularly those dependent on traditional industries, like fossil fuel extraction or the auto industry. It will also create new skills demands. In Europe, almost 60 percent of new jobs created are expected be in highly skilled positions, and only around 10 percent will be low-skilled, according to the International Energy Agency. This further highlights the need for stronger retraining and upskilling systems, to help avoid increases in skills shortages, which can push firms to invest more in labour-saving technologies.[40]

33 HM Government (2020) The Ten Point Plan for a Green Industrial Revolution. [pdf] Available at: assets.publishing.service.gov.uk/government/ uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_ BOOKLET.pdf

34 Local Government Association (2020) Local green jobs – accelerating a sustainable economic recovery [online] Available at: www.local.gov.uk/ local-green-jobs-accelerating-sustainable-economic-recovery

35 Ford, J. (2020) Jobs are the wrong metric to judge a 'Green Industrial Revolution'. Financial Times [online] 6 December. Available at: www. ft.com/content/786c2dd6-9f3d-45b7-854e-09e15a1da220

Who is at risk?

Several studies find a U-shaped relationship between automation and age, but younger workers are by far the most at risk. This is due to the occupational choice of young workers who are more likely to work in some of the most at-risk industries.[41] Young workers are also overrepresented in some of the industries hit hardest by Covid-19.[42] The impacts on gender are more complicated and differ across studies. The OECD suggests that historically automation has disproportionately impacted jobs typically held by men such as those in manufacturing, and women are more likely to work in sectors such as health and education that are more resilient to technological change. But more recent studies show no differences by gender.[43]

Separate research by PwC suggests that men are more at risk of automation in the long run, but that the technologies like autonomous vehicles that will lead to job losses in transport and construction will not be widely adopted until the 2030s. Women are expected to be hit hardest during the 2020s by "the augmentation wave" – where big data and machine learning will automate repeatable tasks such as filling out forms and exchanging information.[44] Previous RSA research on changes in the UK labour market over the last decade suggests that women have borne the brunt of jobs lost to automation, in retail, banking and administration, as well as missing out on the best-paid new hi-tech roles.[45] The challenge of gender diversity in digital is well documented, with women currently only accounting for 18 percent of ICT specialists in the EU.[46]

At risk workers face a double whammy. The OECD has warned that low-skilled workers at risk of automation are three times less likely to participate in training than those in jobs more resilient to technological change. To date, the response to the pandemic has focused on job protection schemes. This has enabled governments to prevent rising unemployment and protect livelihoods, but it has left labour markets in 'suspended animation'. More is needed to help workers at risk into the jobs of the future, otherwise they could be left behind once these schemes taper out. Later in this report we identify some of the most promising innovations in skills, training and lifelong learning can help to address these challenges.

36   Local Government Association (2020) Op Cit.

37   ONS (2021) Low carbon and renewable energy economy, UK: 2019. [online] Available at: www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2019

38   Local Government Association (2020). Op Cit.

39   IISD (2020) Renovation wave: European Commission aims to boost energy efficiency. [online] 16 October. Available at: www.iisd.org/sustainable-recovery/news/renovation-wave-european-commission-aims-to-boost-energy-efficiency/

40   European Investment Bank (2021) Building a smart and green Europe in the COVID-19 era. [pdf] Available at: www.eib.org/attachments/efs/economic_investment_report_2020_chapter10_en.pdf

41   OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

42   According to previous RSA analysis young workers are overrepresented in the high automation, high Covid-19 category of industries. Under 30s make up 23 percent of the whole workforce, but 30 percent of workers in this group are in that age bracket.

43   OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

44   Hawksworth, J., Berriman, R. and Goel, S. (2018) Will robots really steal our jobs? An international analysis of the potential long-term impact of automation. [pdf] PwC. Available at: www.pwc.co.uk/services/economics/insights/the-impact-of-automation-on-jobs.html

45   Wallace-Stephens, F. (2020) What new jobs will emerge in the 2020s? RSA [blog] 8 January. Available at: www.thersa.org/blog/2020/01/new-jobs-2020s

46   European Commission (2020) Women in Digital. [online] Available at: ec.europa.eu/digital-single-market/en/women-digital-0

Box 6: Automation and an ageing population: demographic dilemma or dividend?

Changing demographics are key to understanding future of work trends in different global contexts. Most developed economies (and many emerging markets) are experiencing population aging. In 1980 there were 20 persons over the age of 65 for every 100 of working age across OECD countries and this is expected to double between 2015 and 2050.[47] The median age in Europe is 43, which is 12 years older than the rest of the world. Countries in Southern and Eastern Europe are particularly affected by low birth rates and migration.[48] The long-term unemployment of older workers is particularly concerning in this context, since older workers find it more difficult to retrain and re-enter the labour market as their physical and cognitive abilities decline.

The IMF has warned that a decline in labour force participating rates could lead to a decline in economic output. However, an aging population could also strengthen incentives for automation and in this context may be considered more of an opportunity than a threat, by enabling the country to maintain a sustainable level of economic output.[49] Research by Daron Acemoglu and Pascual Restrepo shows that countries with the fastest ageing population have been the fastest to introduce industrial robots.[50] Japan, the country with the largest population over the age of 65 in the world, has the second highest share of industrial robots relative to manufacturing workers.[51]

47   OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

48   Romei, V. (2020) In charts: Europe's demographic time-bomb. Financial Times [online] 14 January. Available at: www.ft.com/content/49e1e106-0231-11ea-b7bc-f3fa4e77dd47

49   International Monetary Fund (2019) Macroeconomics of Aging and Policy Implications [pdf] Available at: www.imf.org/external/np/g20/pdf/2019/060519a.pdf

50   Acemoglu, D. and Restrepo, P. (2018) Demographics and Automation [pdf] National Bureau of Economic Research. Available at: www.nber.org/system/files/working_papers/w24421/w24421.pdf

51   International Federation of Robotics, 2020. IFR presents World Robotics Report 2020. [press release] 24 September. Available at: ifr.org/ifr-press-releases/news/record-2.7-million-robots-work-in-factories-around-the-globe

THE RISE OF INSECURE WORK

To ensure good work for all, we will need to create greater parity of esteem between non-standard workers and traditional employees.

The rise of insecure work

As future of work theorist Laetitia Vitaud explains, in 20th century Western societies, the dominant social contract model was that of the Fordist 'bundle':

"In exchange for division of labour and subordination, each worker was offered a bundle of benefits: a steady revenue, health insurance, paid holidays, a retirement pension, access to banking credit and housing, the promise of better future earnings thanks to the bargaining power of influential unions, a social and political identity, a set of connections, and more. The bundle made the alienation of industrial jobs quite acceptable. It gave workers dignity, economic security and a sense of agency".[52]

But in recent decades, this social contract has frayed. Jobs have been progressively unbundled, with the rise of insecure work affecting many European countries. In this section we explore how prevalent different forms of non-standard work are across the region and how this has changed over time. We also consider how the pandemic has impacted these workers and helped to surface the challenges they face. Finally, we highlight what demographic groups face the greatest challenges here.

The emergence of the gig economy

Most regions of Europe saw employment growth over the last decade but many of the jobs created were atypical in nature. The gig economy has captured the zeitgeist in this respect. Although piece work 'gigs' are nothing new, the rise of large online platforms able to match tasks to workers 'on demand' is a fairly recent development, with Uber, arguably the most high-profile example, not launching in Paris until 2011.[53] This makes assessing the size of this economy difficult and newer forms of gig work are still not captured well by official statistics.

According to a 2017 study by the University of Hertfordshire, 9 percent of workers in Germany and the UK and 22 percent in Italy have engaged in some form of online gig work. But the same study suggests that a much smaller proportion earn the majority of their income in this way – less than 3 percent in Germany and the UK and around 5 percent in Italy.[54] Similarly, the 2018 Collaborative Economy and Employment (COLLEEM) survey by the European Commission suggests that 11 percent of workers have used online platforms but less than 2 percent use them at least 20 hours a week or earn 50 percent of their income in this way. According to the COLLEEM survey, workers in Spain (18 percent), the Netherlands (14 percent) and Portugal (13 percent) are most likely to have used gig economy platforms to find work.[55]

Gig economy platforms use big data and algorithms to more efficiently coordinate value chains. In the case of Uber, this can enable drivers to complete more trips than traditional minicabs, but it also raises questions about the amount of control the platform exerts over workers. Control is an important factor in determining employment status across Europe, which is why many believe some platform workers

52 Vitaud, L. (2018) The Unbundling of Jobs and What it Means for the Future of Work [Article] Medium. Available at: medium.com/blockchain-and-the-distributed-workforce/the-unbundling-of-jobs-and-what-it-means-for-the-future-of-work-9d04a50767bc

53 O'Connell, B. (2019) History of Uber: Timeline and Facts. The Street [online]. Available at: www.thestreet.com/technology/history-of-uber-15028611

54 Huws, U. et al. (2017) Work in the European Gig Economy. [pdf] Foundation for European Progressive Studies. Available at: uhra.herts.ac.uk/bitstream/handle/2299/19922/Huws_U._Spencer_N.H._Syrdal_D.S._Holt_K._2017_.pdf?sequence=2

55 European Commission (2018). Platform Workers in Europe Evidence from the COLLEEM Survey. [pdf] Luxembourg: Publications Office of the European Union. Available at: ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/platform-workers-europe-evidence-colleem-survey
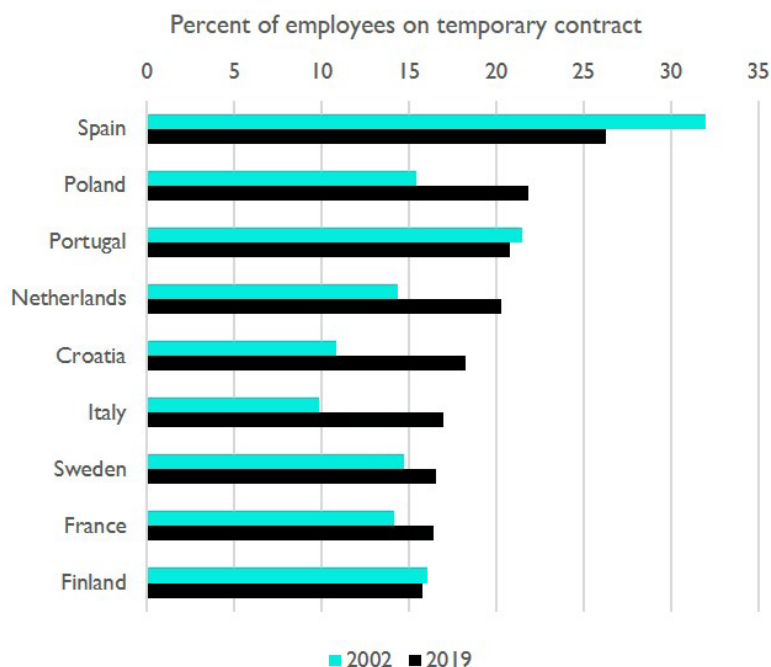
should be re-classified with access to greater employment protections. Currently many are classified as self-employed and not entitled to equivalent employee benefits such as sick pay and pension contributions.[56]

The gig economy is diverse, and platforms have very different business models, meaning the extent of entitlement coverage will likely vary across different sectors and services. A 2017 RSA survey found that as many as 59 percent of UK gig workers were providing creative or professional services, compared to just 16 percent who were providing driving or delivery services.[57] An established graphic design professional offering bespoke services through a platform such as Upwork is in a very different position to a Deliveroo driver frantically zipping around London in order to make ends meet. Some

workers will be genuinely self-employed and simply using platforms sporadically to help manage ebbs and flows in their income.

The OECD have warned that "the recent interest in the (still small) platform economy risks detracting from a more general and relevant issue: the significant (and in some countries growing) incidence of non-standard work more generally, and its potentially negative implications for job quality".[58] Like gig work, non-standard contracts can give people freedom to work when they want and flexibility to fit work around caring or study commitments. But there is a growing concern that such flexibility is 'one-sided' with employers seeking "to transfer all risk onto the shoulders of workers in ways which make people more insecure and make their lives harder to manage".[59]

Figure 9: Changes in temporary contracts across selected European countries (RSA analysis of OECD data)

56 Wallace-Stephens, F. (2019) What's wrong with Uber's IPO? RSA [blog] 10 May. Available at: www.thersa.org/blog/2019/05/uber-ipo

57 Balaram, B., Warden, J. and Wallace-Stephens, F. (2018) Good Gigs: A fairer future for the UK's gig economy. [pdf] London: RSA Available at: www.thersa.org/reports/good-gigs-a-fairer-future-for-the-uks-gig-economy

58 OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

59 Taylor, M. (2017) The Taylor Review of Modern Working Practices. RSA [blog] 10 July. Available at: www.thersa.org/blog/matthew-taylor/2017/07/the-taylor-review

Across Europe, 14 percent of employees were on temporary contracts in 2019. Since the turn of the century, the growth of fixed-term employment has been particularly marked in some European countries like Italy, the Netherlands, Poland and Croatia.[60] Concern here relates to job security in the sense that workers don't have a secure tenure and can easily be fired (around 6 percent are on short temporary contracts that last 6 months or less).[61] Many of these workers will have faced a higher risk of losing their jobs during the pandemic and may have been ineligible for job protection schemes.

Other countries have seen an increase in zero hours contracts which offer workers no guaranteed minimum hours at all. Although different regulatory rules make it different to draw comparisons across countries, 3 percent of employees in the UK and 5 percent of employees in Finland are on zero hours contracts.[62] In the Netherlands 'on call' workers make up 8 percent of workforce.[63] These workers will in many cases be eligible for employment protections, if they work above a certain threshold of hours. But like workers in the gig economy, they may lack certainty about their working hours and have chronic issues with low or volatile earnings.

Reimagining the social contract for the future of work will require that we address thorny issues relating to employment status. While new regulation will also be needed to ensure that the flexibility associated with non-standard contracts is not one-sided. These issues also affect a growing minority of workers in more traditional forms of freelancing.[64] 'Bogus self-employment' is described as a situation where workers are not only financially dependent on clients but are in a situation of subordination with limited control over their working hours or how they carry out tasks.

