



Digital Resilience  
for European Microenterprises

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## *Mapping and stock taking of Digital Entrepreneurship challenges for MSMEs*

### Composite Report

Developed by: CIJ, Sud Concept, IDP, IHF, Itsfa, RRA, Foundation

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## Executive Summary

The DREAM project, under the auspices of Work Package 2, “Mapping and stocktaking of digital entrepreneurship challenges for MSMEs”, is dedicated to providing an extensive analysis of the digitalisation needs of Micro, Small, and Medium-sized Enterprises (MSMEs) at both the European Union and country levels. This work package aims to identify the needs, trends, opportunities, and challenges faced by MSMEs in the context of digitalization, especially in the post-pandemic scenario.

The partners’ meticulous analysis has led to the production of five country-level reports, encompassing France, Italy, Spain, Slovenia, and Greece, in addition to an overarching EU report.

The reports presented within this executive summary collectively illuminate the current status of digital entrepreneurship and digital resilience among MSMEs. By unveiling the challenges, opportunities, and strategies for promoting digital competences within these enterprises, the reports equip owners, managers and staff of MSMEs, policymakers, educators, and stakeholders with essential insights to navigate the digital landscape. By addressing the identified skill gaps and leveraging best practices, targets can foster the digital readiness of MSMEs, ensuring their continued success and competitiveness in the evolving business landscape.

This executive summary serves as a comprehensive snapshot of key findings that have emerged from the in-depth analysis of country-level and EU-wide contexts. Within its pages, readers will find an overview of six reports, each focused on digital entrepreneurship for MSMEs, including the EU report and the Country Snapshots of France, Italy, Spain, Slovenia, and Greece. These reports present valuable insights into quantitative and qualitative indicators, highlighting the challenges, opportunities, and initiatives relevant to digitalisation and digital competitiveness. As readers progress through the subsequent sections, they will discover detailed overviews of each report, replete with key takeaways and actionable recommendations that can drive positive change in the MSME ecosystem.

## EU Report – Overview

In the quest to unlock the full potential of Micro, Small, and Medium-sized Enterprises (MSMEs) in the digital era, the EU Report takes centre stage. This comprehensive analysis casts a spotlight on the digital resilience and digitalisation of MSMEs at the EU level, revealing the challenges and opportunities shaping their digital transformation journey.

As readers delve into the heart of this report, they find MSMEs occupying a pivotal role in the European economy, constituting 99.9% of all enterprises and employing over half of the EU’s workforce. The COVID-19 pandemic tested their resilience, and amid the crisis, these enterprises displayed remarkable adaptability, embracing digitalisation to navigate the new scenario.

Yet, disparities in digital intensity exist within the EU, with some regions demonstrating higher levels of digitalisation than others. A mere 55% of EU MSMEs have reached a basic level of digital intensity, signalling the need for accelerated progress to meet the European Commission’s ambitious target of 90% by 2030.

The report underscores the barriers that hinder the pace of digital transformation among MSMEs, including a lack of essential skills, financing constraints, and infrastructure and cybersecurity challenges. Bridging these gaps requires tailored support, financial resources, improved digital infrastructure, and regulatory clarity.

Training curricula should focus on educational digital priorities such as essential digital skills, cybersecurity and risk management, digital marketing and online presence, e-commerce and online sales, finance



management for digital, cloud computing and data management, and business process automation to enhance MSMEs' digital resilience and transition.

The EU's dedication to fostering digitalisation is evident through funding initiatives and collaborative networks. Digital Innovation Hubs and programs like DigitaliseSME offer specialised knowledge and guidance, empowering MSMEs to navigate digital challenges and integrate technologies effectively.

In conclusion, this report reinforces the EU's commitment to empowering MSMEs in their digital journey. By addressing challenges, providing targeted support, and fostering collaboration, the EU endeavours to unlock the true potential of digitalization, driving the growth, competitiveness, and overall contribution of MSMEs to the digital economy.

## Country Snapshot – French Overview

In the captivating landscape of French MSMEs, this Country Snapshot unveils the essence of digital resilience and digitalisation. In the face of a rapidly evolving business landscape, embracing digital technologies has become imperative for these enterprises to remain competitive and responsive to customer demands.

The report highlights the urgency of digital resilience, especially in the post-pandemic scenario. It delves deep into the French MSME ecosystem, examining the level of digital adoption and the accessibility of digital infrastructure. The ongoing COVID-19 pandemic has served as a catalyst, compelling businesses to pivot their operations and embrace digital channels to sustain their activities.

To enhance digital resilience, targeted interventions play a pivotal role. The report emphasises the significance of government initiatives, business support organisations, training programmes, and financial incentives to bolster digitalisation efforts.

In the pursuit of digital transformation, French MSMEs face a skills gap that hampers their progress. Factors such as limited digital skills and capabilities, insufficient access to technology and connectivity, regulatory complexities, and inadequate support infrastructure have hindered the digital journey of many French MSMEs. The areas of interest for training curricula include digital marketing, online presence, data analytics, e-commerce, and cybersecurity, among others.

The analysis also identifies the challenges faced by MSMEs, including barriers and skill gaps in digital upskilling, flexibility and adaptability in a post-COVID environment, limited resources and financial constraints, rapid technological advancements, and awareness and knowledge gaps.

Addressing challenges calls for strategic planning, understanding digital regulations, and investments in training. A supportive ecosystem, comprising government and private sector collaborations, is essential to foster digital resilience and unlock the potential of French MSMEs in the digital era.

## Country Snapshot – Italian Overview

Nestled in the enchanting realm of Italian MSMEs, the Country Snapshot unearths the essence of digital resilience and digitalisation in this vibrant landscape. These enterprises play a vital role in Italy's economy, constituting 99.9% of all businesses and contributing significantly to total employment.

The report reveals promising progress in the digital transformation of Italian MSMEs, with nearly 70% achieving at least a basic level of digital intensity, surpassing the European average. However, opportunities for growth abound, as only 26.8% have reached high-level digital intensity.



Amidst the progress, a skills gap persists, impeding the full embrace of digital transformation. The list of gaps contains awareness and knowledge, technical capabilities, ability to implement, awareness and marketing and financial capabilities. Targeted interventions and investments in digital training can pave the way for Italian MSMEs to thrive in the digital economy.

The Italian government's commitment to supporting digitalisation is evident through a plethora of initiatives, including financial assistance, technical support, training programmes, and collaborative networks. Private organisations add to the tapestry of opportunities by providing tailored packages and resources to empower MSMEs with digital tools.

Overcoming financing constraints, addressing the fragmented digital market, preventing and managing the cybersecurity risks, ensuring compliance with regulations and reducing the digital divide caused by disparities in infrastructure emerge as critical challenges. With strategic planning and a supportive ecosystem, Italian MSMEs can embark on a transformative digital journey, driving sustained competitiveness and economic growth.

### Country Snapshot – Spanish Overview

This national analysis report delves into the digital resilience of Spanish MSMEs. The study aims to identify training needs and assess challenges and opportunities for enhancing digital capabilities.

Given that MSMEs account for 99.9% of all companies in Spain, ensuring the digital resilience of smaller enterprises becomes even more crucial. The COVID-19 pandemic accelerated the digital transformation of the business sector, impacting MSMEs, particularly small and micro enterprises, causing economic hardships and employment reductions.

Through a combination of quantitative and qualitative indicators, the report reveals crucial insights into skills gaps and training requirements essential for bolstering the digital resilience of Spanish MSMEs. It also explores available training opportunities, operational tools, and successful case studies, with an emphasis on public initiatives.

The journey towards digital resilience is not without its hurdles. Challenges such as the absence of digital skills, resource limitations, and resistance to embracing new technologies have been noted as obstacles that must be addressed effectively.

The findings stress that digital resilience is a decisive factor in the survival and growth of MSMEs. To achieve this, companies are encouraged to invest in digitalisation and upskilling their workforce while fostering a culture of openness to technological change. Moreover, it highlights the need for a diverse range of tailored training programmes and continued efforts to empower Spanish MSMEs with digital competence, ensuring their competitiveness and sustainable growth in the future. Finally, relevant stakeholders are urged to work together to support the digitalisation of MSMEs, particularly smaller ones, in order to fortify their position, contribute to the economy, and provide employment opportunities to society.

### Country Snapshot – Slovenian Overview

Slovenian report focuses on the crucial aspects of digital resilience and digitalisation for MSMEs. Also here, the COVID-19 pandemic has emphasized the significance of these factors in shaping the country's economy. To measure digital resilience, the report considers indicators such as access to high-speed internet, implementation of digital technologies in operations, online presence, and cybersecurity measures.



The report emphasizes the importance of reliable and high-speed internet for MSMEs, enabling efficient operations, especially during the pandemic with remote work and online transactions becoming prevalent. Encouraging the adoption of digital technologies is another critical aspect to streamline business operations and increase efficiency.

