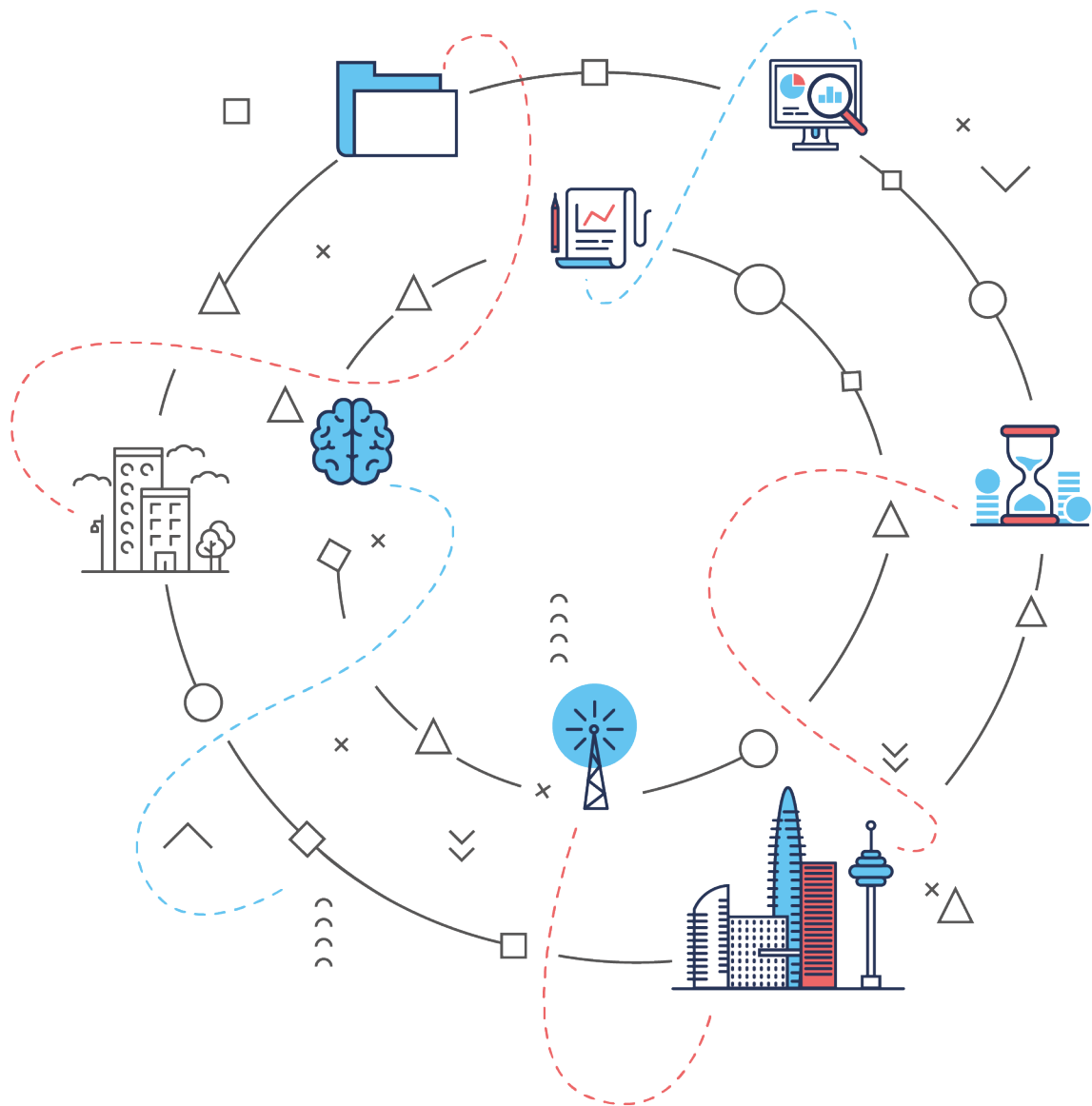


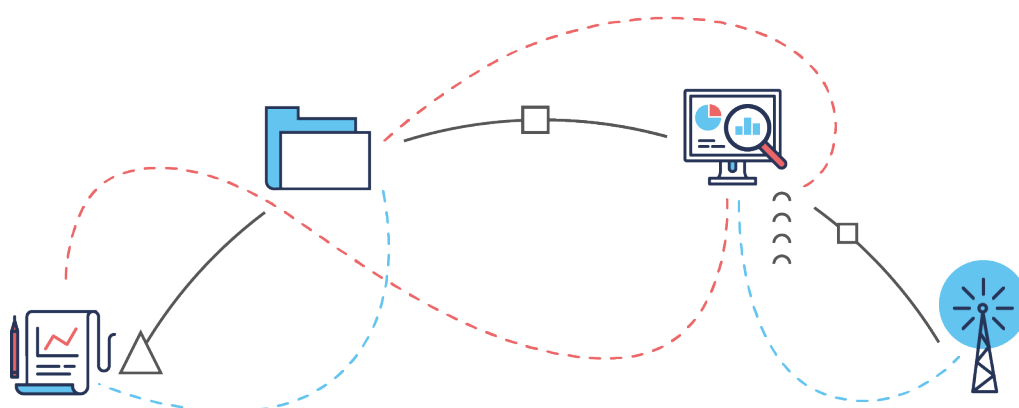
# Making the future of work inclusive of people with disabilities

A joint publication by Fundación ONCE and the ILO Global Business and Disability Network, developed within the framework of Disability Hub Europe, a project led by Fundación ONCE and co-funded by the European Social Fund



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# Foreword

In the context of a rapidly changing world, the *Future of Work* is an issue drawing the attention of many individuals and organizations. It is a global concern, posing important challenges that need to be addressed urgently. One such challenge is how to ensure that the future of work is inclusive, leaving no one behind, including the one billion persons with disabilities living on our planet.

The *ILO Centenary Declaration for the Future of Work*, adopted in June 2019 highlights the necessity for a human-centred approach and incorporates an explicit reference to the need to ensure equal opportunities and treatment for persons with disabilities.

The *2030 Agenda for Sustainable Development* provides the framework for inclusive global sustainable development efforts for the coming decade. Persons with disabilities are considered one of the groups meriting specific attention in the 2030 Agenda, and the corresponding Sustainable Development Goals (SDGs) make explicit reference to persons with disabilities, including in the context of decent work and economic growth.

The rights-based approach towards persons with disabilities reflected in the 2030 Agenda is aligned with the *UN Convention on the Rights of Persons with Disabilities* (CRPD). The CRPD will continue to provide an important framework for promoting inclusion and equal opportunities for persons with disabilities, also in the world of work. Inequalities experienced in the world of work by persons with disabilities remain significant and need to be addressed, or the future of work will replicate the past.

The good news is that an increasing number of organizations are recognizing disability as a source of diversity, talent and innovation. Companies have greater opportunities than ever before to bring in persons with disabilities, as customers and clients, but also as employees and managers and thereby gain a competitive advantage. For persons with disabilities, decent work means they can be empowered to lead more independent lives and contribute to the wellbeing of their families, communities and societies at large, building together a more inclusive economy.



The future of work is still to be shaped, and we can all influence it to some extent. Driven by this idea and aware of the urgency to take action, the ILO Global Business and Disability Network and Fundación ONCE have developed this publication. This is a first exercise to connect different areas of debate, looking at the key trends of the future of work from a disability perspective and seeking to identify specific action needed in order to shape the future of work in a more disability-inclusive way.

This publication should be seen as the beginning of a journey. A journey that requires the involvement and collaboration of all stakeholders to take concrete action to ensure a future of work that is inclusive of people with disabilities.

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# Executive summary

The future will bring major challenges for society in general and the world of work in particular. These challenges need to be addressed before they arise in order to ensure no one is left behind, especially those most vulnerable, including persons with disabilities.

Ensuring an inclusive future of work is part of the 2030 Agenda and Sustainable Development Goals. Furthermore, article 27 of the UN Convention on the Rights of Persons with Disabilities recognises the right of persons with disabilities to work on an equal basis with others.

Employability data of persons with disabilities are hard to obtain, however, where data are available the labour market participation rate of persons with disabilities is lower than that of persons without disabilities. The situation of women with disabilities is worse. With the foreseeable changes in the future labour market, this gap could widen further, and action must therefore be taken to ensure this is not the case.

