OECD Forum for Local Development
Practitioners, Entrepreneurs, and Social Innovators

A new world of work: Global trends and local actions

18-19 September 2018 | Porto, Portugal

POLICY HIGHLIGHTS

OECD

Acknowledgements

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The project was managed by Jonathan Barr, Head of Employment and Skills Unit, with support from Alessandro Kandiah, Junior Policy Analyst, under the supervision of Sylvain Giguère, Head of Local Employment, Skills and Social Innovation (LESI) Division and LEED Programme. Joaquim Oliveira Martins, Deputy Director, and Karen Maguire, Senior Counsellor, provided overall guidance.

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Executive Summary

Megatrends related to digitalisation, automation and the development of the 'gig' economy are reshaping the way people live and work. A significant proportion of jobs will change or disappear altogether but the new world of work also creates unprecedented opportunities for both people and places to transform society and promote inclusive growth. By 2019, it is estimated that 1.4 million new industrial robots will be installed in factories around the world. The pace of technological change requires that we rethink local and regional development policies. Some communities are going to be harder hit than others and must look for new ways of creating quality jobs.

The OECD Forum for Local Development Practitioners, Entrepreneurs and Social Innovators brought together around 300 participants from the local, national and international level, including mayors, employers, social innovators, entrepreneurs, as well as national government leaders, to identify actions needed to re-shape workplaces of the future and take advantage of new ways of producing, creating, and working.

Three plenary sessions, on "Rethinking local employment and skills policies in a polarising labour market", "Social innovation for a more inclusive labour market" and "Enabling small firms and entrepreneurs to thrive in the new world of work", were complemented by eight interactive and thematic workshops, exploring the different features of the future of work, and local lessons learnt sessions from the cities of Braga and Viana do Castelo. During the Forum, Lamia Kamal-Chaoui, Director, Centre for Entrepreneurship, SMEs, Regions and Cities, OECD, launched the flagship publication "Job Creation and Local Economic Development 2018: Preparing for the Future of Work", presenting brand new evidence on the regional implications of automation and non-standard forms of employment.

Key Forum takeaways include:

- **Technology will eliminate jobs but not work**. However, governments, employers and employees should start preparing now for the future of work. Employment and skills policies will need to be adapted to the specificities of regions and cities.
- **Social innovation can play a crucial role in the face of technological and digital changes**, especially by fostering labour market inclusion. Partnerships among public, private and civil society actors are needed to provide adequate financing and unleash the full potential of social innovations.
- **Digitalisation opens up new opportunities for SMEs to innovate, scale up and create jobs**. But to seize these opportunities, investment in skills development and up-skilling is essential. Integrated approaches, combining policy measures and recognising trade-offs and synergies, need to be complementary to financing support.

Opening and Launch sessions

Opening session

Technological progress, including automation, is a driver of productivity growth and increases living standards. However, **rapid automation can leave some people behind**, including both workers that struggle to find their place in a changing labour market and firms that do not keep pace with technological innovations, raising **concerns of inequalities**. While national policies are starting to address the future of work, the potential trade-offs between supporting productivity-enhancing technological advances and preserving jobs in the short-term are felt the most locally.

This historical moment creates opportunities to **balance territorial asymmetries and add value to human resources**. Portugal is deploying important efforts to prepare places and workers for the new world of work, including the prioritisation of investment in education and skills, the development of digital infrastructures and university-business interfaces for knowledge transfers. However, more needs to be done to adapt policies to the needs of knowledge-based and technology-based societies. National governments can play a key role, by fostering social dialogue among different stakeholder, including local actors. Action must be taken now to avoid dangerous potential consequences due to inaction, such as increased inequalities and social exclusion.

In this context, the importance of discussing and exchanging international best practices on **how cities and regions are preparing for the future of work** should not be underestimated. Much can be learned from the efforts that both the Norte Region and the City of Porto are making to ensure that citizens have the right skills needed in a fast-changing labour market.

Distinguished Speakers

Mari Kiviniemi, OECD Deputy Secretary-General

Fernando Freire de Sousa, President, Norte Portugal Regional Coordination and Development Commission (CCDR-N), Portugal

Miguel Pereira Leite, President of Municipal Assembly, Porto, Portugal

José António Vieira da Silva, Minister of Labour, Solidarity and Social Security, Portugal

Launch session

Drawing on new data on the occupation of workers, the OECD flagship publication "Job Creation and Local Economic Development 2018: Preparing for the Future of Work" examines the **geographical distribution of the risk of automation** and whether jobs lost to automation are compensated by the creation of jobs in occupations at lower risk of automation. The same data are used to investigate the rise of non-standard work such as temporary employment, part-time employment and "false" self-employment.

The report also explores the **nexus between productivity and inclusiveness at regional and city level**, and then considers tailored policies and programmes that address the concern of particular disadvantaged groups, such as Indigenous People, and the under-utilised potential of the social economy to foster inclusion.