Furthermore, the percentage of MSMEs with an online presence is seen as a key indicator of digitalisation, allowing businesses to reach new customers and expand their market. Implementing cybersecurity measures is equally essential to safeguard businesses from cyber threats like ransomware and malware.

The report's conclusions highlight various measures taken to support MSMEs and entrepreneurs, such as liquidity aid and recovery schemes. It identifies key areas of focus for MSMEs and entrepreneurship within the country's Industrial Strategy 2021-30, including digitalisation, innovation, and internationalisation. Furthermore, Slovenia's digital transformation efforts aim to have a substantial number of companies using cloud computing, big data, and artificial intelligence services by 2030. The Digital Slovenia 2030 strategy outlines several priority areas, including gigabit infrastructure, digital competencies and inclusion, digital transformation of the economy, Smart Society 5.0, digital public services, and cybersecurity.

## Country Snapshot – Greek Overview

The Greek report focuses on the significance of digitalisation for MSMEs in the context of the 4th industrial revolution. The COVID-19 pandemic prompts MSMEs to embrace digital technologies and participate in the global digital community. However, the digitalisation of MSMEs in Greece has been slow and uneven, with many MSMEs lacking an online presence and e-commerce capabilities before the pandemic.

Online and personalised training, along with the use of operational tools like website builders and cybersecurity measures, are essential in helping Greek MSMEs leverage digitalisation for growth and efficiency. Embracing digital solutions is crucial for businesses to stay competitive in the evolving global market landscape.

The report highlights several challenges and opportunities. The skills gap remains a key challenge, with many MSMEs lacking the necessary digital expertise to take advantage of digital opportunities. Need assessments are crucial to identify the specific digital needs and capabilities of MSMEs. Emerging digital priorities for MSMEs in Greece include developing online presence and e-commerce capabilities, improving digital marketing and customer engagement, and enhancing digital security and data protection. The report suggests tailored training curricula in online marketing, e-commerce, social media management, digital security, and data analytics to address these priorities.

However, several challenges need to be addressed, including digital infrastructure limitations, limited digital literacy, financial constraints, resistance to change, and language barriers. The report recommends solutions such as tailored training programmes, government support and incentives, public-private partnerships, digital hubs, awareness campaigns, and collaboration with educational institutions.

## Conclusion

Collectively, these overviews offer a glimpse into the current state of digital entrepreneurship and digital resilience among MSMEs in the EU, France, Italy, Spain, Slovenia and Greece. Armed with insights and targeted strategies, stakeholders can navigate the digital landscape and propel positive change in the MSME ecosystem, ensuring their continued success and competitiveness in the ever-evolving business landscape.



## Introduction

The DREAM project's Work Package 2, known as "Mapping and stocktaking of digital entrepreneurship challenges for MSMEs", is a collaborative effort involving all partners in identifying and understanding the needs, trends, opportunities, and challenges faced by MSMEs in the digitalisation process, especially in the post-pandemic scenario. One of its key goals is to assess the digitalisation status of MSMEs and develop strategies to enhance their digital resilience through lifelong learning of relevant digital skills.

The main objectives of WP2 are threefold:

- Identification of MSMEs' needs, trends, opportunities, dynamics, and challenges in the post-pandemic landscape, especially within the socio-economic environments, employment scenarios, and VET (Vocational Education and Training) ecosystems of the consortium countries, namely France, Italy, Spain, Greece, Slovenia, and EU-wide. These insights are gathered through a unified mapping methodology adopted by all project partners
- Enhancement of formal and non-formal VET ecosystems by expanding training offerings for small and microenterprises. This involves pinpointing the most relevant skills and topics crucial for MSMEs to enhance their resilience towards digitalization and adaptability to changes
- Development of a novel digital resilience approach, with a specific focus on microenterprises comprising less than ten employees. This approach aims to cultivate lifelong learning of competencies and digital skills, strategically aligned with the current post-COVID19 context. Such an approach is based on an in-depth examination of the national entrepreneurial and VET ecosystems

In this context, six reports were generated to provide insights into the current state of MSMEs' digital entrepreneurship and resilience. These reports encompass the EU-wide analysis and country-specific snapshots of France, Italy, Spain, Slovenia, and Greece. The analyses encompass a comprehensive view of the challenges, opportunities, and best practices for digitalisation and digital competitiveness within MSMEs.



## 1. EU Report

### Introduction

The following report provides an overview of the digital resilience and digitalisation of micro, small, and medium-sized enterprises (MSMEs) at the EU level. It highlights the initiatives and digital entrepreneurship challenges faced by MSMEs in their journey towards digital transformation and explores the opportunities and support available to enhance their digital skills and competences. The findings of this report aim to shed light on the importance of digital transition for MSMEs, the need for targeted actions, and the potential impact on their growth and economic welfare.

MSMEs play a vital role in the European economy, constituting a significant proportion of businesses. In fact, according to Eurostat data (Eurostat, 2022a), MSMEs make up 99.9% of all enterprises in the EU's non-financial business economy. They also employ more than half of the EU's workforce. Given their significant presence, it becomes imperative to support the digitalisation of these enterprises to unlock their full potential and contribute to overall economic development.

The European Commission's MSME strategy recognizes the significance of digital transformation for businesses and its role in promoting competitiveness, growth, and overall economic development. As such, various initiatives have been introduced to empower MSMEs in embracing digitalisation at EU level. For the most part, these initiatives involve obtaining funds and providing frameworks for acquiring the necessary digital skills.

However, despite the efforts to foster digital transformation, MSMEs still face challenges in keeping pace with the digital transition. While digital tools and technologies bring numerous benefits, including reduced costs, improved access to information and resources, and increased innovation potential, smaller firms tend to lag in adopting these digital solutions. This creates a significant gap in digital skills and competences within the MSME sector.

The COVID-19 pandemic has further highlighted the importance of digitalisation for MSMEs. The crisis has pushed MSMEs towards digitalisation, with many businesses in sectors heavily impacted by the economic downturn. Recognizing the resilience of MSMEs during the pandemic, it becomes crucial to provide the necessary support and resources to bridge the technological adoption gap and enable MSMEs to thrive in the digital landscape.

The report also emphasises the need to address the skills gap and conduct comprehensive needs assessments to ensure targeted support for MSMEs. Opportunities for training and access to operational tools play a crucial role in empowering MSMEs to navigate the digital landscape effectively. By expanding the scope of the EU's Digitalisation Support Programmes for MSMEs, more businesses can benefit from the resources and expertise required for their digital transformation journey.

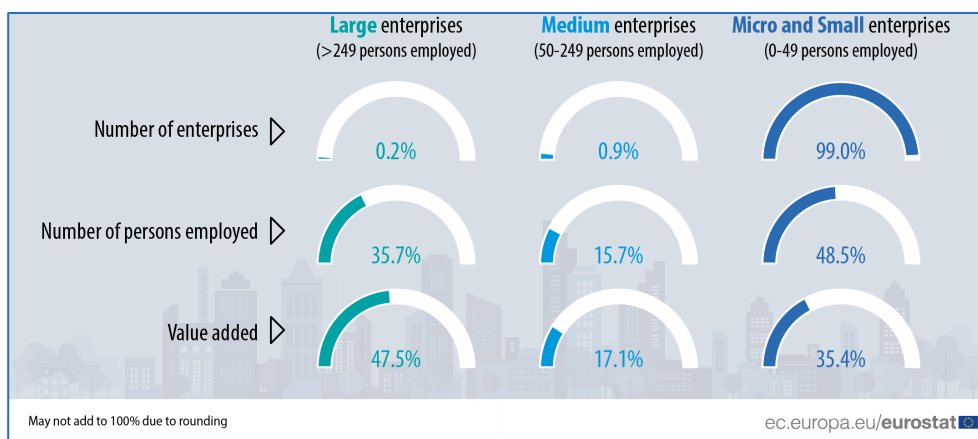
In conclusion, this report underscores the commitment of the European Union towards promoting digital transformation in MSMEs. It highlights the challenges, opportunities, and initiatives aimed at enhancing the digital resilience and digitalisation of MSMEs at the EU level, including both qualitative and quantitative indicators. By addressing the barriers, providing tailored support, and fostering a level playing field, MSMEs can harness the full potential of digitalisation, driving their growth, competitiveness, and overall contribution to the digital economy.

## Quantitative indicators on digital resilience and digitalisation of MSMEs at EU-level

Micro, Small and medium-sized enterprises (MSMEs), which consist of enterprises with fewer than 250 employees, are widely recognised as the backbone of the European economy, providing substantial employment opportunities and driving economic growth. In this section, it will be the exploration of the quantitative indicators that shed light on the digital resilience and digitalisation efforts of MSMEs at the EU-level.

