Bridging the Digital and Generational Skills Gap in Small- and Medium-sized Enterprises

Good Practice Brief

Organization for Security and Co-operation in Europe

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Co-ordinator of OSCE Economic and
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List of Abbreviations and Acronyms

AI	artificial intelligence
DS4Y	(Canada's) Digital Skills for Youth Initiative
GDP	gross domestic product
IoT	Internet of Things
OECD	Organisation for Economic Co-operation and Development
PPP	public–private partnership
SME	small- and medium-sized enterprises
UNCTAD	United Nations Conference on Trade and Development
YESS	Youth Employment and Skills Strategy
4IR	Fourth Industrial Revolution
3D AR/VR	Three-Dimensional Augmented Reality and Virtual Reality applications

Foreword

Accelerating digitalization, the deployment of advanced technologies, and ongoing demographic shifts are reshaping labour markets, business models and competitiveness, particularly for small- and medium-sized enterprises (SMEs), which remain central to economic resilience, innovation and employment. In line with the OSCE's comprehensive approach to security and its economic and environmental dimension, ensuring that digital transformation is inclusive is essential not only for productivity and competitiveness, but also for social cohesion, resilience and long-term stability.

Persistent digital skills gaps, uneven technology adoption, and widening generational divides risk limiting the capacity of SMEs to fully benefit from technological change. Reflecting these developments, this *Good Practice Brief* updates and complements the 2022 Guide (*Developing a Positive Climate for Business and Investment: A Best Practice Guide*) by incorporating recent evidence, policy innovations and practical experiences from across the OSCE region, with a particular focus on bridging digital and generational skills gaps.

It is my sincere hope that this *Brief* will serve as a useful tool for policymakers and practitioners seeking to design and implement strategies that enhance SME competitiveness and foster inclusive digital growth. I also hope that it will encourage further dialogue and co-operation, both among participating States and between public authorities and other key stakeholders, on advancing sustainable economic development in an increasingly digital and interconnected world.

Ambassador Bakyt Dzhusupov

Introduction

1

Since the 2022 release of *Developing a Positive Climate for Business and Investment: A Best Practice Guide*, the economic landscape has continued to evolve rapidly, particularly in the area of digitalization.

The growing capabilities of digital tools and technologies are reshaping the business environment in ways previously unseen, including for small- and medium-sized enterprises (SMEs).

SMEs continue to be the backbone of the global economy, driving innovation, job creation and economic resilience. Globally, they account for approximately 90% of total businesses,[1] contributing up to 70% of total employment and approximately 50% of GDP, although with notable variations across regions. Within the OSCE region as well, SMEs are essential to economic development and cross-border trade.

SMEs operate in a rapidly evolving environment shaped by demographic change and accelerating digitalization, both of which are reshaping skills requirements, business models and overall competitiveness. Persistent digital skills gaps – disproportionately affecting micro and small enterprises, older workers and less-developed regions – continue to constrain productivity and readiness for technological change, making co-ordinated, large-scale reskilling a critical priority for the coming years.

The effect of such gaps is profound. Exclusion from digital tools limits the ability of individuals to engage in modern employment, entrepreneurship, education and even civic activities. This not only restricts economic opportunities but also deepens existing social inequalities, thereby undermining inclusive growth and weakening social and economic resilience. Indeed, when SMEs and local innovators are unable to participate fully in economic systems, levels of trust in institutions and social cohesion may be adversely affected, increasing long-term social and economic vulnerabilities. Conversely, inclusive and future-oriented economic systems can serve as a preventive security enabler, consistent with the OSCE's economic and environmental dimension, by linking macroeconomic strategies with local innovation and broad-based participation, thereby strengthening stability, cohesion and long-term security. In today's interconnected world, ensuring that the benefits of digitalization are accessible to all segments of society requires co-ordinated, inclusive and targeted efforts at local, national and regional levels.

This *Good Practice Brief* builds on the findings of the 2022 *Guide* and incorporates new evidence, insights and good practices that reflect the most pressing developments in digital transformation of SMEs, particularly those related to human capital and generational divides. Its objective is to provide policymakers, SME stakeholders and international partners with a concise and actionable overview of key trends and emerging good practices. This reaffirms the OSCE's role in promoting inclusive digital growth and supporting its participating States to build secure, resilient and equitable economies.