Key messages from the report include:

- **The impact of automation on jobs will be uneven across OECD regions and local communities.** While there are notable shares of jobs at some risk of automation in all regions, the share of jobs at high risk reaches nearly 40% in some regions (for example, West Slovakia) but can be as low as around 4% in others (region around Oslo).
- **Non-standard work is also rising unevenly and precariously**. Technological changes in the nature of work may also be contributing to the increases in temporary and part-time work in most OECD countries. Again, policies need to consider the within-country differences. For instance, in Greece the share of non-standard jobs grew by 7% in one region but declined by 11% in another from 2010-16.
- **Productivity and inclusiveness can go hand-in-hand**. While technology tends to increase labour productivity for many jobs, some groups may find themselves increasingly excluded from the labour market or stuck in unemployment, low-wage jobs or non-standard work. Policies to integrate disadvantaged groups – such as the long-term unemployed, people with disabilities, and migrants – will be critical for social cohesion and to address inequalities.

Panellists

Lamia Kamal-Chaoui, Director, Centre for Entrepreneurship, SMEs, Regions and Cities, OECD

Introduction by Peter A. Creticos, President and Executive Director, Institute for Work and the Economy

Plenary sessions

Plenary 1: Rethinking local employment and skills policies in a polarising labour market

Concerns about technological progress and its impact on human labour are not something new: the fear that machines would replace humans has been present for centuries. Technological innovations have traditionally given rise to news jobs and productivity growth deriving from automation has raised living standards. However, automation also poses challenges for workers: the labour saving effects of automation can be sudden, while it might take time to create new jobs, and the skills profiles of new jobs created by automation do not necessarily coincide with those of jobs lost due to automation.

Public policies must balance the trade-off between productivity growth and the need to manage industrial transitions over the medium to long term. While technology tends to increase labour productivity for many jobs, some groups may find themselves increasingly excluded from the labour market or stuck in unemployment, low-wage jobs or non-standard work. Policies to integrate disadvantaged groups – such as the long-term unemployed, people with disabilities, and migrants – will be critical for social cohesion and to address inequalities.

***The future is now*: governments, employers and employees should start preparing now for the future of work**. Employment and skills policies are fundamental in better preparing people to adapt to labour market changes. Emotional, relational and transferrable skills, together with familiarity with technology, will be the key for tomorrow's labour market, by providing workers with the ability to adapt to a changing context and changing skills requirements. This is a shared responsibility between government, employers, and individuals themselves.

The impact of automation on regional and local labour markets will depend on the characteristics of the local economy: employment and skills policies need to be adapted to the specificities of regions and cities. Partnerships between local training institutions and employers can lead to successful apprenticeship programmes and better designed curricula. These not only properly prepare future workers, but also identify new skills that workers need to develop now.

When looking at how production and employment dynamics will change in the next century, it is likely that fewer people will be employed in good producing sectors, while employment in sectors requiring a higher social element will prevail. Employers will also change: they will be substituted by technological platforms and peer-to-peer channels, which, with no regard for geographical borders, will allow anyone in the world to execute a specific task instantaneously.

Ultimately, digitalisation and automation will displace some workers, but they will also create new employment opportunities: **technology will eliminate jobs but not work**.

Moderator

Sally Sinclair, CEO, National Employment Services Association, Australia

Panellists

Samuel Engblom, Policy Director, Swedish Confederation of Professional Employees (TCO), Sweden; TUAC representative

Sunil Johal, Policy Director, Mowat Centre, University of Toronto, Canada

Séin Ó Muineacháin, EMEA Lead - Economic Graph Analytics, LinkedIn

Sara Sousa, Head of HR, BLIP, Portugal

Closing

Randall W. Eberts, President, W.E. Upjohn Institute for Employment Research

Plenary 2: Social innovation for a more inclusive labour market

Over the last decades, inequalities have continued to deepen in OECD countries, both within and between places. Changes in the labour market linked to digitalisation and technological innovation have contributed to further exacerbate this trend.

Social innovation can play a key role in the face of technological and digital changes, especially when it comes to fostering labour market inclusion. New technologies such as online platforms or even block-chain technology can be used by social entrepreneurs and local governments to generate social impact.

Several innovative initiatives exploiting the potential of digitalisation to deliver social outcomes already exist. These included **ColorADD**, which created pencils and tools allowing colour-blind kids to distinguish colours, and therefore perform better in school. The Danish **Specialisterne** instead provides services such as software testing, quality control and data conversion for business companies using the characteristics of people with autism spectrum disorder as competitive advantages in the business market.

Social innovation can happen in the public and private sectors, but it can also be led by third sectors as well the civil society. There is space for all these actors to create social impact and social value. However, there is a need to distinguish between organisation "built for social impact" and the others that are socially oriented but that do not prioritise it. This is essential along with social impact measurement to avoid impact washing, the same way it can happen with social and/or green washing.

There is a need to provide adequate finance to further unleash the potential of social innovations. This can be done through innovative financing schemes, engaging banks, impact investors and even citizens' participation. Partnerships between social enterprises and traditional ones, as well as with the public sector, are also a promising strategy.