First of all, it is essential to emphasise that MSMEs, as in many regions and countries, dominate the EU economic landscape. According to the latest available aggregate data from 2020 – published in 2022 by Eurostat – MSMEs account for 99.9% of all enterprises in the EU’s non-financial business economy and contribute over half of the total value added (52.5%, €3.4 trillion). Moreover, they employ 64.2% of the total workforce (see Figure 1).

**Figure 1.** Non-financial business economy: size class, by NACE Rev. 2, 2020 – Percentage values



Source: Eurostat, Structural business statistics overview (2022a)

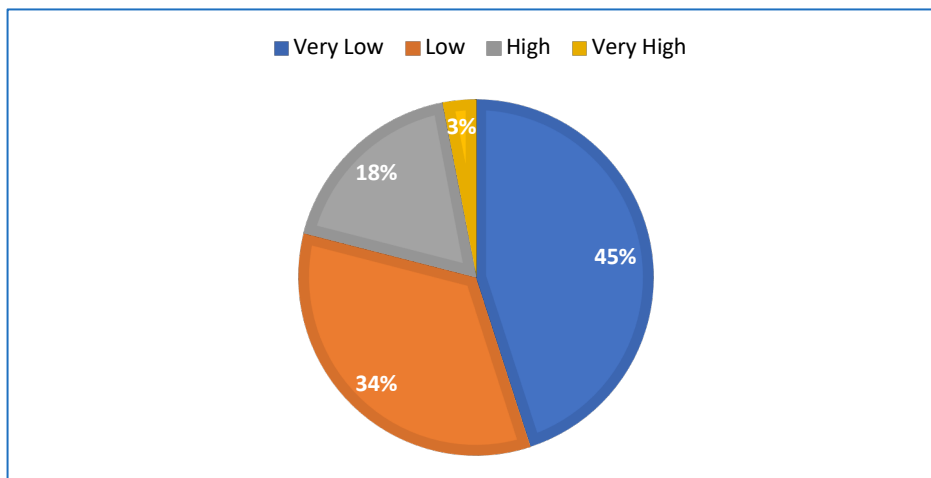
The landscape for MSMEs has evolved significantly due to the COVID-19 pandemic. Despite its profound impact, resulting in closures and layoffs, the total number of enterprises increased slightly to 23.4 million in 2020, a 1% rise from 2019, driven primarily by MSMEs. While the non-financial business economy reported a 6% decrease in value added at factor cost compared to 2019, MSMEs demonstrated remarkable resilience with a smaller 5% decrease in value added. They recorded a smaller decrease in value added than large enterprises and experienced an increase in numbers compared to the previous year.

When examining the spatial distribution of digital resilience and digitalisation efforts, it is crucial to consider disparities within the EU. According to recent data of the EU’s Digital Intensity Index (DII) in 2021 (a composite indicator derived from the survey in ICT usage and e-commerce in enterprises), some countries, such as Northern European ones, have shown higher levels of digital intensity among enterprises. For instance, Sweden, Finland, and Denmark have the highest proportion of enterprises characterised by at least a high level of digital intensity. On the other hand, countries like Romania and Bulgaria have a significant number of enterprises with very low digital intensity.

As per Figure 2 and focusing on EU MSMEs, “55% reached a basic level of digital intensity compared with 88% of large enterprises” (Eurostat, How digitalised are the EU’s enterprises, 2022b). The basic level includes MSMEs with a low, high and very high level of the DII. Notably, only 3% of EU MSMEs achieved a very high level of digital intensity, while 18% reached a high level. The majority of MSMEs, however, recorded low (34%) or very low (45%) levels.



**Figure 2.** EU’s Digital Intensity Index (DII) in 2021 for EU MSMEs – *Percentage values*



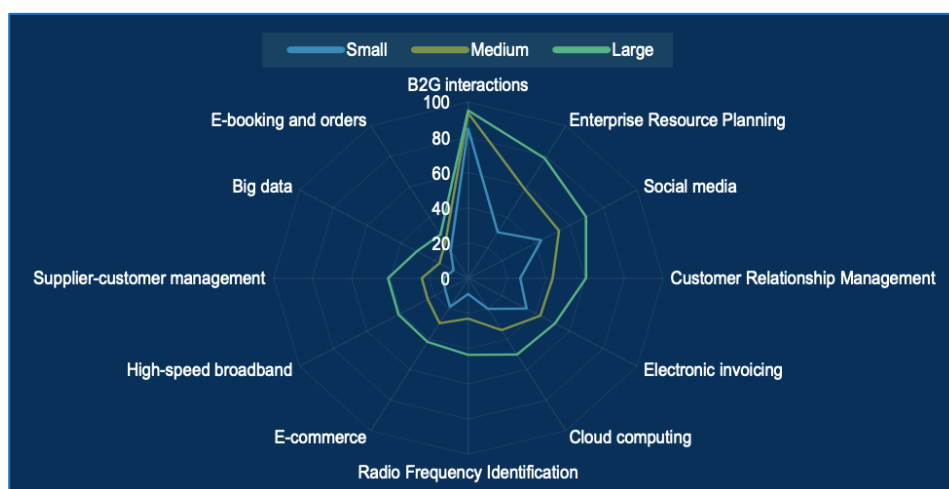
Source: own elaboration with data from Eurostat (2022b)

The European Commission has set ambitious goals for the digital transformation of MSMEs. According to the Digital Compass vision for the Digital Decade, more than 90% of EU MSMEs should reach at least a basic level of digital intensity by 2030. However, in 2021, EU MSMEs were still 35 percentage points shy of this target.

According to the Annual Report on European SMEs 2020/2021 (European Commission, 2021), SMEs in the digital sector outperformed those in the non-digital sector in 2019 in terms of value added (4.5% vs. 3.7%) and employment (2.4% vs. 1.3%). This highlights the positive impact of digitalisation on SMEs’ overall performance. However, the COVID-19 had a significant impact on EU-27 SMEs in 2020. In terms of digitalisation, SMEs in the digital sector showed better resilience compared to non-digital sector ones. Digital sector SMEs experienced a minor decline in value added (0.5%) while non-digital sector SMEs suffered an 8.0% reduction. Employment in the digital sector also witnessed a 1.5% increase, while the non-digital sector faced a decline of 1.9%.

According to a 2021 OECD report, small firms are falling behind medium-sized and large companies in digital transition, and this gap has widened recently.

**Figure 3.** Gaps in SMEs adopting digital solutions – data extraction in 2020

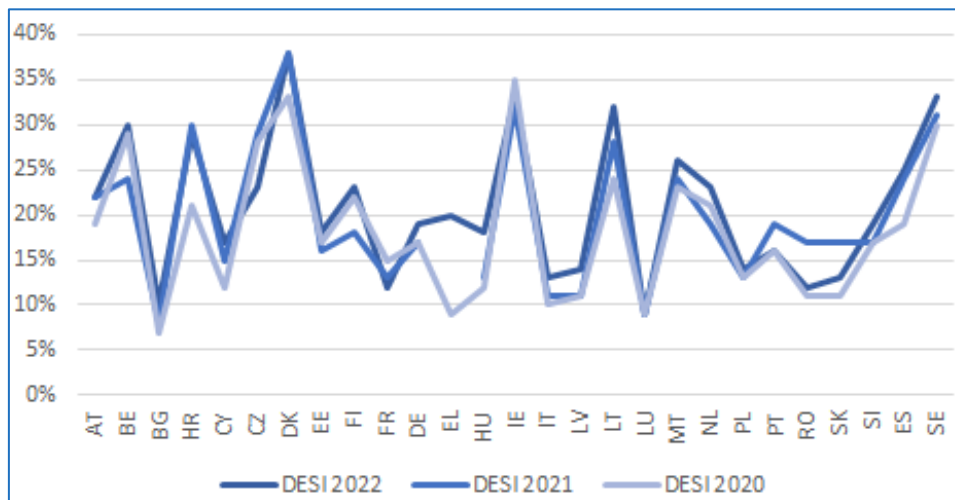


Source: OECD, *The Digital Transformation of SMEs (2021)*

Indeed, Figure 3 highlights the significant disparities in the degree of digital adoption and the related types of gaps.

Using e-commerce as a key variable and the Digital Intensity Index (DII) as a benchmark, it's provided a focus on progress in digitalisation in Europe. The European Digital Economy and Society Index (DESI) assesses the digitalisation of businesses and e-commerce, tracking metrics such as the DII and the adoption of advanced digital technologies. Examining the indicators over the past three years reveals progress in some countries, but persistent gaps and gradual improvements, particularly among SMEs. For instance, the figure below illustrates that only 18% of EU SMEs engaged in online selling in 2021.