The megatrends of the Fourth Industrial Revolution that will shape the future of work are: the technological revolution; the new skills that will be required; the cultural changes being witnessed in society; demographic shifts and the mitigation of climate change. All of these trends are closely interconnected.

Throughout this document these key trends are analysed from the perspective of disability and specific actions are identified that are required to design a roadmap toward the desired future of work. This exercise has been carried out aware of the diversity within the population with disabilities, not only considering the different types of disabilities themselves, but also other factors such as gender, age, or economic context.

The expected transformations in the future of work entail risks for persons with disabilities, but they also offer opportunities. To mitigate these risks and maximise the opportunities, measures must be urgently put in place, and it is



essential that persons with disabilities play an active role in decision-making concerning future employment policies.

The following five key objectives for the inclusion of persons with disabilities in the future of work have been identified:

1. New forms of employment and employment relations integrate disability inclusion
2. Skills development and life-long learning made inclusive of persons with disabilities
3. Universal Design embedded in development of all new infrastructure, products and services
4. Assistive technologies, existing and newly developed, to be made affordable and available
5. Measures to include persons with disabilities in growing and developing areas of the economy

Governments, companies, disability NGOs, trade unions and academia must be encouraged to commit and contribute towards achieving these objectives through different actions. An inclusive future of work can be reached through coordination and alliances among the different stakeholders.

### Purpose and methodology of this publication

This **publication aims to contribute to the visibility of persons with disabilities in the debates about the future of work**. It should also provide elements to ensure that the professionals who are committed to promoting the employment of persons with disabilities have a better understanding of how to constantly adapt their own work.

Based on the core work of the lead contributors, this publication has been developed in a participative manner, conducting consultations with key experts, mentioned in the acknowledgements section. These pages also include examples of initiatives that have been taken by companies, public sector and civil society organizations that show the way forward. The examples do not follow representative criteria such as geography or economic sector, but they serve mainly as an illustration of possible action related to the trends and challenges described in the text. Some examples have been extracted from other publications and others have been collected and elaborated specifically for this publication.

# 1. Work and disability: An overview of the current situation

In 2018, the global labour force comprised 3.5 billion people – 3.3 billion of whom were employed<sup>1</sup>. In this scenario inequality is one of the growing risks.

While the number of people unemployed globally remains high – at more than 190 million –, another source of concern is the poor quality of present and future employment. In 2017, 42% of workers worldwide were estimated to be in vulnerable forms of employment<sup>2</sup>, and this is expected to rise in the near future.

Introducing persons with disabilities into the equation is not easy. Statistics on employment of persons with disabilities are not always available and they are often not internationally comparable.

Nevertheless, it is fair to say that the labour market participation rate of persons with disabilities is significantly lower than that of persons without disabilities. This situation is not often reflected in official statistics as many persons with disabilities are not even registered as unemployed. The position of women with disabilities is generally worse than that of men with disabilities.

Data from eight regions across the world show that 36% of persons with disabilities of working age are in employment, compared to 60% for persons without disabilities. In most countries, persons with disabilities in employment are more likely to be in vulnerable employment, or to be paid less than persons without disabilities<sup>3</sup>.

The data below show the labour market differences between persons with and without disabilities in Europe. It is important to mention that the figures presented are from the European Union since there is more recent data available for these countries. However, the figures are similar to those in other OECD countries and can be extrapolated<sup>4</sup>.

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1. World Economic Situation and Prospects. United Nations, April 2019.

2. World Employment and Social Outlook – Trends 2018. ILO, 2018.

3. Disability and Development Report: Realizing the Sustainable Goals by, for and with persons with disabilities. United Nations, 2018.

4. European comparative data on Europe 2020 & People with disabilities, final report 2017. Academic Network of European Disability Experts.



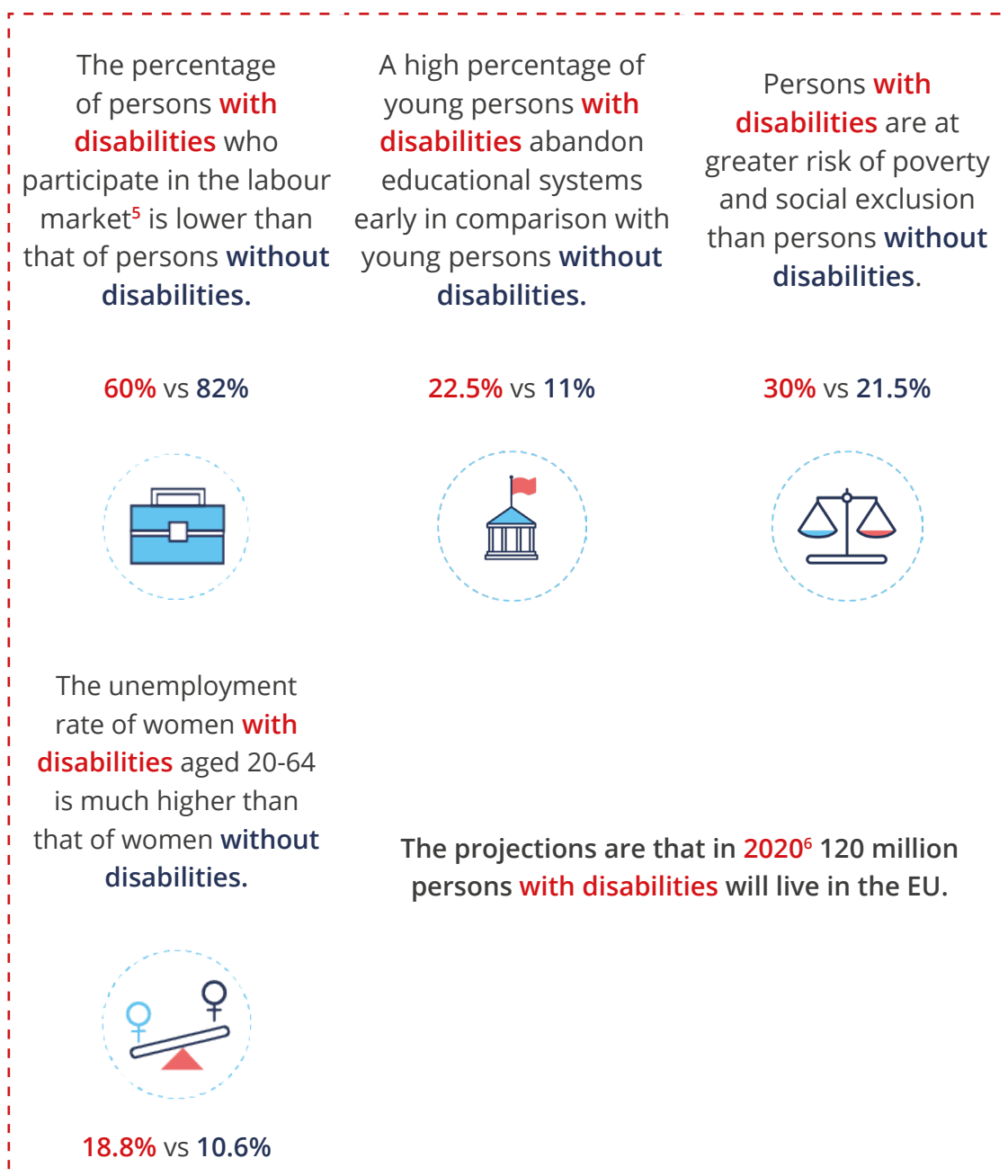


Figure 17: Key data on the current situation of the European labour market  
 Source: Own elaboration based on statistics of 2017 from the European Commission

5. The active population is considered to be those, of a working age, who have a job or who are registered with employment-seeking services.

6. Progress Report on the Implementation of the European Disability Strategy (2010-2020). European Commission, 2017.

7. The percentage of people with disabilities who participate in the labour market is lower than that of people without disabilities (60% vs 82%). A high percentage of young people with disabilities abandon educational systems early, in comparison with young people without disabilities (22.5% vs 11%). People with disabilities are at greater risk of poverty and social exclusion than people without disabilities (30% vs 21.5%). The unemployment rate of women with disabilities aged 20-64 is much higher than that of women without disabilities (18.8% vs 10.6%).