The landscape of self-employment

Like gig workers, the self-employed are a diverse group, accounting for 14 percent of workforce across Europe. For the majority, self-employment brings with it opportunities for flexibility and autonomy, leading to greater levels of job and life satisfaction. According to research by Eurofound, self-employment is a genuine choice for nearly four out of five workers in Belgium, Finland, Sweden and the UK. Across Europe, 60 percent of workers report that it is mainly their own personal preference to work in this way.[65] But these workers still face significant challenges relating to their economic security and lack important protections that workers in conventional employment arrangements take for granted. Across Europe, more than half (55 percent) of all self-employed workers in Europe are ineligible for unemployment benefits, 38 percent are ineligible for sick pay and 46 percent ineligible for maternity or paternity benefits.[66]

To ensure good work for all, we will need to create greater parity of esteem between these workers and traditional employees. The scale of this challenge varies significantly across different parts of Europe. In countries such as Greece, Italy and Poland this share of the workforce that is self-employed is 30 percent, 22 percent

60 OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

61 European Commission (2018). The rise of precarious work (including bogus self-employment) – causes, challenges and policy options [pdf]. Available at: ec.europa.eu/social/main. jsp?langId=en&catId=1047&newsId=9040&furtherNews=yes

62 Statistics Finland (2019) Around 100,000 employees work on zero-hour contracts [online]. Available at: www.stat.fi/til/tyti/2018/15/ tyti_2018_15_2019-06-03_tie_001_en.html
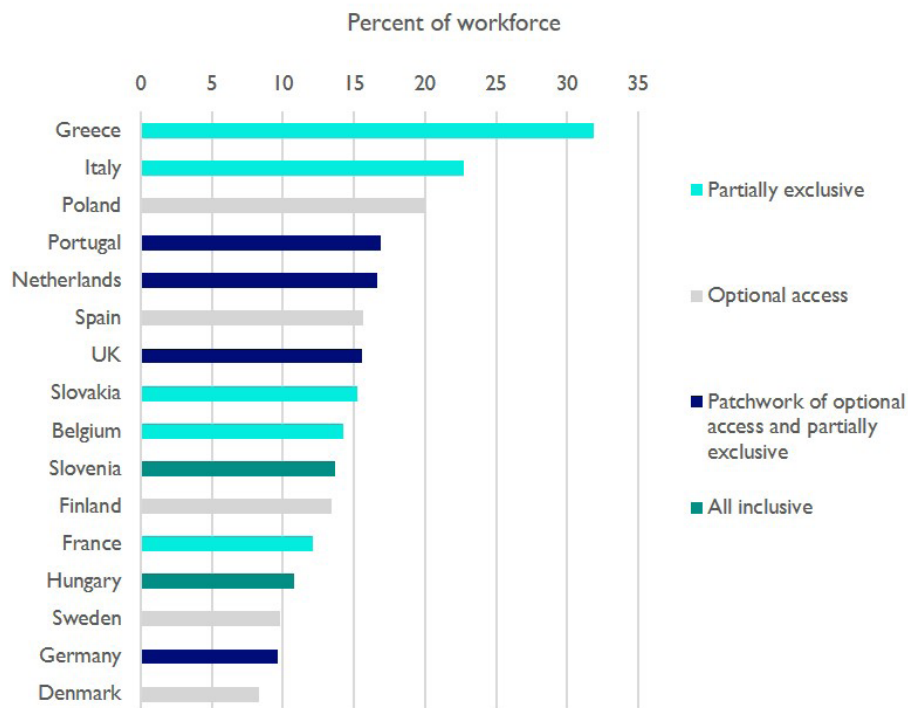
63 OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

64 Ibid.

65 Eurofound (2017) Exploring self-employment in the European Union [pdf] Luxembourg: Publications Office of the European Union. Available at: www.european-microfinance.org/sites/default/files/document/file/ exploring-self-employment-in-the-european-union.pdf

66 OECD (2018) Good Jobs for All in a Changing World of Work [online] Paris: OECD. Available at: www.oecd-ilibrary.org/sites/9789264308817-13-en/index.html?itemId=/content/component/9789264308817-13-en

Figure 10: Percent of self-employed workers across selected European countries by extent of access to social protections (RSA analysis of OECD data)

and 18 respectively. While in some Nordic countries such as Denmark and Norway less than 8 percent of workers are self-employed.[67] Coverage of employment protections also varies significantly across countries. A study by Spasova et al provides a taxonomy that simplifies differences in access to social protections for the self-employed in Europe. In some countries workers have access to similar coverage as employees (all inclusive) or are able to opt-in by making additional social security payments (optional access) but in many countries including France and Italy they are excluded from one or more schemes (partially excluded).[68]

Unlike the rise of non-standard contracts, self-employment is not a new trend. In fact, according to the OECD, there has been a long-term decline in self-employment as a share of total employment in since the 1970s. Much of this trend, however, is related to the long-term decline of the agricultural sector, which occurred in the early part of this period. Since the turn of the 21st century self-employment rates have remained stable at the EU level. But some countries have seen significant increases

in self-employment, particularly the Netherlands, Slovakia and the UK. France has also seen growth in the number of freelancers. [69]

The composition of the self-employed is also in flux. Agriculture continues to be a strong driver of the decline of self-employment in countries such as Portugal and Croatia (accounting for roughly 60 percent of the decline between 2003 and 2015), while professional services, as well as the public sector, have seen an increase in self-employment. More generally, there has been an increase in the share of self-employed workers without employees (also known as own account workers), particularly in part-time work.[70]

67 Eurostat (2019). Self-employed persons [online] Eurostat. Available at: ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20190430-1

68 Spasova, S. and Wilkens, M. (2018) The social situation of the self-employed in Europe: labour market issues and social protection. In: Vanhercke, B., Ghailani, D. and Sabato, S (ed.) Social policy in the European Union: state of play 2018. [pdf] Brussels: ETUI. Available at: www.etui.org/sites/default/files/Chapter%205_9.pdf

69 OECD (2019) Employment Outlook 2019: The Future of Work. Op cit.

70 Eurofound (2017). Op cit.

This could be viewed as a sign of booming entrepreneurship. But the OECD suggest that this kind of self-employment is highly linked to the regulatory and tax arrangements within countries, which can incentivise this form of classification for both employers and employees. In the Netherlands, for example, the 'payment wedge' between hiring an employee and independent contractor is 30 percent (21 percentage points of which are employer social security contributions). Research indicates that for low-wage self-employed workers in the Netherlands, this payment wedge is almost entirely captured by employers but higher earners do capture part of it.[71]

In some countries, particularly parts of Southern Europe, self-employment may persist out of economic necessity. According to Eurofound, more than one in three self-employed workers in Portugal and Croatia, and 28 percent in Greece report that their main reason for becoming self-employed is that they could not find any alternatives for work.[72] In Greece, tax and social security contributions are high, especially for low-income workers, which results in a high level of informal or undeclared activity. According to some estimates, between 33 and 45 percent of self-employed income was unreported in Greece prior to the 2008 financial crisis.[73]

Covid-19 and the gig economy

Self-employed workers have been some of the hardest hit during the pandemic. Over the course of the first three quarters of 2020, the number of self-employed people in the UK fell by over half a million, leaving self-employment at its lowest level since 2015.[74] Across Europe, self-employed people saw their working hours fall by 18 percent, compared to 13 percent for employees.[75] This is in part due to demand shocks associated with the pandemic. According to the OECD, non-standard workers more generally account for 40 percent of employment in the

sectors that were most directly affected by Covid-19 containment measures across Europe, reaching more than 50 percent in Italy, Netherlands, Spain and Greece. This is due to high levels of employment in sectors such as construction, the arts and entertainment and hospitality.[76]

Government support measures for self-employed workers were in many cases introduced significantly later compared to measures designed to support employees and businesses and there was greater uncertainty about whether this would be extended during the second wave.[77] In many countries, self-employed income support could not be combined with other government support, creating challenges for people who work across multiple different employment arrangements. While other countries had varying thresholds of minimum income or turnover loss required to access support.[78] According to Eurofound, the level of support available to self-employed workers and employees was equal only in Finland, Greece, Latvia, Romania and Spain.[79] The UK had one of the most generous self-employment income support schemes but coverage was patchy at best, with only 2.7 million of the 5 million self-employed workers eligible.[80]

71 OECD (2018). The Future of Social Protection: what works for non-standard workers? [online] Paris: OECD. Available at: www.oecd-ilibrary.org/sites/9789264306943-4-en/index.html?itemId=/content/component/9789264306943-4-en

72 Eurofound (2017). Op cit.

73 ILO (2016). Diagnostic report on undeclared work in Greece. [pdf] Geneva: ILO. Available at: www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/projectdocumentation/wcms_531548.pdf

74 Strauss, D. (2020) Covid crisis threatens UK boom in self-employed work. Financial Times [online] 23 November. Available at: www.ft.com/content/3d94b170-c6be-44dd-95ac-436284693090

75 Eurofound (2021) COVID-19: Implications for employment and working life, COVID-19 series [pdf]. Available at: www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20050en.pdf

76 OECD (2020). Distributional risks associated with non-standard work: Stylised facts and policy considerations [online] Paris: OECD. Available at: www.oecd.org/coronavirus/policy-responses/distributional-risks-associated-with-non-standard-work-stylised-facts-and-policy-considerations-68fa7d61/

77 Eurofound (2021). Op cit.

78 Ibid.

79 Ibid.

80 Wood, P. (2021) Millions of Brits still missing out on self-employment grants. City AM [online] 21 January. Available at: www.cityam.com/millions-of-brits-still-missing-out-on-self-employment-grants/

Critically many non-standard workers were not entitled to protections such as sick pay, which may have contributed to worsening outbreaks in some countries. A study produced for the UK government's Scientific Advisory Group for Emergencies (SAGE) found that that just 18 percent of people with symptoms in the UK were self-isolating for the full 10 days they are required to, with financial constraints and caring responsibilities playing a key role in non-compliance.[81] A recent Financial Times report detailed the following account from a chemist based in the London borough of Barking and Dagenham:

> "A lot of minicab and Uber drivers came to see me. They showed classic symptoms of the virus, but they kept saying things like: 'Just give me something for the sore throat, cough syrup or something,'" he says. "I told them time and again to get a Covid test, but they just did not want to get a test or go to the doctor because they knew they could not afford to isolate".[82]

Some parts of the gig economy appear to have experienced growth in Europe. According to the Centre for Economic Performance at the LSE, a third of self-employed people who find work through apps report having more work than usual.[83] In July 2020, parcel firm Hermes announced they were opening 10,000 positions to meet the surge in demand for home deliveries.[84] While Uber Eats saw its revenue grow by 103 percent year-on-year.[85] Similarly, the rise in remote working could mean that more jobs in creative and professional services could be offshored through platforms like Upwork and Fiverr.[86]

But there are also signs that the pandemic has forced platforms to 'grow up' by accelerating conversations about increased protections for workers. The latest Uber Supreme Court ruling is just the tip of the iceberg. Research by the Fairwork Foundation suggests that multinational platforms have introduced a wide range of protective measures, including health insurance and financial support.[87] Food delivery platform Just Eat announced it would hire its drivers as employees on hourly contracts, giving them access to protections such as pension contributions and sick pay.[88] While Hermes offered its drivers financial support if they were told to self-isolate.[89]

Who is at risk?

The COLLEEM survey suggests that, with a median age of 34, platform workers are on average 10 years younger than other workers. And more than half of those who use platforms as their primary source of income are under the age of 35.[90] Young workers are also much more likely to be employed on temporary or zero hours contracts.[91] Workers in more traditional forms of self-employment are typically older than employees, but younger independent workers are less likely to report that it is their own preference to

81 Scientific Advisory Group for Emergencies (2020). Adherence to the test, trace and isolate system: results from a time series of 21 nationally representative surveys in the UK, 3 September 2020 [pdf]. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/928684/S0732_CORSAIR_-_Adherence_to_the_test__trace_and_isolate_system.pdf

82 Raval, A. (2021) Inside the 'Covid Triangle': a catastrophe years in the making. Financial Times [online] 5 March. Available at: amp.ft.com/content/0e63541a-8b6d-4bec-8b59-b391bf44a492?__twitter_impression=true

83 Blundell, J., Machin, S. and Ventura, M. (2020) Covid-19 and the Self-Employed: Six Months into the Crisis. [pdf] Centre for Economic Performance. Available at: cep.lse.ac.uk/pubs/download/cepcovid-19-012.pdf

84 Butler, S. (2020) Hermes to create 10,000 new jobs as delivery business soars. The Guardian [online] 20 July. Available at: www.theguardian.com/business/2020/jul/20/hermes-to-create-10000-new-jobs-as-delivery-business-soars

85 Lee, D. (2020) Uber racks up another loss as rides business shrinks 75%. Financial Times [online] 7 August. Available at: www.ft.com/content/0f0cd5f1-f88d-44e1-8b6a-7b50e48118aa

86 O'Connor, S. (2020). The shift to remote working carries an inherent risk. Financial Times [online] 23 November. Available at: www.ft.com/content/192eb45a-f7c9-4897-ac56-57cb743ac2f2

87 Fairwork (2020) The Gig Economy and Covid-19: Looking Ahead. [pdf] Available at: fair.work/wp-content/uploads/sites/97/2020/09/COVID-19-Report-September-2020.pdf

88 Narwan, G. (2020) Just Eat changes its gig with hourly pay move. The Times [online] 10 December. Available at: www.thetimes.co.uk/article/just-eat-changes-its-gig-with-hourly-pay-move-mwv87x9l3

89 Booth, R. (2020) Delivery firm Hermes to pay gig workers if they must self-isolate. The Guardian [online] 6 March. Available at: www.theguardian.com/world/2020/mar/06/delivery-firm-hermes-gig-workers-self-isolate-coronavirus

Box 7: The Precision Economy: a scenario for 2035?[92]

Gig economy platforms encapsulate what the RSA has des cribed as the Precision Economy – which uses big data and algorithms to more efficiently manage the workforce. Previous RSA research has suggested that this could potentially lead to more disruption than automation in the next 10-15 years, as the technologies that power gig economy platforms are more mature than some of the technologies expected to directly displace workers, for example, autonomous vehicles or service robots.

Indeed, gig platforms are starting to emerge in new sectors. In China, Manbang is an app that matches truck drivers and merchants transporting cargo. 93 Lawyers meanwhile can log onto the Peerpoint platform devel oped by Allen & Overy. Similar technologies are also disrupting more traditional employment arrangements in sectors such as retail. For example, Percolata uses in-store sensors and algorithms to build profiles of retail workers based on an analysis of their performance data, combining this with weather information and other signals to predict footfall and automate shift scheduling. Major supermarket retailer Tesco has also experimented with scheduling software that allows workers to swap shifts and work across multiple stores.

work in this way.[94] Previous RSA research has shown that older self-employed workers in the UK enjoy considerably greater levels of economic security due to being asset rich, even when they are sometimes income poor.[95]

Other research that takes a broad definition of insecure work have found that people from a Black, Asian and Minority Ethnic (BAME) background are considerably more likely than white

people to be employed on a zero hours or temporary contract, or work in erratic shift work across multiple jobs.[96] A 2017 report by European Commission found that foreign born workers across EU-15 Member States were more likely to be employed in less skilled occupations, with lowest income and high job instability, high involuntary part-time working arrangements.[97] Similarly, the COLLEEM survey finds that foreign born workers are significantly more likely to provide services via digital labour platforms than native workers (in all countries except Lithuania).[98]

Insecure forms of employment are also concentrated in specific sectors. For example, construction, transport and logistics and social care are all considered to be areas where bogus self-employment is more widespread in some countries. Cleaning and personal care services are other areas where fixed-term and part-time contracts dominate, and where there are high levels of informal, undeclared activity.[99] In the UK, the situation is

90 European Commission (2018). Platform Workers in Europe Evidence from the COLLEEM. Op Cit.

91 Eurofound (2014). Young people and temporary employment in Europe [online]. Available at: www.eurofound.europa.eu/observatories/emcc/comparative-information/young-people-and-temporary-employment-in-europe

92 Dellot, B. Mason, R and Wallace-Stephens, F (2019) The Four Futures of Work. [pdf] London: RSA. www.thersa.org/reports/the-four-futures-of-work-coping-with-uncertainty-in-an-age-of-radical-technologies

93 Liao, R. (2020) Google-backed Chinese truck-hailing firm Manbang raises $1.7 billion. TechCrunch [online] November 24. Available at: techcrunch.com/2020/11/23/manbang-1-7-billion-funding/

94 24 percent of self-employed workers aged 35 and under say they are self-employed because they have no alternatives for work, compared to 18 percent of those over 50. Eurofound (2017). Op Cit.