Trend analysis

2

SMEs are operating in an environment that is increasingly being transformed by digitalization and demographic change. The accelerated and widespread expansion of digital technologies across business and society has brought about the emergence of the so-called Fourth Industrial Revolution (4IR), a technological concept that is "characterized by the convergence of advanced digital production technologies that include artificial intelligence (AI), 3D printing, big data and robotics, with advances in energy storage, and energy generation transforming the global industrial landscape".[2] Also known as Industry 4.0, the shift is further characterized by the rise of advanced technologies such as the Internet of Things (IoT), cloud computing, machine learning and blockchain, each with the potential to fundamentally reshape production, trade and work. Forecasted investments in AI alone are expected to reach $22.3 trillion by 2030,[3] highlighting the transformative and disruptive nature of 4IR technologies, and AI in particular.

While the impact of digital transformation varies across sectors and the respective size of enterprises, 4IR technologies and the platform economy offer major benefits, such as increased efficiency, broader market reach and new business models.

The impact of these technologies on SMEs is increasingly evident. According to the OECD SME Policy Index 2024, over 75% of SMEs in advanced economies have integrated digital tools into their operations to some degree.[4] This shift is intricately linked to the expansion of the so-called platform economy, which has accelerated to unprecedented levels as global e-commerce sales reached $27 trillion in 2022,[5] a 10% increase from the previous year according to UNCTAD. Digital consumption is also on the rise, with an estimated 2.3 billion people shopping online in 2021, a figure expected to continue to increase sharply over the next years.[6]

Recent OECD findings show that SMEs using tools such as automation, predictive analytics and cloud-based systems experience measurable improvements in productivity and market expansion.[7] Integrating digital skills across the current and future workforce is now indispensable. The future success of SMEs will be defined by their ability to adopt and integrate emerging technologies into daily operations. But gaps in digital skills remain a serious obstacle to adopting these technologies, limiting SMEs in their ability to innovate, improve efficiency and remain competitive. Although SMEs account for roughly two-thirds of employment in advanced economies and nearly four-fifths in emerging economies, studies have estimated that their productivity is only half that of larger firms.[8] This gap reflects digital skills shortfalls, limited access to relevant training and insufficient workforce readiness to adopt new technologies.[9] It has been estimated that a staggering 59% of employees will need to be reskilled by 2030.[10]

Parallel to rapid technological change, demographic trends are reshaping labour markets and compounding workforce challenges. According to the United Nations Department of Economic and Social Affairs,[11] the global working-age population has continued to expand since the 1950s, while growth in the numbers of children and young adults has slowed markedly since the 1990s and the under-five population has largely plateaued. At the same time, the population aged 65 and over has grown rapidly, shifting the global population structure toward older age groups, with far-reaching implications for labour supply, skills availability and long-term development.

As demographic change accelerates and digital adoption remains uneven, SMEs face growing pressure to adapt their workforce strategies. Talent acquisition and retention are among the most pressing challenges for future-ready SMEs, cited by 52.5% of firms.[12] As digital transformation accelerates, age-related differences in digital confidence, learning preferences and familiarity with new tools are becoming more pronounced. While younger entrepreneurs and employees often adapt quickly to digital technologies, older workers may face greater challenges, influencing the speed and effectiveness of technology adoption within SMEs. These generational dynamics directly shape how smoothly digital solutions are integrated into daily operations.

Without targeted and co-ordinated measures to strengthen digital skills, develop human capital and ensure the responsible and informed governance of data and digital platforms, existing divides may hinder efforts to build a robust digital business environment conducive to SME growth. Addressing these challenges requires a structured and collaborative approach, in which governments, the private sector, academia and social partners work together to align workforce development, education and training systems, and business needs.

It is encouraging that policy initiatives are emerging across the OSCE region that link public investment in human capital development with private-sector innovation and SME productivity gains.

Bridging the digital skills gap – A compilation of good practices in the OSCE region

3

This section provides an overview of selected examples and corresponding policy recommendations.

An example of addressing the digital skills gap in a long-term and sustainable manner, while improving the overall readiness of SMEs to adopt emerging technologies, is the Mittelstand-Digital programme, established by the German Federal Ministry for Economic Affairs and Energy.

Through enhanced co-operation between academia and industry, strengthened knowledge-transfer infrastructure and long-term partnerships with local actors, the programme embeds digitalization into broader regional development strategies. By supporting businesses across the country in the practical adoption of technologies such as IoT, AI, and automation, Mittelstand-Digital enables SMEs to modernize their operations, increase productivity, address cyber risks and remain competitive in a rapidly evolving digital landscape. In this way, the programme functions not merely as a temporary intervention, but as a catalyst for long-term structural change, strengthening the resilience and adaptability of the SME sector in the digital era.

