Digital *inclusion* as a driver of prosperity: innovation and sustainable growth

Digital Public Policy, Regulation and Competition 2025

Telefónica

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1. Foreword: Digital inclusion, Prosperity and *Innovation*

Moving towards greater prosperity is the major challenge of the 21st century and goes beyond mere economic growth. It implies promoting inclusive and sustainable development that considers all actors in society and integrates technological and environmental advances, as well as social, economic and cultural aspects.

Given the growing role of digital technologies in innovation and economic and social development, it is essential to foster an inclusive digital environment. Such an environment enables citizens, consumers, workers, businesses, governments and society at large to develop and adopt new capabilities, ensuring their full participation in all facets of digital life.

Integrating the society into this cycle of progress driven by the digital economy will foster an enabling environment for balanced and sustainable growth. This will ensure that the benefits of this growth reach all people, especially those in vulnerable situations. This will result in a more cohesive society, with greater economic integration at the local and global levels, and an improved quality of life.

In the digital age, ensuring digital inclusion is therefore a key factor in driving prosperity. It refers to the capacity of diverse range of economic actors to access, use and benefit from digital technologies, thereby transforming interactions within society and creating opportunities.

Access to digital technologies improves basic services such as education or healthcare, increases business efficiency, boosting productivity, and creates quality jobs, contributing to more equitable and sustainable economic growth¹. In this context, it is vital to promote inclusive digital innovation and meaningful connectivity.
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This connectivity provides greater access to information, technology and resources for all. By expanding the number of participants in digital and green innovation and transformation processes, it ensures that societies can leverage the transformative power of connectivity to build more equitable and prosperous futures for all.

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Conversely, the digital divide, or inequalities in access to and use of digital technologies, would have a negative impact on the prosperity of individuals, businesses and public administrations. This would limit the evolution of demand, access to opportunities or the improvement of products and services. Consequently, the promotion of an inclusive digital environment therefore implies addressing the gaps faced by different actors in society with concrete actions.

An effective digital inclusion creates a virtuous circle between supply and demand, which is beneficial for all parties involved. It is vital that businesses and administrations are digitally included, as this acts as a catalyst for wider digital inclusion in society. By adopting digital technologies, these actors enhance the digital skills of their employees, customers and citizens, thereby raising overall digital literacy. Consequently, the digitisation of consumer habits drives the digital inclusion of businesses and public institutions, creating an environment where supply and demand are mutually reinforcing, thereby fostering innovation.

This process requires a comprehensive approach that ensures synchronisation of both sides of the market, facilitating the digitalisation of the private sector, public sector, consumers and citizens. The implementation of this strategy would help to bridge the usage gaps in the productive structure and to promote inclusive digital innovation.

In the first position paper, we addressed people's digital inclusion with a focus on reducing the coverage and usage gap. In this second document we focus on the essential levers to favour digital inclusion in its

economic aspect for inclusive economic development, favouring prosperity and greater participation of societies in the global economy.

We begin by examining the value of fostering digital innovation, which faces challenges such as the access gap to advanced technologies, the investment gap and the constant need to upgrade skills. This gap has the potential to impede inclusive growth and perpetuate socio-economic inequalities, as evidenced by the experience in Latin America and the Caribbean².

From the perspective of enterprises, digitisation is crucial to improve their productivity and competitiveness at national and global level, as well as to generate wealth and employment. However, businesses, especially SMEs, face barriers such as lack of access to finance, suitable infrastructure or technology, and a shortage of digital skills or the ability to adapt their processes or services to evolving demand.

The digitisation of public administration is also crucial. The modernisation of public services through advanced technologies can drive improvements in service delivery, increase transparency and foster economic formality, entrepreneurship and business efficiency. This approach has also the potential to contribute to inclusive development.

Finally, in the era of digital innovation, enhancing business productivity and competitiveness, and thus the inclusion and resilience of societies in the digital economy, requires an increase in the digital intensity of the factors of production, including the workforce. Individuals with advanced skills adopt and use new technologies, enabling businesses to operate more efficiently and respond quickly to market developments or driving impactful ventures. Investing in access to quality education and training is an effective strategy for leveraging the benefits of digitalisation, enhancing employability, and promoting inclusive and sustainable economic growth.





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Prosperity is based on the relationship between technological progress, innovation and digital inclusion. Inclusive innovation is therefore the first step towards the goal of digital inclusion that drives prosperity.

The OECD defines innovation as the implementation of new or improved products, processes or organisational methods. In the digital era, innovation has evolved towards an open innovation model, creating an ecosystem in which companies, startups, academic institutions, research centres and public entities work together. This collaboration allows for the exchange of knowledge and resources, accelerating the development of innovative solutions and emerging technologies, as well as the innovation process. This improves competitiveness and adaptability to the evolution of markets.





A. Challenges of digital innovation

In this context, digital innovation gaps originate in inefficient innovation ecosystems, with challenges such as unequal access to financial resources, public or private, needed to boost investment, business innovation or digital entrepreneurship.

In addition, other factors exert a significant influence, such as disparities in access to effective connectivity and technological infrastructure; access to education, digital literacy and the development of skilled professionals; and the culture and innovative capacity of different actors, among others.

In this context, the establishment of "shared values"³ creates an enabling environment for inclusive innovation, thereby promoting a fairer and more sustainable business and social environment. It is essential that the development of these new technologies is responsible and inclusive by design, avoiding, for example, discriminatory biases.

One of the most evident examples is the case of Al in general, and generative Al in particular. We believe that the design, development and use of this technology must be underpinned by ethical values and a responsible approach that encompasses economic areas such as competition, intellectual property and business, as well as its impact on the workforce and fundamental rights⁴. Similarly, inclusive innovation must also be environmentally responsible, adopting green technologies and promoting the circular economy.

On the other hand, and given the crucial role played by the development and adoption of emerging technologies for inclusion in the industries of the future, their rapid advancement is a challenge that is receiving heightened scrutiny in innovation processes. Despite their importance, not all countries have the necessary capabilities to leverage these technologies, based on digitisation and connectivity. For instance, according to the United Nations Technology and Innovation 2023 report⁵, Latin America is among the regions least prepared to use, adopt or adapt to cutting-edge technologies, potentially missing out on current technological opportunities.

It is essential that the development of these new technologies is responsible and inclusive by design, avoiding, for example, discriminatory biases

Innovation related to these technologies is often concentrated in a few countries and communities, where there are more efficient innovation ecosystems, large-scale firms or better access to finance and talent. This trend contributes to a widening of the innovation access gap, creating significant disparities in the development and adoption of emerging technologies on a global scale⁶.