95 Dellot, B. and Wallace-Stephens, F. (2018). Venturing to Retire: Boosting the long-term savings of the self-employed. [pdf] London: RSA. Available at: www.thersa.org/reports/venturing-to-retire

96 Bowyer, G. and Henderson, M. (2020) Race Inequality in the Workforce [pdf]. Available at: www.carnegieuktrust.org.uk/publications/race-inequality-in-the-workforce/

97 European Commission (2017) Migration in a segmented labour market [pdf] Luxembourg: Publications Office of the European Union. Available at: ec.europa.eu/jrc/en/publication/migration-segmented-labour-market

98 European Commission (2018). Platform Workers in Europe Evidence from the COLLEEM Survey. Op Cit.

99 McKay, S. et al. (2012) Study on Precarious work and social rights [pdf] Working Lives Research Institute. Available at: www.researchgate.net/publication/344338990_Study_on_Precarious_work_and_social_rights

particularly bleak for care workers in
the private sector, with more than 35
percent employed on zero hours contracts
according to an analysis by the GMB
Union.[100]

Box 8: The decline of worker voice

As the growth of non-standard employment shows, differences in the regulatory and
institutional landscape of European countries can significantly shape future of work
challenges. Arguably, one of the most significant factors in this respect is the role that
trade unions play in governing labour markets.

Since the 19th century, trade unions and collective bargaining have increased workers
bargaining power and helped temper rising inequality. Today, union density varies
significantly across Europe, with many countries experiencing a long-term decline in
membership. Currently, membership is above 50 percent only in the Nordic countries
and Belgium where unemployment benefits are administered by union-affiliated
institutions (also known as the Ghent system). In all these countries more than 70
percent of workers are covered by collective agreements. Union strength, however, is
not entirely reliant on density. Dense labour market regulation means that in countries
such as France, unions can mobilise well and exert power despite having very low levels
of density (around 8 percent).[101]

In some countries the decline in trade union membership has been due to political
reasons. In Eastern European countries, union density fell steeply following the collapse of
the Soviet Union and subsequent liberalisation of the economy. Today, trade unions are
perceived as part of the 'old regime' and this general distrust is dissipating very slowly.[102]
While Southern European countries such as Greece, Portugal and Spain that were
hit hard by the 2008 financial crisis, had to agree to social and economic reforms that
weakened union power, in exchange for bailouts by the European Central Bank.[103]
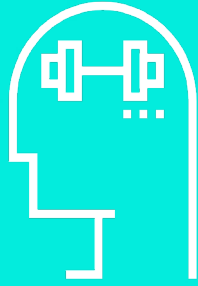
Others point out that the expansion of non-standard forms of employment is likely to be
a key driver here. A fragmented gig workforce is much harder to organise than workers
on the factory floor. Similarly, average firm size has an impact, and unions can find it
harder to gain a foothold in smaller businesses. The pandemic context may also bring
challenges in this respect. The seminal economist Robert Solow has suggested that "the
virus is no friend of collective bargaining" because remote workers are considerably more
difficult for trade unions to organise.[104]

But Covid-19 has also demonstrated that unions c ontribute to greater resilience in
times of economic crises. Germany's Kurzarbeit (literally short-time work) scheme has
provided the model for protecting jobs across Europe, with governments covering some
or all of the costs of employee's wages. As Christos Katsioulis of Friedrich-Ebert-Stiftung
pointed out in an interview with RSA researchers "the whole scheme of Kurzarbeit was
devised together with unions. So the reaction to this crisis was something they already
had in the drawer".[105]

100 GMB (2019). Private sector care workers three times more likely to be on
zero hours contracts. [article] GMB. Available at: www.gmb.org.uk/news/
private-sector-care-workers-three-times-more-likely-be-zero-hours-contracts

101 Worker-participation.eu (2016) Trade Unions. [online] ETUI. Available at:
www.worker-participation.eu/National-Industrial-Relations/Across-Europe/
Trade-Unions2

Innovative initiatives are emerging to address future of work challenges such as automation and the rise in insecure work. From training boot camps that teach workers at risk of automation how to code, to new unions experimenting with digital organising, and FinTech start-ups providing workers in the gig economy with access to portable benefits

Mapping good work innovations

5

Mapping good work innovations

Innovative initiatives are emerging to address future of work challenges such as automation and the rise in insecure work. From training boot camps that teach workers at risk of automation how to code, to new unions experimenting with digital organising, and FinTech start-ups providing workers in the gig economy with access to portable benefits. Together with the Autodesk Foundation, we embarked on a period of research to understand what good work innovations have emerged in recent years and build an online directory to help raise awareness of these organisations and support policy making and social investment.

Our approach builds on the Future Work Awards, a global innovation competition, that the RSA ran in partnership with ALT/Now, Social Capital Partners and Barclays LifeSkills in 2018-19. Alongside desk research, our innovation mapping involved extensive engagement with key ecosystem players in different global regions, including more than 30 interviews with stakeholders across Europe. This time, we structured our search around three broad themes: **skills, training and lifelong learning, economic security** and **worker voice and power**. Across all themes we were particularly interested in innovations that address diversity and inclusion, opening up good work to people on the margins of the economy, regardless of age, gender, race, or mental and physical health conditions.

- **Skills, training and lifelong learning**: programmes which equip people with the skills they need to weather oncoming technological trends or help them transition into the jobs of the future.

- **Economic security**: initiatives that help workers, particularly those in the gig economy and other new forms of employment, to grow and stabilise their incomes, or offer important protections such as sick pay and retirement planning.

- **Worker voice and power**: new kinds of trade unions, cooperatives, or organisational forms which give people greater influence over their working conditions.

This is in part an attempt to better understand a nascent field of innovation – one that overlaps with FinTech, EdTech and what has been described as WorkerTech. Within each theme we aimed to cluster innovations into broad intervention sets that use similar approaches to address similar problems. Our hope is that this starts to provide a common language that policy makers and social investors can use to spot opportunities for new ways to support workers. And by showcasing emerging best practice we want to encourage people to consider kick starting similar initiatives in their own communities. With this in mind, we aimed to profile organisations and projects that are not only developing innovative approaches to address significant challenges that workers face but have proven traction or at least a realistic prospect of reaching scale with users who count (see Box 9 for a discussion).

102 Magda, I. (2017) Do trade unions in Central and Eastern Europe make a difference? [article] IZA World of Labor. Available at: wol.iza.org/articles/do-trade-unions-in-central-and-eastern-europe-make-a-difference/long

103 Rigby, M. and Garcia Calavia, M.A. (2018) Institutional resources as a source of trade union power in Southern Europe. [online] European Journal of Industrial Relations 24 (2): 129-143. Available at: journals.sagepub.com/doi/full/10.1177/0959680117708369

104 MIT Work of the Future (2020) Robert Solow talks about the work of the future [video online]. Available at: workofthefuture.mit.edu/

105 Lockey, A. and Wallace-Stephens, F. (2020). A blueprint for good work: Eight ideas for a new social contract. [pdf] London: RSA. Available at: www.thersa.org/globalassets/reports/2020/a-new-blueprint-for-good-work.pdf

Box 9: Innovation mapping: guiding criteria (adapted from 2018–19 Future Work Awards judging criteria)

- **Significance of challenge**: does the organisation address a significant problem felt by many workers (or is the problem relatively niche or superficial?) Increasingly, a distinction is drawn between the future of work and work(ers) to highlight their focus on the latter. We prefer projects that are worker-centred rather than focused primarily on business productivity or economic growth.

- **Evidence of impact**: does the organisation provide an effective solution? We prefer projects with clear evidence of impact but recognise the value in highlighting potential new solutions to emergent problems. But there is a balance to strike here: placing too much onus on evidence of impact can lead to a focus on innovations that are already well documented and less in need of support from policy makers and social investors.

- **Extent of innovation**: has the organisation demonstrated significant innovation in its product, service, process, organisation or business model? We have no preference whether organisation's use new technology such as artificial intelligence, repurpose old technology or have yet to integrate technology into their solution. Some projects can make bold claims about using hi-tech solutions to solve social problems but provide little explanation of why AI is necessary or even useful for solving that problem. Similarly, most claims to 'a blockchain for X' are yet to show any signs of having real traction with users that count.[106]

- **Potential to scale**: can the solution be scaled or replicated in different contexts? We prefer projects that have a realistic prospect of reaching scale but recognise that there may be trade-offs in some contexts. The most scalable solutions are likely to be 'sustaining' rather than 'disruptive' innovations – meaning that they easily plug into existing infrastructure such as the app store, rather than require new kinds of enabling infrastructure and a more radical rethink of the current system and existing power dynamics.[107] It is also important to note that scaling social innovations does not always mean growing an organisation (which can bring with it significant management challenges). Often scaling is done through partnerships or franchising models.

A systems thinking perspective on good work innovations

Bottom-up grassroots innovators can make a meaningful contribution to addressing future of work challenges. Many entrepreneurs are demonstrating the effectiveness of novel approaches, defining new markets and proving demand. But we are also careful to avoid solutionism and overstate the potential of these organisations or ignore the difficulties of rapidly scaling new ideas, particularly those that aim to address systemic challenges. For many of these innovations might need to shape – and be shaped by – the regulatory and institutional landscape of different countries before they can have a lasting impact on people's working lives. This idea is captured well by social innovators Mona Mourshed and Maryana Iskander's suggestion that "having the impact of a unicorn means embedding practices and interventions that nonprofits like ours have proven will work better into complex, hard-to-change government systems".[108]

106 Wallace-Stephens, F. (2019) 4 key takeaways from Future Work Awards 2019. RSA, [blog] Available at: www.thersa.org/blog/2019/02/4-key-takeaways-from-the-future-work-awards-2019

107 Gabriel, M. (2014) Making it big: strategies for scaling social innovation. [pdf] London: Nesta. Available at: www.nesta.org.uk/report/making-it-big-strategies-for-scaling-social-innovations/

108 Mourshed, M. and Iskander, M. (2021) Memo to Silicon Valley: Here's what 'blitzscaling' looks like in the nonprofit world. Fast Company [online]. Available at: www.fastcompany.com/90611533/memo-to-silicon-valley-heres-what-blitzscaling-looks-like-in-the-nonprofit-world

Figure 11: An RSA adaptation of Frank Geels's Multi-level perspective

Transition level	Can include
Micro (niches)	New ideas, experiments, pilots, entrepreneurial developments
Meso (regimes)	Organisations, markets, institutional behaviour
Macro (landscapes)	Frameworks, values, laws paradigms

Systems thinking can provide a framework that helps us to understand how this kind of change happens. Frank Geels, professor of systems innovation at the University of Manchester, has developed an approach for analysing systems change within periods of profound technological transition. In this multi-level perspective, Geels identifies three distinct sites for systems innovation – the micro, the meso and the macro.[109]

This categorisation may look simple but it helps tell a nuanced story about how systems change can come about. Micro innovations are nurtured, scaled and shaped by meso regimes, before being elevated by policy, frameworks and norms into a new paradigm. In some instances, this requires considerable effort from innovators who must essentially 'hack the system' to scale their impact, by forging strategic partnerships with public sector organisations or other institutions who

may be able to help them reach new users, or trying to influence policy or regulatory change, so that their solution can become more widely adopted. In other cases, institutions may be more forthcoming. Macro action can provide the context for meso institutions to nurture a new field of micro innovations that, in time, may renew and reaffirm the system by cascading back up in the manner just described. This is the case for initiatives such as challenge prizes, government investment schemes, accelerators and other scale up programmes.

As well as providing an overview of our innovation mapping research, we provide a social contract level recommendation for each thematic area that illustrates a potential pathway to systems level impact and highlights areas for partnerships between micro and meso actors.

Figure 12: Pathways to systems level impact

Theme	Example of impact pathway
Skills, training and lifelong learning	Public employment services partner with innovators to pilot a range of new digital transition services under the banner of a 'job security centre'.
Economic security	Governments work with gig platforms, trade unions and innovators to scale access to portable benefits platforms through institutional and regulatory change.
Worker voice and power	Governments introduce union innovation funds to promote partnerships between trade unions, WorkerTech start-ups and other innovators.

109 Lockey, A. and Wallace-Stephens, F. (2020). Op cit.

Skills, training and lifelong learning

As the economy evolves and technology eliminates, creates, and transforms jobs, workers will need to find new ways of reskilling or upskilling. The pandemic has accelerated this challenge in some sectors. But it has also created new winners and losers, with some industries previously thought to be more resilient to automation now on the brink of collapse. Workers at risk of automation face a double whammy as they are also less likely to participate in training than those in jobs that are more resilient to technological change.[110] It is something of a maxim that "the single best predictor of later participation in education is earlier participation".[111] We need to reimagine our skills system so that it supports the needs of these workers and helps them to overcome barriers they face.

In this section we identify some of the most promising innovations in skills, training and lifelong learning that are helping workers to prepare for the jobs of the future. Within this theme, we identified over 65 innovations in Europe that cluster around six main intervention sets. Looking forward, our hope is that projects in this field will start to complement each other and create more of an end-to-end transition service for at risk workers.

- **Online learning:** Massively Open Online Courses (MOOCs) and other tools that offer learners a flexible, modular approach to upskilling and reskilling.

- **Peer learning networks:** programmes where people can connect to support each other to stay motivated through mentoring and peer support.

- **Technology bootcamps:** programmes that teach people digital skills in an accelerated format and connect them with employment opportunities.

- **Augmented learning:** augmented and virtual reality systems that enhance the provision of both technical and soft skills in the workplace.

- **Digital career coaching:** platforms that use new technologies to offer workers personalised coaching and labour market information.

- **Digital credentials and skills profiles:** new approaches to recognise and validate skills, including those developed through on-the-job and informal learning.

Online learning

The skills that workers need for the jobs of the future will be varied, ranging from technical, digital to soft and transferable skills. One innovation that recognises this is Kokoroe, an online learning platform that "allows everyone to be trained in the skills of tomorrow, whether human, technological or business".[112] Kokoroe has a user-friendly design that resembles a Netflix interface and creates short, playful learning experiences that are sprinkled with pop culture references. Kokoroe has partnered with the French employment service Pôle Emploi, to support 3.4 million job seekers.[113]

In Finland, Reaktor Education has partnered with the University of Helsinki to develop MOOCs that aim to demystify the concept of AI and relieve anxiety around automation. Among the successes of their first course is that 40 percent of learners are women, more than double the global computer science average, and over 25 percent are over the age of 45.[114]

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110 Nedelkoska, L. and Quintini, G. (2018). Op Cit.