TEXTBOX 1.
Mittelstand-Digital: Strengthening the digital backbone of the German economy

The Mittelstand-Digital funding programme helps enterprises overcome key barriers to digital adoption – such as limited internal capacity, financial constraints or uncertainty about investment in digital technology – by combining central co-ordination with decentralized delivery. Until the end of 2023, the initiative consisted of three mutually reinforcing components. First, it has operated through a network of nearly 30 regional innovation hubs (22 currently active), supported by over 1,000 digitalization experts and embedded in trusted intermediary institutions such as chambers of commerce, universities, associations and technology institutes. These hubs serve as the primary interface for SMEs, offering localized, sector-sensitive support, including tailored advisory services, live demonstrations of digital tools, pilot projects, and structured peer-to-peer learning formats. Workshops, thematic networks, and best-practice exchanges foster social learning, help normalize digitalization among SMEs and encourage informal mentoring between early adopters and firms at earlier stages of digital maturity.

Second, Mittelstand-Digital includes a dedicated initiative that supports cybersecurity for SMEs, recognizing that cybersecurity risks are a major obstacle to digital uptake among SMEs. This component provides awareness-raising activities, risk diagnostics, in-house training and technical assistance to support the establishment of secure digital infrastructures.

Third, the “Digital Jetzt” (Digital Now) investment scheme (which ran 2020–2023) complemented advisory support with targeted financial incentives. The programme provided co-financing for over 5,000 digitalization projects, covering 30–60% of eligible investment costs for digital technologies and workforce training. Funding was linked to mandatory digitalization plans, helping to reduce investment risk and accelerate uptake, particularly among smaller or less digitally advanced firms. The scheme was designed to complement other federal initiatives, such as “go-digital”, a federal programme providing subsidized consulting for SME digitalization projects and IT security.

Overall, Mittelstand-Digital emphasizes incremental, long-term digital transformation rather than one-off interventions. By combining centralized strategic co-ordination with regionally embedded delivery, hands-on support, peer learning and targeted financial incentives, the initiative builds trust, strengthens digital capabilities and promotes sustainable digital adoption across the SME sector in Germany. Nearly all of the initiative’s tools, learning materials and platforms are open-source and publicly available, which will allow continued access even after formal project funding ends.

Impact

The emphasis on demonstration and pilot projects is a key strength of the Mittelstand-Digital programme. Initiatives are typically concrete, small-scale interventions that allow SMEs to experience the benefits of digital solutions in real-life conditions. For example, in one case, a bakery implemented simple sensors to track temperature and humidity, improving inventory management and reducing spoilage. In another case, a logistics firm used digital dashboards to optimize delivery routes and fuel consumption. By focusing on such relatable use cases, Mittelstand Digital helps move digitalization from theory to practice, making it more accessible for firms with limited resources or technical expertise.

The Mittelstand-Digital initiative has delivered tangible results. Evaluations show that SMEs receiving support through Mittelstand-Digital report higher levels of digital maturity, improved cybersecurity awareness and enhanced productivity. Many firms have also experienced positive spillover effects, including streamlined operations, better customer service and increased competitiveness. The "Digital Jetzt" scheme alone is estimated to have generated up to €1.2 billion in additional gross value, demonstrating the broader economic return on public investment in SME digitalization.[13]

Moreover, participating SMEs reported progress on environmental and social sustainability goals. For example, energy-efficient production methods and more precise material use have contributed to better energy efficiency and lower material waste. Digital tools have also enabled more flexible work arrangements, supporting work-life balance and talent retention.

In addition, many regional hubs have established long-term partnerships with local actors, embedding digitalization within broader regional development strategies.

Another government-led initiative addressing digital skills gaps, as well as supporting youth employability and SME competitiveness, is Canada's Digital Skills for Youth (DS4Y) Initiative.

While SMEs form the backbone of the Canadian economy, they face a dual challenge: significant demographic pressures, with up to 76% of small-business owners approaching retirement,[14] and an increasing need for digital transformation to remain competitive. While younger generations often demonstrate strong digital fluency, they frequently lack the professional experience required to integrate effectively into the SME ecosystem.[15] In this context, DS4Y, which is funded by the Government of Canada, represents a targeted response by equipping underemployed young Canadians with both digital and soft skills, while enabling SMEs to harness the technological capabilities of the next generation.

TEXTBOX 2.
Digital Skills for Youth (DS4Y) – Strengthening youth employability in Canada's digital economy

Launched as part of Canada's Youth Employment and Skills Strategy (YESS), the DS4Y initiative is a non-repayable contribution programme. It connects underemployed post-secondary graduates (aged 15 to 30) with SMEs and non-profit organizations to provide mutually beneficial work placements. The programme also seeks to bridge the digital divide by helping Canadians develop the skills they need to take advantage of new technologies.[16] The programme funds delivery organizations to recruit participants and host employers, utilizing wage subsidies to facilitate internships and reduce hiring risks.[17] The initiative helps launch the careers of young people while simultaneously boosting the digital capacity and competitiveness of host organizations. The focus is on preparing young people for the future of work, particularly in high-demand emerging areas such as cybersecurity, AI and big data analytics. DS4Y benefits participating employers by increasing the supply of highly qualified young people, with a focus on skills related to knowledge economy. It also builds employers' overall capacity in digital domains.