**Persons with disabilities – one billion in the world<sup>8</sup> –constitute a source of talent for employment and for the development of new products and services.** However, every day they face challenges that hamper their ability to contribute equally to the life of our societies. This is not only a violation of their rights but a loss for our society and its diversity<sup>9</sup>. It also has a negative effect on the economy considering the value these people could generate if employed.

The table below shows “current” challenges, which will need to be addressed since they will continue to be relevant and often even more so in the future. **These are not specific to the future of work, nor have they arisen as a consequence of the commonly agreed trends in the future of work, but unless action is taken, they will persist.**

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8. The World Bank, 2019.

9. MIROSLAV LAJČÁK, President of the UN General Assembly at the 72nd Session of the UN General Assembly, in International Day of Persons with Disabilities 2017.



# Current challenges to labour inclusion of persons with disabilities

## Lack of an enabling environment

- Accessibility barriers in built environments, transport, products and services
- Badly designed disability benefits, often leading to poverty of persons with disabilities
- Insufficient support services and lack of transferability of these from one country to another
- Non-inclusive education and vocational training leading to lower levels of education and training among persons with disabilities
- Inadequate support for youth with disabilities in transition from school to work
- Low level of capacity of public employment services to support persons with disabilities
- General lack of compliance with employment quotas, where these exist

## Employers (public and private)

- General lack of awareness and confidence on how to include persons with disabilities in the workplace
- Inaccessible work premises and work tools, including Information and Communication Technologies (ICT)
- Inadequate provision of workplace adjustments
- Lack of support for persons with disabilities to maintain employment and explore career development
- Lack of targeted support for SMEs regarding employment of persons with disabilities

## Trade unions & employers' associations

- Insufficient level of attention to persons with disabilities, both those in employment and those seeking to enter the labour market

## General society

- Persons with disabilities are often faced with stigma and stereotypes in society
- Discrimination and higher exposure to situations of violence and harassment, also in the workplace

Figure 2: Current challenges of labour inclusion of persons with disabilities

There are however many encouraging developments in terms of legislation, policies and practices. Both in the private and public sector, the advantages of disability inclusion<sup>10</sup> are increasingly being recognised. This is often called the “business case for disability inclusion”. The main ideas on this can be found below:

## The business case for disability inclusion

### Persons with disabilities as employees

Misconceptions about work and disability continue to persist, including the false idea that hiring persons with disabilities could lead to a loss of productivity as well as to negative impacts on the financial results of companies. It has been demonstrated that these concerns are not valid but rather that disability inclusion does indeed have a positive impact on business performance.

Persons with disabilities have been pushed to develop skills such as perseverance, problem-solving, agility, forethought, innovative thinking and a willingness to experiment in order to adapt to the world around them<sup>11</sup>. All these skills are key to facing tomorrow's reality. Studies demonstrate that employing persons with disabilities make workplaces more inclusive and better for everyone<sup>12</sup>, thus creating stigma-free environments<sup>13</sup>.

A study published by Accenture<sup>14</sup> in 2018 analyses the correlation between the financial performance of organizations and the number of employees with disabilities in their workforces. The results show that companies employing persons with disabilities are above average in terms of profitability (revenues and net income) and value creation (economic profit margin).

Moreover, turnover of persons with disabilities is 48% less than for persons without disabilities<sup>15</sup>. Furthermore, general staff turnover can be reduced by up to 30% by having persons with disabilities in the workforce.

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10. Refers to the meaningful participation of persons with disabilities in all their diversity, the promotion of their rights and the consideration of disability-related perspectives, in compliance with the UN Convention on the Rights of Persons with Disabilities. Definition extracted from the United Nations Disability Inclusion strategy.

11. What companies gain by including persons with disabilities? World Economic Forum, 2019.

12. What companies gain by including persons with disabilities? World Economic Forum, 2019.

13. There is no single measure for a Stigma free environment but it includes issues like a clear top level commitment to non-discrimination, training on unconscious bias, internal campaigns on issues like mental health.

14. Getting to equal: the disability inclusion advantage. Accenture, 2018.

15. Disability Employment and Inclusion: your guide to success. Workplace Initiative, 2017.

Employing persons with disabilities in a company also brings reputational benefits<sup>16</sup>. A survey conducted by the US National Business and Disability Council found that 78% of consumers will purchase goods and services from a company that facilitates access for persons with disabilities at their physical locations<sup>17</sup>.

What is more, implementing diversity and inclusion policies, from recruitment to development, will bring wider opportunities for talent attraction and retention.

A recent study promoted by Fundación ONCE and Reputation Institute with the co-funding of ESF showed that inclusion of persons with disabilities in companies impacts positively on their reputation (+5,3%), and negatively when not considered (-15,9%)<sup>18</sup>.

### **Persons with disabilities as consumers**

In an increasingly complex and dynamic world, innovative products, services and environments that are accessible to everybody are not only required, but will also bring competitive advantages.

When considering persons with disabilities as consumers, companies can reach a greater number of people. There are one billion persons with disabilities in the world, which represent over \$1.2 trillion in annual disposable income. Taking into account the expected ageing of the population, removing disability-specific barriers for customers with disabilities would clearly also make it easier for all customers to access goods and services.

Furthermore, considering persons with disabilities as customers and consumers will also gain the loyalty of their families and immediate environments, increasing the potential disposable income to be spent up to \$8.1 trillion<sup>19</sup>.

Figure 3: The business case for disability inclusion

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16. What companies gain by including persons with disabilities? World Economic Forum, 2019.

17. A Hidden Market: The purchasing power of working-age adults with disabilities. American Institute for Research, 2018.

18. Study "The impact of social and labour inclusion of people with disabilities in business reputation", 2019 co-funded by the ESF (available in Spanish).

19. 2016 Annual Report: The Global Economics of Disability. Return on Disability, 2016.

Companies are increasingly aware that in order to maximize benefits and to create long-term value (related to their Sustainability or Corporate Social Responsibility strategies) they need to meet the expectations of all their stakeholders – from shareholders to local communities in general. Therefore, a comprehensive approach when considering persons with disabilities is required as reflected in the 360° perspective<sup>20</sup>.



Figure 4: 360° approach for people with disabilities.  
Source: Disability Hub Europe

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20. Term coined in the framework of Disability Hub Europe.



## 2. The megatrends of the future of work and persons with disabilities

Over the course of history, the nature of work has evolved at an ever-increasing pace. The inertia of new forces has created scenarios that would have been unimaginable a few years ago<sup>21</sup>. Since the beginning of the 21<sup>st</sup> century, there has been a transformation of not only the means of production, but also the supply and demand of products and services. This is largely due to the increasing interconnection and cooperation between people and technology.

Some refer to this as the Fourth Industrial Revolution<sup>22</sup>, which is understood as a series of significant shifts in the way that economic, political, and social value is being created, exchanged, and distributed, fundamentally by new technologies such as artificial intelligence, digitalization or blockchain. This has the potential to improve our quality of life while raising global income levels as previous revolutions have done before, but not without significant challenges.

Figure 5 presents the trends that will shape this future of work, according to experts in this field<sup>23</sup> and shows that they are interconnected. These five trends serve as the basic structure for sections 3.1 to 3.5.

### Trends that will shape the future of work:

- The **technological revolution**, which includes, among others, digitalization, artificial intelligence, the use of biometrics, automation, robotics and big data, is one of the main driving forces behind the changes sweeping through the labour market.
- This technological revolution will affect the jobs of tomorrow and will require different **skills** from those of today, creating an important skill mismatch. In a society where knowledge will be easier to acquire, transversal skills will become much more relevant, as content and know-how will permanently be updated.
- The future of work will be affected not only by new technologies, but also by **cultural change** altering the preferences, needs and demands of upcoming generations<sup>24</sup>. Responsible labour relations, work/life balance social values and sustainability will need to be embedded in the organizations of tomorrow.

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21. Work for a brighter future. ILO Global Commission on the Future of Work, 2018.

22. Refers to how a combination of technologies are changing the way we live, work and interact. Concept by Klaus Schwab, Founder and Executive Chairman of the World Economic Forum.