Global share of patents for frontier technology (%)



Frontier technologies:

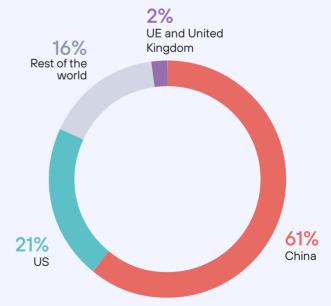
Industry 4.0: Al, IoT, Big Data, 5G, blockchain, 3D prinying, robotics, drones

Green: Solar photovoltaic, concentrated solar energy, biofuels, biogas y biomass, wind power, green hydrogen, electric vehicles Other: nanotechnology, gene editing

Source: Telefónica based on The technology and Innovation Report 2023, UNCTAD (2023). Available at: https://unctad.org/system/files/official-document/tir2023_en.pdf



Cumulative share of granted Al patents (2010-2022)



Source: Telefónica based on The Al Index 2024 Annual Report. <u>https://aiindex.</u> stanford.edu/wp-content/uploads/2024/05/HAI_Al-Index-Report-2024.pdf



Inclusive innovation

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B. Implications of the innovation gap for prosperity

Consequently, there is a wide disparity between innovation ecosystems, which in turn has resulted in differences in the resources and environments that support more or less inclusive economic growth.

This result in a situation where some countries have well-established innovation ecosystems, while others face difficulties in building innovation capacity, which in turn contributes to the widening of the regional digital divide. This results in a lack of uniformity in innovation activities, with disparities in terms of geography, industry, business and even at the individual level. Innovation hotspots are often located in urban areas or dynamic regions, attracting talent and financial resources, increasing the likelihood of incubating digital services unicorns⁷. This hinders the diffusion of knowledge and technology to less innovative areas or industries. Furthermore, the low absorptive capacity of people and firms in non-innovative or remote sectors exacerbates this issue.

Top 50 unicorns in the world: leading economies by region



Source: Global innovation Index



In the startup ecosystem, the slower development of private capital markets also gives rise to imbalances. By way of illustration, the EU has just 263 unicorns (13% of the total), compared with 387 in China and 1,539 in the US⁸.

A further challenge is to encourage transformative entrepreneurship, defined as technology-based entrepreneurship that develops innovative solutions to meet demand, generating value and sustainable employment in the medium and long term through the growth of its activity.

In societies where this type of entrepreneurship is scarce, either due to a lack of skills, funding or an unfavourable regulatory environment for its development, entrepreneurship is often associated with small, low-performing businesses, often in the informal economy. This offers a partial explanation for the high rates of entrepreneurship observed in regions such as Latin America, where some countries surpass the United States in this aspect⁹. From this perspective, it is essential to create an environment that encourages high-impact entrepreneurship. This type of entrepreneurship is an effective means of expanding prosperity. It generates value, higher quality products and services, and employment, which in turn increases purchasing power and wellbeing in society.

Furthermore, the concentration of digital innovation activities in a few specific companies or industries can have the unintended consequence of reducing competition, polarising talent, employment and wealth, and increasing inequality. This ultimately under-utilises the full potential of the economy's human resources.

By leveraging the power of network effects or network economies, these firms gain a competitive edge by contributing to the creation of barriers to entry, which can widen the gap between industry leaders and the rest of the firms, leading to a concentration of market power. This has resulted in a "dual economy", with a small number of highly innovative and competitive firms coexisting alongside a much larger group of non-innovative firms. Therefore, promoting inclusive innovation requires business strategies and public-private cooperation for the promotion of efficient innovation ecosystems where inequalities between companies, talent or geographical areas are reduced, fostering diversity and ensuring a more inclusive diffusion of the benefits of innovation.





At Telefónica, we understand the importance of promoting inclusive digital innovation to ensure that all members of society can benefit from new technologies. This entails not only ensuring equitable access to goods and services, but also engaging civil society, particularly entrepreneurs who develop digital solutions to the region's challenges, supporting digital inclusion and prosperity.

An example of this vision is Wayra Hispam, our open innovation area and investment fund. Since its inception in 2011, Wayra Hispam has supported over 100 entrepreneurs in Latin America (with over 1000 global investments), facilitating access to capital and networks to enable the rapid delivery of digital solutions in multiple areas reach to society. Examples of these ventures include 1DOC3, a platform offering anonymous and free medical consultations, answered by verified doctors with personalised advice; Addi, a digital commerce platform facilitating fast and transparent purchases in Latin America; or Kibo, a financial platform connecting investors with those seeking microcredits. Wayra Hispam currently has over 100 solutions in its portfolio, 45% of which support the Sustainable Development Goals. In addition, in partnership with the Inter-American Development Bank (IDB), we have launched the CIVLAC programme¹⁰, which aims to enhance regional impact through a network of corporations that facilitate investment and innovation with a focus on impact.

Currently, Wayra Hispam has over 100 solutions in its portfolio, 45% of which support the Sustainable Development Goals





Recommendations

Promote an enabling environment for innovation in the private sector. Incentivise the adoption of open innovation models, for instance through tax incentives, including support and funding programmes for entrepreneurs and researchers from marginalised backgrounds, and facilitating the development and scale-up of innovative solutions for remote areas with accessible and sustainable technologies.

2 Encourage impactful or transformative ventures through accessible financing, incubation and acceleration programmes at the local level, tax incentives, simplified procedures for business creation, and regulatory and expert support for innovative ventures with high economic and social impact. 3 Integrate digitalisation into science, technology and innovation policies. Strenghthen the digital ecosystem by provinding funding R&D (from the initial concept to its commercialisation), as well as support for ventures in emerging technologies and future sectors such as artificial intelligence and edge computing.

Foster collaborative and inclusive innovation. Promote the participation of diverse actors including crowdsourcing, innovation labs, testbeds, or cross-sectoral collaboration, as well as international cooperation to establish common standards and an ethical approach to the development and application of emerging technologies.





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3. Digital *inclusion* of enterprises

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The digital transformation of businesses has the dual benefit of enhancing their efficiency and competitiveness, while also fostering a more inclusive and technologically advanced society. This is because their employees and customers acquire digital skills, which contributes to overall digital literacy. On the other hand, and regardless the company size, inclusive and accessible design promotes universal accessibility, enabling the integration of people with disabilities into the digital economy, as consumers, citizens or qualified professionals. A segment that, according to the World Health Organisation, represents 1.3 billion people in the world¹¹.