111 Lockey, A. and Wallace-Stephens, F. (2020). Op Cit.

112 Websites for every innovation mentioned in this section of the report are included in the appendix.

113 Wong, C. (2019) Gender diversity: 4 start-ups who are committed to taking up the challenge [online] Available at: business.lesechos.fr/entrepreneurs/ressources-humaines/start-15053-mixite-4-start-up-qui-s-engagent-a-relever-le-defi-329229.php

114 Schaible, M. (2019) Democratizing AI – Finland offers free AI education to every EU citizen. Reaktor [blog] 10 December. Available at: www.reaktor.com/blog/democratizing-ai-finland-offers-free-ai-education-to-every-eu-citizen/

In the UK, online learning is also being used to support workers in hi-touch roles. CuppaCare and Kinderly both exploit the modular nature of online courses, which allows workers to fit learning around their busy work schedules. The CuppaCare app provides care workers with training guides and quizzes on care topics to be used in downtime as training refreshers. Kinderly provides CPD accredited bite-sized learning for early years childcare practitioners, which is made more engaging through animations, videos and interactive activities.

Entrepreneurial skills will be critical for workers considering self-employment as a future career choice. Silver Starters aims to help people nearing retirement acquire the skills needed to turn their ideas into a business. Learners are supported by personal coaches and can learn at their own pace, skipping content they are already familiar with. Having completed pilots in the Netherlands and Poland, Silver Starters will soon also be launching in Italy and Portugal. Level Up is an initiative from OpenClassrooms that helps workers in the gig economy to advance their careers. According to their user research, the majority of gig workers in France, the UK and Belgium see this as a short-term stop gap and want to develop new skills. Level Up has teamed with Uber and Deliveroo to provide these workers with free courses on entrepreneurship and software development.

When MOOCs first launched in the early 2010s, the hope was that they could democratise knowledge. However, several studies suggest that MOOCs could actually reinforce inequality and are mostly used by people with higher education levels.[115] Some innovations we identified are attempting to address this by engaging learners that would otherwise be hard to reach through digital channels. For example, the Swedish Public Employment Service has partnered with Google to equip everyone with basic digital skills through its Digitala jag service. And the City of Glasgow College is developing Citizen Literacy, an app that uses AI accent recognition to support people with low-literacy skills and encourage them to take up more formal, in-person learning opportunities.

Box 10: Peer learning networks - a blended approach to online learning?

Studies have shown how a major limitation of online learning relates not only to digital skills but to motivation, which according to the OECD is one of the reasons why MOOC completion rates are as low as 10 percent.[116] To overcome this challenge, some innovator s are introducing peer-to-peer elements to support learners.

Enrol Yourself aims at supporting learners to continually learn in order to prepare for the transformations that will come in the world of work. The majority of participants at the start of their journey are self-employed or part-time workers, with no access to learning and development budgets. Workers are supported in learning by introducing a peer-to-peer exchange that can help overcome the obstacle of self-motivation, without the cost barriers associated with formal university education.

My Education Club (MEC) is a Bulgarian initiative that stems from the recognition that "nobody knows everything, and yet, everybody knows something valuable".[117] The platform allows users to ask advice an d get in touch with people who are skilled in a wide range of topics, building relationships between people with common goals and interests and bridging the gap between theory and practice.

115 Rohs, M. and Ganz, M. (2015) MOOCs and the claim of education for all: A disillusion by empirical data. The International Review of Research in Open and Distributed Learning [e-journal] 16(6). Available at: www.irrodl. org/index.php/irrodl/article/view/2033

116 OECD (2020) The potential of online learning or adults: Early lessons from the COVID-19 crisis [online] Paris: OECD. Available at: www.oecd.org/coronavirus/policy-responses/the-potential-of-online-learning-for-adults-early-lessons-from-the-covid-19-crisis-ee040002/

117 My Education Club (2020) Nobody knows everything, and yet, everybody knows something valuable. [blog] 16 April. Available at: myeducationclub.com/nobody-knows-everything-and-yet-everybody-knows-something-valuable/

Technology bootcamps

Bootcamps represent an innovative approach to teaching coding skills to people with no or limited skills in an accelerated format. These initiatives are often designed in partnership with industry and provide "a clear line of sight" to employment which research shows is key for some groups of workers to participate in retraining and maintain motivated.[118] The New Austrian Coding School, for example, offers a nine-month training programme with the aim leading to job placements and sustainable integration into the job market. Simplon is training programme that teaches programming languages to people in France and Romania, taking them from beginners to experienced coders in six months.

Boot camps are a useful way of providing any group of people with new skills, but recent initiatives have highlighted their potential to widen access to tech skills for otherwise underserved groups. This is particularly important considering the lack of diversity in the tech industry. TechUP is programme funded by Institute of Coding (IoC) in the UK, which aims to retrain individuals under-represented in the sector into technology careers. The intensive retraining programme is mostly online and is aimed at women from Black, Asian and Minority Ethnic and other excluded groups, such as people with disabilities.

Konexio is a French initiative which started by providing digital skills workshops in Paris' immigrant-dense neighbourhoods, fuelled by community demand. It has now grown into a project facilitating professional integration of refugees, migrants and other disadvantaged groups through digital skills training. Konexio provides certified training in basic digital skills, which upon completion opens access to full-stack web development courses. Since its creation in 2016 it has launched more than 70 classes, with a 72 percent positive exit rate of employment, entrepreneurship or a return to schooling for learners.

Augmented learning

As augmented and virtual reality (VR) systems are become cheaper, and more widely adopted these technologies are being used in various different contexts to enhance training in both technical and soft skills. For example, Gleechi has developed VirtualGrasp, which provides VR training that allows manufacturing and healthcare workers to interact naturally with their surroundings and learn-by-doing, in a safe environment that reflects real-life operational scenarios. The immersive nature of the training can also serve to heighten sense and re-create the urgency of emergency situations, which is proven to give users more confidence in applying their training to real life scenarios.

Bodyswaps and the Humanitarian Leadership Academy are using VR and AI to create interactive and realistic scenarios in which workers can practice their soft skills using their own voice and body language. Described as a "flight simulator for soft skills" by Bodyswaps CEO, the product places aid workers and volunteers into safeguarding-related scenarios. Learners have the chance to respond naturally to the particular scenario and are then able to relive the intervention from the point of view of the survivor of the incident.

Other technologies are also being used to augment learning experiences for marginalised groups. How Do I? uses accessible technologies to provide people with learning disabilities opportunities to learn vocational skills on the job. The company uses NFC-enabled stickers to provide micro learning experiences linked to people's work environment that are delivered via smartphones.

118 Lockey, A. and Wallace-Stephens, F. (2020). Op Cit.

Digital credentials and skills profiles

Digital badges are micro credentials that provide a new way to recognise and validate skills, including those developed through on-the-job or informal learning. As Jonathan Finkelstein, Founder and CEO of Credly explains in a 2018 RSA blog, digital badges "can provide employers with better evidence of in-demand skills and provide job-seekers with new tools to show employers what they know and can do".[119] And this could open doors for workers previously excluded from some professional occupations by allowing firms to hire based on competencies rather than credentials.

A growing number of organisations are also using digital badges to track and manage internal talent. In these instances, digital badges can reveal opportunities to close internal skills gaps through targeted development and create more transparent career pathways. Credly supports the IBM Open Badge Program, which has issued digital badges to more than 400,000 individuals and enabled corporate leaders to create a virtual heat map of the skills possessed by workers in 195 countries.[120]

Tendo focuses on frontline workers in sectors such as retail and logistics where there are acute issues around low pay and a lack of progression. Tendo provides a 'skills passport' which enables these workers to build and access a trusted, portable record of their hours and skills. The skills passport works on a two-way ledger, where data must be verified by both workers and managers. In this way, it both informs personalised training needs for employees and provides employers with a way to incentivise learning and development. Similarly, in the Netherlands, platform economy expert Martijn Arets is working with gig economy platforms to develop Kluspaspoort, which will look to leverage reputation (or ratings) data in order to provide these workers with a digital CV.

The RSA's Cities of Learning uses digital badges to make learning, work and development opportunities in places more visible and measurable, and to support learners to articulate their skills and experiences. The programme develops pathways that connect badges together to provide new progression routes for learners. Over the last two years the RSA has worked with Plymouth and Brighton to run local pilots. During the pilots, 1,734 badges were issued to young people for activities ranging from audio production to Covid-19 response campaigns and volunteer charity work with Barnardo's.

Box 11: Digital career coaching

Technology is also being used to provide workers with personalised labour market information and coaching that can help them transition into the jobs of the future. For example, FutureFit AI describes itself as "the GPS (Global Positioning Device)" for career transitions. Based on an assessment of a worker's skills and data from online jobs vacancies, it uses AI to provide workers with career path recommendations, highlighting gaps in their skills and recommended training. FutureFit AI also aims to support employers in training workers at risk of redundancy for new roles inside or outside of the company. Similarly, Singularity Experts in Spain uses a profiling system that measures the 50 most critical attributes of workers, which are in turn used to identify 10 of the jobs of the future best suited to them and associated training routes.

119 Finkelstein, J. (2018) Recruiting to Retention: The Emerging Role of Digital Credentials in the World of Work. RSA, [blog] 2 October. Available at: www.thersa.org/blog/2018/10/recruiting-to-retention-the-emerging-role-of-digital-credentials-in-the-world-of-work

120 Ibid.

Pathway to systems impact 1: transition services

Prior to the pandemic, RSA researchers interviewed Department for Work and Pensions (DWP) representatives responsible for public employment services to explore what a transition service for the future of work could look like in the UK. As one representative explained "most of the people who walk through our doors are on Universal Credit [a benefit related to unemployment]". But they added: "we have that current customer base – but we're at a moment of full employment and that won't always be the case. The last year has rendered this prediction somewhat prophetic.

But to date, the policy response across Europe has focused on job protection schemes and other business support measures. This has enabled governments to prevent rising unemployment and protect livelihoods (for those in traditional employment arrangements) but it has left labour markets in suspended animation. More is needed to help at risk workers transition into the jobs of the future, otherwise they could be left behind when these schemes taper out. As Andy Haldane, Chief Economist at the Bank of England has suggested:

> "The macro-economic policy response so far – large-scale, sure-footed and front-loaded – has reduced significantly the risk of hysteresis. But the only way of immunising against economic long Covid will be through a skills programme every bit as large-scale, sure-footed and front-loaded".

The RSA has previously recommended that the UK government introduce an end-to-end transition service to support at risk workers. According to OECD future of work lead Stijn Broecke the countries that have been able to help workers at risk rapidly reskill are those that already "have the legacy institutional infrastructure in place" – effective social dialogue between government, employers and trade unions, as well as good lifelong learning and effective social protection schemes.

In Sweden, employers pay into funds to provide workers with an end-to-end transition service, following collective redundancies. Organisations known as Job Security Councils are set up through collective agreements between unions and employers to provide displaced workers with information about their local labour market, as well as coaching, training opportunities and financial compensation. This makes Sweden's economy more dynamic. Businesses can more easily shed unproductive labour because unions can support job cuts, knowing that workers will be protected.[121] France has personal learning accounts, which give all workers (including the self-employed) annual training credits that they can spend on accredited courses. Personal learning accounts are a portable benefit, independent from employment arrangements – meaning the credits accrued are retained by workers even if they move jobs or become unemployed.[122]

The reality is that spending on active labour market policies such as public employment services, training, direct job creation and start up support has varied considerably across Europe with most countries spending more on passive measures such as out of work benefits (see figure 13).[123] Traditional approaches to skills, training and lifelong learning may prove too challenging and costly to scale to in an age where automation increases demand for these services. But there is also a dearth of evidence on what works here. While innovators may be able to enhance government support services by making them more accessible and user friendly.

121 European Monitoring Centre on Change (2020) Job security councils. [online] Eurofound. Available at: www.eurofound.europa.eu/observatories/emcc/erm/support-instrument/job-security-councils
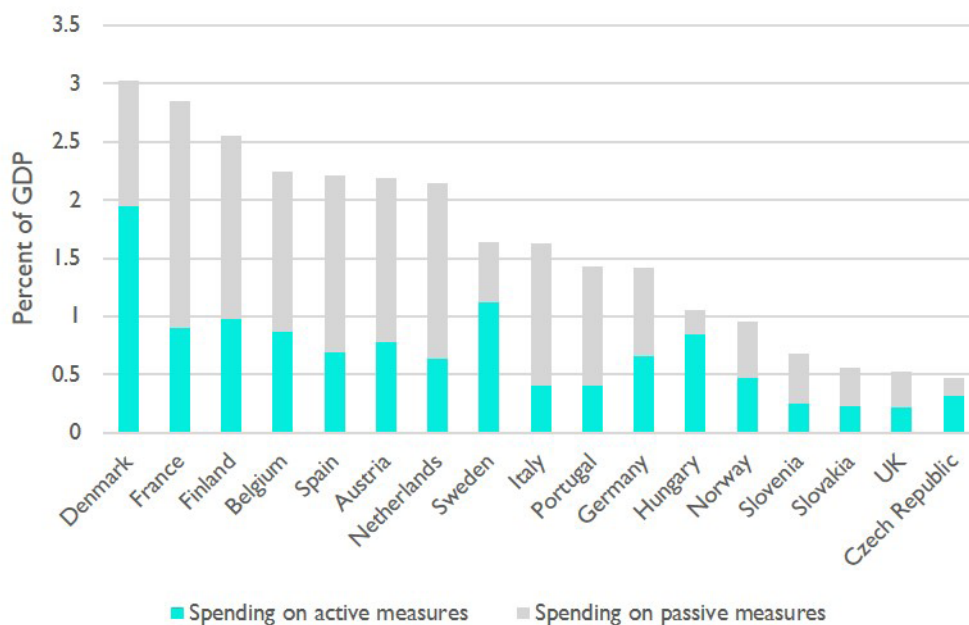
122 OECD (2019) Individual Learning Accounts: Panacea or Pandora's Box? [online] Paris: OECD. Available at: www.oecd.org/publications/individual-learning-schemes-203b21a8-en.htm

123 Latest available data is 2011 for UK and 2015 for Italy. Data for all other countries is for 2017.

Looking forward, we hope that projects in this field will start to complement each other and create more complete end-to-end solutions for people. Our recommendation here is that meso actors such as public employment services partner with micro innovators to pilot a range of new transition services under the banner of a job security centre. For example, as workers look to navigate a changing labour market, they could use a digital career coaching platform which recommends they participate in an online learning course or technology training boot camp, all of which is underpinned by new forms of digital credentialing.

Figure 13: Spending on labour market policies across selected European countries in 2017 (RSA analysis of OECD data)

Economic security

For some workers, non-standard employment relationships can offer flexibility and autonomy, leading to greater levels of job and life satisfaction. But there is a growing concern that such flexibility is often one-sided with employers seeking "to transfer all risk onto the shoulders of workers in ways which make people more insecure and make their lives harder to manage". The pandemic has helped surface some of the challenges these workers face. Many experience problems with income volatility and don't have access to important protections such as sick pay.

In this section we identify some of the most promising innovations that are addressing these challenges and improving the economic security of non-standard workers (some are also relevant to workers in more traditional employment arrangements). Within this theme, we identified over 60 innovations in Europe that cluster around six main intervention sets. In the longer term, we hope that some of these projects will provide the mechanisms that underpin a new social safety net, one that ensures risk is more fairly shared between these workers and those that use or broker their services.

- **Income smoothing and cash flow management:** platforms that help workers to manage income volatility, including through access to affordable credit and loans.