23. Work for a brighter future. ILO Global Commission on the Future of Work, 2018.

24. Green Paper, p.7. Federal Ministry of Labour and Social Affairs of Germany, 2015.

- **Demographic shifts**, including ageing population, urbanisation and migration, while varying according to region, will place strains on the labour market and the social security system<sup>25</sup>.
- **Lastly, climate change**, as part of sustainability, is one of the major problems that concerns society in general and is increasingly regulated. The transition to a low-carbon economy, the adverse impacts of climate change and the new patterns in production models will also shape the future of work.

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25. Work for a brighter future, p.10. ILO Global Commission on the Future of Work, 2018.



# The future of work

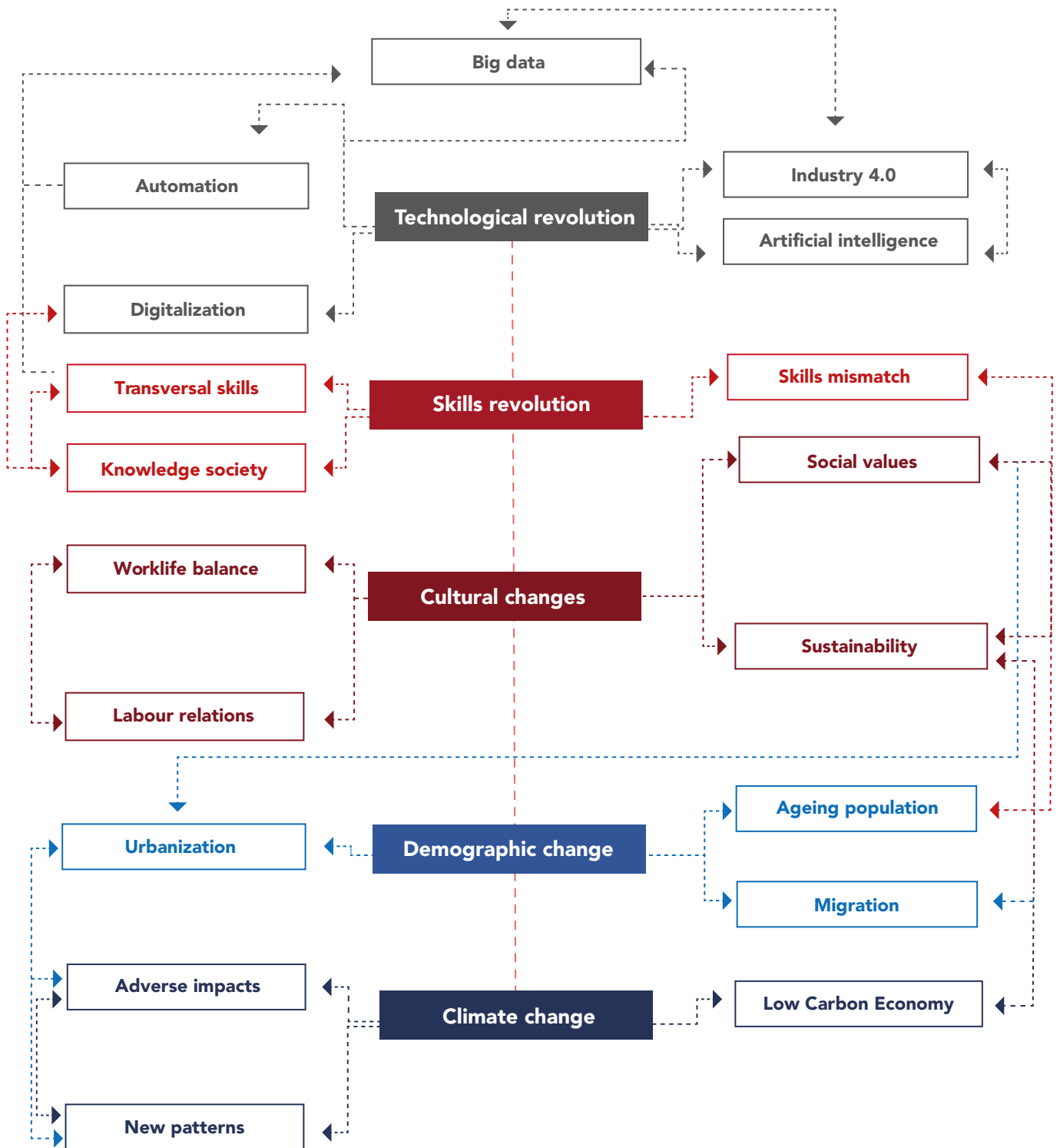


Figure 5: Major trends in the future of work.  
 Source: Own production on the basis of main Future of Work publications





The consequences of the transformation are unclear, but the rise in inequality and the effects on those more disadvantaged sectors of society, such as persons with disabilities, are a matter of concern.

It is essential to identify the challenges faced and the opportunities offered by this transformation in order to pave the way for a more inclusive society while offering financial security, equal opportunities and social justice for persons with disabilities. This means that governments, companies, disability NGOs, trade unions and citizens must all play their part<sup>26</sup>.

This chapter will look into each of the megatrends identified, providing details of the changes that are occurring or likely to occur and then focusing on those aspects that seem to be particularly relevant from a disability perspective. This is not easy as persons with disabilities are a very diverse group and therefore the future of work trends might have very different impacts on them, depending on their type of disability, social circumstances, including education, age, gender, place of residence, to cite just a few. One area that will surely require more attention and research is the relation between gender and disability in the context of the future of work.

Where available, examples of initiatives that show what may need to be done to maximize opportunities and address the challenges will be provided. The examples do not follow representative criteria such as geography or economic sector. Some have been extracted from other publications and others have been collected and elaborated specifically for this publication.

## 2.1. Technological revolution

The **technological revolution** of the last decades is responsible for the pace at which the world is being transformed.

New technologies will create new jobs, while rendering others obsolete<sup>27</sup>. A rift in the world of work is expected to open due to a lower demand for mid-level qualifications and a higher demand for low and high-level expertise<sup>28</sup>. The wage gap is therefore set to widen, with **a rise in the salaries attached to highly-qualified jobs and a drop in those associated with less-qualified employment**<sup>29</sup>. The impact on persons with disabilities who are already in the labour force will depend on the jobs they currently have and on the efforts being made by their employers themselves and the support of public administrations, to move to jobs that remain and ideally to highly-qualified jobs. Technologies

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26. Work for a brighter future. ILO Global Commission on the Future of Work, 2018.

27. Work for a brighter future, p.10. ILO Global Commission on the Future of Work, 2018.

28. Green paper, p.16-17. Federal Ministry of Labour and Social Affairs of Germany, 2015.

29. Global Risk Report 2018, 13th Edition. World Economic Forum, 2019.



that do not replace jobs but enhance them by supporting the work of people can be relevant for some persons with disabilities, replacing tasks they might not be able to do or not do as effectively as others.

**The technological transformation can, if it is carried out in an inclusive way, offer persons with disabilities better access to the job market.** Digital technology facilitates participation in training in the form of more flexible, more condensed learning arrangements. Digital platforms can be used for job-hunting, offering direct access to employment and employers. However, it is vital that these platforms are accessible from the outset. For platforms that are used for job mediation, this raises the issue of whether persons with disabilities should inform about their disability and any disability-related needs. This raises ethical and data protection issues, which require more reflection.

**Artificial Intelligence (AI) applications can create important opportunities for persons with disabilities if they are designed for all** but, if not, they may encompass considerable threats to the employment of persons with disabilities. An example of these threats is the AI based software used by some large companies to support recruitment processes, which filters candidates prior to any human intervention. Some of this software has been criticised for leading to the exclusion of candidates because of their disability. In this regard, legislation on protection from discrimination regarding new forms of technology is essential to ensure human rights are guaranteed in this transformation.





The pace of change and innovation is so fast that unless **Universal Design is at the heart of the teams that are in charge of innovation**, new products and services might create new barriers and by the time accessibility has been added, these products and services will already have been replaced. Having persons with disabilities directly involved in the innovation processes is key for this and will also lead to better products and services for all, a clear example of how disability inclusion contributes to innovation and competitiveness. In this context, Employee Resource Groups can play an important role in ensuring that new products and services take into account Universal Design from the outset.