It is therefore not possible to achieve a full digital inclusion without business inclusion. It is crucial for all businesses, from micro-enterprises to SMEs and large corporations, to adapt swiftly to the global economy, which is increasingly digitalised and characterised by rapid technological diffusion. This enables them to drive their own growth and, subsequently, contribute to the inclusive prosperity of their societies.

The digital inclusion of enterprises is therefore the second step, after inclusive innovation, in making inclusion a driver of prosperity



A. The challenge of digital inclusion for large companies and recommendations

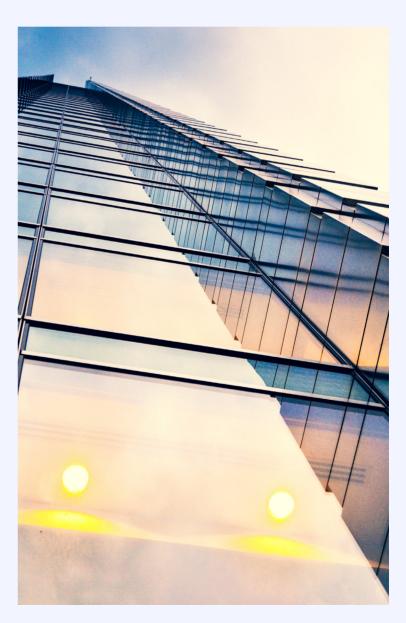
One of the key issues that will shape future leadership and the well-being of societies is the capacity to foster the competitiveness of large companies and their integration into global value chains.

In a context where inclusion in the global economy is marked by digitalisation and new technologies, digitalisation is a crucial factor in reducing productivity gaps and promoting a more balanced participation of societies in global prosperity.

In particular, it presents a significant challenge in the digital and technological domain. This is characterised by unbalanced growth, intensified by the rapid evolution of emerging technologies and disparities in technology adoption. The concentration of digital companies and the development of technologies that will shape the industries of the future in a few countries and companies could result in the exclusion of other players, including smaller companies and those from other regions.

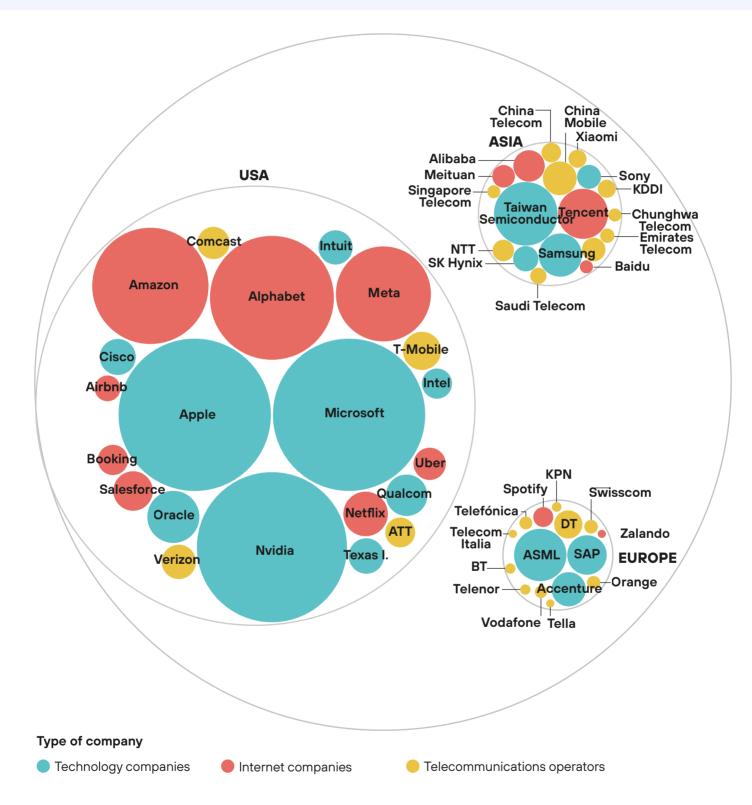
Leading companies, and by extension the regions in which they are located, tend to attract investments, innovations and advanced technological adoptions, as well as more skilled professionals, which reinforces their competitive advantage. This dynamic results in growth, which in turn gives impetus to clusters of economic activity or innovation around them and promotes technological diffusion in the productive structure of their regions.

In this regard, large companies play a pivotal role, exerting a dual influence on businesses within their value chains. They stimulate economic activity and drive social development, acting as a catalyst for growth and progress. For example, in 2023, Telefónica allocated 83% of the total value of its purchases to local suppliers, representing EUR21,863 million. Of this amount, 57% was spent with small and medium-sized companies. In addition, Telefónica's digital inclusion initiatives, have generated a socioeconomic impact of over EUR32 billion¹². However, for other regions and businesses, especially those that are less digitally developed, the gap widens. The lack of access to advanced technologies, adequate digital infrastructure, financial resources and digital skills can restrict the ability of businesses in less developed regions and sectors to generate large, competitive businesses in their markets or internationally. This in turn limits opportunities for them to accelerate their development. These disparities can be observed today in the digital ecosystem.





Polarisation of digital and technological development



Souce: Data represents market capitalisation (USD billions) of ICT sector companies as of June 2024. Selection of companies in the Top 100 Telcos, Top 100 global companies and Top 100 ICT companies by market capitalisation. Telefónica based on Bloomberg (June 2024)



This development has implications for competition and the capacity to influence the design of prosperity. In the digital domain, the concentration of technological leadership in a few companies or countries affords them a competitive advantage, enabling them to exert influence over multiple economic sectors, set technological standards, and shape social and political decisions. This imbalance in the power to influence could potentially result in an unequal and/or value-biased prosperity, which could in turn lead to an intensification of inclusion gaps.

This outlook underlines the importance of fostering balanced growth, guaranteeing that all businesses and regions have equal opportunity to participate in and benefit from the global digital economy, thereby promoting a shared prosperity.



Recommendations

- Promote digital adoption and development of emerging technologies. Implement tax benefits and funding for companies that invest in digital infrastructure and/or in the development, adoption and use of emerging technologies.
- Promote technology diffusion initiatives. Tailor them to the specific needs of regions and sectors, facilitating access to resources and knowledge on available technologies to promote cross-sectoral collaboration and exchange of good practices.
- **Ensure a level playing field.** Address regulatory asymmetries, and remove sector-specific fees, to ensure that the dominant positions of global digital companies do not undermine the inclusion in the digital economy of local or smaller companies, or those from other regions.