**Figure 4. SMEs selling online – Percentage values**



Source: European Parliament, Addressing the challenges of the digital transition in national RRF plans (2022)

As a corollary to the data presented in this section, it is argued that although the COVID-19 crisis has accelerated digital transformation and the adoption of new business models – digital ones, long-term structural barriers persist that prevent MSMEs from embracing the digital transition. These barriers include digital skills gaps, among others.

In fact, although MSMEs have demonstrated resilience and progress, there is still a significant gap to be bridged to meet the digital transformation targets set by the European Commission. Addressing these challenges and promoting digital resilience will be key to ensuring the long-term growth and competitiveness of the European micro, small and medium-sized enterprises (EU MSMEs).

To enhance digital resilience and promote digitalisation among MSMEs, key priorities should focus on enhancing cybersecurity measures and supporting MSMEs in managing digital security risks. Resilience and adaptability are vital for the survival and growth of any business, and cybersecurity plays a crucial role in ensuring their security. Additionally, efforts to facilitate the digital transformation of MSMEs should include initiatives to support their commercial resilience and improve operational efficiencies.

## Qualitative indicators on digital resilience and digitalisation of MSMEs at EU-level: skills-gap and need assessments

The digitalisation of EU MSMEs is of utmost importance for their growth and competitiveness in the current digital era. This qualitative analysis focuses on the trends and dynamics that impact MSMEs' digital resilience and digitalisation, with a specific emphasis on the skills-gap and areas of interest for training curricula.

Educational digital priorities in the post-COVID scenario have emerged as crucial factors shaping the digital landscape for MSMEs. These priorities have been influenced by the new normal and the need for businesses to adapt to survive and thrive. Some key priorities include:

- **Transition to online operations:** MSMEs have faced disruptions in supply chains and operations due to the pandemic, prompting a radical shift in business models. The ability to swiftly transition online or adopt smart working solutions has become a priority for MSMEs
- **Digital transformation and new business models:** The multi-crises have acted as a game-changer, accelerating the need for digital transformation. MSMEs are recognising the importance of embracing digitalisation to remain competitive, overcome challenges and address the needs.

In the Annual Report on European SMEs 2021/2022, published by the European Commission, it is highlighted that there are key factors contributing to the delay in digitalising activities among SMEs, along with the associated gaps. These factors include a lack of necessary skills, such as ICT expertise or knowledge, and low capability in obtaining financing. On the other hand, SMEs that have successfully embraced digitalisation identify advanced digital skills, infrastructure limitations, and cybersecurity challenges as significant barriers.

To address the skills-gap and enhance digitalisation among MSMEs, it is crucial to identify the areas of interest that should be covered in training curricula. These areas will enable MSMEs to acquire the necessary competencies to navigate the digital landscape effectively. Some areas of interest include:

- **Digital Skills and Competences:** Providing training in essential digital skills is paramount for MSMEs. This includes improving proficiency in using digital tools, understanding digital marketing strategies, data analytics, and leveraging social networks and e-commerce platforms effectively
- **Cybersecurity and Risk Management:** Enhancing cybersecurity measures and promoting digital risk management practices are vital to ensure business resilience. MSMEs need to be equipped with the knowledge and skills to identify and mitigate cybersecurity threats effectively
- **Digital Marketing, Communication and Online Presence:** Focusing on digital marketing strategies, including search engine optimisation, communication, social media marketing, and content creation, is crucial for MSMEs to establish a strong online presence and attract customers
- **E-commerce and Online Sales:** Developing expertise in e-commerce platforms, online sales techniques, and managing customer relationships (CRM) in the digital realm are essential for MSMEs to tap into new markets and expand their customer base
- **Finance Management for Digital:** Throughout their digital transition and growth journey, MSMEs face greater obstacles than larger enterprises when it comes to obtaining financial support. It is imperative for MSMEs to have a solid understanding of the fundamentals of financial digitalisation and tools to effectively manage their business finances and secure external investments



- Cloud Computing and Data Management: Training in cloud computing solutions and data management enables MSMEs to optimise their operations, enhance data security, and access advanced technologies like artificial intelligence and machine learning
- Business Process Automation: MSMEs can benefit from learning about automation tools and techniques to streamline their business processes, improve operational efficiencies, and reduce costs

By addressing these areas of interest in training curricula, MSMEs can bridge the digital skills gap and enhance their digital resilience and transition in digital business models, enabling them to thrive in the digital era.



## Opportunities: training available and operational tools

This EU report presents valuable opportunities for the digital resilience and digitalisation of MSMEs at the EU level. These opportunities encompass various training options and operational tools aimed at supporting MSMEs in their digital transition. Here is an in-depth response highlighting the EU opportunities.

The European Union has demonstrated its commitment to fostering digital transformation and supporting MSMEs through a range of funding programmes and initiatives. These opportunities include:

- **European Commission’s Industrial Strategy:** The EU’s industrial strategy outlines actions to shape Europe’s digital future. The strategy emphasizes the digital transition of MSMEs, introducing measures such as the establishment of Digital Innovation Hubs – at European and country level – and providing advice on integrating digital innovations into products and processes (Interreg Europe, 2022)
  - The European Digital Innovation Hubs (EDIHs) have been established as one-stop hubs to assist companies in responding to digital challenges and enhancing their competitiveness. These hubs provide support, such as trainings, technical expertise, and skills development programmes. They also facilitate international (EU) networking and knowledge transfer among MSMEs, fostering innovation and digital solutions (Interreg Europe, 2022)
- **Digital Europe Programme (DEP):** With a budget of €7.6 billion, the DEP is a central EU funding programme for digital transformation. It aims to accelerate economic recovery and drive digital transformation across Europe. The DEP supports projects in key areas such as supercomputing, artificial intelligence, cybersecurity, digital skills, and the widespread use of digital technologies. It complements other EU programmes and funding initiatives, ensuring a comprehensive approach to digitalisation (Interreg Europe, 2022)
- **Recovery and Resilience Facility (RRF):** The RRFs provides significant financial support for investments and reforms, including digital transformation. Member States allocated at least 20% of their total allocation to initiatives that bolster the digital transition and develop digital skills. This ensures a strong focus on digitalisation and resilience in national economies (European Commission, 2022a). Among the direct measures targeted to SMEs, there are 19 National Plans that contain investments and reforms worth around €44 billion, with further potential of funding worth €109 billion (close to 24% of the total RRF) if including the wider measures in all National Plans (Vodafone, 2020). After

### The European DIGITAL SME Alliance

The European DIGITAL SME Alliance (acronym: DIGITAL SME) is the leading network of micro, small and medium-sized enterprises (MSMEs) in the field of information and communication technology (ICT) in Europe.

It represents over 45000 digital MSMEs across the European Union. This alliance is the collaborative effort of 30 national and regional MSME associations from EU member states and neighbouring countries, aiming to prioritise and advocate for digital SMEs on the EU agenda.

The DIGITAL SME is a member of SBS, SMEUnited, ECSO, AIOTI, EU Gateway, the European AI Alliance, INATBA, the European Internet Forum, GeSI, and the Coalition for App Fairness.

By becoming a Digital SME Member and joining this network, each MSME can benefit from a range of services, priority training programmes, events, and funding opportunities through a dedicated matchmaking platform.

More info: <https://www.digitalsme.eu/>



reviewing the RRF Plans, it is evident that significant investments are being made in the digitalisation of businesses, amounting to approximately €2000 per SME (European Parliament, 2022)

- InvestEU: It is a comprehensive programme that plays a crucial role in supporting companies during their recovery phase, with a particular emphasis on prioritizing digitalisation efforts. As part of its commitment, InvestEU dedicates a minimum of 10% of its funds specifically towards digital goals, ensuring essential support for MSMEs (Interreg Europe, 2022)
- DigitaliseSME Initiative: This EU-funded scheme matches SMEs with Digital Enablers based on their specific needs, helping them advance their digital transformation. The programme provides guidance, training, and support for digitalisation (European Commission, 2021)
- Digital Volunteers Pilot Programme: part of the European Commission’s MSME strategy, this programme aims to enhance the digital competences of employees in MSMEs through collaboration with skilled mentors from larger businesses. It involves providing digital mentors who offer training, advisory services, and facilitate joint digital projects for MSMEs. By broadening the scope of this support programme, with the second edition, more MSMEs will be able to access the necessary resources and expertise for effective digital transformation. This approach promotes a level playing field and equal opportunities for all MSMEs to thrive in the digital landscape (Digital Volunteers Pilot Programme, 2022)

These EU opportunities provide a comprehensive framework for supporting MSMEs in their digital resilience and digitalisation efforts. By leveraging these initiatives, MSMEs can enhance their digital maturity, accessing to financing, improving production processes, adapting to market requirements, and fostering innovation.