The European Standard EN 17161:2019 'Design for All -Accessibility following a Design for All approach in products, goods and services- Extending the range of users' has been created to help organizations address accessibility of products, goods and services for people with disabilities.

**Assistive technologies** are creating new opportunities in society and in the labour market. It is important that these technologies **are widely available and form part of the catalogue of reasonable accommodations to be provided by employers and training institutions**. ICT can also be helpful in raising awareness of the solutions that exist and contribute to ensuring that the most appropriate adjustments are provided for each person depending on their individual needs and actual job.

Last but not least, the development of new technologies is feeding the “gig economy”, characterised by flexible work arrangements supported by platforms that allow short-term work engagements between employers and employees. The implications for persons with disabilities will be further discussed in the section on cultural change.

Some examples of the way on how to include persons with disabilities in the technological revolution are as follows:

 <p><b>Samsung</b> aims to offer products, which are accessible for persons with disabilities and to do so, the company develops its products under the 4C (Consideration, Coherence, Comprehensiveness, Co-Creation) Principles for Accessibility Experience Design. The company also uses the ‘Accessibility UX (User Experience) Design Guide’ and ‘Checklist’ to ensure that its designers and developers consider and integrate factors of accessibility into the real-world product design process<sup>30</sup>.</p>	 <p>The organisation “<b>Teach Access</b>” in the U.S. is a collaboration between academia, industry, and advocates for persons with disabilities, formed to address the urgent need to enhance the skills of higher education students as they learn to design and develop mobile and desktop technologies. The goal is to ensure that future technologies are “born accessible,” by proliferating fundamental skills and concepts of accessible technology design and development in mainstream design, computer science, and other related disciplines.</p>
 <p>AI for Accessibility is a <b>Microsoft</b> grant programme that harnesses the power of AI to amplify human capability for persons with disabilities. AI for Accessibility aims to do so through grants, investments in technology, and expertise. The AI for Accessibility programme awards grants in areas that are vital for building a sustainable future for persons with disabilities: employment (AI to develop more advanced skills and for inclusive hiring); daily life (making software and devices smarter and more contextually relevant) and communication and connection (creating new possibilities through technology).</p>	 <p><b>Atos</b> has signed the Valuable 500 campaign to highlight its commitment to implementing the values of inclusion and accessibility from the board level throughout the entire organization.</p> <p>As a technology organization, Atos has contributed to global standards and the professionalization of accessibility to ensure the technology of tomorrow is designed with accessible principles in mind, from the beginning of the process.</p>

30. Disability in Sustainability Reporting, p.25. Fundación ONCE and GRI, 2019.





SourceAmerica and the World Information Technology and Services Alliance (WITSA) published a policy statement to address the social and economic imperatives of employment of persons with disabilities and lay out a roadmap for the ICT industry to grow as leaders in supporting the employment of persons with disabilities. This collaboration is a good example of the type of initiatives that are needed to make the ICT industry more inclusive<sup>31</sup>.



The Israeli company Atvisor created an AI based system for online assistive technology consultation and procurement that can provide advice to companies, persons with disabilities and professionals on the best available product. While not specific to the workplace, it includes assistive technologies that can be provided in the form of workplace adjustments. The company collaborates with the relevant Ministries and is therefore a good example of public/private partnership.

## 2.2. The skills revolution

The life cycle of skills at the workplace is shorter than ever due to adaptation of technology and change is happening at an unprecedented rate (which will continue to accelerate).

As mentioned before, the creation of new jobs and the destruction of others is altering the professional profiles in demand, associated with know-how and skills of a technological nature. STEM<sup>32</sup> profiles and highly-qualified candidates able to keep pace with constant technological progress are required. A study published by the World Economic Forum<sup>33</sup> shows that the jobs most in demand in the coming years will be related to data, AI and machine learning, where problem-solving capacities will become essential. The new employment paradigm also prioritises social and personal skills (the value of which cannot be replaced by technological processes) over specific expertise<sup>34</sup>. **Skills such as critical thinking, analytical capacity, emotional intelligence and cognitive flexibility may become essential in this new reality.**

Organizations are facing skill shortages and skill mismatches<sup>35</sup>. Workers are confronted with the need to continuously update their knowledge and skills due to ever more condensed processes of innovation. This scenario requires companies, educational institutions and public administrations to provide

31. ICT Leadership in Inclusive Employment of Persons with Disabilities: An Economic and Social Imperative. WITSA/SourceAmerica, 2018.

32. Science, Technology, Engineering and Maths.

33. Key Findings: The future of jobs. World Economic Forum, 2019.

34. Green Paper, p.29. Federal Ministry of Labour and Social Affairs of Germany, 2015.

35. Green Paper, p.45. Federal Ministry of Labour and Social Affairs of Germany, 2015.

employees and the workforce with the training required to cover the skills in demand. Similarly, they must guarantee the ongoing training of employees, accompanying them throughout a lifelong learning process<sup>36</sup>.

In this context, ensuring that persons with disabilities have the adequate skills will become even more relevant and will need to address both those seeking to enter the labour market as well as those in the labour market who might be at risk of losing their jobs. **Life-long learning will be key for all and needs to be inclusive of persons with disabilities.**

Leaving and returning to the labour market will become more of a reality and better policies will need to be designed for this, which can also benefit persons with disabilities, including those with mental health conditions.

An important barrier that needs to be addressed relates to the lack of transferability of disability support services (also in the EU), in a context where it becomes even more important for people to benefit from being able to study and work abroad, among other things, to develop some of the skills that may become relevant in the future. Not solving this issue will put those persons with disabilities, who require these support services, at a disadvantage compared to people who do not need them.

A still small but increasing number of examples, some included below, show that there is a potential for training initiatives that target persons with disabilities, and focus on skills and jobs that are in high demand. The examples also show the relevance of collaboration between private sector, public sector, disability NGOs and academia.

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36. Work for a brighter future, p.24. ILO Global Commission on the Future of Work 2018.





**IBM** has invested in the P-TECH education model, which connects high school, college and the business world to prepare students for technology jobs of the future, including cybersecurity. Through P-TECH, public high school students can earn both a high school diploma and an industry-recognised two-year postsecondary degree at no cost to them or their families, while working with industry partners like IBM on skills mapping, mentorship, workplace experiences and internships.

Although this programme currently applies to all students, with and without disabilities, in 2019, IBM will deploy “New Collar” programmes outside of the United States targeting youth with disabilities by working with local NGOs.



The **Fundación ONCE Digital Academy** was launched in 2018, with co-funding of the European Social Fund, to enhance digital skills linked to highly demanded jobs amongst young people with disabilities, including Robotics, Internet of Things, Artificial Intelligence, Augmented Reality, 3D printing, Big Data or Cybersecurity.

The programme involves two phases, providing more generic skills and specialized training.

In 2018 220 youngsters with disabilities participated in the Academy.



Modis, the IT, engineering and life sciences consultancy of **Adecco Group** has developed a comprehensive programme for Asperger diagnosed students with Grenoble EM Business School as its partner. The programme aims at training 75 students (25 per year) for the positions of data analysts and data coders. Modis invests time and energy in designing the training as well as helping the students to successfully integrate in their future work environment.



In Kenya, the **CISCO Networking Academy** has offered IT courses to nearly 400 people with hearing impairments since 2012 through partnerships with Deaf Aid and Karen Technical Training Institute for the Deaf. Sixty-five percent of participants are employed or conducting internships.



**The Mayor's Office for People with Disabilities (MOPD) in New York** launched, in partnership with Cisco, an innovative ICT training academy, which seeks to bridge the ICT skills gap for people with disabilities by providing training in cyber security to enter the tech industry. The training academy recruited previously unemployed people with disabilities into a free of charge ICT training programme, funded by a private-public partnership. Students learn cyber security skills and are ready for work preparation in a 6-month classroom based programme. It is followed by a 3-month apprenticeship, which leads directly to a network security analyst position paying at market rate. Several New York City employers are participating to have priority access to the in-demand cyber security talent. As a result of its success and employer talent demand, this model is now being planned for introduction in several other hiring markets and locations in the United States.