Cities can also play a key role in creating conducive ecosystems for social innovation development, taking into account the local needs. Local governments can act as broker and connector between stakeholders in the field of social innovation while providing capacity building opportunities.

Going forward, it will also be crucial to create the necessary preconditions to promote a generation of social innovators. It was emphasised that being innovators requires being able to take on risks. Therefore, policies should aim to take off the pressure relating to the financial impact of social innovations to allow social entrepreneurs and innovators to take on risks to achieve social objectives.

Moderator

Mario Calderini, Director, Tiresia; full Professor, Politecnico di Milano School of Management, Milano, Italy

Panellists

Nicolas Hazard, Founder and President, INCO, France and USA

Paola Pisano, Deputy Mayor for Innovation, Smart City, Demographic and Statistical Services and Information Systems, City of Turin, Italy

Filipe Santos, Full Professor and Chair of Social Entrepreneurship, Catolica-Lisbon School of Business and Economics

Aline Sara, Co-Founder and CEO, NaTakallam

Closing

Peter Ramsden, Managing Director, Freiss Ltd and URBACT

Plenary 3: Enabling small firms and entrepreneurs to thrive in the new world of work

The new industrial revolution and the changing nature of work, with greater demand for high-skilled and non-routine jobs, generate new opportunities for innovative entrepreneurs and are leading to the emergence of new business models. Digitalisation can also facilitate up-scaling of SMEs and access to new markets and innovative financing instruments, such as mobile banking and online payments.

SMEs typically face greater difficulties in accessing, developing and retaining skills than larger firms. In many countries and regions, shortages of technical and digital skills are perceived as the main obstacle to innovation and growth by SMSgt seize the opportunities arising from the new world of work, investment in skill development, re-skilling and up-skilling is essential. This concerns both management and workers skills. Management and organisational soft skills are essential to ensure that SMEs are able to cope with the uncertainty and rapid changes in the nature of work and markets. Raising awareness about the need for continuous training and soft skills development is key.

Public policies can play a crucial role in ensuring that small firms and entrepreneurs have the skills needed in a fast changing labour market. For instance, a progressive approach to entrepreneurship education over the student's lifetime, as well as specialised entrepreneurship education training and support for teachers, as well as business start-up support in vocational and higher education institutions, could play an important role going in this direction.

However, public education systems alone cannot address this. The SME policy space comprises different elements, including framework conditions, broad policies impacting SMEs, specific targeted policies as well as the characteristics of the local economy. The pace of change and its pervasiveness also demand flexibility, adaptability and resilience in individuals and organisations.

Integrated approaches, combination of skill development tools and experiences are essential. Integrated approaches also mean combining policy measures, recognising trade-offs and synergies, ensuring a closer alignment between national policies, local strategies

and business strategies, including that of large enterprises with suppliers. Financing support cannot be the only answer.

A key challenge going forward will be getting all SMEs on board for this transformation. Cost-effective approaches are needed while recognising that for some firms the change is beyond their organisational capacity and efforts should focus on enabling individuals, entrepreneurs and workers, to reskill.

Moderator

Ester Silva, Vice-President, Norte Portugal Regional Coordination and Development Commission, Portugal

Panellists

Iris Arbel, Innovation Management Expert; Innovation Consultant for SMEs; Lecturer, Technion and Bar-Ilan universities, Israel

Paul Healy, CEO, Skillnet Ireland

Christin Pfeiffer, Expert, DG Industrial Policies, Competitiveness and SMEs, Ministry for Economic Development, Italy

Johan Stevens, CEO, SANITOP

Closing

Patrik Kovacs, Vice-President, SME & Entrepreneurship Taskforce, BIAC, OECD

Workshops

Workshop A: Making training more relevant in a digital world

What are the changing roles of educators and individuals in a digital world?

Digitalisation and automation can enable many companies to compete on a global scale through increased productivity.

Skills training, both work-based and classroom focused, as well as lifelong learning, will be crucial to ensure that workers have the skills needed in a changing labour market, driving workplace innovation and competitiveness. Employers will need to be engaged in the development of trainings, to ensure that these are well aligned with the skills needed by the local labour market.

Given the uneven impact of automation across regions, **places more vulnerable to changes will require targeted efforts**. The creation of local skills ecosystems, clustering firms working horizontally across a value chain with the education and training system, can also be instrumental to foster knowledge exchange and co-ordination.

Local employment and training organisations can facilitate the adaptation of workers' skills to the changing needs of the economy but they require greater room for manoeuvre to respond to mega trends. Flexibility in the management of national policies can provide local actors, such as local employment services, vocational education and training organisations, as well as city and regional authorities, with the necessary tools to tailor programmes to their unique local labour market challenges. Vocational education schools and employment services have a critical role to play in providing workers with access to hands-on training that exposes them to technology.

Lifelong learning opportunities also play a fundamental role in preparing individuals for changes in the labour market while providing employers with a strong supply of talent. Individual Training Accounts (or Lifelong Learning Accounts) can help workers to manage disruption in the labour market, by providing funding at any point in their careers to invest in training – either to help them with career advancement or to adjust to a new job as a result of automation.