Impact

Since its inception in 2018, DS4Y has helped provide training and valuable work experience to nearly 6,000 young Canadians.

From 2019 to 2022, the DS4Y programme delivered strong outcomes directly supporting the growth and digital readiness of SMEs across Canada. The number of participating internship host organizations rose by 200–300%, indicating a growing demand for digital talent and capacity-building support. Overall, 5,596 youth were hired during these years. Stakeholder feedback confirms that interns acquired valuable soft and technical competencies, allowing them to contribute meaningfully to host organizations' digital transformation efforts.[18] Improved employability was reported by all participants, and 93% reported gains in soft skills.[19]

The programme has been continued for the period 2023 to 2026, with $10.68 million allocated to expand training opportunities and strengthen Canada's long-term digital talent pipeline.[20] This phase seeks to deliver an additional 356 training and employment opportunities.[21]

A key factor linking workforce development to cross-sectoral productivity gains in SMEs has been close collaboration between public and private partners.

By sharing responsibility for the design, funding and delivery of targeted programmes, such partnerships help ensure that support measures are closely aligned with employer needs, while also contributing to long-term sustainability. Ireland's Skillnet initiative illustrates this approach: built on a collaborative model in which employer groups co-design and co-deliver training programmes, it demonstrates how public and private stakeholders can work together to upskill employees and foster a culture of lifelong learning.

TEXTBOX 3.
Ireland's Skillnet – A model for employer-led training

Ireland's Skillnet programme demonstrates a strong cross-sectoral approach to workforce development and upskilling. Bringing together networks of businesses that jointly design and deliver training, Skillnet programmes align content with employer needs and labour market requirements. This is done in close partnership with government partners and, in many cases, academic institutions. Programmes are co-funded by the National Training Fund and participating companies, ensuring shared ownership and accountability. Quality is supported through internal assurance systems and alignment with national education standards, including collaboration with universities and oversight by agencies such as Quality and Qualifications Ireland. This structure helps ensure that training remains relevant to employer needs while advancing national skills policy objectives.

In 2022, Skillnet supported nearly 25,000 businesses and delivered training to over 92,000 workers across multiple sectors. Financial contributions from participating businesses amounted to more than €26 million, representing 37% of the total investment.[22] This was an increase of €4 million compared to 2021, indicating strong joint ownership and industry commitment to workforce development.

Skillnet also works to support SME digitalization and collaborates with IT firms to deliver digital skills programmes. The Data Smart initiative for example, developed with Microsoft and the Analytics Institute, will train over 10,000 non-IT professionals in data literacy. Through Technology Ireland DIGITAL, Skillnet offers courses in artificial intelligence, cloud computing and data analytics. The Women ReBOOT programme, supported by companies such as Mastercard, assists women returning to technical careers by providing training in current technologies and facilitating placements within tech firms.

Skillnet has also integrated micro-credentials into its framework to support digital transformation. These short, accredited courses validate specific digital competencies and offer flexible upskilling pathways for professionals. In collaboration with academic and industry partners, Skillnet is involved in developing micro-credentials focused on emerging technologies, including AI, cybersecurity, data analytics and cloud computing.

Impact

Participants have reported significant benefits, including enhanced skills and career progression, underscoring the programme's impact on individual development. The OECD has recognized Skillnet as a good-practice example and recommends the expansion of such programmes to further develop management capabilities in Irish SMEs.[23]

Among the interventions with the highest potential for long-term impact and sustainability are those embedded in national educational strategies that integrate digital skills into educational curricula.

Several OSCE participating States have already adopted this approach, demonstrating a commitment to equipping youth with the skills and competencies required to thrive in the digital economy.