**Sun ITeS Consulting Private Limited** is a Bangalore based technology and management service firm that has been working with Leonard Cheshire to actively encourage and support the employment of people with disabilities since 2012. Sun ITeS Consulting private Ltd has been training people with disabilities in the necessary skills to become IT professionals. After conducting a special recruitment drive at JSS Polytechnic, 20 candidates, 17 of whom were women, were selected to become Trainee Process Executives. The 20 selected candidates were trained in company processes by a trainer from Sun ITeS. A sign language interpreter was also provided to support candidates with hearing impairments. Following this training, all 20 candidates were hired by Sun ITeS.

There is great potential for upscaling and replication of initiatives like these and it will be important to use the lessons learned from these experiences to ensure that mainstream initiatives become disability inclusive.

One example of replication is the design and implementation of the "Neurodiversity Hub" (NDH) model by DXC Technology and Untapped. This is a community of practice across a number of universities and employers in Australia, USA and the UK. The Neurodiversity Hub focuses on helping neurodiverse students get through their course and increase their likelihood of getting a job and starting a career. Employer partners in the Hub may offer mentoring, work experience or internship opportunities which will help build a pipeline of students for neurodiverse-friendly employers. The NDH co-curricular programme of activities is available globally through the Hub website: [www.neurodiversityhub.org/resources](http://www.neurodiversityhub.org/resources), and includes a wealth of resources for students, their parents and carers, employers and university faculties.





## 2.3. Cultural change

Society is experiencing cultural and social changes. The manner in which new generations organise their professional lives and the products and services they require are being transformed<sup>37</sup>. This cultural shift is borne out by new approaches in the relationship between people and the world of work as well as greater social and environmental awareness. People are calling for a fair, responsible world of work that enables them to strike a better work/life balance<sup>38</sup>, while at the same time there are challenges related to the need to be connected on a 24/7 basis.

New technologies and globalisation have brought disruption to the world of work. It is much easier today for qualified workers to change jobs; the possibilities are almost endless, free from the shackles of geographic location, almost anyone can find a job anywhere in the world, as long as they have the adequate skills and means of access. Employee turnover is becoming a problem for many businesses, one of the factors that is leading many organizations to ensure the wellbeing of their employees. To this end, they must incorporate their employees' demands into their corporate culture, setting in place initiatives to ensure their needs are met and aligning themselves with employees' values. In this sense, **the companies of the future will foster more sustainable working environments, and will be less hierarchical, more flexible, diverse and inclusive.**

Disability is a factor of diversity within the population and workforce, as are, ethnicity, age, religious beliefs or sexual orientation, besides gender, but still not enough organizations are including disability in their work on diversity and inclusion. **Companies, whether private or public, that claim to be diverse and inclusive must ensure that their workplaces and environments are conceived as accessible and free from any physical, digital or social barriers towards persons with disabilities.**

The 2016 Annual Report of the Return on Disability Group, showed that only 4% of businesses are committed to including disability in their strategies<sup>39</sup>.

An organisation concerned about the wellbeing of its employees will set in place **teleworking and flexitime initiatives and policies**. Such new ways of working would also be relevant for persons with disabilities and might help overcome the current barriers they face. On the one hand, physical barriers, that often make their journeys more difficult and on the other, social ones. For example, not having to go to an office can be highly beneficial for people with social phobias.

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37. Green Paper, p.7. Federal Ministry of Labour and Social Affairs of Germany, 2015.

38. Green Paper, p.7. Federal Ministry of Labour and Social Affairs of Germany, 2015.

39. 2016 Annual Report – The Global Economics of Disability. Return on Disability Group, 2016



Additionally, these working methods offer the opportunity for persons with disabilities to adapt their work timeline to their own necessities.

Nevertheless, these solutions also pose challenges, which are common to other platform workers, both in terms of the quality of employment, as well as risks of isolation and exclusion, which might be especially concerning for persons with disabilities.

Cultural change is also related to the **demand to work in companies that are socially conscious and are aligned with a sustainable future**. New models of economic growth focused on social wellbeing such as the Social and Solidarity Economy (SSE) are becoming increasingly relevant. SSE puts people, rather than profit, at the centre of its strategies. These models bring innovative solutions to issues that have not yet been adequately addressed. They support values such as self-help, equality and equity and they aim to achieve economic growth through cooperation and democratic processes<sup>40</sup>.

**ILUNION**, the business project of ONCE Social Group, is driven by the principles of inclusion and diversity, demonstrating that a more inclusive economy is possible. With more than 50 business lines, ILUNION's staff comprises 35,800 employees, of which 41% are persons with disabilities. One of the group companies, ILUNION Technology and Accessibility (ILUNION T&A), with more than a hundred workers – more than half with disabilities – offers quality technological and accessible solutions contributing to create digital environments that meet the needs of all and to advance digital transformation leaving no one behind.

## 2.4. Demographic change

The growing urbanization and ageing population, also in countries such as China and India, shape the demographic changes taking place. It seems that over the coming decades there will be global declines in the rate of population growth and some shifts in the overall weight of the global working-age population. Africa is expected to see its share in the global working-age population rise considerably. Other regions, with the exception of Europe and Central Asia, will slow down at similar rates and therefore their weight will not change much in the coming years<sup>41</sup>.

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40. Cooperatives & Social Solidarity Economy – Responses to key issues in the report of the Global Commission on the future of Work. ILO, 2019.

41. Future of Work, Major trends. ILO, 2018.



In the European Union –from a general overview– there is a clear trend towards an ageing population, brought about by a falling birth rate combined with increased life expectancy, which may well represent the most pressing demographic challenge facing the current and future world of work.

Societies and the world of work must face the challenges posed by demographic trends, above all the ageing population. The skills of more senior members of society who wish to continue working must be exploited, and the world of work must therefore adapt to their needs. **An ageing population is contributing significantly to a higher rate of disability among the population. Ageing societies therefore need to make disability inclusion a priority** to be able to address the current and future requirements of a large percentage of their members.

The home improvement retailer **Lowe's** is providing employees in the U.S. with a simple exoskeleton to help them on their job. The company has developed this technology in partnership with Virginia Tech. These uniforms, mainly for older employees, make lifting and moving heavy objects easier. If this technology is developed inclusively, it can bring new opportunities not only for older workers but also for persons with disabilities.

The tensions caused by the ageing population and the fall in birth rates, such as the decrease in pension payments, the growing cost of healthcare and the extension of people's working life, may lead to important societal challenges<sup>42</sup>.

These challenges may include difficulties for young workers to enter the labour market. The increasing retirement age in some countries, may reduce employment opportunities for young workers<sup>43</sup> and lead to a lack of stable jobs, increasing caring responsibilities for older family members, a difficult transition from education to employment and poor access to social protection. **Youth with disabilities are more vulnerable and at greater risk of exclusion if not taken into account when designing transition opportunities.**

An ageing population together with migration, another important demographic trend, are leading to more diverse workforces. In this context, **organizations will have to make greater efforts to create inclusive working environments.** This may be beneficial for persons with disabilities, since diversity will be embedded at the centre of the organizations.

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42. The future of work and youth. European Youth Forum, 2018.

43. The future of work and youth. European Youth Forum, 2018.

Additionally, the city-dwelling population is expected to continue to rise while the population in **rural areas** will further decline. This exodus exacerbates rural isolation problems, among others the lack of employment and education facilities<sup>44</sup>. Therefore, the future of work poses specific challenges to persons with and without disabilities living in rural and remote areas, considering however the higher impact on persons with disabilities who cannot access transport due to accessibility problems and get-to-work facilities. Consequently, investment to improve connectivity with rural areas is necessary to slow down urbanisation<sup>45</sup> and reduce exclusion, and it is important that these measures are designed so they will also fully benefit people with disabilities living in rural and remote areas.

Impact Sourcing, an Initiative of the Global Impact Sourcing Coalition (GISC), is a collaboration between companies to build more inclusive global supply chains which seeks to provide meaningful employment to people living in rural and remote areas, and can provide opportunities for persons with disabilities living in those areas, if designed in an inclusive way. One of the toolkits prepared by GISC deals with autistic people.