Box 1. Featured initiative: SWitCH ()

SWitCH() is a graduate requalification and job placement program in Software Development aiming to mitigate the chronic shortage of IT skilled workers in Portugal. It was created as a partnership between an IT trade association and a Higher Education Institution and it is 100% self-funded. SWitCH() applies agile practices and learning interactive processes to provide its students (including graduates who do not necessarily have a science, technology or mathematics background) with a solid, yet fast comprehension and application of software development skills.

The first edition of the SWitCH() project ended in July 2018: the 30 students involved in the project have all started working in Porto Tech Hub member companies.

Moderator

Sylvain Giguère, Head of LESI Division and LEED Programme, OECD

Key Practitioners

Menno Bart, Public Affairs Manager, Adecco Group

Jeffrey Brown, Manager, Bertelsmann Foundation

Emma Crichton, Executive Director of Skills, PeoplePlus

Pedro Duarte, Corporate, External and Legal Affairs Director, Microsoft Portugal

Ângelo Martins, Auxiliary Professor of Computing, ISEP, Porto

Anu Parantainen, Head of Planning and Development, City of Turku, Finland

Anna Ståhlberg, Administrative Official, Gävleborg County, Sweden

Workshop B: Entrepreneurship and start-up support in cities

How are cities supporting the emergence of functional start up ecosystems?

The value creation of the start-up economy from 2015 to 2017 reached USD 2.3 trillion. It is a major part of our economy, and start-ups will continue impacting job creation and destruction as well as traditional industries in the years to come. The good news for entrepreneurs is that global venture capital investments in start-ups in 2017 went over USD 140 billion, and will likely be higher in 2018. The bad news is that cash is not equally distributed across the globe.

Start-ups are about validating new business models. Companies are about executing business models. The distinction is essential: the needs of a start-up are not the same as the needs of a company. In other words, start-ups are about validating new business models.

Successful entrepreneurs are not necessarily 25-year old technology enthusiast. Ample research from several institutions has shown this myth to be false. In France, for example, almost 60% of founders have a business background. The average founder age is 40, and almost 1 out of 2 defines him or herself as a serial entrepreneur.

Start-ups also do not necessarily succeed rapidly. Some do, but most of them do not. For instance Angry Birds succeeded after 51 games, and Pinterest started in 2009, but was not successful before 2012. Most start-ups have good story tellers that might give the

impression that success happened overnight, but the truth is that almost 90% of start-ups fail, mostly because there is no market need, not enough cash, or a bad fit within a team.

Entrepreneurs thrive in good ecosystems. An ecosystem is a good set of interconnected agents which formally and informally coalesce to connect, mediate and govern the performance within their environment, like UPTEC. Good ecosystems generate external economies of scale. Good ecosystems are expected to have positive impacts on urban economies.

Box 2. Featured initiative: UPTEC

UPTEC – Science and Technology Park of University of Porto supports the creation and development of business projects in the arts, sciences and technologies, through sharing knowledge between the university and the market. Following a clustering strategy and resource sharing between start-ups, innovation centres and anchor projects, UPTEC offers its projects the specific support they need, engaging them into a broader and transversal network of national and international partners and mentors.

Since the beginning of its activity, in 2007, UPTEC has supported more than 500 business ideas.

Moderator

Cristian Santibanez, Founder and CEO, SC Consulting

Key Practitioners

Eli David, CEO, Startup Blink

Niina Immonen, Director, Smart Cities Services, Business Tampere

Carlos Oliveira, Director of Communication and Co-operation, UPTEC

Workshop C: women's entrepreneurship in the digital economy

How can digitalisation help women overcome the barriers they face when starting or growing a business?

Ensuring that women have access to education, employment and entrepreneurship is critical to foster sustainable and inclusive growth that benefits all. Women's entrepreneurship is not a topic that concerns only women: men entrepreneurs and policy makers should also be involved in the discussion.

Role models play an important role in the fight against stereotypes: successful women entrepreneurs are often not known enough, they do not get sufficient media coverage. Therefore, it would be crucial to ensure that communication about women entrepreneurs is strengthened. Not only about "successful" women entrepreneurs, but also about local initiatives and the challenges they face.

More generally, **the entrepreneurial ecosystem and infrastructure were not created with women in mind**. This should be reshaped, to ensure that women are better integrated in the relevant networks.

Finally, **digitalisation can play a key role in reducing the gender gap**, rather than increase it, for instance by fostering access to finance and financial services, boosting mobility and facilitating new opportunities.

Successful examples of policy programmes aiming to boost women's entrepreneurship include: the **Women code festival**, organised by Women in Tech Brussels, which aims to create the conditions to accelerate the presence of women in innovative and technological sectors of the high-tech industry, as well as start-ups, but also to engage and sensitise women. **Cross mentoring Munich**, organised by the City of Munich, Germany. It is a program designed for future female leaders, where female executives are supported and assisted for an entire year by experienced executives of other companies.