TEXTBOX 4.
Embedding digital skills in national education curricula – Estonia and beyond

Estonia's AI Leap initiative, launched in 2025, is a collaborative effort involving Estonia's Ministry of Education and Research, the President's Digital Advisory Board, and leading technology entrepreneurs. It represents a unique and systemic effort to embed AI tools and digital competencies directly into national education curricula. In its first phase, it was set to reach around 20,000 upper secondary students (approximately 80% of the country's total) and 3,000 teachers. The programme seeks to integrate AI into everyday teaching and learning, thereby also reducing the administrative burden on teachers, and to equip students with foundational AI literacy. A second phase, planned for 2026, will see expansion to vocational schools and new upper secondary entrants. The initiative forms part of Estonia's broader digital strategy and builds on the country's earlier "Tiger Leap" programme, which pioneered digital education reform and successfully brought internet access to all schools in the country in the 1990s.[24]

Comparable initiatives exist in other OSCE participating States. Finland, for example, integrated digital competencies into its national curriculum already in 2016, supported by teacher training and strong local autonomy. Ireland's Digital Strategy for Schools to 2027 promotes digital skill-building through curriculum updates and national teacher support programmes. Germany's DigitalPakt Schule focuses on digital infrastructure as well as efforts addressing curriculum reform. In Kazakhstan, digital subjects such as ICT and robotics are mandatory in secondary schools, underpinned by nationally co-ordinated teacher training.

A key pillar of long-term economic development involves embedding digital upskilling in national development strategies.

This approach empowers the private sector, fosters an ecosystem that drives innovation, supports start-ups and SMEs, and helps attract IT companies and talent. An example is Kazakhstan's Astana Hub and Tech Orda, which provide inclusive digital skills training to support innovation and strengthen the digital ecosystem.

TEXTBOX 5.
Kazakhstan's Astana Hub and Tech Orda – Supporting innovation through inclusive upskilling

The Kazakh economy is embracing digital transformation as part of its transition from a traditional growth model to innovation-driven development.[25] A major focus of this digital transformation has been broadband connectivity and digital infrastructure. As part of this agenda, key sectors of the economy and public services have been digitized, tech hubs and start-ups have been established, and education and reskilling have been fostered.[26] The "Digital Kazakhstan" programme was launched by the government in 2018 as a key instrument to accelerate economic transformation by promoting innovation in information technology (IT).[27] Empowering the private sector (particularly SMEs) fosters structural change in the economy.

The core of the digital agenda is the Autonomous Cluster Fund "Astana Hub", a state-funded IT techno park and ecosystem supporting start-ups and SMEs, attracting foreign IT companies and talent, and driving digital innovation. With the support of the Ministry of Artificial Intelligence and Digital Development of the Republic of Kazakhstan, Astana Hub developed the Tech Orda programme – a dedicated training initiative for IT specialists. Tech Orda provides IT upskilling for adults (aged 18 to 45) through accredited private IT schools across the country. By offering practice-oriented courses, the programme directly addresses the workforce shortage in SMEs. The programme offers training across various fields, including operating systems development, big data analytics, artificial intelligence and algorithms, cybersecurity and the Internet of Things, development of operating systems, 3D AR/VR application development, and mobile application development.[28]

Impact

Tech Orda is a core instrument of Kazakhstan's human capital development strategy, supporting both the digital transformation of SMEs and the growth of the start-up ecosystem. Between 2022 and 2025, the programme successfully scaled its reach, training a total of about 10,000 IT specialists. While overall student numbers remained stable, Tech Orda expanded its delivery network substantially: the number of active partner schools increased from 49 in 2022 to 90 in 2025. This suggests that Tech Orda functions not only as a workforce development initiative, but also as a financial stimulus for the private education market, strengthening competition and supporting regional growth.

Addressing the demographic trends that are reshaping labour markets and compounding workforce challenges requires targeted support.

To remain competitive, economies need to shift from general age management approaches to targeted digital inclusion strategies, supported by public policies that help SMEs navigate the twin challenges of demographic change and digitalization. Developing concrete digital inclusion strategies for SMEs is an important first step. One notable example is Austria's Demografieberatung Digi+ programme, which provides tailored guidance to help businesses adapt to demographic shifts while enhancing digital capabilities.

TEXTBOX 6.
Austria: Demografieberatung Digi+ – From general age-management to targeted digital inclusion

The initiative, originally launched as Demografieberatung für Beschäftigte + Betriebe (Demographic consulting for employees and companies) and later rebranded as Demografieberatung Digi+ (Demographic consulting Digi+), illustrates a successful shift from general age-management to targeted digital inclusion.

During its initial phase (2017–2022), the programme operated as a free comprehensive national advisory scheme designed to help companies of all sizes remain competitive amidst demographic change. The aim of the initiative was to help Austrian businesses and employees adapt to demographic shifts by promoting age-inclusive work environments and offering practical guidance on managing related challenges.