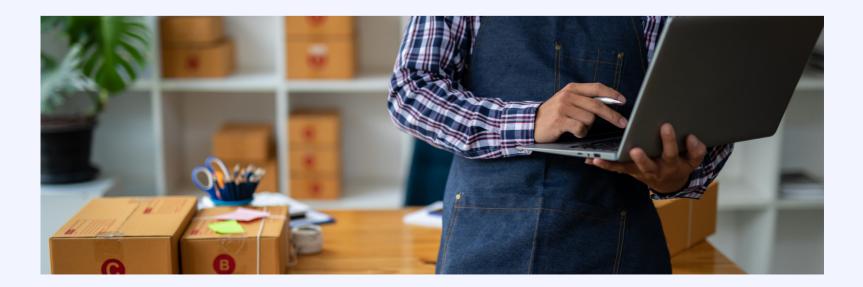


B. The challenge of digital inclusion for SMEs and micro-enterprises and recommendations

As previously stated, digitisation is a global driver of sustainable economic growth¹³. Over 85% of companies recognise that the adoption of new technologies and the expansion of digital access are key factors in improving efficiency and growth¹⁴. Digital transformation provides businesses with the tools to instantly access customers, suppliers and all stakeholders along the value chain, as well as to enhance the efficiency of their processes and customer relationships.

Small and medium-sized enterprises (SMEs), together with micro-enterprises (MSMEs), are the backbone of the global economy, representing over 90% of the business landscape and 70% of global employment and GDP, according to the World Economic Forum¹⁵. Their significance is amplified in emerging economies. For instance, in Latin America, they account for approximately 99% of all enterprises and employ around 67% of all workers¹⁶. However, MSMEs contribute 25% of regional GDP in contrast to 50% contribution made by MSMEs in OECD countries¹⁷. This indicates shortcomings in productivity, a lower creation of value and quality employment opportunities and the difficulty of addressing informality. Given the economic and social relevance of small and medium-sized enterprises, it is crucial to foster their digital inclusion in order to promote their development, competitiveness and resilience

An effective digital transformation could boost enterprise productivity¹⁸, facilitate greater incorporation into the formal economy and drive higher economic growth. As outlined in the Digital Society in Latin America Report 2023, a 1% increase in the rate of digitisation results in a productivity increase that equates to a 0.3% growth in GDP¹⁹. However, the unequal capacity of firms to embrace digitalisation and innovation increases the risk of exclusion in national, regional and international markets, deepening the prosperity gap.





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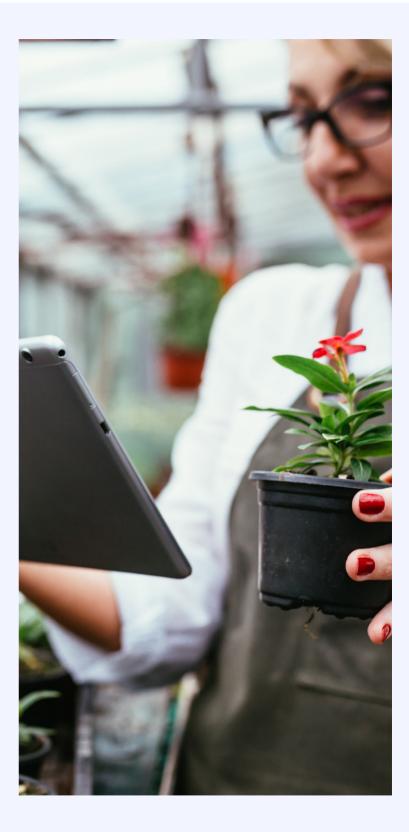
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These companies, due to their smaller size, have limited capacity to innovate, export services and access new markets, which affects their competitiveness and ability to grow, create value and employment in their communities. Furthermore, they are more vulnerable to economic shocks: during the pandemic, 60% of small and mediumsized enterprises experienced a decline in sales, compared to 43% of large enterprises, according to the World Bank²⁰.

A significant number of small and mediumsized enterprises, frequently family-owned and -managed, face significant challenges in terms of management capacity, strategic vision and digital skills. The Movistar's Digital Adoption Survey 2023 in Latin America, revealed that 68% of small and medium-sized businesses in the region, identified a lack of knowledge and expertise as a significant barrier to digital adoption²¹. With tight budgets, investment in technology and employee training is limited. As a result, and according to the CAF, many Latin American MSMEs have a high level of closure due to non-viability, as well as difficulties to grow in markets and thus generate higher levels of quality employment²².

A major barrier is the difficulty in obtaining financing for digitisation²³. In addition to a lack of awareness of available grants and incentives, as well as technology partners, SMEs and micro-enterprises must cope with informality, a lack of a guarantor to support their activity, low credit ratings and even a lack of physical real estate. The challenge is acute for small and medium-sized enterprises led by women. The World Economic Forum reports that women entrepreneurs own 22% of micro-enterprises and 32% of SMEs, yet face difficulties in accessing financing. It is estimated that the total financing gap for women in micro, small and medium-sized enterprise is \$1.7 trillion²⁴.





To address this issue, it is essential to implement models that provide direct subsidies to SMEs and micro-enterprises, enabling them to gain access to capital and technology to facilitates grow, innovate and digitalise, thus improving their competitiveness. This will also have a positive impact on employment generation and entrepreneurship, promoting economic development and regional stability²⁵. One example is IDB Lab, which provides technical assistance and resources for private sector development in Latin America and the Caribbean. The aim is to strengthen the private sector, and depending on the scope of the project, resources can also be provided to the public sector²⁶.

These challenges are further compounded by a lack of access to adequate technological infrastructure, a lack of digital confidence, the perception that the digitisation process will be expensive or complicated, or cultural resistance to change.

In addition, certain regions are confronted with the challenge of informality in small enterprises, also known as the informal economy. The International Labour Organisation (ILO) estimates that approximately half of the total number of people employed in Latin America are in the informal workforce. In 2023, Bolivia recorded the highest rate of informality in the region and one of the highest globally, with about eight out of ten workers employed in the informal sector. Peru and Ecuador are confronted with more than two-thirds of their population employed in informal wage jobs. Meanwhile, in Mexico and Brazil, the two largest economies in Latin America, this figure rises to 53% and 37%, respectively²⁷.

The negative impact of Informality is twofold. Firstly, it keeps a significant part of economic activity outside government control and support. Secondly, it prevents access to legal, financial and social benefits such as credit, insurance and labour protection. This in turn limits business growth, reduces tax revenues and perpetuates labour precariousness. Digitalisation has the potential to facilitate the capture of this economic activity, integrating it into a formal structure and thereby, strengthening the overall economy.