- **Financial capability and wellbeing:** products and services that help people to better understand their financial circumstances or provide advice and mental health support for those in problem debt.

- **Insurance as an employment protection:** new insurance products and collective schemes that protect workers against risks such as illness and injury.

- **Umbrella cooperatives: organisations** that provide independent workers with a hybrid employment status that entitles them to unemployment protections while providing other support services.

- **Fairer gig platforms:** task and job matching platforms that offer workers that are excluded from the labour market with access to flexible working opportunities.

Income smoothing and cash flow management

The income of self-employed workers is characterised by periods of feast and famine as client demand can change and payment for services is not always timely. Workers in the gig economy or on zero hours contracts also have chronic issues with income volatility. According to a 2019 RSA survey, 17 percent of workers in more traditional employment sometimes have trouble making ends meet their basic living costs due to income volatility. But for both self-employed and workers with non-standard contracts, this figure was as high as 45 percent.[124]

FinTech apps have become a mainstay in recent years, benefitting savvy millennials by revealing how much they spend on avocados or trips to Sri Lanka. But they are rarely geared towards people with more precarious finances. However, more recently a new breed of FinTech is starting to emerge, one which is designed with non-standard workers in mind. For example, Trezeo has been developed to help gig and self-employed in the UK and Ireland weather the income volatility they experience due to unpredictable working patterns. Trezeo is an income smoothing bank account that tops up earnings during quiet periods, interest-free, to ensure a consistent pay cheque. It works by leveraging open banking and

124 Wallace-Stephens, F. (2018) Economic Insecurity: The case for a 21st century safety net. [pdf] London: RSA. Available at: www.thersa.org/globalassets/pdfs/reports/economic-insecurity-21st-century-safety-net-report.pdf

machine learning to understand income patterns and model risk. Wollit is another UK based innovation that provides access to interest free cash top ups for workers who are earning less than usual. It supports shift workers and those on zero hours contracts, as well as self-employed workers.

Etch, instead, is exploring a blockchain based solution to this problem. Etch provides a payroll card and uses smart contracts to ensure wages flow automatically in the Etch wallet while they are being earned. It aims to support casual workers in sectors such as hospitality and retail and independent contractors in construction and allows them to access their earnings before pay day. Their aim is to eliminate the need for people to access costly payday loans as well as increase transparency. Etch is currently partnering with an Financial Conduct Authority (FCA) regulated open banking company to create a hybrid open banking/ blockchain platform.[125] Wagestream, SteadyPay and Hastee are all platforms that provide similar (although non-blockchain) based income advance solutions for workers in more traditional employment arrangements.

Mansa, based in France, supports self-employed workers by facilitating access to bank loans. It can finance up to 10,000-euro loans that can be repaid over 12 months. The decision on the loan is made 24 hours after the application, providing quick cash availability to freelancers. Unlike traditional bank financing, the credit rating system that Mansa uses is designed around self-employed workers and registers more criteria than traditional lenders, including multiple income sources, cash flow and spending patterns.

Box 12: Financial capability and wellbeing platforms

Some innovators are building tools to help people to better understand the economic risks they are exposed to, or support people with the impacts economic insecurity can have on wellbeing.

Tully launched in 2018 as the first completely digital debt adviser in the UK and has now shifted to offering support relating to Covid-19. Tully makes an assessment about the financial and mental health of users before redirecting them to tailored support, including expert advice. Tully can also help users build a tailored budget based on the reduction in income caused by the pandemic and point them to government support as and when it is introduced as well as reliefs from banks and lenders, if they are eligible.

Sherpa Score is an initiative meant to help people decide on individually tailored insurance offers. The information provided by users is taken into the Sherpa 'brain', an AI enabled tool that combines user data about their current financial circumstances and exposure to risk, alongside external validated data, including actuarial tables and official statistics, to provide an individual protection score. The protection score is a number that indicates how protected a user is against a range of different financial risks they may incur in life.

125 Evans, E. (2019) Exciting new partners for Etch – May 2019. Medium, [blog] 16 May. Available at: medium.com/@euros/exciting-new-partners-for-etch-may-2019-dfea5746ea8f
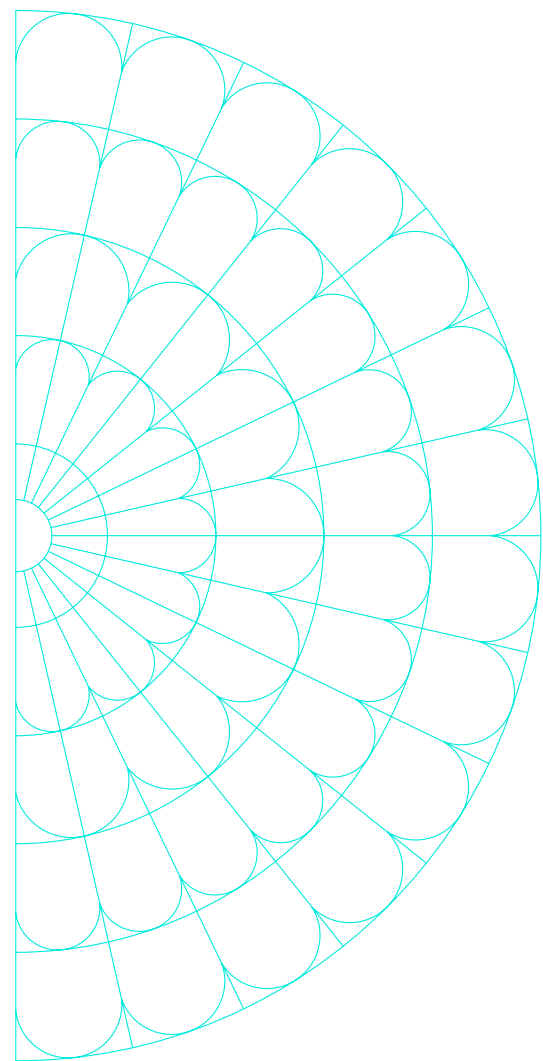
Insurance as an employment protection

Other innovations we identified aim to provide self-employed people, or those in non-standard forms of work, with access to some of the protections that employees might take for granted, such as sick pay and health insurance. This includes some of the innovators mentioned earlier in this section such as Trezeo, which recently introduced a range of additional bundles for its users including medical support, sickness insurance and enhanced personal accident insurance.[126]

SafetyWing is looking to create a safety net for people looking to work anywhere in the world. It is specifically targeted at digital nomads and provides travel and medical insurance, as well as remote health tools. The company is piloting a remote pensions service launching in 2021. During the pandemic, European InsurTech start-up Indeez launched CoviSure, which provides income replacement to workers in case they are not able to work due to a Covid-19 infection. The first European platforms to provide CoviSure to their communities were online freelancer platform PeoplePerHour and ride hailing platform Heetch.

Wemind is a community of freelancers that gives its members access to products like health and liability insurance. Since starting in 2015, it has grown to over 20,000 members. Through economies of scale, Wemind has reduced the cost of such products by 30 percent for self-employed people. The initiative has also been successful in providing access to a rent guarantee product for freelancers, which in France was previously reserved for those with an employee contract.

The Netherlands has relatively high levels of self-employment alongside some of the least affordable income protection insurance. Broodfonds (or Bread Funds) are collective sick pay funds in which the self-employed contribute in small groups of 20 to 50. Money can be drawn upon when members fall ill, and practical support is also offered to help sick members share workloads. A Broodfonds Alliance established in 2016 allows for money to flow between groups should one be hit by multiple illnesses at once. CommonEasy, also in the Netherlands, have developed a similar model of support based on concentric circles of trust in entrepreneurial networks.

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126 Trezeo (2020) Trezeo launches new products to expand its safety net for independent workers. Trezeo, [blog] 26 March. Available at: blog.trezeo. com/2020/03/trezeo-launches-new-products-to-expand-its-safety-net-for-independent-workers/

Box 13: Umbrella cooperatives

In previous RSA research we found that differences in economic and legal context affect the need for initiatives and their attractiveness to users.[127] For example, in France, Belgium and Italy, Business and Employment Cooperatives act as umbrella organisations for freelancers, enabling them to pool together business administration and support services such as training and workspace. These organisations are essential in some countries due to differences in social security where self-employed workers can't pay into government unemployment insurance schemes. As they enable self-employed workers to access a more protective employment status by becoming employees of a cooperative without sacrificing their independence or autonomy (although sometimes workers will also collaborate on projects). In many instances these organisations are also cooperatively owned and democratically governed by members.

Coopaname in France, Doc Servici in Italy and Lilith in Finland are some of the examples we found during our search. Although the most noteworthy example here is SMart, which started as a cooperative for artists and creative professionals in Belgium but now has over 100,000 members, across a range of sectors in nine different European countries. In addition to providing a more protective employment status, SMart offers a range of support services to simplify administrative complexities like contracts and invoices. It has also introduced a salary guarantee fund that pays its members within seven working days, accident at work insurance, legal advice and co-working spaces.

Fairer platforms

During our search we identified many gig platforms that are widening access to good work opportunities for groups that are otherwise excluded from the labour market. In Romania, The Care Hub provides work for older workers or recently retired people, who might still want flexible additional income. The initiative selects workers who have training and experience in caregiving for the elderly or people with disabilities. Seniors@work also helps retired workers find one off projects, part-time or hourly work in over 30 different areas, including accounting, administration, architecture and care.

Labour Xchange allows underemployed workers and home carers to find employment opportunities that they can fit around their other commitments. The platform enables these to register their upcoming availability to work on an hourly basis. Local businesses then use the platform to access the free time of individuals and fill ad hoc staffing requirements. As the platform is automated and operating costs are low, Labour Xchange can then ensure individuals are always paid at least the living wage. Labour Xchange has partnered with Community Union to provide all workers on the platform access to a union. In January 2020, Labour Xchange also partnered with Trezeo and insurance provider Dinghy. The partnership is meant to provide Labour Xchange's users with the added level security provided by the other two initiatives.[128]

Some platforms are also focused on the growing market of data labelling and other 'click work' services. Humans in the Loop in Bulgaria, for example, provides ethical and bias free machine learning model training and validation. The programme starts from the recognition that these tasks can be easily performed by workers who face barriers to employment and is working with displaced communities from Turkey, Syria and Iraq to provide them with digital employment opportunities.

127 Wallace-Stephens, W. (2018) Good work across the globe – introducing the future work awards. RSA, [blog] 17 July. Available at: www.thersa.org/blog/2018/07/good-work-across-the-globe--introducing-the-future-work-awards

128 Trezeo (2020) Labour Xchange teams up with Trezeo and Dinghy to bring a safety net for self-employed workers. [online] Available at: www.trezeo.com/labour-xchange-trezeo-dinghy-jan-2020/

The founder Iva Gumnishka stresses the importance of fair pay and training and development opportunities, noting that there is a fine line here between providing decent job opportunities and "creating an environment for low-paid invisible microwork".[129]

Pathway to systems impact 2: portable benefits

Early in the Covid-19 pandemic, the UK government was accused of failing to grasp the threat of gig economy workers spreading coronavirus, after a minister at the Department for Work and Pensions advised those with no access to sick pay to claim unemployment benefits instead.[130] Many of these workers may not have been able to afford to self-isolate, which may have worsened outbreaks in some countries. Eventually many governments did introduce temporary measures but there remains a need to radically reform the system.

The RSA has previously recommended that governments create a system for portable benefits, which would give self-employed workers access to a range of non-statutory employment protections. Portable benefits can be accumulated on a pro-rata basis across multiple employers. Unlike current systems across Europe, once portable benefits are accrued, they are retained by workers even if they move jobs or become unemployed.

Experiments with portable benefits are most advanced in the US, often led by worker voice organisations. NDWA Labs, the innovation arm of the National Domestic Workers Alliance has developed Alia, an online platform for portable benefits. Alia works by enabling different clients and employers to contribute to a pot, which can be drawn down by domestic cleaners to receive paid time off. Alia was initially piloted on the basis that clients would contribute voluntarily (eg $5 per job) but the NDWA has since introduced legislation in Philadelphia that mandates contributions to paid time off through a portable benefits platform as part of a wider package of reforms for domestic workers.[131]

Some innovators in Europe are also developing portable benefits solutions. For example, Collective Benefits partners with gig economy platforms to give their workers access to a tailored package of benefits that can include sick pay, family leave and holiday pay. These innovations could be scaled through partnerships and collective agreements with trade unions. One such example is the recent Hermes-GMB 'self-employed plus' deal, which gives the couriers who choose it the most important rights that go with dependent contractor status while they continue to be classified as self-employed.

Such agreements would not only help build legitimacy. During previous RSA research Palak Shaw, Social Innovations Director at NDWA, explained that "if you read the law carefully, there will need to be one operator to administer the system – you need to have an aggregator function for the worker, so that they can realise the paid time off all together".[132] A portable benefits system would not be very useful if a delivery driver received benefits from Uber Eats and Deliveroo in different accounts. The practicalities here are yet to be fully worked out, but nod towards the Ghent system where trade unions administer welfare benefits. Alternatively, there may be a role for institutions such as Nest, the UK government-backed workplace pension provider, to pool together smaller amounts from different employers.[133]

129 Namrata, Y. (2020) Post Covid-19 world: How AI can ensure a more inclusive digital economy. Observer Research Foundation [online] Available at: www.orfonline.org/expert-speak/post-covid-19-world-ai-ensure-more-inclusive-digital-economy/

130 Mason, R. and Booth, R. (2020) Coronavirus UK: unions warn over lack of sick pay for gig economy workers. The Guardian, [online] 3 March. Available at: www.theguardian.com/world/2020/mar/03/coronavirus-uk-unions-warn-over-lack-of-sick-pay-for-gig-economy-workers?CMP=Share_iOSApp_Other
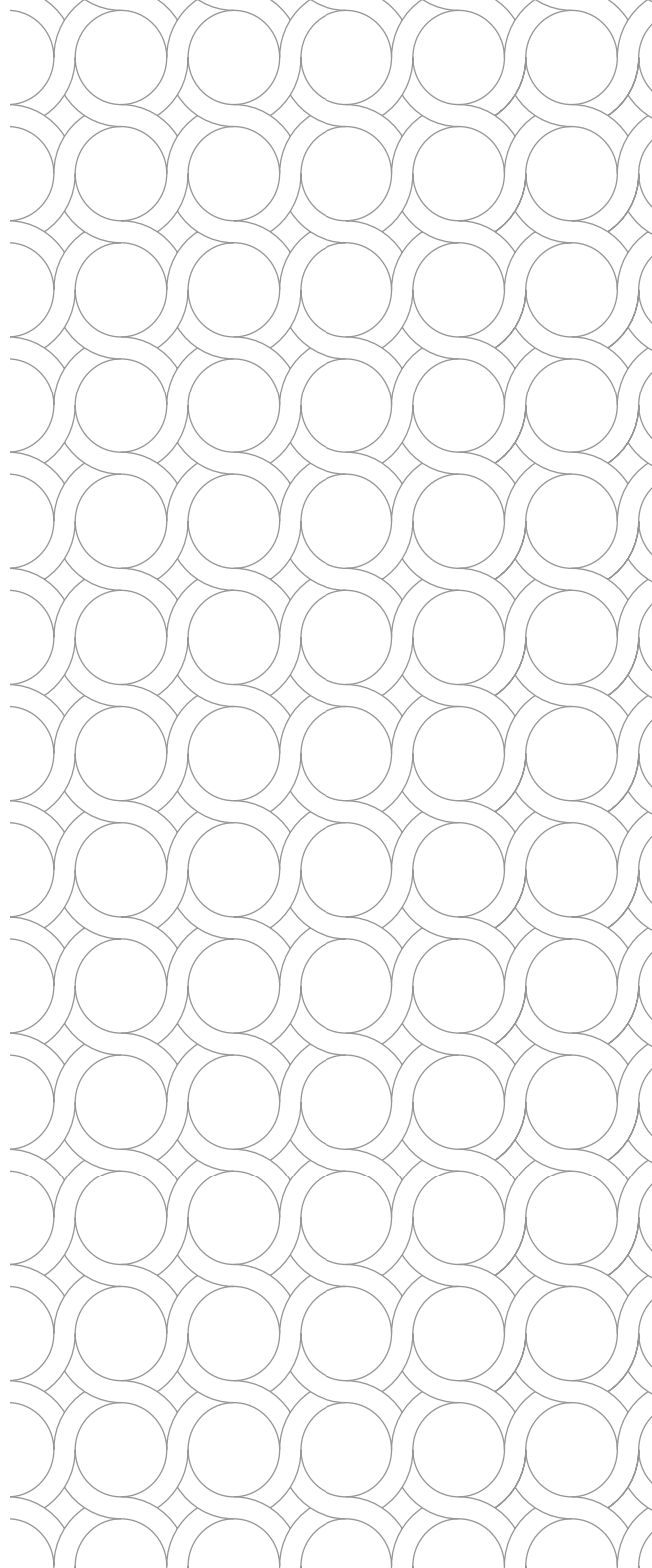
131 Lockey, A. and Wallace-Stephens, F. (2020). Op Cit.