In its second period (2023–2027), the initiative has been renamed Demografieberatung Digi+, signalling a strategic shift to explicitly address digitalization within the context of an ageing workforce. With a budget of approximately €17.6 million and the goal of reaching 930 companies, the current programme offers free, in-depth consulting to help businesses, particularly SMEs, develop corporate strategies that align demographic management with digital transformation. The core objective is to create age-diverse, future-fit workplaces by treating digitalization not just as a technological upgrade, but as a crucial tool for supporting employees of all ages. The companies receive support in the following areas, which form the Active Ageing Toolbox: work design (25 tools), knowledge and skills (21 tools), leadership and culture (48 tools), health (18 tools) and personnel management (33 tools).[29]

Impact

By the end of 2022, the first programme had advised 1,814 companies and reached around 220,000 employees, including more than 63,000 over the age of 45. SMEs accounted for 89.9% of participating firms (39.7% with fewer than 15 employees, 29.9% with 15–49 employees and 20.3% with 50–249 employees), while the remaining 10.1% employed 250 or more people. Around 70% of participating firms continued to use the Active Ageing Toolbox after the consultation had ended.[30]

Sweden is widely recognized as a digital frontrunner in Europe, consistently scored above the EU average in the Digital Economy and Society Index.[31]

Its strong position is supported by a digitally skilled workforce and well-developed digital infrastructure. However, many SMEs face challenges in understanding digital opportunities and initiating a digital transformation. In response, a government-led initiative has been launched to increase awareness among SME owners and managers better understand how to capture the benefits of digitalization, notably through peer-learning and knowledge-sharing.

TEXTBOX 7.
Sweden: Kickstart Digitalization – Enhancing SME digital readiness through peer-learning

Launched in 2016 and financed by Tillväxtverket, the Swedish Agency for Economic and Regional Growth, Kickstart Digitalisation is delivered by the Association of Swedish Engineering Industries (Teknikföretagen) in collaboration with RISE Research Institutes of Sweden, IF Metall, IUC, and Swedish Incubators & Science Parks (SISP).[32] The initiative promotes SME digital transformation efforts through coaching and mentorship, building digital knowledge and skills among employees, managers and entrepreneurs, and strengthening the competitiveness of industrial firms in the transition towards Industry 4.0. Because the programme required the involvement of management-level staff and other key decision makers, it naturally engaged employees with longer professional tenure and greater strategic responsibilities. It sought to lower the barriers to taking first steps towards digitalization in SMEs and to strengthen digital competencies through a six-week series of three workshops involving peer-exchange with other firms. Representatives from around ten companies participated in each group, sharing experiences and ideas. Participants gained practical, business-oriented knowledge and were able to benchmark their digital practices.[33] The sessions combined inspirational lectures with workshops to help firms identify digital opportunities and initiate follow-up activities.[34]

Impact

This model of digital transformation was designed to lower barriers for firms taking first steps towards digitalization and to help them identify opportunities for the adoption of new technologies through peer-learning. In total, 627 companies participated in 75 kickstart sessions organized by 40 different actors[35]; 75% of participating firms employed 50 or fewer people.[36] Overall satisfaction with the programme was very high. About 81% of participating companies reported having launched a digitalization project or accelerated the pace of digitalization after taking part in the programme, while 92% rated the concept as good or very good.[37] Moreover, Kickstart has been recognized internationally as a good practice example in peer-learning, coaching and mentoring to strengthen SME skills and support early-stage digitalization. The programme was later adopted in Latvia, Lithuania and Estonia.

Conclusions and key recommendations

4

SMEs are central to economic growth, job creation and innovation. Yet demographic shifts, persistent digital skills gaps and uneven technology adoption are limiting productivity and competitiveness. Evidence from across the OSCE region demonstrates that targeted, inclusive, long-term and evidence-based strategies combining workforce development, SME digital adoption and innovation ecosystems are essential for sustainable economic growth. Governments are encouraged to consider co-ordinated policies that simultaneously build human capital, promote digitalization and support SMEs in navigating demographic and technological transitions. Across the OSCE region, targeted policy initiatives linking workforce development to SME productivity gains have begun to emerge. Drawing on a review of good practices from different countries, six policy areas merit consideration:

Embed digital transformation into national development and innovation strategies

- Consider linking SME digitalization to broader economic and innovation ecosystems, in order to foster start-ups, attract talent and create sustainable structural change.
- Encourage monitoring, knowledge-sharing and scalable models to maximize long-term impact.

Strengthen SME-focused digital skills and capacity

- Consider expanding targeted digital upskilling and training programmes for SMEs, and to include financial incentives, co-financing and tax breaks to reduce adoption risks.
- Encourage sector- and region-specific support to address the needs of SMEs in traditional or underserved industries to serve as a catalyst for long-term and structural change.