Overcoming these challenges is essential for small and medium-sized enterprises to fully leverage the opportunities presented by digitalisation. To this end, it is essential to view digital inclusion as an ongoing process, adapted to the specific digital maturity and readiness of each business. The initial step should be the adoption of basic, low-barrier-to-entry technologies such as email or social media. This should then be followed by the integration of more complex technological solutions such as e-commerce or the digitisation of customer relationships.







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The Movistar Business Innovation Academy in Latin America

The Movistar Business Innovation Academy was launched two years ago with free and open courses that provide knowledge, tools and experience to accelerate the transformation of SMEs and entrepreneurship. Since then, it has established itself as one of the most important spaces for strengthening the digital capabilities of businesses in the region. In the last two years, more than 40,000 SMEs in Latin America have enrolled in the Movistar Business Innovation Academy courses, providing more than 30 hours of training through 8 live courses. The Movistar Business Innovation Academy is supported by Wayra Hispam, Telefónica Movistar's investment, open innovation and entrepreneurship support arm in Latin America.



Brazil and the digital advancement of small and medium-sized rural producers

In 2024, VIVO, in partnership with the Brazilian Agribusiness Association (ABAG), has launched the Connectivity Primer, which presents strategies to promote the digitisation of Brazilian agribusiness, 84% of which is made up of small and medium-sized producers. The document, entitled "How to expand rural connectivity in your region", is aimed at governors and policy makers, and provides a guide to improving connectivity in the countryside. This is crucial for the advancement of agriculture and livestock in terms of efficiency, precision, traceability and sustainability.

Despite progress in rural areas, a connectivity gap persists that limits local workers' access to the opportunities of the digital ecosystem, a situation that is exacerbated by the low digital skills of the workforce.

The actions proposed in the primer include mechanisms to promote both supply and demand for connectivity. Fiscal incentives for the expansion of network infrastructure and the use of government funds are suggested, as well as incentives to facilitate access to credit lines and the reduction of regulatory and fiscal barriers to the procurement of connectivity services and devices.









Innovation and digitisation for an



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Recommendations

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- Promote tax incentives and expand public funding efforts. Encourage specific programmes or funds to subsidise the adoption of digital technologies or services by small and medium-sized enterprises. Also stimulate their participation in digital markets.
- **2** Establish specialised advisory programmes to provide comprehensive support for digitisation. Create an accessible and userfriendly platform with information on available subsidies or grants for digitisation, technological partners, and advice adapted to the digital maturity of the company.
- **3** Promote digital training and skills programmes accessible to small and mediumsized enterprises. Promote the digital skills of employees, through training/webinars.

- 4 Promote a favourable regulatory environment for the digital inclusion of small and medium-sized enterprises and access to digital government services. Establish one-stop shops for digitised public services and streamline the digitisation of administrative procedures, facilitating interaction, reducing bureaucracy and ensuring legal compliance.
- **5** Implement policies and regulations that foster interoperability and the adoption of open technology standards. Facilitate the participation of small and medium-sized enterprises in digital value chains, thereby promoting competition and innovation.





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The introduction of innovative digital technologies and processes in public administration has a significant impact on government efficiency, transparency and economic growth. It also plays a crucial role in the digital inclusion of society and businesses.

The digitisation of public administration is a key catalyst for innovation and economic competitiveness. By adopting cutting-edge technologies, governments can optimise their own processes, enhance efficiency and transparency, and cultivate an environment that nurtures the growth of new businesses and technology sectors, while creating employment opportunities. This innovative environment not only attracts investors seeking stable and predictable markets, but also positions the country as a leader in the global economy, driving growth and sustainable development.

The transition towards a more digital government not only improves the operational efficiency of government, but also fosters greater equity by ensuring equal access to essential public services, particularly benefiting rural and vulnerable communities with limited access to traditional government services. Its impact on digital inclusion is a crucial factor, and it forms part of the virtuous circle created by the digital inclusion of citizens and businesses, which in turn boosts prosperity.



A. The impact of the digitisation of public administration on inclusion, innovation and economy

The process of digitisation of government involves the adoption of advanced technologies such as cloud, artificial intelligence (AI), big data and blockchain. The integration of these technologies allows governments to significantly improve the efficiency of their operations.

It is vital for governments to embed processes and a culture of technological innovation if they are to become drivers of change in the digital transformation of the economy. By fostering an environment that values and promotes the adoption of new technologies, governments can boost efficiency, improve public services and enhance economic competitiveness. Innovation not only optimises internal operations, but also facilitates the creation of more agile and flexible policies and regulations, aligned with the demands of the digital environment. This proactive approach positions the Administration as a leader in the transition to a digital economy, with a positive impact on economic growth and citizens' quality of life.

Al and big data, for example, enable the analysis of large volumes of data for more informed and efficient decision-making. Al systems automate routine administrative tasks, freeing up human resources for more strategic and complex tasks. The use of big data facilitates the collection and analysis of large-scale data, enabling public administrations to identify patterns, trends and citizens' needs with greater accuracy. This results in more effective public policies and more efficient resource planning. Blockchain technology enhances security and transparency in government transactions and records, reducing the risk of fraud and fostering a greater trust in public systems.

In any case, the digitisation of public administration offers significant benefits governments, while also providing a foundation for an innovative ecosystem in the private sector. By implementing and promoting cutting-edge technologies, governments can stimulate R&D and foster the creation of new technology companies.

In this regard, the accesibility of open data is a clear example of how digitisation can propel innovation. By making government data freely available and accessible, entrepreneurs and developers can create applications and new services that address social and economic needs in areas such as health, transport, education or the environment.

The accesibility of open data is a clear example of how digitisation can propel innovation

The digitisation of these processes therefore facilitates collaboration between the public and private sectors. Joint projects can address complex problems that require the combined expertise and resources of both sectors. For instance, *smart city* initiatives that integrate AI and big data technologies to enhance urban management, transportation and public services are made possible through collaboration between governments and technology companies.

Technological innovation and government digitalisation not only optimise internal processes, but also facilitate the development of new products and services. These are created within a robust digital ecosystem, meeting local demand and positioning themselves in international markets. This result in increased exports and foreign exchange earnings, thereby strengthening the national economy.