Box 3. Featured initiative: Collectiva

Collectiva is an independent platform and store-gallery, providing promotion and communication support for Portuguese women entrepreneurs in the jewellery sector. It aims to support the emergence of young Portuguese designers and brands. It does so by presenting collections, limited editions and exclusive pieces, as well as through exhibitions and regular events.

Moderator

Nicolas Hazard, Founder and President, INCO, France and USA

Key Practitioners

Naima Smaini, Policy Analyst, OECD

Loubna Azghoud, COO, Women in Business – Women in Tech Brussels

Natalia Basterrechea, Facebook Spain

Telma Ferreira, Artist, Collectiva Initiative

Lu Li, Founder, Blooming Founders

Ines Santos Silva, Advisor, Portuguese Secretary of State for Industry

Workshop D: Financing social innovation for the future

How can traditional and hybrid financing models contribute to better opportunities for social innovators to create employment?

While social investing emerged in the early 2000s, microfinance was already an existing form of financing for initiatives targeting socially disadvantaged groups. In parallel, the emergence of venture philanthropy and social investment created a movement to use financing to generate impact.

The amount of finance is one of the key constraints for social innovators. **However, also the format (e.g. loans, grants, etc.) also represents a key issue, as well as the duration (long versus short term)**. Partnerships involving the different stakeholders from the public, private and social sectors are crucial to ensure adequate and effective financing for social innovation.

An adequate ecosystem is also needed to nurture social innovation. Private businesses have a key role to play: for instance, BNP Paribas has engaged with social enterprises to foster social inclusion, while still making a profitable investment.

A common issue derives from the fact that social enterprises that easily access finance are usually those that already generate a lot of finance and are less risky. This calls for more innovative approaches to match and connect different types of finance with social enterprises in need. Awareness-raising on the different types of financial instruments available is also key.

The importance of measuring the social impact is also an important step. This should not be seen only as a tool for traditional investors, but also for consumers and people willing to invest.

Box 4. Featured initiative: S.A.O.M.

S.A.O.M. – Serviços de Assistência Organizações de Maria, is a private social solidarity institution founded in 1976. It has since been involved in several projects to foster social inclusion, by working with the local ecosystem. The project "Giving Life a Purpose" is dedicated to the social inclusion of homeless and socially excluded people. It provides education, training in hotel and restaurant work, and the life skills necessary to re-entering the job market. Dedicated food stores and restaurants, including Restaurante Torreão, have also been opened in the City of Porto, aiming to accumulate resources which are then used to support socially excluded people.

Moderator

Risto Raivio, Senior Expert, European Commission (Moderator)

Key Practitioners

Antonella Noya, Head of Social Economy and Innovation Unit, OECD

Claudia Belli, Head of Social Business and Microfinance, BNP Paribas

Markus Freiburg, Founder and CEO, FASE, Germany

Filipe Santos, Professor, Catolica-Lisbon School of Business and Economics

Suzanne Wisse-Huiskes, Incoming Executive Director, Euclid Network

Workshop E: Labour markets of the future: A foresight exercise

How will workplaces change from now until 2030?

The fast spread of new technologies will present labour markets with **multiple challenges and opportunities that are complex, unpredictable and potentially very disruptive**. As world experts disagree where automation of work tasks, workplace fragmentation or new forms of labour organization will take us, local communities must learn how to adapt and operate under uncertainty. Strategic foresight, a structured and disciplined approach to exploring plausible future changes and their implications, can help inform decision making in this context.

The OECD Strategic Foresight Unit delivered a workshop on "The Future of Labour Markets" for about 100 participants. It was designed to **help policy makers engage with**

uncertainty and explore the unknown. A group of policy experts lent their support as breakout group facilitators, enabling targeted and structured discussions in small groups.

Duncan Cass-Beggs, OECD counsellor for Strategic Foresight, opened the workshop by introducing foresight and its benefits for policy-making. He highlighted a number of key uncertainties and potential changes that could shape the future of labour markets. For example, **the effects that advances in AI and big data might have on skill assessment and development, what a mostly virtually connected workforce could lead to or what a world of freelancers and entrepreneurs organised on global online labour platforms could look like**. This was followed by the interactive part of the workshop, which gave participants the opportunity to engage with potential changes to the future of labour markets. In individual breakout groups, each facilitator presented one potential change to the future of labour markets to his or her group. This was followed by a guided discussion of potential impacts of the change as well as new challenges and opportunities it could raise. Finally, participants were invited to identify a potential action they could take in order to prepare for the scenario they had explored and to share their ideas in plenary.

Box 5. What is Strategic Foresight and why is it useful?

Strategic Foresight is a structured and systematic way of thinking about the future. It helps organisation anticipate a range of potential future scenarios, prepare for change and make better decisions today. The aim is not to predict developments or build forecasts based on an extrapolation of past data. Instead, foresight uses a range of methodologies, such as scanning the horizon for emerging changes, analysing megatrends and developing multiple scenarios, to reveal and discuss useful ideas about the future. Through a range of approaches, foresight can support policy-making in the following main ways:

- Better anticipation: to move beyond the commonly expected future and scan the horizon for signals of change to explore a range of potential disruptions in the years ahead
- Clearer visions: to make explicit what kind of future is desired, and agree on shared priorities
- Future proofing & robust plans: to use a range of plausible future scenarios to stress-test existing strategic and policies and support the development of robust new ones

In a time of rapid change and high uncertainty, responsible policy-making requires considering and preparing for the unexpected. The OECD encourages all areas of policy-making to integrate strategic foresight into their work and helps governments in building anticipatory capacity.