Integrate digital skills into education and lifelong learning

- Consider embedding digital competencies, AI literacy and vocational technology skills into national curricula to ensure long-term workforce readiness.
- Encourage flexible, blended and continuous learning to support lifelong upskilling.

Foster youth and workforce preparedness

- Consider developing scalable and innovative learning pathways for young people to build digital and soft skills aligned with SME needs.
- Combine training with practical work placements or internships to enhance employability and strengthen SME capacity.

Promote inclusive and equitable digital access

- Consider policies addressing digital and generational divides, as well as regional disparities.
- Support mobile, flexible and remote-access solutions in order to reach underserved areas.

Leverage public–private partnerships and peer learning

- Consider co-designing and co-delivering training programmes with industry, academia and government to align with employer needs.
- Promote mentoring, coaching and peer-learning networks to accelerate digital adoption and innovation among SMEs.

ENDNOTES

1 World Economic Forum. Future Readiness of SMEs. https://initiatives.weforum.org/sme-resource-hub/home (accessed 5 Nov. 2025).

2 UNIDO. 2021. Making the 4th Industrial Revolution Work for All: Development Dialogues on the UNIDO 4IR Strategic Framework 2021–2030. https://hub.unido.org/sites/default/files/publications/Making%204IR%20Work%20for%20All_2021.pdf (accessed 30 Oct. 2025).

3 IDC. 2025. IDC Predicts AI Solutions & Services Will Generate Global Impact of $22.3 Trillion by 2030. https://www.businesswire.com/news/home/20250401184356/en/IDC-Predicts-AI-Solutions-Services-will-Generate-Global-Impact-of-%2422.3-Trillion-by-2030acessed (accessed 3 Nov. 2025).

4 Mastercard. Small and Medium Enterprises Are Big Business. https://www.mastercard.com/global/en/business/overview/sme_report/small-and-medium-enterprises-are-big-business.html?campaign_id=7016e000002acJA&channel=soc (accessed 3 Nov. 2025).

5 UNCTAD. Making E-Commerce and Digital Economy Work for All. https://unctad.org/news/making-e-commerce-and-digital-economy-work-all (accessed 3 Nov. 2025).

6 World Economic Forum. 2021. E-Commerce Is Growing Fast – What Comes Next? https://www.weforum.org/stories/2021/09/e-commerce-fast-growth-online-sales-china-europe-america/ (accessed 3 Nov. 2025)

7 OECD/EBRD (2023), SME Policy Index: Eastern Partner Countries 2024: Building Resilience in Challenging Times, SME Policy Index, OECD Publishing, Paris. https://doi.org/10.1787/3197420e-en (accessed 7 Nov. 2025)

8 McKinsey Global Institute. 2024. A microscope on small businesses Spotting opportunities to boost productivity. https://www.mckinsey.com/mgi/our-research/a-microscope-on-small-businesses-the-productivity-opportunity-by-country#/ (accessed 2 Dec. 2025).

9 idem

10 World Economic Forum. 2025. Future of Jobs Report 2025. https://www.weforum.org/press/2025/01/future-of-jobs-report-2025-78-million-new-job-opportunities-by-2030-but-urgent-upskilling-needed-to-prepare-workforces/ (accessed 2 Dec. 2025).

11 United Nations Department of Economic and Social Affairs (UN DESA). 2024. World Population Prospects 2024. https://population.un.org/wpp/downloads?folder=Standard%20Projections&group=Population (accessed 1 Nov. 2025).

12 World Economic Forum. 2021. Future Readiness of SMEs Report https://www3.weforum.org/docs/WEF_Future_Readiness_of_SMEs_2021.pdf (accessed 8 Nov. 2025).

13 Mittelstand-Digital. 2025. Executive Summary – Evaluation Report. https://www.mittelstand-digital.de/MD/Redaktion/DE/PDF-Anlagen/Executive_Summary-EN_Final_Report_Evaluation_Mittelstand_Digital_2025.pdf?__blob=publicationFile&v=3 (accessed 8 Oct. 2025).

14 Business Data Lab. Think Big, Buy Small. https://businessdatalab.ca/charts/think-big-buy-small (accessed 5 Dec. 2025).

15 Business Data Lab. Think Big, Buy Small. https://businessdatalab.ca/charts/think-big-buy-small (accessed 2 Dec. 2025).

16 Government of Canada. Youth Employment Strategy. https://www.canada.ca/en/employment-social-development/services/funding/youth-employment-strategy.html (accessed 5 Dec. 2025).

17 Innovation, Science and Economic Development Canada. Digital Skills for Youth Program. https://ised-isde.canada.ca/site/digital-skills-youth-program/en (accessed 5 Dec. 2025).