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The role of GovTech in inclusive growth and development in the EU

The digitisation strategy is a pivotal element of the European Union's efforts to reinforce the Single Market and enhance citizen services, as outlined in the Berlin 2020 Declaration. GovTech plays a key role in addressing technological challenges such as cybersecurity and data modernisation, driving digital transformation and resilience. Integrating GovTech solutions, including data and artificial intelligence, is essential for modernising and promoting industrial growth, particularly among SMEs and start-ups. This will ensure strategic autonomy and industrial resilience in the EU.



Case study: Chile

According to the World Bank report "Connected: Digital Technologies for Inclusion and Growth"²⁸, digital technologies can be a key factor for growth and inclusion in Latin America and the Caribbean. Chile has developed a robust digital infrastructure that supports a wide range of digitised public services. Investments in an advanced communications network and the expansion of high-speed internet access have been instrumental in supporting the efficient and accessible delivery of government services across the country. The adoption of emerging technologies such as artificial intelligence and big data has enabled further innovation in public management, improving the quality of services and strengthening the relationship between government and citizens. These advances have contributed significantly to Chile's socio-economic development by increasing productivity, reducing operating costs and improving citizen satisfaction with public services.





B. Challenges of the digitisation of public administration

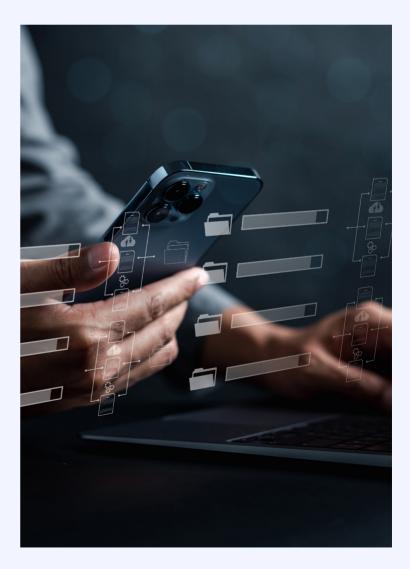
The digitisation of public administration faces several significant challenges that need to be addressed to ensure its success and sustainability. One of the main challenges is digital inequality, which particularly affects rural areas and low-income populations in Latin America and the European Union. Lack of equitable access to information and communication technologies (ICTs), especially in local government, limits participation in the digital economy and access to essential services, requiring investment in technological infrastructure and digital inclusion policies.

In addition, data protection and cybersecurity are critical areas in the digitisation of public services, given the increased risk of cyber-attacks and data breaches that put sensitive data and privacy at risk. Promoting digital trust in government is fundamental to reducing the digital usage gaps for businesses and citizens.

Another key challenge is resistance to change within public institutions, where bureaucratic inertia and lack of awareness of new technologies can slow down the adoption of digital solutions. Overcoming this resistance requires the promotion of an organisational culture that values innovation and change, as well as the continuous training of staff in key digital skills. This will ensure that the workforce is prepared to take full advantage of the benefits of digitalisation, thereby improving the efficiency of government and the quality of public services provided to citizens.

The lack of homogeneity between the tools used by public administrations, particularly at the local level, is an additional challenge that significantly hampers access for citizens and businesses. This technological disparity creates barriers and friction in the interaction with public services, which affects efficiency and user satisfaction. A significant proportion of users -61%- report problems related to this lack of uniformity²⁹. It is therefore essential to address this fragmentation through the standardisation of platforms and processes is essential to simplify access and improve the user experience, thereby fostering a more cohesive and effective public administration in the context of digital transformation.

By effectively addressing these challenges, governments will be able to optimise the benefits of digitisation, improving administrative efficiency and the quality of public services, and fostering sustainable and inclusive economic development.



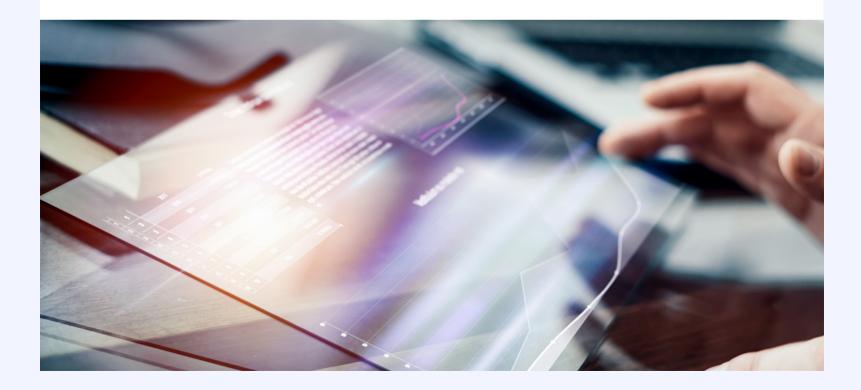


Recommendations

1 Set up accessible and standardised digital platforms. Develop digital platforms for access to public services, ensuring a userfriendly and accessible interface for all citizens and businesses, considering their needs, in a homogeneous and interoperable manner between the different levels of administration. In addition, platforms and processes should be standardised to simplify access and improve the user experience, fostering a more cohesive and effective public administration in the context of digital transformation.

2 Implement cybersecurity and privacy policies to protect citizens' information and maintain trust in digital systems. This includes adopting advanced technical measures, such as data encryption and multi-factor authentication, as well as a clear legal framework governing the use and storage of personal data.

- Streamline processes to improve accessibility and transparency. Automate routine tasks, which reduces operational costs, and improve accessibility to public services online. This saves public resources, increases transparency through real-time monitoring of activities, making corruption more difficult. In addition, it is essential to facilitate digital access to essential public services, for all populations, including rural and vulnerable areas.
- 3 Foster a culture of innovation through training of public employees to overcome resistance to change. Promote a culture that values innovation, through continuous training in the use of new technologies, cyber security and data management.





Foreword: Digital inclusion, prosperity and innovation



2

J Digital inclusion of enterprises



Innovation and digitisation for an inclusive public administration



Human capital, productivity and competitiveness in the age of digital innovation



Compass: Digital

Inclusion as a driver

5. Human capital, *productivity* and competitiveness in the age of digital innovation

A. Challenges of digitising human capital as a factor of production

Recommendations

Ongoing skills development is crucial for personal and professional digital inclusion in an environment where technology is advancing rapidly, creating new opportunities and transforming the labour market. In this context, a commitment to continuous learning and skills development of the workforce is essential to ensure that, beyond the employability of individuals, the necessary skills are in place to drive digital innovation, and the digitisation of enterprises and public administrations, thereby enhancing the digital inclusion of society.