132 Ibid.

133 Ibid.

Mapping good work innovations

In the long-term, governments will need to introduce laws that mandate portable benefits so that they can be enjoyed by all self-employed workers. Schemes could be funded via the contractor of labour through an 'engagers tax', with the government potentially topping up through general taxation if required. In instances where workers provide services direct to consumers, such as domestic cleaning, it would be the consumer that contributes. Where there is an intermediary such as a platform, they would cover the costs (though in theory could pass them on to consumers through higher prices). And legislation should specify that providing benefits does not contribute to determining employment status. To be clear, this is not intended to facilitate some kind of Faustian pact of providing benefits instead of employment reclassification. The Hermes self-employment plus deal, for example, requires that workers use route optimisation software and regulators will need to decide if this warrants reclassification on the basis of management control.[134]

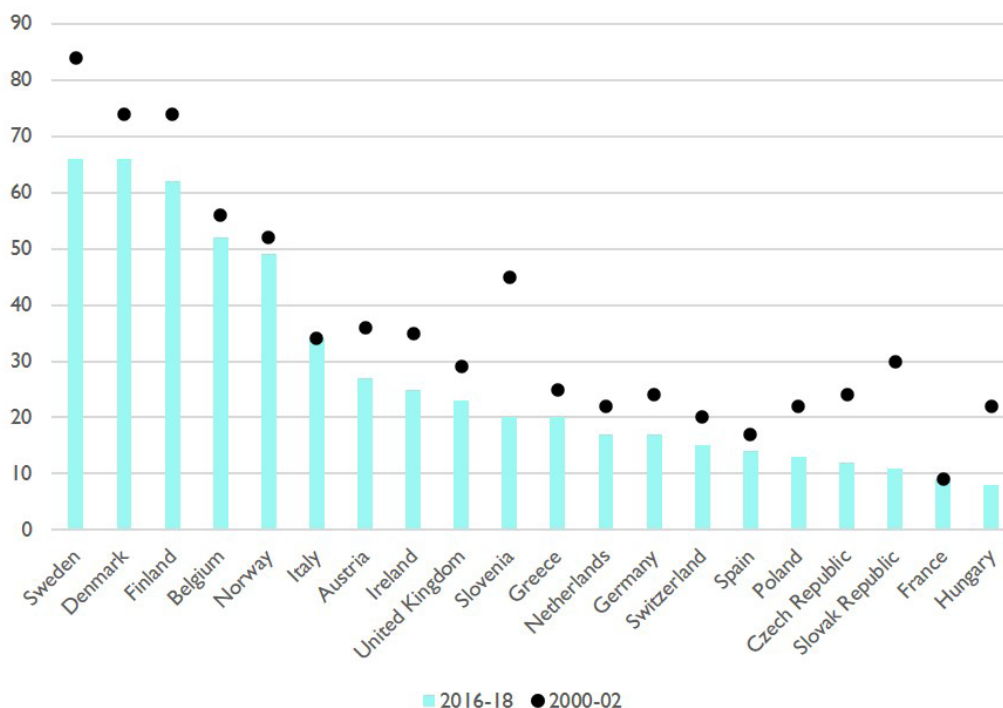134 Ibid.

Worker voice and power

Trade union density has been declining across most countries in Europe. As chapter 2 illustrates, this is due to a range of different factors, including the changing political landscape. In Britain, the challenge unions face has been characterised as existential. According to analysis from the Resolution Trust, due to the demographic profile of current union membership there would need to be an 80 percent rise in membership amongst the under 35s by 2030 just for total membership levels to stand still.[135] But unions are also grappling with similar challenges in countries where density remains high. During a previous RSA research interview with Martin Grønbæk Jensen, formerly of HK Lab, the innovation arm of one of Denmark's largest unions, he explained how in Denmark "people used to see the union as part of their identity. But the brand – being a 'HKer' – is not as strong as it used to be… union membership is seen as leftist, nostalgic. Young people working in portfolio careers want something else".[136]

Across Europe, unions and other worker voice organisations are innovating for the future of work by experimenting with digital forms of organising or new kinds of support services. In this section we identify some of the most promising innovations in worker voice and power. Within this theme, we identified over 50 innovations in Europe that cluster around five main intervention sets.

- **New organising models and expanded membership offerings**: new approaches to organise insecure workers from both within and outside of mainstream trade union movement.

Figure 14: Trade union density across Europe (RSA analysis of OECD data)

2016-18 ● 2000-02

135 Kelly, G. and Tomlinson, D (2018) Inexorable decline or moment of opportunity? [Article] Resolution Trust. Available at: resolutiontrust. org/inexorable-decline-or-moment-of-opportunity

136 Wallace-Stephens, F. (2019) The future of work in Denmark [blog] RSA. Available at: www.thersa.org/blog/2019/10/future-work-denmark

- **New kinds of collective agreements**: landmark agreements between unions and businesses that boost the working conditions of insecure workers.
- **Worker data and digital organising platforms**: tools that give workers more control over data about their working lives or amplify worker voice by enabling workers to more easily share information or organise around issues that affect them.
- **Platform cooperatives**: cooperatively owned, and democratically governed organisations that use platforms to facilitate the provision of goods and services.
- **Cooperative federations**: organisations and networks that can help smaller cooperatives reach greater scale.

New organising models and expanded membership offerings

In the UK, the Independent Workers' Union of Great Britain (IWGB) is a new union that represents mainly low-paid migrant workers, many of whom are in outsourced services or working in the gig economy. The fragmented nature of this work makes collective action difficult to coordinate. IWGB has a devolved model which sets it apart from other unions, placing decision-making power directly in the hands of workers. As a result, they have been able to make an impact where traditional unions have struggled. Following one recent successful campaign, the IWGB ended outsourcing of cleaners at the University of London. While the United Private Hire Drivers (UPHD) branch previously represented the lead co-claimants of the Uber worker rights case at the Employment Appeal Tribunal.

In November 2017, Deliveroo riders in Cologne announced they wanted to create a works council, a democratic governance structure that is common in Germany and gives workers wide-ranging decision-making powers over their company. At the heart of the campaign was a Facebook group called Liefern am Limit (Drivers at the limit). With the support of the German Food, Beverages, and Catering union (NGG), a work council was introduced in 2018. Although Deliveroo has since to terminate its operations in Germany, works councils have now been established at competitor Lieferando in Stuttgart, Nuremberg, Frankfurt, Hamburg, Bremen and Kiel.

Trade unions are also creating new membership offerings to support insecure workers. In January 2019, GPA-djp – the largest trade union in Austria – extended its membership to crowdworkers. The union aims to provide more specific information and legal advice on labour law issues for these workers who typically complete micro tasks such as data labelling or image recognition using platforms like Amazon Mechanical Turk. Similarly, IG Metall, the German metalworkers' union has been reaching out to platform workers. It has initiated Fair Crowd Work, a platform that crowdsources information about platforms from the perspective of workers and unions and provides an assessment of the issues facing workers. Furthermore, IG Metall recently introduced an Ombuds Office where crowdworkers who have been treated unfairly can submit a complaint and be assisted with grievances. This applies to platforms that have signed the Crowdsourcing Code of Conduct, signed by several digital platform companies in Germany.

National Italian union CGIL introduced a section for non-standard workers as far back as 1998. The NIdiL (New labour identities) section was particularly active during the Covid-19 pandemic,

highlighting the inadequate support provided to non-standard workers by the Italian government. Sindacato Informatici Networkers UILTuCS a trade union for ICT professionals in Italy also has a section for gig economy that offers legal and tax assistance, information and trade union representation in cases of disputes with the various platforms.

Box 14: Landmark agreements

A few landmark agreements between unions, platform workers associations, and platforms paved the way for improved working conditions for workers in the gig economy.

In Denmark, a collective agreement similar to that between GMB and Hermes was introduced between Danish union 3F and Hilfr, a platform for domestic cleaners. This entitles workers who have clocked over 100 hours on the platform to receive employment benefits such as holidays, sick pay, pension contributions and a minimum wage of €19 per hour. These workers become Hilfr employees (or "super Hilfr"), but those who just use the platform for odd jobs are free to opt out and remain self-employed.

The Riders Union Bologna in central Italy teamed up with national trade unions CGIL, CISL and UIL and the Municipality of Bologna to broker an agreement with food platforms Mymenu, Sgnam and Domino's pizza. The agreement led to the introduction of the voluntary "Charter of fundamental rights of digital labour in the urban context" which includes the right to insurance, the right to organise, the right to a fair wage, the right to be informed and to disconnect. The charter is meant to establish that, beyond the employment status classification of workers, platforms should provide a minimum threshold of protection standards for workers.

Worker data and digital organising platforms

Several tech for good start-ups in the UK are also developing solutions to enhance worker voice and power, under the banner of WorkerTech. Organise is an online platform that is designed to enable distributed, bottom-up organising for workers. Organise provides workers with the tools to collect their own data and build networks and advocate for change. Surveys, petitions and campaigns are written by directly affected workers, ensuring language that resonates and pulls in a wide variety of staff within an organisation. Organise has supported successful campaigns for better maternity pay at ITV, fairer wages at supermarket chain Tesco and an end to 'forced hugging' at Ted Baker.[137] During the pandemic they helped to campaign for £500 hazard pay for Amazon workers.[138]

One example is that of Earwig, an employer review platform for construction workers on temporary contracts. Akin to Glassdoor, a popular website where employees, both current and former, can review their company, Earwig provides relevant detailed and worker-led intelligence about how recruiters and employers treat workers so that they feel secure when choosing jobs. It aims to provide clearer data to workers in the construction sector on businesses and employment agencies, in order to allow workers to make more informed decisions and thus increase their voice and agency. Similarly, Breakroom describes itself as a "people-powered job comparison site". It is based on the recognition that star ratings don't usually tell the whole truth. Breakroom aims to provide unbiased, useful and honest reviews including information on pay, hours, training, sick pay entitlements and flexibility of working hours.

137 Jacobs, E. (2019) Workplace activism gathers pace after Ted Baker case. Financial Times [online] 18 January. Available at: www.ft.com/content/81cbfd2c-1803-11e9-9e64-d150b3105d2l

138 Organise (2020) Victory: Amazon workers win bonus for working through the pandemic. Organise, [blog] 30 June. Available at: organise.network/blog/2020/6/30/victory-amazon-workers-win-bonus-for-working-through-the-pandemic

The General Data Protection Regulation (GDPR) is a regulation in EU law on data protection and privacy. It, in theory, requires that all workers have a right to access the data that businesses hold about them and understand how it is being used to make decisions, including those around hiring, firing or promotions. But in many cases workers don't have the skills or support to interpret and understand their data. Worker Info Exchange has been set up to provide gig economy workers with analytics based on the data they can access under GDPR subject to access requests. For Uber drivers this includes data that can be used calculate their earnings per hour and how productively their time is utilised (ie driving passengers as opposed to waiting for fares).[139] Worker Info Exchange aims to pool this information through a data trust to give trade unions and other grassroots worker organisations ammunition to fight for fairer working conditions.

WorkSmart by the Trade Union Congress (TUC) provides an example of where a leading worker voice organisation is attempting to take innovation seriously, with a dedicated app trying to engage young workers who are at risk of exploitation. It has been developed through extensive user testing with young people and aims to provide them with job advice – for example on career progression and rights at work – in a way that is fun and engaging. Going forward they are exploring whether they will be able to identify and support defined networks of workers that will make collective action viable. This could, for example, begin with a network of baristas working across coffee shops in a city such as Liverpool.

Platform coops

New cooperatively owned and democratically governed organisations are being created in sectors where good work is currently out of reach for many. Like gig economy platforms, the provision of goods and services is brokered through an app. One such platform cooperative is Equal Care Co-op, in the care sector. The aim of the cooperative is to establish a more equal relationship between care givers and receivers, at the same time removing administrative burdens for its worker-members and people receiving care. The cooperative focuses on making jobs in the sector more attractive through higher rates of pay and greater autonomy at work.

In Bologna in Italy, a city with a rich history of worker cooperatives, COTABO, a cooperative of taxi drivers was instituted as early as 1967 to provide services including administrative and financial support as well as vehicle upkeep. Today customers can use a ride hailing app to find the nearest available taxi. In the UK, a cooperative of black cab drivers in London have introduced Taxiapp as an alternative to platforms like Uber.

In Germany, KOLYMA2 was founded in 2019 after British food delivery company Deliveroo stopped its services in Germany, due to fierce market competition by German market leader Lieferando. The couriers were left without an income and no support or protection suddenly, leading some to look for an alternative that would provide better protection for couriers. The coop doesn't position itself as a market competitor to Lieferando but has specific partnerships with several hand-picked restaurants. Mensakas, in Barcelona, is also led by former couriers of other platforms, who mostly participated in the 2017 strikes

139 Lockey, A. and Wallace-Stephens, F. (2020). Op cit.

against platforms which were the driving force behind the creation of the Riders X Derechos (Riders x Rights) campaign. Its mission is to prioritise the interests and rights of workers over capital and opaque algorithms. The cooperative also sees itself as support an ecosystem of local trade, responsible consumption and respect for the environment.

In 2016, Fairbnb was introduced in Bologna with the aim of providing a cooperative alternative to home-sharing, recognising the negative externalities of the Airbnb model in cities with pressing housing concerns such as Bologna. For now, the cooperative is a worker cooperative where 15 percent of income is split between the cooperatives and community projects in the area where guests stay. However, the aim is to create a multi-stakeholder cooperative, which would allow other stakeholders to have more ownership and control over operations and decision-making, including hosts, guests and local communities.