Overall, the European Union – and all European context – have been demonstrating the dedication to digital transformation through these initiatives, translating broad strategies into practical measures to achieve sustainable digitalisation – especially for MSMEs. These efforts encompass customized training, funding options, advisory services, and collaborative networks, all designed to empower MSMEs in effectively navigating the digital landscape. These initiatives present valuable opportunities for MSMEs to contribute to digitalisation, modernisation, flexibility, and economic growth, fostering their overall development into new digital business models.



## Challenges

The development and implementation of a Toolkit for MSMEs' digital resilience in a post-COVID business and operational setting, along with barriers and skill gaps faced by MSMEs in digital upskilling, require a comprehensive understanding of the challenges involved.

The following points highlight the key challenges in achieving digital resilience and digitalisation of MSMEs at the EU-level:

1. Limited access to digital infrastructure and resources (OECD, 2021):
  - Many MSMEs, particularly those in rural and remote areas, lack affordable digital and data infrastructure, limiting their ability to engage in e-commerce and leverage the digital economy effectively
  - Barriers such as limited connectivity, digital tools, and services hinder their access to markets and productivity
  - Lack of access to data and international trade further complicates their digital transformation efforts
2. Skills gap and capacity constraints:
  - MSMEs face an internal skills gap, making it challenging to identify the digital solutions they need and adapt their business models and processes (OECD, 2021)
  - Limited capacity in terms of skills, time, and funding hampers effective digital transformation (OECD, 2021)
  - Insufficient awareness of digital technologies exacerbates the challenges faced by MSMEs (Digital Volunteers Pilot Programme, 2022)
  - Digital transformation brings risks, such as the shortage of skilled labour and experienced managers, potentially impacting their competitiveness (International Journal of Information Management, 2023)
3. Financing and collateral barriers (OECD, 2021):
  - MSMEs encounter difficulties in accessing finance for intangible digital investments, as these investments cannot be easily used as collateral
  - The financing gap prevents MSMEs from fully embracing digital transformation and reaping its benefits
4. Lack of information and guidance:
  - Many businesses have not had adequate time or the necessary advice to plan their digital transition effectively (OECD, 2021)



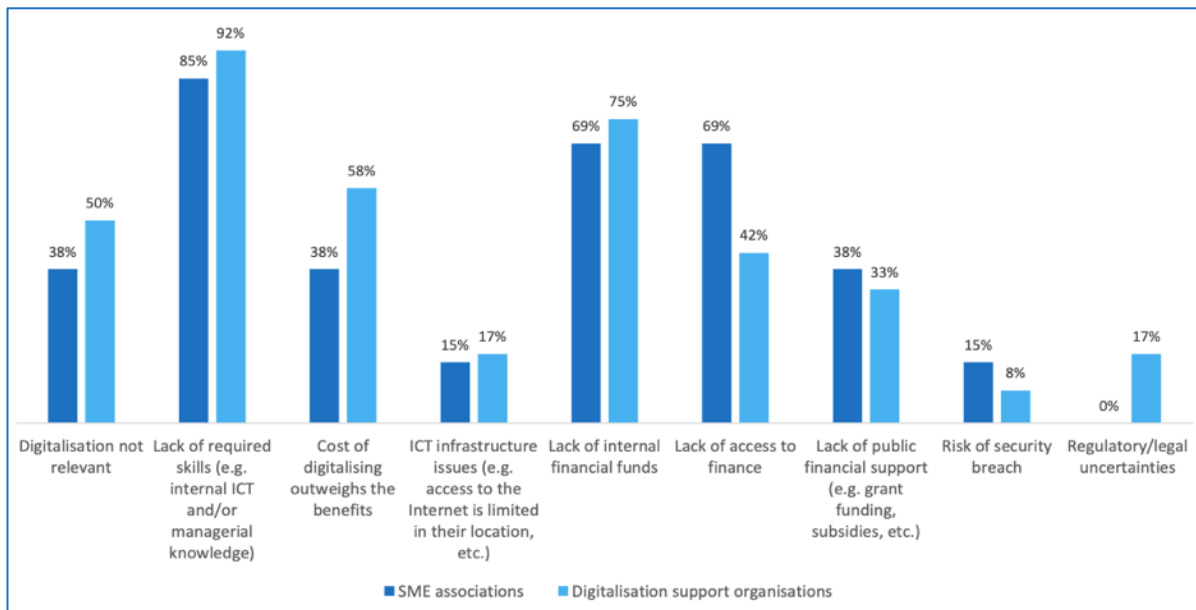
- MSMEs require advice, support, and guidance from reliable sources to navigate the transition successfully, upgrade digital skills, and understand the potential of digital tools (OECD, 2021)
  - Lack of awareness about the benefits of digital technologies and inadequate customization and understanding of these tools hinder the complete transition of some firms (International Journal of Information Management, 2023)
  - Ongoing advice, support, and guidance are necessary to address risks and fully exploit the potential of digital tools (OECD, 2021)
5. Lack of digital awareness and integration:
- MSMEs face challenges in combining digital strategy with a concrete business model, including integrating new technology with existing systems and processes (European Commission, 2021)
  - Limited awareness and understanding of the benefits of digital technologies impede the digitalisation efforts of MSMEs (Digital Volunteers Pilot Programme, 2022)
  - Digital transformation strengthens MSMEs' ability and flexibility to address main business concerns such as access to new and traditional customers, competition changes, access to finance, and increasing input costs (International Journal of Information Management, 2023)
6. External challenges and regulatory barriers:
- Lack of clearly defined and agreed international standards poses a challenge for MSMEs in adopting digital technologies (European Commission, 2021)
  - Regulatory barriers and cybersecurity concerns create obstacles for MSMEs in their digital transformation journey (OECS, 2021)
  - Affordable and accessible digital infrastructure, interoperability, and access to public data and digital platforms are key external challenges faced by MSMEs (European Commission, 2021)

A comprehensive and summarising overview of the challenges and barriers to the digitalisation of SMEs is provided by the results of the survey conducted for the European Commission's Annual Report on European SMEs 2020/2021. The results of the survey of SME associations and SME digitalisation support organisations are summarised in figure 5 by key factors.





**Figure 5.** Reasons why EU SMEs do not digitalise their activities



Source: European Commission, Annual Report on European SMEs 2020/2021 (2021)

According to the same report (European Commission, 2021), the challenges described so far can be summarised in three main categories:

- Lack of awareness about and availability of digital technologies, including the lack of good connectivity, digital tools and services
- Lack of capacity to engage in digital transformation in terms of skills, time and funding
- Lack of capability to combine digital strategy with a concrete business model

Addressing these all challenges is crucial for enhancing the digital resilience transition of the EU MSMEs. Policies and initiatives must focus on bridging the skills gap, providing financial support, improving digital infrastructure, offering guidance and technical support, and addressing regulatory barriers. By doing so, MSMEs can increase their flexibility, competitiveness, and contribute to economic growth in the digital era. It is imperative to prioritize initiatives aimed at increasing awareness, availability, and affordability of digital technologies, as well as promoting digital literacy and development to support MSMEs in digital transition.

Furthermore, collaboration between public and private sectors, along with international cooperation in setting standards and addressing regulatory challenges, will be vital in creating an enabling environment for MSMEs to thrive in the digital economy. By providing material to address these challenges head-on, the DREAM project will help MSMEs in their digital transition – first of all – and in unlocking their full potential, access new markets, and improve their productivity and competitiveness in a post-COVID business landscape.

## Conclusions

After conducting an analysis of the digital resilience and digitalisation of the EU MSMEs, as well as delivering an overview of the current state of the digital transition among these businesses, the study has yielded significant findings. These findings have been synthesised below, resulting in the following key takeaways:

- MSMEs constitute the backbone of the European economy, accounting for 99.9% of all enterprises and contributing over half of the total value added. They also contribute over half of the total value added (52.5%) and employ 64.2% of the total workforce
- Despite the challenges posed by the COVID-19 pandemic, MSMEs displayed remarkable resilience, experiencing a smaller decrease in value added compared to large enterprises and recording an increase in numbers
- Disparities in digital intensity exist within the EU, with Northern European countries demonstrating higher levels of digital intensity among enterprises – especially MSMEs. On the other hand, countries like Romania and Bulgaria have a significant number of enterprises with low digital intensity
- Only 55% of EU MSMEs have reached a basic level of digital intensity, with a majority (79%) falling into the low or very low digital intensity category. These figures indicate the need for significant progress to meet the European Commission’s target of 90% of EU MSMEs reaching at least a basic level of digital intensity by 2030
- Post-COVID, MSMEs prioritise transitioning to online operations and embracing digital transformation to remain competitive and address skills-gap, challenges and needs
- Key factors contributing to the delay in digitalisation among MSMEs include a lack of necessary skills, financing limitations, and infrastructure and cybersecurity challenges
- Training curricula should focus on educational digital priorities such as essential digital skills, cybersecurity and risk management, digital marketing and online presence, e-commerce and online sales, finance management for digital, cloud computing and data management, and business process automation to enhance MSMEs’ digital resilience and transition
- Limited access to digital infrastructure and resources, along with barriers such as connectivity and lack of data, hinder MSMEs’ effective engagement in the digital economy
- MSMEs face challenges related to skills gap, capacity constraints, financing barriers, lack of information and guidance, insufficient digital awareness and integration and regulatory barriers
- Addressing these challenges requires bridging the skills gap, providing financial support, improving digital infrastructure, offering guidance and technical support, and addressing regulatory barriers. Collaboration between public and private sectors is crucial, along with international cooperation in setting standards and addressing regulatory challenges
- The EU supports digitalisation in MSMEs through funding and initiatives, providing financial support, technical expertise, and training opportunities to enhance competitiveness and digital capabilities