This is essential because a digitised society plays a decisive role in the process of consolidating an inclusive digital environment: as part of the supply side (human capital of companies, administrations, and enterprises); and as part of the demand side (consumers and citizens). Consequently, the development of digital literacy and the availability of qualified professionals with technical skills to increase productivity and efficiency in both the private and public sectors is the cross-cutting component that ensures progress in prosperity linked to digital inclusion.

Constant development and updating of digital skills is crucial to ensure digital inclusion in all areas



Digital inclusion of enterprises



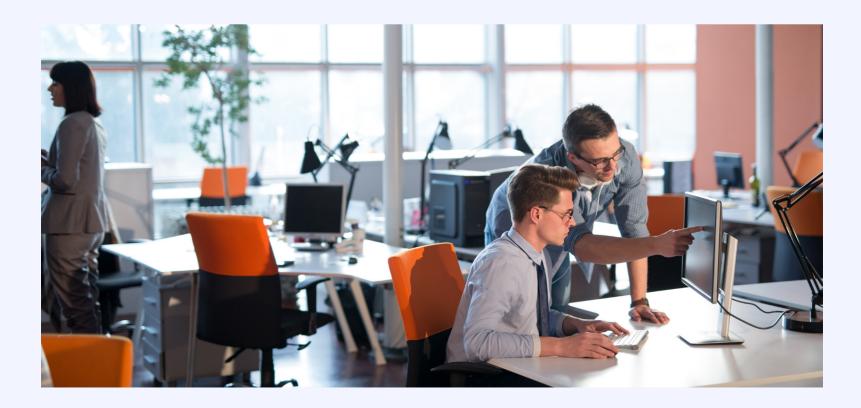
Innovation and digitisation for an inclusive public administration Human capital, productivity and competitiveness in the age of digital innovation Digital Inclusion Compass: Digital Inclusion as a driver _____

A. Challenges of digitising human capital as a factor of production

To build an inclusive digital environment, it is essential for companies in all sectors and public administrations to recruit professionals with a certain level of digital skills. In other words, talent is a critical factor in the digital transformation of countries and in their economic and social prosperity.

A quality education system that is adapted to the evolving needs of society and the economy provides the foundation for human capital with transformative impact. The OECD LEO 2023 report³⁰ identifies ongoing structural challenges in Latin America and the Caribbean (LAC) that are impeding economic growth. Almost 43% of households in the region have all their members working informally, which presents a challenge for governments seeking to invest and redesign the productive structure. It is therefore vital to invest in education and technical training to ensure workers have the skills to capitalise on the opportunities presented by the adoption of cuttingedge technologies across a range of activities and economic sectors, driving formal employment growth. In an era where technological advances are outpacing the pace of adaptation in training systems, investing in education and skills training represents the most significant challenge facing societies as they transition towards an inclusive digital environment.

Technological progress requires a continuous commitment to upskill enhancement and reskilling. However, a growing dissociation between the supply and demand of professionals with digital skills may slow down the process of digital inclusion and create bottlenecks in positions requiring high technological specialisation. Furthermore, there is a challenge of upskilling professionals whose work is impacted by constant digital innovations. The European Round Table (ERT) estimates that over the next decade approximately 100 million European workers will need to enhance their skills and knowledge to remain competitive in the digital age³¹.





Similarly, a production structure lagging in its digital transformation or framed in regulatory environments less favourable to digital innovation may result in a talent drain to those regions and companies that are more digitally advanced, capable of offering higher salaries or better working environments. This dynamic would lead to a polarisation of talent, resulting in unequal access by the productive structure to the skills needed to tackle its digital transformation or develop high-impact ventures. In such a scenario, the prosperity of these societies would then depend on importing talent and innovation from abroad.

This is a reality. As an example of this, the European Commission has identified that two of the four most digitally intensive professions are experiencing, skills shortages; database and network professionals; and software and application developers and analysts³². These shortages present a challenge for companies to find ICT specialists. Specifically, in 2022, 62.8% of European companies looking for ICT specialists reported difficulties in the recruitment process³³. In particular, the current geopolitical context highlights a vulnerability in the lack of skills to develop and embed cybersecurity solutions. In terms of brain drain, while 18% of the world's AI researchers have been trained in Europe, the region accounts for only 10% of the world's top researchers³⁴. The situation is reversed in the US. While 20% of AI researchers are trained there, the US has 59% of the world's top AI researchers, making it an attractive destination for talent.

In addition, for the lack of appetite for risk and innovation in certain regions is exacerbated by a shortage of skilled human capital, leading to the emergence of firms with less complex and less innovative offerings. Once more, the quality of education is of great consequence in two distinct ways. On the one hand, a lack of incentives and potential shortcomings in teacher training at the initial stages of the education system can lead to inequalities, particularly in students' decisions regarding higher technical studies. On the other hand, there is a need for a robust higher education or university structure to facilitate such growth.





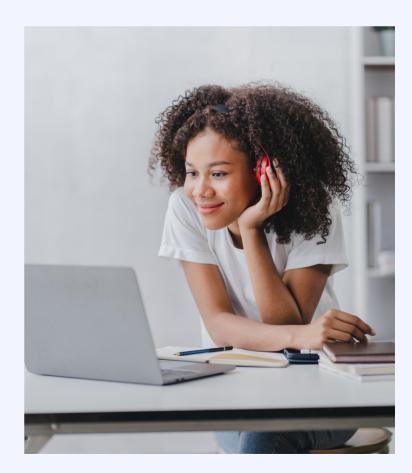
It is also worth noting that the labour force in certain regions is affected by the *spillover* effect of international trade. The digitisation of more efficient and optimised industries in more developed countries results in less reliance on human capital in emerging regions, which in turn has a negative impact on labour demand in these regions.

The digital transformation presents a further opportunity for the creation of employment in less favoured countries using remote working

The digital transformation presents a further opportunity for the creation of employment in less favoured countries using remote working. This model enables global companies to access skilled professionals in a range of regions, thereby fostering economic and professional growth in less digitised countries. However, a potential drawback is the possibility of a lack of skilled talent in these countries, which could restrict their capacity to fully leverage these opportunities. Furthermore, the phenomenon of digital nomads -professionals working remotely from anywhere in the world-adds a layer of dynamism and diversity to the global labour market. This trend highlights the need for investment in education and technology skills in these countries to enable them to compete and participate effectively in the global digital economy.