Cooperative federations

It is unlikely that platform coops will ever become direct competitors with the likes of Uber and Deliveroo platforms backed by venture capital investors with deep pockets. However, the platform coops profiled earlier in this report have had traction where they offer an alternative for more ethically minded consumers and businesses who care about workers' rights and the health of their local economy. During an interview with platform coop expert Trebor Scholz, he reiterated that "the endgame is never going to be a meaningful competition with Uber – but coops offer an alternative and can cut into the margins of larger platforms a little bit".

Scholz explains that "if you look at the history of co-ops, they group together as federations, that is the way they can have scale". This is the case of one of the most often cited examples of the successes of worker cooperatives: that of Mondragón, in the Basque region in Spain. The Mondragón Corporation was founded in 1956 as an industrial cooperative and now consists of over 100 federate cooperatives, and includes its own bank, university, business incubator and social welfare agency. The federation represents the largest employer in the Basque region, and it is among the largest companies in Spain and the largest coop in the world. The success of Mondragón is often attributed precisely to its federated nature, where different cooperatives band together to attain economies of scale, and to the creation of support cooperatives that could finance the federation's growth and provide technical assistance.[140]

Vera Zamagni, professor of economic history at the University of Bologna, has pointed out that an alternative to centralised approach like that of Mondragón, which may not be feasible in all sectors, is networked ecosystem.[141] An example of an attempt to scale cooperatives in this way is CoopCycle. Based in Paris, it is a federation of courier platform cooperatives that are active in more than 50 cities in eight countries. Through resource pooling it reduces costs for individual cooperatives, including KOLYMA2 and Mensakas that were profiled earlier in this section. It also supports individual couriers creating new cooperatives, sharing the customer facing smartphone app and knowledge around business strategy and pricing. All riders in the CoopCycle federation are employees, allowing couriers to access a stable income and better working conditions.[142]

140 Hackl, T. (2020) Mondragón: One of Spain's largest corporations belongs to its workers. Kontrast.at, [online] 8 March. Available at: scoop.me/mondragon-one-of-the-largest-corporations-in-spain-belongs-to-its-workers/

141 Duda, J. (2016) The Italian Region Where Co-ops Produce a Third of Its GDP. Yes Magazine, [online] 5 July. Available at: www.yesmagazine.org/economy/2016/07/05/the-italian-place-where-co-ops-drive-the-economy-and-most-people-are-members/

142 Smith, T. (2021) The Europeans rethinking the gig economy model. Sifted, [article] 21 January. Available at: sifted.eu/articles/rethinking-the-gig-economy/

Pathway to systems impact 3: union innovation funds

In this chapter we highlighted examples of unions innovating for the future of work by experimenting with digital forms of organising or providing new kinds of financial and other support services. Scaling such experiments, however, will require new mindsets and ways of working within trade unions. As Palak Shah of the American union, the National Domestic Workers Alliance (NDWA) explains, innovations such as Alia – a platform that provides domestic cleaners with portable benefits (see section 4.2) "emerge from throwing spaghetti at the wall". While HK Lab work with product development methodologies such as the Lean Startup, which allows organisations to rapidly discover if a proposed business model is viable through a combination of experimentation, iterative product releases and validated learning.[143]

In order to experiment with new forms of organising, unions will also have to build their capacity to work with data. James Farrar of Worker Info Exchange explains how "the biggest lessons I ever had about organising I learnt from Uber itself - we've got to collect the data, use it, analyse it".[144] A survey by the TUC Digital Lab reveals that while some unions have established digital transformation teams most "still see 'digital' primarily as a communications channel. Most of their spending is on short-term maintenance rather than developing new products and services".[145] Money remains one of the biggest barriers to innovation. Fredrik Söderqvist of Unionen, the largest trade union in Sweden suggests that "unions will need new and better tools to do old-fashioned union work". But he adds that "while they must do the actual work, they need resources, and this is difficult given the declining trends in membership". [146]

To support unions to develop their capacity for innovation, we recommend that the government creates a union innovation fund. This could build on a proposal from the European Trade Union Confederation (ETUC) that a fund be set up to "build the capacity of social partners for social dialogue, industrial relations and collective bargaining".[147] The union innovation fund should be focused on scaling up projects that aim to increase union density, particularly among underrepresented groups (eg young and atypical workers). The fund should also be accessible to relevant WorkerTech and other social innovations where those organisations commit to working in partnership with trade unions. The union innovation fund should look to foster scalable projects between innovators like Earwig and relevant unions, in this case Unite the Union, the UK's main union for construction workers.

143 Lockey, A. and Wallace-Stephens, F. (2020). Op Cit.

144 Ibid.

145 TUC Digital Lab (2019) Digital in UK unions: Measuring our digital journey. [pdf] London: TUC. Available at: digital.tuc.org.uk/wp-content/uploads/dlm_uploads/2019/10/Digital-in-UK-unions-measuring-our-digital-journey-survey-report-2019.pdf

146 Lockey, A. and Wallace-Stephens, F. (2020). Op Cit.

147 European Trade Union Confederation (2019) ETUC Action Programme 2019-2023. [online] Available at: www.etuc.org/en/publication/etuc-action-programme-2019-2023

BUILDING A FIELD

In this report, we also wanted to explore what other actors could do to help deepen and scale the impact of innovators. This section of the report puts forward a series of around field building for calls to action the future of work. As Cassie Robinson, founder of The Point People, has said, "field building" is to social impact what market-making is in purely commercial environments: it creates the enabling conditions into which innovations can grow and thrive. For good work innovations, to go mainstream, we will need enabling innovations in finance, open data and open sourcing and policy, regulation and procurement.

6

Building a field

To complement our desk-based research and innovation mapping analysis we convened a series of workshops and interviews to hear first-hand how the Covid-19 pandemic has impacted social innovators and the workers they support. Our conversations spanned a range of common themes.

Some organisations have launched new products and services or engaged in advocacy efforts to ensure that workers in non-standard employment arrangements have been able to access government support. For those starting out, the pandemic has created opportunities to build credibility and get funding for projects that respond directly to the crisis. For example, we heard about how a London-based delivery platform cooperative had started doing food bank deliveries.

However, many organisations that have had to pause or dial back activity, are concerned about survival and have had to furlough staff. Meanwhile, the funding landscape has reportedly dried up, despite the pandemic helping to raise the profile of future of work issues. As one innovator put it "it's frustrating because the pandemic highlighted why what we were doing was so important, but everyone's conservatism has increased".

This report follows the launch of the RSA's good work guild, a new endeavour to bring together a global community of practice to amplify good work principles. Over the next year we will bring together social innovators alongside institutional actors, such as policy makers and investors, to explore opportunities for learning, shared sense-making, collective action and advocacy. Our aim is to create a knowledge commons for members to share and swap best practice. But we also hope to create a better interface between micro and meso actors and nurture

potential partnerships between them. The meso here also includes unions and employer organisations who may be able to support with resources or reaching new groups of workers.

In this report, we also wanted to explore what other actors could do to help deepen and scale the impact of innovators. This section of the report puts forward a series of **calls to action** around field building for the future of work. As Cassie Robinson, founder of The Point People, has said, "field building" is to social impact what market-making is in purely commercial environments: it creates the enabling conditions into which innovations can grow and thrive.[148] For good work innovations to go mainstream, we will need enabling innovations in finance, open data and open sourcing and policy, regulation and procurement.

Access to finance

Access to finance is frequently identified by innovators as one of the most significant challenges they face when trying to scale their impact. During an interview with RSA researchers, Devin Cook, Associate Director at the MIT Initiative on the Digital Economy suggested that "helping people identify capital channels is the number one ask of most of the innovators I've worked with". While the number of socially minded investors interested in the future of work is growing, it remains a relatively niche area. At one of our workshops we heard that there remains resistance to supporting projects that could disrupt existing power dynamics. As one innovator put it, "if you have got something sexy like an app, it's easier; if you are dealing with low income people, it's not sexy. In some cases, founders feel they need to cover up what they are doing and make it look different in order to get funders interested. And the moment you start focusing on empowering the workers, it gets taken off the table".

148 Conway, R., Leadbeater, C. and Winhall, J. (2019) The Impact Entrepreneur: Building a New Platform for Economic Security in Work [pdf] London: RSA. Available at: www.thersa.org/globalassets/pdfs/reports/impact-entrepreneur-report.pdf

There have been some promising enabling innovations in recent years, particularly in financing worker centric start-ups in the UK. The Nesta's CareerTech Challenge Prize is a partnership with the Department for Education focused on stimulating new solutions for workers in insecure work or at risk of automation, to upskill and retrain online, or access accurate data-driven information, advice and guidance that helps them find work. The £1.2m programme has awarded funding and support to 20 innovators.[149] The WorkerTech partnership between Resolution Ventures and Bethnal Green Ventures, which previously has supported many of the innovations featured in this report through its Tech For Good accelerator, has recently created a £1.3m investment programme backed by Joseph Rowntree Foundation, Friends Provident Foundation, Accenture, Ufi VocTech Trust and Trust for London.[150]

But according to the stakeholders we spoke with, similar initiatives are few and far between on continental Europe. According to future of work expert Albert Cañigueral, "Tech4Good and impact investors in Europe still don't have much of a focus on future of work and workers. It's not one of the traditional 'verticals' like education, health or water". Governments and impact investors should draw on best practice to create challenge prizes and accelerator programmes that support the development of good work innovations across Europe, particularly where our innovation mapping suggests there are gaps in intervention sets and demand for new kinds of support.

Moreover, as a 2016 policy briefing on scaling social enterprises by the European Commission and OECD suggests, where funding for social ventures is available, that it is often short-term, usually for one to three years, which can hinder scaling over time by creating a high degree of uncertainty.[151] In the RSA's Impact Entrepreneur report, which detailed the

learnings from our Economic Security Impact Accelerator, Rowan Conway, Charlie Leadbeater and Jennie Winhall argue that funding for social ventures usually takes the shape of a funnel – and that while this catalyses some successful start-ups, there is a need for approaches that operate more like an amplifier.[152] The good work guild will aim to do this through forging partnerships, building networks and using communications channels to shape the wider debate about the future of work.

Social innovators Mona Mourshed and Maryana Iskander argue that "foundations and other funders should also redirect their financial clout to demand that the nonprofits they support show a clear path to embedding their work inside government systems". They point out that Co-Impact and the Skoll Foundation are two important funders who are already supporting this direction, "in part by giving social enterprises longer time horizons to achieve system change using multiple measures of impact".[153]

The European Commission and OECD suggest that funders should collaborate more to gain awareness of each other's approaches to investing and strategic priorities, as well as the projects being funded and gaps in their respective portfolios and approaches to impact evaluation, with a view to joining forces and pooling resources in others.[154] During one of our workshops with innovators, many expressed a desire to collaborate on shared impact measures or KPIs "that help people understand monetary and social impact value in a standardised format

149 Nesta (2021) CareerTech Challenge [online]. Available at: www.nesta.org.uk/project/careertech-challenge/

150 Marston, L. (2020) Introducing the Workertech Partnership. Resolution Foundation, [online] 10 November. Available at: www.resolutionfoundation.org/comment/introducing-the-workertech-partnership/

151 European Commission and OECD (2016) Policy Brief on Scaling the Impact of Social Enterprises. [pdf] Luxembourg: Publications Office of the European Union. Available at: www.oecd.org/employment/leed/Policy-brief-Scaling-up-social-enterprises-EN.pdf

152 Conway, R., Leadbeater, C. and Winhall, J. (2019). Op Cit.

153 Mourshed, M. and Iskander, M. (2021) Op Cit.

154 European Commission and OECD (2016) Op Cit.

and ground people in the challenges of today. Rather than something that could happen 50 years in the future". This could help create a shared narrative around contemporary future of work challenges and the collective impact of social innovators. Indeed, an impact investor we interviewed reiterated that "collective data gathering on who is benefitting from innovations like these – that would be really valuable".

Box 15: Calls to action: access to finance

- Impact investors should collaborate to develop challenge prizes and accelerators that support the development of new innovations in the future of work across Europe.

- Impact investors should collaborate to develop scale up funding mechanisms that are dedicated to field building and supporting partnerships between micro actors such as social innovations and meso institutions such as trade unions or public employment agencies.

- Social innovators should collaborate on monitoring and evaluation to create a shared narrative around future of work challenges and their collective impact.

Policy, regulation and procurement

Innovators and institutional actors often don't see each other as natural collaborators. In developed European countries there is a bias from institutional actors toward top-down, regulatory solutions, and innovations are sometimes seen as ways of legitimising gaps in social protection or government support. On the other hand, innovators want to move quickly and often see the prospect of trying to change regulation or institutions

as laborious. As an innovator at one of our workshops put it "if we wait for regulation to catch up we will play a very long game".

Innovators should not wait for institutions to get their house in order before starting to work on problems, but they should be aware of the contexts in which they operate. Longer term, changes in the regulatory landscape of different countries will significantly impact the viability of their business model. Portify was recognised in the 2018-19 Future Work Awards for an innovative approach to improving the financial security of workers in the gig economy. Portify enabled these workers to connect their bank account to the app and see their financial activity across all the platforms they work with, using this data to provide credit to help manage income volatility. More recently they have pivoted away from this segment and towards a mass market financial inclusion product.

In a recent interview with RSA researchers, Portify's CEO and co-founder Sho Sugihara explained how the company felt there was a ceiling to their scalability through partnerships with gig platforms alone, noting that with the exception of large platforms like Uber and Deliveroo the market is fragmented and characterised by a long tail of smaller platforms. This, together with regulatory uncertainty meant that in 2020 Portify shifted their focus towards a B2C mass market credit score building financial inclusion product. Reflecting on the recent Uber supreme court ruling Sho tells us, "as a company we remain committed to financial inclusion, but had to choose a different means to scale our impact. We welcome the additional benefits that will be granted to gig workers in light of the ruling, which simultaneously confirms our belief that capturing the gig economy benefits will get harder as such provision of benefits moves in house".

Portify is VC backed start-up and so may have faced different incentives to social entrepreneurs or grassroots organisations, but the example highlights the importance of regulatory landscape in affecting business model viability. This is central to the RSA's living change approach, 'think like a system, act like an entrepreneur'. This encourages changemakers to first think deeply about the nature of social problems and understand the complexity of the surrounding system, before identifying where there are opportunities and energy for change and experimenting with new solutions.

In chapter 3 we illustrated the need for portable benefits. Given current regulatory uncertainties associated with the knock-on effects of the recent Uber ruling, the pensions gap in the UK is a particularly interesting area to explore here. Because even if all workers in the gig economy are reclassified as workers with access to greater employment protections, many would fall below earnings thresholds for auto-enrolment (£10,000). While those that earn above the threshold to opt-in (£5,876) would benefit from having a single pot that multiple employers can contribute to.[155] As the impact of Alia in the US demonstrates, it's possible for innovators at the micro level to influence the macro level regulations and laws in a way that can lead to more widespread adoption of products and services, and a lasting impact on people's working lives.