## 2.5. Climate change

The Paris Agreement, the 2030 Agenda and the UN Sustainable Development Goals have put climate change mitigation at the centre of the global agenda. Transition towards a low-carbon economy is one of the actions that may best contribute to achieving this goal<sup>46</sup>. This will have a relevant impact on the economy and on the world of work affecting production models, since the use of polluting products or processes will be reduced and changing demand patterns such as clean products will be cheaper in countries adopting green policies<sup>47</sup>.

Tackling climate change will affect employment, generating new jobs and demanding new skills. This may mitigate the job polarisation resulting from new technologies by creating job opportunities that may not require digital skills and has the potential to offer new opportunities for persons with disabilities, if well tackled.

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44. Rural poverty in the European Union. European Commission, 2017.

45. Work for a brighter future. ILO Global Commission on the Future of Work, 2019.

46. Persons with disabilities and a just transition to low-carbon economy. ILO Global Business and Disability Network, 2019.

47. Employment Implications of Green Growth: Linking jobs, growth, and green policies, p. 6. OECD, 2017.



The transition towards a low-carbon economy will also result in the substitution of some existing jobs. An example is the operations related to landfilling that may be replaced by recycling and refurbishing operations. This change in jobs may require an upgrading of skills or greening-of-skills programmes<sup>48</sup>. Again, if the re-skilling process is done in a disability-inclusive way it can bring new job opportunities for persons with disabilities.

The substitution of polluting processes and the transition towards more energy and water efficiency in sectors such as agriculture may also result in the elimination of certain jobs without direct replacement. In this context, access to skills development programmes and social protection schemes are essential to ensure no one is left behind<sup>49</sup>.

Estimates suggest that overall, **the transition to low-carbon economies worldwide will be a net generator of jobs, with as many as 18 million new jobs appearing globally<sup>50</sup>** and 1.2 million in the European Union by 2030<sup>51</sup>.

In Hull, UK, **Siemens Gamesa Renewable Energy** partnered with Pathway Plus in 2017 to offer internships to students with disabilities and subsequently provide them employment at Siemens Gamesa in the UK. Interns were given work placements in various departments in the wind turbine blade factory to build their capacity and develop skills necessary for factory employment.

The **Climate Action Summit** held in September 2019, launched the “Climate Action for Jobs”. This is an initiative that provides a roadmap to ensure that people’s jobs and wellbeing are at the centre of the transition to a carbon-neutral economy and calls on countries to formulate national plans for a just transition that creates decent work for all. Additionally, it sets out specific measures for inclusion in the plans, such as “designing innovative social protection policies to protect workers and vulnerable groups”.

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48. Persons with disabilities and a just transition to low-carbon economy. ILO Global Business and Disability Network, 2019.

49. Persons with disabilities and a just transition to low-carbon economy. ILO Global Business and Disability Network, 2019.

50. World Employment Social Outlook. ILO, 2018.

51. Employment and Social Developments in Europe. European Commission, 2019.

# 3. A roadmap for an inclusive future of work

Changes transforming the future world of work are occurring at a rapid pace. Measures need to be urgently implemented to ensure that currently disadvantaged groups, including persons with disabilities, benefit from these transformations. As shown in this publication, many of the changes related to the future of work pose not only risks but also opportunities for persons with disabilities.

**Persons with disabilities and the disability perspective needs to be central in all future of work related discussions at global, regional, national and local levels.** The UN CRPD and the Agenda 2030 for Sustainable Development are guiding frameworks for shaping a future of work inclusive of persons with disabilities.

As the ILO Centenary Declaration on the Future of Work adopted in June 2019 states, the ILO itself must work towards, among other issues:

*“Ensuring equal opportunities and treatment in the world of work for persons with disabilities, as well as for other persons in vulnerable situations.”*

There are a range of key issues that will be particularly relevant to ensure that in an ever-changing world of work approaches are human-centred. Many of these issues build on initiatives that are already being undertaken to make the world of work inclusive of persons with disabilities. Efforts to include persons with disabilities in employment and work have already been oriented towards inclusive and equitable futures, but a more worldwide and articulated movement is needed with the participation of all the stakeholders.

Analysis of the five megatrends through a disability lens has led to the identification of **5 key objectives for the inclusion of persons with disabilities in the future of work:**





Figure 6: Key objectives for the inclusion of persons with disabilities  
Source: Own Production

To be able to achieve these goals, disability inclusion needs to be further integrated with other initiatives contributing to an equitable future of work. There will be considerable scope to strengthen the connection between actions on gender equality and disability inclusion, or to further develop the connections between disability and initiatives for mental health and wellbeing in employment, for example. Making these initiatives disability-inclusive, will require the active participation of persons with disabilities and their organizations in the relevant decision-making or implementation processes.

Alongside the five key objectives, social protection systems are an important complement to achieving a future of work inclusive of persons with disabilities. Recent work by ILO and other partners has focused on transforming social protection systems to ensure the rights of persons with disabilities and to enable a positive relationship between social protection and work<sup>52</sup>. As the world

52. Joint Statement: Towards Inclusive Social Protection System Supporting Full and Effective Participation of Persons with Disabilities. ILO and IDA, 2019.

changes, transforming the world of work and how disability is experienced, adaptive social protection systems will be crucial to allowing persons with disabilities to participate positively in the future of work.

**Immediate, active and appropriate engagement and awareness of all stakeholders is key to unlocking the potential the future of work offers to persons with disabilities.** The table below shows and develops the main actions that stakeholders should implement to achieve the five objectives identified.

**Key objective 1: New forms of employment and employment relations integrate disability inclusion**

Public authorities	Corporate Sector	Disability NGOs	Trade Unions	Academia
<ul style="list-style-type: none"> <li>• Promote disability inclusion and protection from discrimination in legislation and policies dealing with new forms of employment and employment relations</li> <li>• Include persons with disabilities in the changes in social protection systems related to the future world of work</li> <li>• Support more effective compliance of affirmative action measures, including quotas and targets</li> <li>• Foster inclusive employment in the public sector</li> </ul>	<ul style="list-style-type: none"> <li>• Embed disability inclusion throughout the company and the business strategy</li> <li>• Ensure disability inclusion is a core part of Diversity and Inclusion and it is reflected in sustainability reporting</li> <li>• Encourage a stigma free environment</li> <li>• Provide reasonable accommodation, including through flexible work schedules</li> </ul>	<ul style="list-style-type: none"> <li>• Take active advocacy action in all initiatives leading to changes in social protection systems, new forms of employment and employment relations</li> <li>• Disseminate and share knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Consider disability in the processes of consultation and negotiation</li> </ul>	<ul style="list-style-type: none"> <li>• Cover the disability perspective in the knowledge generated</li> </ul>



## Key objective 2: Skills development and lifelong learning made inclusive of persons with disabilities

Public authorities	Corporate Sector	Disability NGOs	Trade Unions	Academia
<ul style="list-style-type: none"> <li>Invest in and encourage education and training of persons with disabilities with a special focus on digital skills, including workplace based training (apprenticeship) and entrepreneurship training</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that training is accessible for employees with disabilities</li> <li>Engage and support training programmes promoting inclusion of persons with disabilities in the context of the future of work</li> </ul>	<ul style="list-style-type: none"> <li>Promote and support disability-inclusive training focused on the skills demanded by the labour market</li> </ul>	<ul style="list-style-type: none"> <li>Support the rights of persons with disabilities to be trained the same as other employees</li> </ul>	<ul style="list-style-type: none"> <li>Develop open and accessible knowledge platforms, as well as targeted programmes for students with disabilities, related to skills in demand</li> </ul>

## Key objective 3: Universal Design embedded in development of all new infrastructure, products and services

Public authorities	Corporate Sector	Disability NGOs	Trade Unions	Academia
<ul style="list-style-type: none"> <li>Support accessible innovation and R&amp;D</li> <li>Promote legislation and public procurement for Universal Design and protect from discrimination in the design of new products and services</li> </ul>	<ul style="list-style-type: none"> <li>Mainstream a Universal Design approach in products and services from the outset, by involving persons with disabilities at every stage</li> </ul>	<ul style="list-style-type: none"> <li>Foster the use of Universal Design and provide technical guidance</li> <li>Participate in Universal design development and testing</li> </ul>	<ul style="list-style-type: none"> <li>Enhance awareness about the importance of a Universal Design approach</li> </ul>	<ul style="list-style-type: none"> <li>Include Universal Design in the format and content of the training provided and also in the research projects developed</li> </ul>