- Digital Innovation Hubs and programmes like DigitaliseSME offer specialized knowledge and guidance, enabling MSMEs to navigate digital challenges, adopt technologies, and integrate them into their products, processes, and business models
- Dedicated funding programmes in the EU allocate resources to support MSMEs' digitalization efforts, ensuring financial resources for investing in technologies, skills development, and infrastructure improvements
- EU initiatives promote collaboration and knowledge transfer among MSMEs through networks, mentoring, and partnerships, facilitating learning from experts, sharing best practices, and accessing international markets, driving innovation, growth, and competitiveness
- The EU's commitment to digital transformation is evident in the comprehensive framework of opportunities it offers to MSMEs. These opportunities encompass financial support, technical assistance, training, and collaborative networks, all aimed at empowering MSMEs to embrace digitalisation, enhance their digital resilience, and thrive in the digital economy



## 2. Country Snapshot – France

### Introduction

The national analysis of the French micro, small, and medium-sized enterprise (MSME) ecosystem in relation to its digital resilience is a fundamental component of the DREAM (Digital Resilience for European Microenterprises) project. This report is an in-depth overview of the French MSME landscape, focusing on the challenges and opportunities related to digital resilience. This analysis is part of the project's second work package (WP2), which aims to identify the training needs of French MSMEs and develop strategies to improve and strengthen their digital capabilities.

In today's rapidly evolving business landscape, digital resilience has emerged as a critical factor for the success and sustainability of MSMEs. The ability to adapt to digital technologies, leverage digital tools and platforms, and navigate the digital realm effectively has become essential for MSMEs to remain competitive, responsive to customer demands, and resilient in the face of disruptive events. The ongoing COVID-19 pandemic has underscored the urgent need for digital resilience, as businesses across all sectors have had to quickly pivot their operations, adopt remote working practices, and embrace digital channels to sustain their operations.

In France, MSMEs are a vital driver of economic growth, employment generation, and innovation. However, they face unique challenges when it comes to embracing digital transformation and fully capitalizing on the benefits of digital technologies. Factors such as limited digital skills and capabilities, insufficient access to technology and connectivity, regulatory complexities, and inadequate support infrastructure have hindered the digital journey of many French MSMEs.

This national analysis will delve into the current state of digital resilience within the French MSME ecosystem, encompassing various dimensions and aspects that influence digital readiness. It will examine the level of digital adoption among French MSMEs, exploring the extent to which they have integrated digital technologies into their business processes, operations, and customer interactions. Additionally, it will assess the availability and accessibility of digital infrastructure, including high-speed internet connectivity and advanced digital tools and platforms.

To ensure a comprehensive analysis, the study will also consider the existing support mechanisms available to French MSMEs in their digital transformation journey. This includes evaluating the effectiveness of government initiatives, business support organizations, training programs, and financial incentives aimed at facilitating digital adoption and enhancing digital resilience. By assessing the utilization and impact of these support measures, we can identify best practices, gaps, and opportunities for improvement.

The importance of digital resilience extends beyond individual businesses. It has broader implications for the overall economic and social well-being of the nation. Digitally resilient MSMEs are better positioned to adapt to market disruptions, seize new opportunities in the digital economy, and contribute to job creation and economic growth. Furthermore, their ability to embrace digital technologies can foster innovation, enhance customer experiences, and drive sustainable business practices.

## Quantitative indicators on digital resilience and digitalisation of MSMEs in France

The digitalisation of MSMEs in France has experienced a notable evolution over the years, with significant milestones and transformative shifts in response to changing technological advancements and market dynamics. Understanding the historic evolution provides valuable insights into the context and trajectory of digital resilience and digitalisation among MSMEs in the country.

Before the COVID-19 pandemic, digitalisation efforts among MSMEs in France were characterized by varying levels of adoption and digital maturity. While some businesses had embraced digital technologies and established an online presence, many others were still in the early stages of their digital transformation journey. The focus was primarily on building basic websites, using email marketing, and exploring basic digital tools to streamline internal processes. However, the pace of digitalisation varied across sectors and regions, with certain industries and metropolitan areas exhibiting higher levels of digital readiness.

The arrival of the COVID-19 pandemic in 2020 marked a turning point in the digital resilience and digitalisation of MSMEs in France. As lockdown measures were enforced and physical interactions were limited, businesses faced unprecedented challenges, forcing them to rapidly adapt and leverage digital technologies to survive and continue operating. This unprecedented crisis acted as a catalyst for accelerated digital transformation, reshaping the business landscape across sectors.

During the pandemic, MSMEs in France witnessed a surge in the adoption of digital tools and online platforms. E-commerce became a vital channel for sales and revenue generation, with businesses quickly pivoting to online selling models, including click-and-collect, e-marketplaces, and direct-to-consumer sales. Remote working and collaboration tools became essential for maintaining business operations and facilitating communication among remote teams.

The pandemic also highlighted the importance of digital resilience, as businesses that had already embraced digitalisation and had robust digital infrastructure were better equipped to navigate the challenges and disruptions caused by the crisis. The ability to quickly adapt to remote work, leverage online marketing strategies, and provide digital customer experiences became crucial for business survival.

The digital resilience and digitalisation of MSMEs in France exhibit variations in spatial distribution, with regional disparities and differences in digital maturity levels. Understanding the spatial distribution provides insights into the regional dynamics and factors that influence the digital transformation of MSMEs across different areas in the country.

France is characterized by diverse regions, each with its unique economic characteristics, industrial composition, and technological infrastructure. As a result, the level of digitalisation and digital resilience among MSMEs can vary significantly from one region to another. However, the digitalisation of businesses remains highly uneven across France. Île-de-France tops the list with 76% of businesses digitalised, followed by Normandy, the Centre and the North of France. At the bottom of the ranking is the North-West, with 48% of businesses digitalised. The North-West includes the Pays de la Loire, Brittany and Poitou-Charentes.

Metropolitan areas such as Paris, Lyon, Marseille, and Toulouse have traditionally been at the forefront of digitalisation efforts in France. These urban centers boast advanced technological infrastructure, a concentration of digital service providers, and a higher density of tech-savvy entrepreneurs and professionals. MSMEs in these regions tend to have higher digital maturity levels and are more likely to adopt innovative digital solutions.



In contrast, rural and peri-urban areas may face greater challenges in terms of digitalisation due to limited access to high-speed internet connectivity, fewer digital service providers, and a lower concentration of tech talent. MSMEs operating in these regions may have lower digital readiness and face barriers to adopting advanced digital tools and technologies. However, it's worth noting that initiatives have been undertaken to bridge the digital divide and promote digital inclusion in rural areas, aiming to enhance digitalisation opportunities for MSMEs across the country.

The French government has implemented various initiatives and regional policies to promote digitalisation and narrow the digital gap between regions. These include investment in broadband infrastructure, support for digital skills development programs, and incentives for MSMEs to adopt digital technologies. Regional governments also play a significant role in fostering digital transformation by implementing tailored strategies and initiatives to support local businesses.