There is an opportunity for social innovators to work together to anticipate potential shifts in the policy and regulatory landscape of the countries they operate in and identify energy for change and opportunities for advocacy. But regulators could also be more forthcoming as they have been in other sectors such as financial services. For example, in the UK, the FCA has set up a regulatory sandbox that allows start-ups to test innovative products, services, business models and delivery mechanisms in a live environment with real users under regulatory supervision.

Through the FCA sandbox, innovators can access regulatory expertise and a set of tools to facilitate testing, including temporary waivers or modifications to regulatory rules.[156] In 2018 the UK government accepted the Taylor Review's recommendation to work with partners to stimulate the development of a range of WorkerTech platforms and allow new and emerging solutions to develop and grow in a sandbox environment.[157] But there has been little follow through here to date. Governments and regulations across Europe should draw on this novel approach to regulation to support the development of future of work innovations, particularly those that interact with heavily regulated industries such as pensions or financial services, or could be affected by changes to employment law.

In chapter 3 we also illustrated the need for more partnerships between innovations in skills, training and lifelong learning and public employment services. Establishing strategic partnerships with public sector organisations can provide a pathway to scale their impact by providing distribution channels for services and helping them to reach new users. They may also be able to provide support with investment and specialist expertise (eg legal). While mainstreaming innovative approaches will have obvious benefits for government agencies. The RSA is currently working with the Mastercard Center for Inclusive Growth and Bayes Impact to pilot a new digital career coaching platform in France. Critical to the success of the platform will be how it fits within the existing training and careers eco-system. Bayes Impact is exploring partnerships with key system actors, including Caisse des Dépôts (who operates France's Compte Personnel de Formation), to develop a strategy to reach 100,000 French users over the next two

155 Wallace-Stephens, F. (2019) The retirement gig [blog] RSA. Available at: www.thersa.org/blog/2018/02/the-retirement-gig

156 Financial Conduct Authority (FCA) (2021) Regulatory Sandbox. [online] 6 January. Available at: www.fca.org.uk/firms/innovation/regulatory-sandbox

157 Department for Business, Energy and Industrial Strategy (2018). Good work plan. [pdf] OGL: London. Available at: www.gov.uk/government/publications/good-work-plan

years. We are also working with the Bayes Impact team to understand how this tool can be adapted to the UK market.

One early finding is that there are barriers around procurement and endorsement and support for existing innovations in this space. This insight is transferable across other contexts outside the UK, where governments are developing innovations that compete with, duplicate or cannibalise existing interventions in the market. Or where procurement policies and service standards act more as entry barriers than market shaping enablers. There is a role for government to play in understanding the innovation market, in order to prioritise public funding and investment, and to create the enabling infrastructure to improve the quality, reach and impact of existing innovation markets.

Box 16: Calls to action: policy, regulation and procurement

- Social innovators should work together to anticipate potential shifts in the policy and regulatory landscape of the countries they operate in and identify energy for change and opportunities for advocacy.

- Governments and regulators should run regulatory sandboxes to stimulate the development of new future of work innovations across Europe.

- Governments should reduce procurement barriers and avoid spending public funds duplicating innovations that already exist, instead focusing on creating an enabling environment for innovators and prioritising support and investment to scale their impact.

Open data and open sourcing

System changing innovations will require a complementary field of innovations. As Rowan Conway, Mission Oriented Innovation Network at UCL's Institute for Innovation and Public Purpose has put it, "the jet airliner needed not just jet engines, but longer, better runways and larger airports; an electric car will be useless without good batteries and an infrastructure of recharging points".[158] Open banking reforms, which force the UK's biggest banks to share the financial data they hold on their customers with start-ups (at the customer's request) have transformed the financial services industry. This has led to a range of new products and services that improve the financial wellbeing of consumers, including some of the innovations profiled in chapter 4 such as Trezeo.

In skills, training and lifelong learning, this is not far from a reality in some countries. For example, the public employment service in Sweden has created JobTech Development, which provides Application Programming Interfaces (APIs) and other open-source technology for those who have an idea on how to improve the functioning of Sweden's labour market. Through these digital tools innovators can access and use the data that the public employment service holds to develop new products and services for workers. JobTech Development also hosts hackathons to support new innovations in the field.[159] Similarly, the Department for Education in the UK has developed labour market information (LMI) for all. Nesta not only provide funding to innovators through the CareerTech Challenge, they have also open sourced the underlying code of research that maps viable pathways to new jobs for workers at risk of automation. Their ambition is for

158 Conway, R., Leadbeater, C. and Winhall, J. (2019). Op Cit.

159 JobTech Development (2021) JobTech Development. [online] Available at: jobtechdev.se

these resources to be used by innovators to augment the digital tools for career services they are developing.

But there is a lack of analogous enabling innovations that relate to supporting non-standard workers. The challenge here is that the data is held by private companies rather than the public sector. In this area, open data could be even more transformative. This remains a poorly understood segment of the labour market and more information on their working lives could greatly improve the quality and quantity of products and services that support their needs. Argyle enables gig economy workers in the US to make all of the data about their working lives available through a single API. This includes data about their identity, finances, hours worked, jobs completed, and reputation (eg ratings and reviews). The data can then be shared with a range of different service providers, including banks and lenders, insurers and recruiters.[160]

Access to this kind of data could be provided by a data trust model that the RSA has previously advocated. Developing a precise definition of what constitutes a data trust is not easy. In the purest sense, most data trusts seek to emulate conventional trust governance models – data shared into the trust is managed on behalf of the data holder by a trustee or trustees with clear duty of care fiduciary responsibilities. This means that the trustee is legally barred from holding a financial or any conflicting interest that would prevent responsible stewardship of that data. Nesta however, define them more broadly as "institutions that work within the law to provide governance support for processing data and creating value in a trustworthy manner".

Open data stored in data trusts could become the bedrock of an open source WorkerTech ecosystem. At the micro level, there is also huge scope for innovators to look to open source solutions as a route to scaling their impact. Innovators often create networks of organisations to encourage take-up of innovative practices or expand delivery of an innovative service or programme while maintaining their locally embedded dimensions. Sometimes this can be done through more formal partnerships such as franchises. But in other cases, it is done more informally, for example, through sharing 'white label' versions of the technology that has been developed. An exciting mentioned earlier in this report is CoopCycle, a federation of delivery and courier platform coops that are active in more than 50 cities in eight countries. CoopCycle helps couriers launch their own platform coop, by sharing the tech for the platform software, including the customer facing smartphone app, as well as knowledge around business strategy and pricing.[161]

During our workshops with innovators, the potential for open sourcing tools and sharing best practice was flagged as a key area that members of the good work guild were interested in exploring. As one innovator explained, "during an accelerator programme I was supporting, many of the start-ups were making the same mistakes that we did four years ago. That is a sign of a faulty ecosystem". Others noted how this can be a particular challenge when many innovators "with social beliefs, but private sector nonetheless" might see each other as in competition and recognised a role for an organisation like such as the RSA as an impartial convener.

Box 17: Calls to action: open data and open sourcing

- Governments should play an active role in nurturing a WorkerTech ecosystem which encompasses data trusts, particularly for workers in the gig economy.

- Social innovators should share learnings and open source tools as a route to scaling their impact.

160 Marsden, B. (2021) How we're helping to build a more inclusive financial system. Argyle, [blog] 4 May. Available at: argyle.com/blog/democratizing-data

161 Smith, T. (2021) Op Cit.

CONCLUSION

7

Conclusion

The pandemic is likely to accelerate the pace of technological change and automation across Europe. While labour markets in some countries and regions are characterised by particularly high levels of insecure work, the pandemic has helped to surface some of the challenges these workers face. A future of good work for all is possible. But we will need new approaches to skills, training and lifelong learning, to economic security (particularly for workers outside of traditional employment arrangements), and to worker voice and power.

This report intends to complement an emerging body of research from the RSA Future Work Programme that aims to explore the contribution that bottom-up grassroots innovators can make towards addressing these challenges. A new social contract will require that we reimagine the institutions responsible for work and redraw their respective rights and responsibilities. Innovators are often the ones doing the hard work at the early stage here, demonstrating the effectiveness of novel approaches, defining new markets and proving demand. But for innovators to have a lasting impact on people's working lives, they will likely need to shape – and be shaped by – the regulatory and institutional landscape of different countries.

We hope that the report and accompanying online directory help to raise awareness and recognise the contribution that these organisations are making, and can be used by policy makers and social investors to spot opportunities for new ways to support workers. And by showcasing emerging best practice we want to encourage people to kick start similar initiatives in their own communities.

The RSA is committed to impact and are proud of how we have contributed to change in this space to date. For example, following the RSA's Economic Security Impact Accelerator, Labour Xchange partnered with fellow alumni Trezeo and Dinghy to work with local authorities in the UK to provide a more end-to-end solution to improve the economic security of care workers. While a partnership between fellow alums Bayes Impact and AHC – a social enterprise working to resettle refugees through the labour market and social integration – was recently announced as the winner of the Nesta CareerTech Prize.

The RSA's good work guild will build on this work. Over the next year we will bring together social innovators alongside institutional actors such as policy makers and investors to explore opportunities for learning, shared sense-making, collective action and advocacy. Our aim is not only to create a knowledge commons for members to share and swap best practice. We also hope to create a better interface between micro and meso actors and nurture potential partnerships between them.

But field building for the future of work will require actions from others. We will need enabling innovations in financing, in open data and open sourcing as well as more agile approaches to regulation to help scale and deepen the impact of innovators.

Appendix A: Skills, training and lifelong learning

Innovation	Website	Intervention set	Country
Kokoroe	www.kokoroe.fr/	Online learning	France
Reaktor Education	www.reaktor.com/work/education/	Online learning	Finland
CuppaCare	www.cuppacare.com/	Online learning	UK
Kinderly	kinderly.co.uk/cpd-training/	Online learning	UK
Silver Starters	silverstarters.org/	Online learning	Netherlands, Poland, Italy
Level Up	levelup.openclassrooms.com/en/index.html	Online learning	France, UK, Belgium
Digitala jag	www.digitalajag.se/	Online learning	Sweden
Citizen Literacy	citizenliteracy.com/	Online learning	UK
Enrol Yourself	www.enrolyourself.com/	Peer learning networks	UK
My Education Club	myeducationclub.com/	Peer learning networks	Bulgaria
New Austrian Coding School	www.newaustriancodingschool.at/	Technology bootcamps	Austria
Simplon	en.simplon.co/	Technology bootcamps	Romania, France
TechUP	techupwomen.org/	Technology bootcamps	UK
Konexio	www.konexio.eu/en.html	Technology bootcamps	France
Gleechi	www.gleechi.com	Augmented learning	Sweden
Humanitarian Leadership Academy	www.humanitarianleadershipacademy.org/safeguarding-vr-launch-of-a-new-immersive-experience/	Augmented learning	UK
How Do I?	wearehowdoi.com/	Augmented learning	UK
Credly	info.credly.com/	Digital credentials and skills profiles	global
Tendo	tendo.com/	Digital credentials and skills profiles	UK
Kluspaspoort	kluspaspoort.nl/?lang=en	Digital credentials and skills profiles	Netherlands
FutureFit AI	www.futurefit.ai/	Digital career coaching	UK
Singularity Experts	singularity-experts.com/	Digital career coaching	Spain

Appendix B: Economic security

Innovation	Website	Intervention set	Country
Trezeo	www.trezeo.com/	Income smoothing and cash flow management	UK and Ireland
Wollit	wollit.com/	Income smoothing and cash flow management	UK
Etch	www.etch.work/	Income smoothing and cash flow management	UK
Wagestream	wagestream.com/	Income smoothing and cash flow management	UK
SteadyPay	www.steadypay.co/	Income smoothing and cash flow management	UK
Hastee	www.hastee.com/	Income smoothing and cash flow management	UK
Mansa	getmansa.com/	Income smoothing and cash flow management	France
Tully	www.tully.co.uk/how-we-help	Financial capability and wellbeing	UK
Sherpa	sherpascore.com/how-does-it-work/	Financial capability and wellbeing	UK
SafetyWing	safetywing.com/	Insurance as an employment protection	Norway
Indeez	indeez.eu/press-release-covisure/	Insurance as an employment protection	European
Wemind	www.wemind.io/	Insurance as an employment protection	France
Broodfonds	www.broodfonds.nl/	Insurance as an employment protection	Netherlands
CommonEasy	www.commoneasy.nl/	Insurance as an employment protection	Netherlands
Collective Benefits	www.collectivebenefits.com/	Insurance as an employment protection	UK
Coopaname	www.coopaname.coop/	Umbrella cooperatives	France
Doc Servizi	docservizi.retedoc.net/en/network/	Umbrella cooperatives	Italy
Lilith	www.lilith.fi/en/	Umbrella cooperatives	Finland
Smart	smart.coop/	Umbrella cooperatives	Belgium
The Care Hub	thecarehub.ro/	Fairer gig platform	Romania
Seniors@work	www.seniorsatwork.ch/	Fairer gig platform	Switzerland
Labour Xchange	www.labourxchange.uk/	Fairer gig platform	UK
Humans in the Loop	humansintheloop.org/	Fairer gig platform	Bulgaria

Appendix C: Worker voice and power

Innovation	Website	Intervention set	Country
IWGB	iwgb.org.uk/	New organising models and expanded membership offerings	UK
United Private Hire Drivers	uphd.org.uk/	New organising models and expanded membership offerings	UK
Liefern am Limit	digitalplatformobservatory.org/initiative/deliveroo-works-council-in-cologne-and-other-german-cities/	New organising models and expanded membership offerings	Germany
GPA - djp	www.gpa.at/	New organising models and expanded membership offerings	Austria
Fair Crowd Work	faircrowd.work/	New organising models and expanded membership offerings	Germany
IG Metall - Ombuds Office	ombudsstelle.crowdwork-igmetall.de/en.html	New organising models and expanded membership offerings	Germany
Nuove Identità di Lavoro	www.nidil.cgil.it/	New organising models and expanded membership offerings	Italy
Sindacato-Networkers	sindacato-networkers.it/	New organising models and expanded membership offerings	Italy
Hilfr-3F	hilfr.dk/en/about-super-hilfrs	New kinds of collective agreements	Denmark
Riders Union Bologna	digitalplatformobservatory.org/initiative/riders-union-bologna/	New kinds of collective agreements	Italy
Organise	organise.network/	Worker data and digital organising platforms	UK
Earwig	www.earwigwork.com/	Worker data and digital organising platforms	UK
Breakroom	www.breakroom.cc/	Worker data and digital organising platforms	UK
Worker Info Exchange	www.workerinfoexchange.org/	Worker data and digital organising platforms	UK
WorkSmart	worksmart.org.uk/	Worker data and digital organising platforms	UK
Equal Care Co-op	www.equalcare.coop/	Platform cooperatives	UK
COTABO	www.cotabo.it/chi-siamo/storia-della-cooperativa/	Platform cooperatives	Italy
Taxiapp	taxiapp.uk.com/	Platform cooperatives	UK
KOLYMA2	www.kolyma2.de/en/	Platform cooperatives	Germany
Mensakas	www.mensakas.com/	Platform cooperatives	Spain
Fairbnb	fairbnb.coop/	Platform cooperatives	Italy
CoopCycle	coopcycle.org/en/	Cooperative federations	France

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