**Key objective 4: Assistive technologies, existing and newly developed, to be made affordable and available**

Public authorities	Corporate Sector	Disability NGOs	Trade Unions	Academia
<ul style="list-style-type: none"> <li>• Provide funds and technical assistance for assistive technologies in the workplace as reasonable accommodation with particular attention to SMEs</li> <li>• Introduce subsidies for R&amp;D in assistive technologies</li> </ul>	<ul style="list-style-type: none"> <li>• Supply the relevant assistive technologies required by employees in the workplace as a form of reasonable accommodation</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in innovation and new developments</li> </ul>	<ul style="list-style-type: none"> <li>• Support the provision of assistive technologies for persons with disabilities in the workplace</li> </ul>	<ul style="list-style-type: none"> <li>• Foster R&amp;D in assistive technologies</li> </ul>

**Key objective 5: Measures to include persons with disabilities in growing and developing sectors of the economy**

Public authorities	Corporate Sector	Disability NGOs	Trade Unions	Academia
<ul style="list-style-type: none"> <li>• Ensure inclusion of persons with disabilities in initiatives targeting the new growth areas, e.g. the low- carbon and “green” economy</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage disability inclusion in initiatives linked to jobs being created in growth areas (climate change)</li> <li>• Support disability inclusion in the context of private sector alliances and coalitions in growth areas</li> </ul>	<ul style="list-style-type: none"> <li>• Actively engage with initiatives that are focused on the new growth areas</li> </ul>	<ul style="list-style-type: none"> <li>• Promote the inclusion of persons with disabilities in just transition, leaving no one behind</li> </ul>	<ul style="list-style-type: none"> <li>• Generate and disseminate knowledge on opportunities for persons with disabilities in the future of work</li> </ul>



### Transversal recommendations:

- When implementing all these initiatives, **gender equality** and links with other intersectional identities will need to be fully embedded.
- Particular attention should be paid to persons with disabilities who already face specific challenges to enter and stay in the labour market, including people with intellectual and psychosocial disabilities.
- To achieve the 5 objectives, and in accordance with SDG 17 “Partnerships for the goals”, multilateral collaboration with all stakeholders is crucial and should be strengthened. Persons with disabilities, and their representative organizations, must be included in decision-making and processes that shape the future of work.

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# Acknowledgements

The leading teams of this publication at ILO GBDN and Fundación ONCE would like to thank the following persons and organizations for their different contributions, participating in the report contrast and/or facilitating the contribution process. They are mentioned by alphabetical order of the organization represented:

- Daniel Ellerman (Accenture)
- Bruce Roch (Adecco Group)
- Neil Milliken (ATOS)
- Susan Scott-Parker (Business Disability International)
- Pilar Villarino (CERMI)
- Josefa Torres (CERMI, Labour Inclusion Committee)
- Susanne Bruyere (Cornell University)
- Yvette Sweringa (CSR Europe)
- María Trigo, Rogier Reinders (DOW)
- Haydn Hammersley, Loredana Dicsi (European Disability Forum)
- Inmaculada Placencia (European Commission)
- Germán Granda, Ricardo Trujillo (Forética)
- Sabina Lobato, Virginia Carcedo, Ana Juvíño, Edurne Alvarez de Mon, (Fundación ONCE-Inserta Empleo)
- Yves Veulliet (IBM)
- Martin Ostermeier (ILO)
- Margaret Johnston-Clarke, Veronica Lalov (L'Oréal)
- Christopher Prinz (OECD)
- Debra Ruh (Ruh Global Impact)
- Melissa Soh (Standard Chartered Bank)
- Patrick J. Romzek (Three Talents)
- Elisabeth Anna Resch, Griet Cattaert, Julie Kofoed, Lauren Gula, Mari-lou Dupont (United Nations Global Compact)
- Alexandre Bloxs (World Federation of the Deaf, International Disability Alliance)



## Design & Layout:

ILO GBDN and Fundación ONCE would also like to thank ILUNION for the publication design and the accessibility treatment.

## The leading team of this publication includes:

- **ILO GBDN:** Stefan Tromel, Jürgen Menze, Peter Torres Fremlin
- **Fundación ONCE:** Carla Bonino, Maria Tussy
- **KPMG, acting as Disability Hub Europe Technical Secretariat:** Ramón Pueyo, Teresa Royo, Alicia Goya, Cristina Irujo





## GLOBAL BUSINESS AND DISABILITY NETWORK

The ILO Global Business and Disability Network (GBDN) aims to create a global workforce culture that is respectful and welcoming of persons with disabilities. Its goal is to make sure that employment policies and practices in companies of all types are inclusive of persons with disabilities around the world. The GBDN also works to increase awareness about the positive relationship between disability inclusion and business success.

The GBDN is a unique platform for business-to-business support and peer-to-peer learning on disability issues. The GBDN facilitates the exchange of knowledge through global, regional and national meetings, both face-to-face and online, as well as working groups, joint publications and tools.

The GBDN also supports national-level business initiatives on disability inclusion, particularly in developing countries. It provides technical advice and facilitates contacts with national business and disability initiatives, disabled people's organizations, partners and offices of the ILO.

Webiste: [www.businessanddisability.org/](http://www.businessanddisability.org/)



The main goal of Fundación ONCE for the Cooperation and Social Inclusion of People with Disabilities (Fundación ONCE) is to promote the quality of life of people with disabilities and their families, particularly focusing on the areas of training, employment and universal accessibility of environments, products and services.

Based in Spain, and founded by ONCE (the National Organization of the Spanish Blind), Fundación ONCE has extensive experience in labour inclusion of people with disabilities, and has collaborated beyond borders with private companies, governments at all levels and other organizations from civil society, making the disability dimension in this field much more visible.

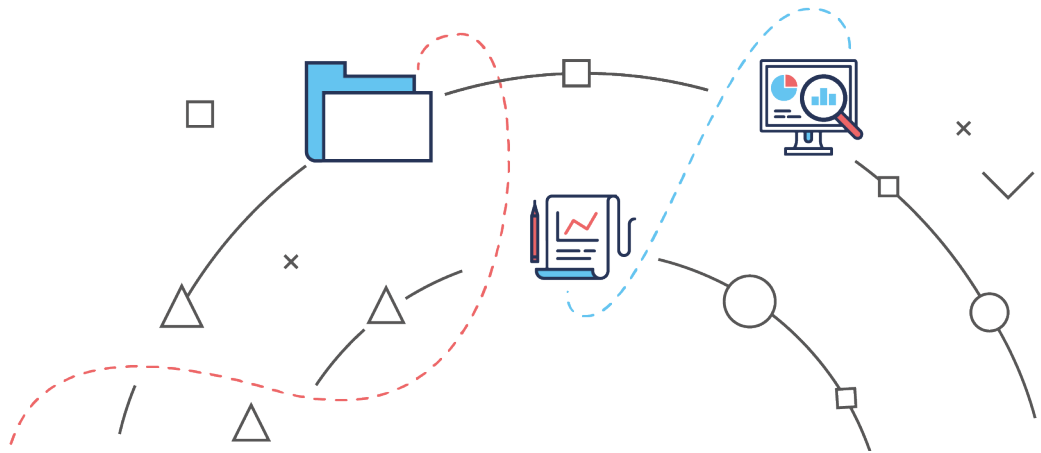
Website: [www.fundaciononce.es](http://www.fundaciononce.es)



Fundación ONCE runs the Spanish Operational Programme "Social Inclusion and Social Economy" 2014-2020, co-funded by the European Social Fund, which allows it to develop several key activities, including the transnational initiative "Disability Hub Europe for sustainable growth and social innovation", that focuses on best practice exchange, dissemination, mutual learning and awareness-raising on the binomial Disability and Sustainability. Aligned with the 2030 Agenda and the SDGs, Disability Hub Europe serves as the framework for this Publication.

Webiste: [disabilityhub.eu](http://disabilityhub.eu)





**This document is a contribution to the 2030 Agenda and the Sustainable Development Goals, specifically to Goal 8 “Decent work and Economic Growth” and to the specific target 8.5 “By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value”.**