18 Government of Canada. 2025. Employment and Social Development Canada Report. https://publications.gc.ca/collections/collection_2025/edsc-esdc/Em20-206-2025-eng.pdf (accessed 5 Dec. 2025).

19 https://publications.gc.ca/collections/collection_2025/edsc-esdc/Em20-206-2025-eng.pdf

20 Government of Canada. Digital Skills for Youth – Frequently Asked Questions. https://ised-isde.canada.ca/site/digital-skills-youth-program/en/frequently-asked-questions-digital-skills-youth (accessed 5 Dec. 2025).

21 Government of Canada. 2023. Helping Youth Acquire Digital Skills. https://www.canada.ca/en/innovation-science-economic-development/news/2023/10/government-of-canada-helping-youth-acquire-the-skills-they-need-to-thrive-in-the-evolving-digital-economy.html (accessed 5 Dec. 2025).

22 Skillnet Ireland. 2022. Annual Report 2022. https://www.skillnetireland.ie/uploads/attachments/Skillnet-Ireland-Annual-Report-2022.pdf (accessed 12 Nov. 2025).

23 OECD. OECD Skills Strategy Ireland. https://www.oecd.org/en/publications/oecd-skills-strategy-ireland_d7b8b40b-en.html (accessed 12 Nov. 2025).

24 Ministry of Education and Research of Estonia. 2025. AI Leap Programme to Bring AI Tools to All Schools. Estonia Announces A Groundbreaking National Initiative: AI Leap Programme to Bring AI Tools to All Schools | Haridus- ja Teadusministeerium (accessed 3 Dec. 2025).

25 World Bank (2018). A New Growth Model for Building a Secure Middle Class. Kazakhstan Systematic Country Diagnostic. Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/664531525455037169 (accessed 2 Dec. 2025).

26 Tsakallerou, M., Batyrbek, B., Bekzhan, A., Askerova, S., Khamitova, A., Mobayo, J. O. (2025). *Tailoring digital transformation: A customized DESI framework for economic and societal growth*. Telematics and Informatics Report, 19, 100244, https://doi.org/10.1016/j.teler.2025.100244; Yelshibayev, R., and Tungatarova, B. (2024). Improvement of the mechanism of development of small and medium-sized enterprises of the Republic of Kazakhstan in the conditions of digitalization. Scientific Collection «InterConf+», 45(201), 39–52. https://doi.org/10.51582/interconf.19-20.05.2024.004 (accessed 1 Dec. 2025)

27 Navas-Sabater, J. (2021). Resilient Digital Kazakhstan Program - P176295 (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/400941617469177523 (accessed 1 Dec. 2025).

28 Astana Hub. TechOrda 2025. https://astanahub.com/en/l/TechOrda2025 (accessed 20 Nov. 2025).

29 Demografieberatung Plus. https://www.demografieberatungplus.at/en/; Interreg Danube https://interreg-danube.eu/storage/media/01KA8Y8XAK6N3NYYGT9RC56B9B.pdf (accessed 28 Nov. 2025).

30 European Social Fund Austria. Wir Schaffen Wandel. Gemeinsam. https://www.esf.at/wp-content/uploads/2022/07/Abschlusspublikation-Demografieberatung_Wir-schaffen-Wandel-gemeinsam-2017-2022-1.pdf (accessed 28 Nov. 2025).

31 European Commission. Digital Economy and Society Index (DESI). https://digital-strategy.ec.europa.eu/en/policies/desi (accessed 30 Nov. 2025).

32 Interreg Europe. Kickstart Digitalization. https://www.interregeurope.eu/good-practices/kickstart-digitalization (accessed 30 Nov. 2025).

33 Interreg Europe. Policy Brief on Digital Transformation. https://www.interregeurope.eu/sites/default/files/2022-04/Policy%20brief%20on%20digital%20transformation.pdf (accessed 1 Dec. 2025).

34 https://drive.google.com/file/d/1Uuz1mYi2KyCe3vCcpQGHIj-xaHriDDPX/view

35 Teknikföretagen. 2020. Analysis of Kickstart Digitalization. https://www.teknikforetagen.se/globalassets/rapporter--publikationer/digitalisering/analys-av-kickstart-digitalisering-2020.pdf (accessed 30 Nov. 2025).

36 OECD. 2021. Incentives for SMEs to Invest in Skills. https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/12/incentives-for-smes-to-invest-in-skills_f98ba8ed/1eb16dc7-en.pdf (accessed 1 Dec. 2025).

37 https://drive.google.com/file/d/1Uuz1mYi2KyCe3vCcpQGHIj-xaHriDDPX/view

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