Here is a list of statistics:

- **Digital Presence:** Approximately 60% of French MSMEs have an online presence through their own website or social media channels. However, the data also indicates that the level of digital presence varies based on the size of the company, with larger enterprises having a higher rate of online presence compared to smaller ones
- **E-commerce Adoption:** Around 26% of MSMEs in France have implemented a form of e-commerce, such as "click and collect" or full-fledged online sales. It is worth noting that there is still significant untapped potential in e-commerce, as more than half of the surveyed MSMEs have not yet embraced online selling
- **Skills Gap and Training Needs:** Around 61% of MSMEs in France have not recently recruited digital profiles, indicating a potential skills gap in the workforce. Furthermore, the data underscores the need for training and upskilling programs to enhance digital competencies within MSMEs
- **Financing and Support:** While 42% of MSMEs express a need for financing, only 10% have benefited from financial support in the digitalisation context. This suggests that there is room for improvement in terms of connecting MSMEs with available financial resources and support programmes
- **Awareness and Utilization of Public Initiatives:** A significant proportion of MSMEs (56%) are not aware of the digital initiatives and aids provided by the government's digitalisation plans, such as the digital aspect of the plan de relance. This calls for increased efforts to raise awareness and improve accessibility to these initiatives, ensuring that MSMEs can fully leverage the support available to them



## Qualitative indicators on digital resilience and digitalisation of MSMEs in France: skills-gap and need assessments

The post-COVID scenario has brought forth several trends and dynamics that impact MSMEs' digital resilience and digitalisation efforts. These trends reflect the changing business landscape and the increasing importance of digital technologies. Based on these trends, the following educational digital priorities are emerging:

- **Digital Transformation Readiness:** The barometer highlights that while digitalisation has accelerated in the wake of the pandemic, there is still a significant gap between large companies and MSMEs in terms of digital readiness. Educational priorities could focus on helping MSMEs understand the importance of digital transformation and equipping them with the necessary knowledge and skills to embark on their digital journey
- **Online Presence and E-commerce:** The barometer reveals that MSMEs are increasingly recognizing the importance of establishing a strong online presence and engaging in e-commerce activities. Educational programs could prioritize training modules on website development, search engine optimization, social media marketing, and online sales strategies to support MSMEs in expanding their digital footprint and effectively reaching their target customers
- **Data-driven Decision Making:** The barometer indicates that there is a growing awareness among MSMEs about the value of data and its role in driving business growth. Educational initiatives could emphasize the importance of data analytics, providing training on tools and techniques for data collection, analysis, and interpretation. By empowering MSMEs with data-driven decision-making skills, they can make informed choices to optimize their operations and enhance customer experiences
- **Cybersecurity and Data Protection:** The barometer highlights that cybersecurity remains a concern for MSMEs, with a significant percentage reporting security incident. Educational programs could address cybersecurity awareness, best practices, and risk mitigation strategies to protect MSMEs from cyber threats. Additionally, training on data protection regulations, such as the General Data Protection Regulation (GDPR), can assist MSMEs in ensuring compliance and safeguarding customer data
- **Digital Marketing and Customer Engagement:** The barometer suggests that MSMEs are increasingly recognizing the importance of digital marketing for customer acquisition and retention. Educational initiatives could cover topics such as social media marketing, content creation, email marketing, and online advertising. By enhancing their digital marketing skills, MSMEs can effectively engage with their target audience and build strong customer relationships in the online sphere
- **Technology Adoption and Automation:** The barometer indicates that MSMEs are keen on adopting technology and automation to improve their efficiency and productivity. Educational programs could focus on introducing MSMEs to emerging technologies relevant to their industry and providing guidance on their integration and implementation. Training on process automation, cloud computing, and productivity tools can help MSMEs streamline their operations and stay competitive in the digital age
- **Digital Skills Development:** The barometer highlights the importance of fostering digital skills among MSMEs. Educational initiatives could prioritize digital skills training, including basic digital literacy, communication and collaboration tools, and remote work capabilities. Upskilling the workforce in



digital competencies will enable MSMEs to adapt to changing work dynamics and maximize their digital potential

By addressing these educational digital priorities, training curricula can equip MSMEs with the necessary knowledge and skills to navigate the digital landscape successfully. It is essential to tailor the training curricula to the specific needs and challenges faced by MSMEs in France, considering the diverse nature of businesses across sectors and regions.





## Opportunities: training available and operational tools

In the digitalisation of MSMEs in France, there are notable opportunities for training and operational tools that can support their journey towards digital resilience and increased competitiveness.

- **Structured Digital Training Offer Tailored to MSMEs:** There is a growing recognition of the importance of providing structured digital training programs specifically designed for MSMEs. In France, for example, 61% of MSMEs have not recently recruited digital profiles, indicating a significant skills gap in the workforce. To address this, various educational institutions, industry associations, and training providers have developed targeted training courses and programs. These offerings cover a wide range of topics such as digital marketing, e-commerce, data analytics, cybersecurity, and digital leadership. By participating in such training programs, MSMEs can acquire the necessary knowledge and skills to effectively navigate the digital landscape and leverage digital technologies for business growth

### Workshops for local entrepreneurs and craftspeople organised by the Communauté de Communes de l'Oise Picarde (CCOP)

Hosted by Christophe Roca, Activateur France Num, digital advisor to the Communauté de Communes, these workshops are an opportunity to discover what digital technology can do for a small business. They cover online visibility, for example, by working on search engine optimisation, and business development by creating a company page on social networks.

These meetings are held at the Forum, a third-party centre in a rural setting that brings together local economic development players. The building, which is equipped to accommodate businesses, has a training room where friendly themed workshops are held twice a week during the day. After-work get-togethers are also organised at the end of the day in restaurants.

- **Formal Provision of Educational Services:** France has a formal provision of educational services that can benefit MSMEs in their digital transformation. In 2021, French SMEs generated 51.0% of employment and 42.3% of value added, indicating their significant contribution to the economy. Vocational education and training (VET) providers, higher education institutions (HEIs), and other training organizations offer degree programs, diplomas, certificates, and vocational courses that equip individuals with the digital skills and competencies required by MSMEs. Collaborations between these educational institutions and industry stakeholders can further enhance the relevance and effectiveness of these educational services, ensuring they align with the evolving needs of MSMEs in the digital era
- **Examples of Resilience, Competitiveness, and Economic Growth:** There are compelling examples of MSMEs in France that have achieved resilience, increased competitiveness, and economic growth through digital upskilling. For instance, 73% of French SMEs report supply difficulties, indicating a need for digital solutions to optimize their supply chain processes. By embracing digital technologies and acquiring the necessary digital skills, MSMEs have been able to streamline their operations, expand their market reach, and improve customer experiences. Furthermore, 79% of French SMEs have taken measures to strengthen their cybersecurity, showcasing their proactive approach to digital resilience. These initiatives have enabled MSMEs to adapt to changing market conditions, enhance operational efficiency, and seize new business opportunities
- **Development of Easy-to-Use Tools by Public Agencies:** Public agencies in France have recognized the importance of supporting MSMEs in their digitalisation efforts. Despite the challenges faced by MSMEs, 56% of them are unaware of the digital support measures provided by the government. To



bridge this gap, public agencies have developed user-friendly tools and resources that can assist MSMEs in their digital transformation journeys. These tools provide guidance, best practices, and practical tips on various aspects of digitalisation, such as website development, online marketing, cybersecurity, and e-commerce integration. By providing easy access to information and support, public agencies aim to empower MSMEs to embrace digitalisation, enhance their flexibility, and contribute to economic growth



## Challenges

Developing and implementing a Toolkit for MSMEs digital resiliency in a post-COVID business and operational setting comes with its own set of challenges:

- **Barriers and Skill-Gaps in Digital Upskilling:** MSMEs often face barriers when it comes to acquiring and enhancing digital skills. These barriers may include limited access to relevant training programs, financial constraints, and a lack of awareness about the importance and benefits of digital upskilling. Skill-gaps in areas such as digital marketing, online presence, data analytics, e-commerce, and cybersecurity need to be addressed. MSMEs require targeted training programs and resources that cater to their specific needs and challenges
- **Flexibility and Adaptability in a Post-COVID Environment:** The COVID-19 pandemic has brought significant changes to the business landscape, requiring MSMEs to be flexible and adaptable. Implementing digital tools and strategies requires a shift in mindset and a willingness to embrace change. MSMEs may face challenges in integrating digital technologies into their existing business models, processes, and operations. Overcoming resistance to change and ensuring smooth transitions are crucial for successful digital transformation
- **Limited Resources and Financial Constraints:** Many MSMEs operate with limited resources, making it challenging to invest in digital infrastructure, training, and tools. Financial constraints can hinder the adoption of digital technologies and hinder competitiveness. It is essential to identify affordable or cost-effective solutions that align with the budgets and capabilities of MSMEs. Exploring partnerships, subsidies, and funding opportunities can help alleviate financial barriers and support digital initiatives
- **Evolving Digital Landscape and Rapid Technological Advancements:** The digital landscape is constantly evolving, with new technologies, platforms, and tools emerging regularly. MSMEs may struggle to keep up with these rapid advancements and stay updated on the latest digital trends. Ongoing training and upskilling are necessary to ensure MSMEs can effectively leverage digital tools and technologies. The Toolkit could address the challenge of staying current and provide resources to help MSMEs navigate the ever-changing digital landscape
- **Awareness and Knowledge Gaps:** Many MSMEs may lack awareness of the benefits and potential of digitalization. There may be a need to raise awareness about digital opportunities, showcase success stories, and highlight the positive impact of digital transformation on resilience, competitiveness, and economic growth. The Toolkit could include educational resources, case studies, and practical guidance to bridge the knowledge gaps and promote a better understanding of the value of digitalization for MSMEs

## Conclusions

In conclusion, the analysis and discussions conducted in this conversation shed light on the digital resilience and digitalization landscape of MSMEs in France. The data from sources such as the France Num Barometer 2022 and the insights shared highlight several key findings and implications for developing a Toolkit for MSMEs in the context of post-COVID business and operational settings.