It is evident, inequalities in access to quality education in general and to training opportunities in digital skills can increase disparities and hinder inclusive economic growth. In some societies, improving human capital requires more than just developing digital skill. It also needs a comprehensive enhancement of the quality of the education system. A 2024 forecast by ECLAC, based on an analysis of 14 Latin American countries, indicates that 41.4% of the workforce aged 15 and over did not complete secondary education³⁵. Likewise, the BID study, "The State of Education in Latin America and the Caribbean 2023" states that students from low socio-economic backgrounds, rural areas and indigenous cultures are the groups most affected by these inequalities³⁶. In addition, there is a need to improve access to suitable infrastructure and technological resources.

Moreover, there is still a shortage of female digital talent. Companies with a more diverse gender composition tend to be more profitable and efficient. Initiatives such as "Girls Love Tech" are instrumental to developing digital skills, promoting entrepreneurship and enhancing employability among women. Increasing female participation in technology not only advances gender equality, but also optimises a vital economic resource for more inclusive and sustainable growth.



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Reskilling for employment

Reskilling is an essential process for acquiring new skills and adapting to the demands of the everchanging skills and adapt to the demands of the dynamic digital labor market. In this context, the New Career Network (NCN) has been created, a platform promoted by Fundación Telefónica, SAP, Iberdrola and CEOE, which uses artificial intelligence to customize reskilling customize reskilling programs. Its objective is to to close the digital skills gap by connecting users with companies that demand their new skills.

The NCN is part of the pan-European <u>Reskilling 4</u> <u>Employment</u> (R4E) initiative, led by the European Round Table for Industry (ERT), which seeks to address the training needs and facilitate employability in emerging sectors. It offers programs focused on digital and technology careers, combining training and direct access to job vacancies.

The platform is aimed at anyone interested in acquiring new professional skills and adapting to the current job market.





The telecommunications sector in the promotion of talent

The telecoms sector is committed to supporting Europe in developing and retaining the talent required to achieve its vision of digital leadership. First, the sector provides businesses across all sectors with the best technology expertise to enable them to successfully navigate the digital and green transformation. For example, Telefónica has leading experts in cybersecurity, cloud, Big Data, IoT and blockchain technology, who are able to transform businesses. The company's investment in employee training programmes ensures that the expertise it offers is enhanced and aligned with the pace of change. To complement its own expertise, Telefónica also works with startups to gain access to specific technology expertise, thereby enhancing its own capabilities.





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Global Innovation and Talent Hub

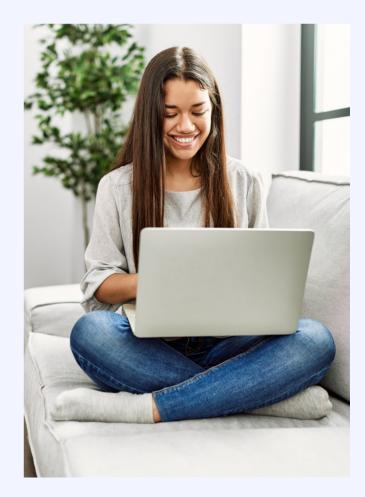
Beyond building and maintaining up-to-date internal capabilities, Telefónica is highly committed to nurturing talent and digital capabilities in the countries where it operates. This enables businesses to transform and enhances regional competitiveness, while also promoting employability. To illustrate this commitment, Telefónica launched its <u>Global Innovation and Talent Hub</u> in October 2021. The Madrid headquarters buildings have been transformed into a large, interconnected centre of excellence dedicated mainly to 5G, Artificial Intelligence, Smart Fibre, Edge Computing, Deep Learning Algorithms, Internet of Things, Cloud, Cybersecurity, Blockchain and Video. The centre is equipped with these technologies and is geared towards building the future. The hub has the capacity to train 100,000 people each year in new digital skills, making it an attractive and appealing place for talent to develop their careers.



Conecta Empleo in Latin America

A good example of encouraging the improvement of digital skills is Fundación Telefónica's Conecta Empleo programme. As a result of this initiative, over 921,000 unique users have been trained with Conecta Empleo in Latin America between 2020 and April 2024. Of these, just over half were women (53%), thereby promoting actions against the gender gap. In addition, over 850,000 people in the region have used the guidance tools during the aforementioned period.







Digital education

Profuturo is a project with the objective of reducing the education gap using technology, with the aim of improving the quality of education for millions of children in vulnerable environments in Latin America, the Caribbean, Africa and Asia. The programme provides innovative digital experiences to enhance the development of digital competencies in teachers, students and school principals. It also contributes to education in the region through public policy initiatives in partnership with institutions such as the OAS, OEI and UNESCO-OREALC.

By 2023, ProFuturo has reached approximately 563,000 children and trained approximately 188,000 teachers in Latin America. These figures represent

the total impact of ProFuturo in the region since 2016, which is estimated to have reached 2.7 million children and approximately 1 million teachers by the end of 2023.

Furthermore, between January and June 2024, ProFuturo has reached 273,374 children and trained 98,485 teachers in Latin America

*(Provisional figures, pending audit 2023)

Recommendations

1 Intensify public-private coordination to define the skills needed for the professions of the future. Technology companies are best placed to understand the type and level of knowledge and skills required for the professions of the digital era, as well as to promote a culture of entrepreneurship. Training programmes in the public sector and universities should be developed in line with the demand for professionals. 2 Promote internal initiatives to retrain workers. The public and private sectors should develop continuous training programmes for their employees, with content aligned with the latest technologies and business models.

3 Promote digital skills programmes for citizens and businesses. Digital literacy and the effective use of online public services need to be promoted, with special emphasis on vulnerable sectors and small and mediumsized enterprises (SMEs).



Foreword: Digital inclusion, prosperity and innovation



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Innovation and digitisation for an inclusive public administration



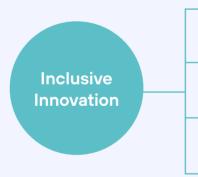




Compass: digital

Inclusion as a driver of prosperity Peferenc

6. The digital *Compass* for prosperity: innovation, digitalisation and sustainable growth



- Create tax incentives and support programmes for entrepreneurs, as well as promote accessible and sustainable technologies in remote areas.
- Encourage entrepreneurship by facilitating financing and regulatory and administrative simplification for businesses with social and economic impact.
- Integrate digitalisation and emerging technologies (AI, Edge Computing) into public policies to strengthen digital ecosystems.
- Foster collaborative innovation across sectors and countries using open platforms and innovation labs.



Human capital, productivity and competitiveness in the



Inclusion as a driver of prosperity

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Foreword: Digital inclusion, prosperity and innovation



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6 Digital Inclusion

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Digital *inclusion* as a driver of prosperity: innovation and sustainable growth



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