Potential changes to the future of labour markets

The breakout groups explored the following potential changes relating to the future world of work:

What if in 2030….

1. ...AI and big data made it possible to identify the levels of skills, motivation, reliability and productivity of all people?

2. ...virtual work (including virtual reality workplaces) enabled most people to work from anywhere in the world?
3. ...technologies had made it possible to automate a majority of the work tasks performed in 2018?
4. ...global online labour market platforms boomed, creating a world of freelancers and entrepreneurs?
5. ...network effects and economies of scale led to a further economic concentration around a small number of tech companies?
6. …technological change had further concentrated benefits within a small group of highly educated, wealthy individuals?
7. ...a universal basic income were introduced widely?
8. ...many governments had adopted policies to significantly restrict cross-border trade, investment, migration and data flows?
9. ...there was high transparency in labour markets and strong public pressure globally for firms to adhere to societal goals?
10. …monopsonies had come to dominate regional labour markets?
11. …advances in AI lead to pervasive monitoring of worker performance and a loss of privacy in the workplace?

Potential implications and actions for today

Some of the interesting ideas to emerge from the discussions included:

- **AI-enhanced job matching**: Full insight into skills, motivations etc. should lead to "*precision employment*", comparable to precision medicine. Having detailed data thanks to AI would mean drastically improved matching between workers and jobs, perhaps even on the level of tasks.
- **Company funds for social action:** A world of high transparency could lead to higher societal pressure on companies. This could lead some to create internal funds to reward solutions proposed by employees that cater to a social problem.
- **Digital Literacy Skills for all**: Universally building digital literacy skills through public education system and vocational training could empower citizens to take their digital lives into their own hands. This could help ensure that digital development is designed to serve the needs of individuals as much as those of large tech companies.
- **Jobs to accommodate High Tech and High Touch**: We need to promote the *uniquely human skills* of creativity, empathy, leadership, commercial awareness, collaboration etc. Value can be co-created between technology and people by inculcating these skills in the workforce.
- **Socially manage virtual work**: Initiate a dialogue in the form of staff meetings with HR to anticipate how to prevent or mitigate negative impacts of virtual work. A new role of HR could be to manage and support staff working from virtual spaces.
- **A digital and lifestyle niche for smaller economies:** A future of more restrictive global trade and migration policies could especially impact smaller countries

without access to larger markets, and lead to further emigration of skilled workers. A possible strategy for smaller countries is to focus on accessing the global digital economy – and investing in quality of life to attract and retain skilled digital workers.

- **Universal Basic Income – uncertain impacts for the labour market and inequality.** The least skilled and most vulnerable could lose motivation and support to work, and fall further out of employability and the labour market. Alternatively, UBI could provide the financial psychological security needed to shift out of occupations that are soon to be automated and into more creative and complementary activities.

Moderators

Duncan Cass-Beggs, Counsellor for Strategic Foresight, OECD

Julia Staudt, Policy Analyst for Strategic Foresight, OECD

Key Practitioners

David Bartolini, Senior Economist, OECD

Marguerita Lane, Labour Market Economist, OECD

Peter A. Creticos, President and Executive Director, Institute for Work and the Economy

Menno Bart, Public Affairs Manager, Adecco Group

Jeffrey Brown, Bertelsmann Foundation

Chris Warhurst, Director, Warwick Institute for Employment Research

Workshop F: "Smart" cities and the Future of Work: Opportunities, challenges and risks of digitalisation

How are cities of all sizes leveraging digitalisation to deliver better outcomes for people, places & firms, in the context of the changing world of work?

Digitalisation has profound impacts on our societies and economies, and *"there is no going back"*. However, public policies are still not equipped to leverage the opportunities and manage the challenges and risks that have emerged.

Digitalisation affects places, people and firms in different ways. Small cities and companies may face capacity challenges, but on the other hand they can be more agile and adaptable. Large cities may have skills gaps within the public sector, and must also manage security and privacy concerns.

Digital innovation also comes with risks: these include the lifecycle impacts (2% of GHG are produced by data centres), vulnerabilities to physical and virtual infrastructure, as well as broader systemic impacts.

Technology should be seen as a means to an end, not an end in itself. Leadership, vision and values are essential elements in advancing a strategic digitalisation agenda. Leadership can be political, private-sector, or citizen-led. A clear vision about *digitalisation for what* and *for whom* is an essential starting point, and should engage a range of city stakeholders. A strong understanding of the values of a city, firm or society should also guide decisions.

A key question is *how to measure success*? Success needs to be based on our values and vision. Two critical elements should include the extent to which digital innovation can improve environmental sustainability and well-being/happiness. Key opportunity areas include public sector procurement, education (for youth but also for older workers looking to change careers), and healthcare.

Successful examples of policy programmes include Urbact's **TechTown**, which has brought eleven European small and medium-sized cities together to help cities engage with and benefit from increased digitalisation across jobs, firms and services, and the **Corporate Ambassadors of Braga**, including representatives from firms, universities, and the public sector, who meet monthly to develop a shared vision of investment and economic development for their city.

Moderators

Marissa Plouin, Coordinator of OECD Champion Mayor Initiative, OECD

Key Practitioners

Laurent Frideres, Head of Unit for Evidence and Outreach, ESPON EGTC

Tracey Johnson, Project Director, Digital Media Centre

Alexandre Mendes, Executive Director, Startup Braga

Roman Mendle, Manager, Smart and Circular Cities, ICLEI

Cristian Santibanez, Founder and CEO, SC Consulting

Workshop G: Supporting regional industrial transition

Which entrepreneurship and innovation policy levers can support the diversification of local economies into new, higher productivity sectors and technologies?

Regional industrial diversification is crucial for economic growth and increasing employment levels. Diversification into newly emerging sectors depends on integrated local ecosystems which align all key stakeholders and support cross-fertilisation.

However, there is no "one size fits all": each region is different – despite the alleged myth of the *placeless entrepreneur*, geography matters in industrial diversification.

Local policy leadership in cities and regions is key to overcome regional bottlenecks, and so is co-ordination of policies across levels of government and excellent business framework conditions at local and national level.

Successful examples of policy programmes to support regional industrial transition exist. For instance, the **Canton of Vaud in Switzerland** established a local innovation ecosystem, whose key success factors were (i) a focus on regional strengths (e.g. watchmaking) and actively encouraging new technologies and applications (such as drones); (ii) stimulation of entrepreneurship in technical VET schools; (iii) strengthening management and leadership skills in SMEs. The **Province of Trento** supported the shift from traditional to smart manufacturing: the Trento Mechatronics Hub has brought together 200 researchers with businesses in one physical space and provides training to SMEs to use new technologies such as AI and 3D printing.

Moderator

Sandra Hannig, Policy Analyst, OECD

Key Practitioners

Lucia Cusmano, Acting Head of SME and Entrepreneurship Division, OECD

Raphaël Conz, Economic Promotion Manager, Office for Economic Affairs and Innovation, State of Vaud, Switzerland

Raffaele Farella, Director for International Affairs, Autonomous Province of Trento

Gorazd Jenko, Secretary and Senior Expert, Government Office for Development and EU Cohesion Policy, Slovenia

Dirk Plees, Coordinator for internationalisation, Province of Limburg

Workshop H: Creative jobs: Maximising the impact of culture on local development

How to put in place support ecosystems for cultural and creative industries?

According to 2016 data, Cultural and Creative Industries (CCIs) employ 8.4 million people in Europe. Creative jobs are characterised by a high resilience to external shocks, lower risk of automation and delocalisation, as well as highly-skilled including strong digital skills.

Employment in CCIs has always had specific characteristics that are now starting to mark other sectors as well: **flexible and part-time work; project-based jobs; but also a very high share of self-employment and voluntary work**.

Local skills and business development initiatives should be adapted to the particular characteristics of CCIs.

Business development initiative should be adapted to up-scaling needs of self-employed creatives. Creative Saxony is taking important steps in this direction.

It is important to inject entrepreneurial learning in Arts and Humanities faculties. The Universities of Matera and Porto, together with other 5 Universities in Europe, are working to address this need.

Tailored sectoral skills strategies should address the specific needs of various creative sectors. For instance, Skills Scotland has put in place a Skills Strategy for the Scotland Screen (film) industry.

Moderator

Ekaterina Travkina, Coordinator, Culture, Creative Industries and Local Development, OECD

Key Practitioners

Alessandra Proto, Acting Head of OECD Trento Centre, OECD

Cristina Farinha, Culture & Creative Economy Expert, Ecures – Association of Cultural Researchers

Josephine Hage, Deputy Director, Creative Saxony, Germany

Paolo Montemurro, Director, Matera Hub

Paul Zealey, Skills Planning Lead, Skills Development Scotland

Ways Forward

Ways Forward

Key takeaways from the 14th Annual Forum Meeting includes the importance of **employment and skills policies in better preparing people to adapt to labour market changes,** and the need for transversal skills that make people more adaptable over the long term. Social enterprises have the capability to tackle societal problems in innovative ways; digitalisation creates opportunities for both social enterprises and SMEs.

These policy considerations can be illustrated by some concrete initiatives taken by the Agency for Development and Cohesion to ensure that Portuguese people are ready for the future of work.

Data are crucial to foresee future trends and start preparing for the future of work, especially given the fact that megatrends are having an asymmetric impact at the regional level. In this regard, the new evidence on the regional implications of automation and non-standard forms of employment, presented by the OECD in the report Job Creation and Local Economic Development 2018: Preparing for the Future of Work, will play a key role in guiding a tailored approach which brings together central, regional and local governments.

The Forum demonstrated the importance of **bringing together the different levels of government**, as well as practitioners and businesses from all over the world in order to exchange and learn best practices in preparing for the future of work.

Panellists

Denis Leamy, CEO, Pobal, Ireland, Chair of the OECD Forum for Local Development Practitioners, Entrepreneurs and Social Innovators

António Dieb, President, Agency for Development and Cohesion, Portugal

Joaquim Oliveira Martins, Deputy Director, Centre for Entrepreneurship, SMEs, Regions and Cities, OECD

Lessons learnt from the cities of Braga and Viana do Castelo

Braga

The session highlighted the successful experience of Braga in bringing together the local government, businesses and academia to generate new economic activities, by developing effective strategies for attracting FDI and linking the local university with businesses.

With a population of more than 130 000 inhabitants, Braga is the third largest city in Portugal, after Lisbon and Porto, and one of the most dynamic in terms of FDI attraction.

The Strategic Plan for Braga Economic Development 2014-2020 has played a crucial role in prioritising sector development and fostering FDI. This plan, which was the result of the collaboration between InvestBraga and its strategic partners aims to build on the strength of the city to encourage employment creation, stimulate sustainable investment, foster tourism and trade.

Braga's competitive advantages have been identified as follows: a strong demographic growth; a skilled workforce; a strategic location and the presence of reliable infrastructure; higher cost competitiveness as compared to other European regions with similar characteristics; a larger number of historical and cultural sites as compared to the average city in Portugal; an innovative and entrepreneurial spirit, captured by the number of companies and new companies present in the city; and, finally, the presence of strong knowledge infrastructure, such as the University of Minho.

Partnerships between the University of Minho and large businesses such as Bosch Portugal and APTIV have been instrumental in making Braga one of the most innovative cities in Portugal.

The partnership between Bosch and the University of Minho has allowed developing a high degree of innovation technologies with extreme relevance to the Multimedia Automotive sector, including the development of new processes, products and solutions that enable the strengthening and entry into new markets, production solutions tailored to each client.

Panellists

Ricardo Rio, Mayor of Braga

Carlos Ribas, CEO, Bosch Portugal

Rui Vieira de Castro, Rector, University of Minho

Rui Enes, Director, Aptiv Braga

Viana do Castelo

The session highlighted the importance of the strong collaboration of the city with strategic partners, including employer representatives, academia and civil society, which has given the impulse for the remarkable growth of the last years by fostering FDI attraction and territorial marketing.

Viana do Castelo is a city with more than 88 000 inhabitants, and the capital of the intermunicipal community of Alto Minho, whose GDP has been growing at double the rate of the Norte Region. A ten year Strategic Plan was elaborated on a participative basis through a Social and Economic Council, created to bring together representatives from the local population and business community.

The vision for Viana do Castelo is to transform it into an Atlantic destination championing sustainability and renewable energy, tapping into the Ocean-based economy, and reinventing regional traditions in new and innovative contexts. Viana do Castelo's competitive advantages have been identified as follows: a strategic location and the presence of reliable infrastructure; a high quality of life; cost competitiveness as compared to other European regions with similar characteristics (namely, neighbouring Galicia); the proximity of Galicia with a strong transfer of people, knowledge and goods; the presence of one of the biggest PSA (automotive) factories near Vigo, in Galicia, whose suppliers have installed in Alto Minho; a larger number of historical and cultural sites as compared to the average city in Portugal; an innovative and entrepreneurial spirit, captured by the number and emergence of companies in the city; and, finally, the presence of the Polytechnic Institute.

These competitive advantages were mirrored in the local initiatives discussed during the two parallel sessions. The high-tech companies installed in Viana do Castelo over the last years represent a good example of technological innovation framed within the context of Industry 4.0. The emergence of co-working spaces, sport-oriented tourism and the use of environmental-friendly and high-technology operations for the production of aromatic herbs were also presented as examples of the entrepreneurial spirit of the city.

These developments have led to a reduction of the unemployment rate in the region, which is today the lowest in the country, and to a high employment creation rate, especially qualified employment. Since the region has been affected by a negative demographic growth and brain-drain of young people during the global financial crisis, the main challenge is to design a sustained and energetic strategy to retain and attract talents. This is the main priority of the city for the next strategic plan. An international conference, in which several successful international cases were presented (from Australia, Finland, Switzerland and Canada), took place in February this year. Potential future co-operation is being discussed with regions from some of these countries.

Welcoming

José Maria Costa, Mayor of Viana do Castelo

Parallel session 1: Regional industrial transition

Moderator

Joana Santos, Director of ESTG, Polytechnic Institute of Viana do Castelo

Panellists

Artur Silva, Technological Accelerator

Ana Silva, Borg Worner

Pedro Gonçalves, Xpand IT

Parallel session 2: Innovative new business ideas

Moderator

Maria João Rauch, Senior Partner, PPLL Consult

Panellists

Daniel Campelo, Aromáticas Vivas

Joana Carvalho, Dinamo10

José Sampaio, Feelviana Hotel

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