Quantitative indicators have shown that while there has been progress in the digitalization of MSMEs, there are still significant opportunities for growth. The digital divide, particularly in terms of online presence and e-commerce, is evident among smaller enterprises. Additionally, the spatial distribution analysis reveals regional disparities that need to be addressed to ensure equal access to digital resources and opportunities across the country.

Qualitative indicators emphasize the skills gap and the need for digital training and upskilling among MSMEs. The COVID-19 pandemic has accelerated the importance of digital resilience, and educational digital priorities have shifted in response to the evolving post-pandemic scenario. The areas of interest for training curricula include digital marketing, online presence, data analytics, e-commerce, and cybersecurity, among others.

Opportunities exist for the development of a structured digital training offer tailored to the specific needs of MSMEs. Formal provisions of educational services, including VET and HEI, play a crucial role in supporting digital upskilling initiatives. Furthermore, examples of resilience, increased competitiveness, and economic growth resulting from digital upskilling highlight the potential benefits for MSMEs.

The analysis also identifies the challenges faced by MSMEs, including barriers and skill gaps in digital upskilling, flexibility and adaptability in a post-COVID environment, limited resources and financial constraints, rapid technological advancements, and awareness and knowledge gaps. Addressing these challenges will be vital for the success of the Toolkit and the digital resiliency of MSMEs.

In conclusion, the development of a Toolkit for MSMEs digital resiliency in a post-COVID setting presents a valuable opportunity to empower MSMEs in their digital transformation journey. By addressing the identified challenges, leveraging the available opportunities, and focusing on the needs and trends specific to MSMEs in France, the Toolkit can provide practical tools, training resources, and guidance to enhance the digital resilience, flexibility, competitiveness, and economic growth of MSMEs.



### 3. Country Snapshot – Italy

#### Introduction

The digital transformation of micro, small, and medium-sized enterprises (MSMEs) has become a pressing matter in Italy, given their critical role in the country's economy. According to recent data from the Italian National Institute of Statistical (Istat), MSMEs make up 99.9% of all businesses in Italy and contribute to 76.8% of total employment. This report focuses on quantitative and qualitative indicators that shed light on the digital resilience and digitalisation of MSMEs in Italy. Understanding the level of digital resilience and digitalization among Italian MSMEs is crucial to identify opportunities, address challenges, and foster sustained economic growth.

This report is structured into four key sections, each offering unique insights into the digital landscape of Italian MSMEs.

In the first section, the report presents quantitative indicators, shedding light on the structure and dominance of MSMEs in Italy. The Digital Intensity Index (DII) is employed to measure the level of digitalisation, encompassing digital skills, online presence, e-commerce, and process automation. The findings indicate that 69.9% of Italian MSMEs have achieved at least a basic level of digital intensity, surpassing the European average. However, a mere 26.8% attain high-level digital intensity, trailing behind larger companies.

In the second section, qualitative indicators are analysed to identify the skills-gap hindering Italian MSMEs from embracing digital transformation fully. A need assessment is conducted to pinpoint areas requiring targeted interventions and improved digital capabilities. Training curricula are recommended, focusing on essential digital skills, online presence, collaboration, e-commerce, financial management, and process automation.

The third section presents a myriad of opportunities available to Italian MSMEs to bolster their digitalization efforts. Government initiatives encompass financial assistance, technical support, training programmes, and collaborative networks. Additionally, private organizations offer tailored packages, equipping MSMEs with digital tools.

The fourth section outlines the challenges faced by Italian MSMEs in their digital transformation journey. Obstacles include limited digital awareness, inadequate digital skills, financing constraints, a fragmented digital market, implementation complexities, cybersecurity concerns, regulatory compliance, and the digital divide. Addressing these challenges demands strategic planning, comprehensive understanding of digital regulations, investments in training, and collaborative efforts.

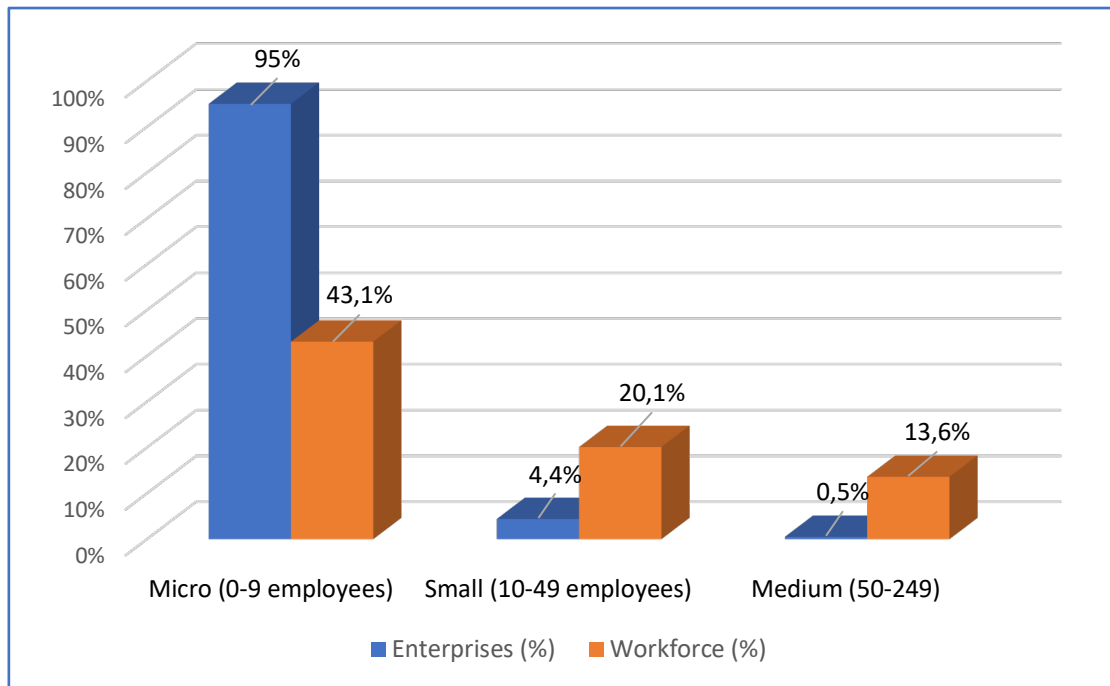
In conclusion, the report emphasises the progress made and the persistent challenges in enhancing digital resilience and digitalisation among Italian MSMEs. By fostering a supportive ecosystem through government and private sector collaborations, Italy can empower its businesses to thrive in the digital era, ensuring sustained economic growth and global competitiveness.



### Quantitative indicators on digital resilience and digitalisation of MSMEs in Italy

Italian micro, small, and medium-sized enterprises (MSMEs) play a crucial role in the Italian economy, like other EU countries. According to the latest data update from Istat – the Italian National Institute of Statistical – on enterprises and employees (Istat, 2023a), there are slightly over 4.5 million MSMEs in Italy, with micro-enterprises accounting for 95% of the total. Italian MSMEs represent 99.9% of all businesses and contribute to 76.8% of total employment. Figure 6 provides an overview of the structure of MSMEs in Italy in terms of the number of businesses and employees.

**Figure 6.** Overview of the structure of Italian MSMEs, 2021 – Percentage values



Source: own elaboration with data from Istat (2023a)

After providing this overview of the structure and dominance of the MSMEs in Italy, the analysis uses the Digital Intensity Index (DII) to measure the level of digitalisation of these Italian MSMEs. The DII is based on four dimensions: digital skills, online presence, e-commerce, and process automation.

The Istat report on enterprises and ICT in 2022 provides quantitative evidence on the percentage of MSMEs with at least a basic level of digital intensity – i.e., with at least 4 of the 12 DII targets. According to the report, the latest updated percentage of MSMEs with at least a basic level of digital intensity is 69.9%, which is a higher percentage than the European average of the EU27 countries (69.1%) and above all an increase of 9.6% compared to the same quantitative indicator in Italy in 2021 (60.3%).

Specifically, Italian MSMEs show the most significant progress on the parameter of employee internet access for business purposes, which grew by 9 points between 2019 and 2022 (from 40% to 49%). And also on the use of business systems remotely (73%), at least 3 ICT security measures (74%), and broadband access (83%) show the 4 DII’s targets responsible for the detected progress.

Nevertheless, and on the other hand, only 26.8% of Italian MSMEs achieve a high level of digital intensity (7 to 9 targets of the DII), so for the overall level of digitalisation the situation of MSMEs remains lagging behind.

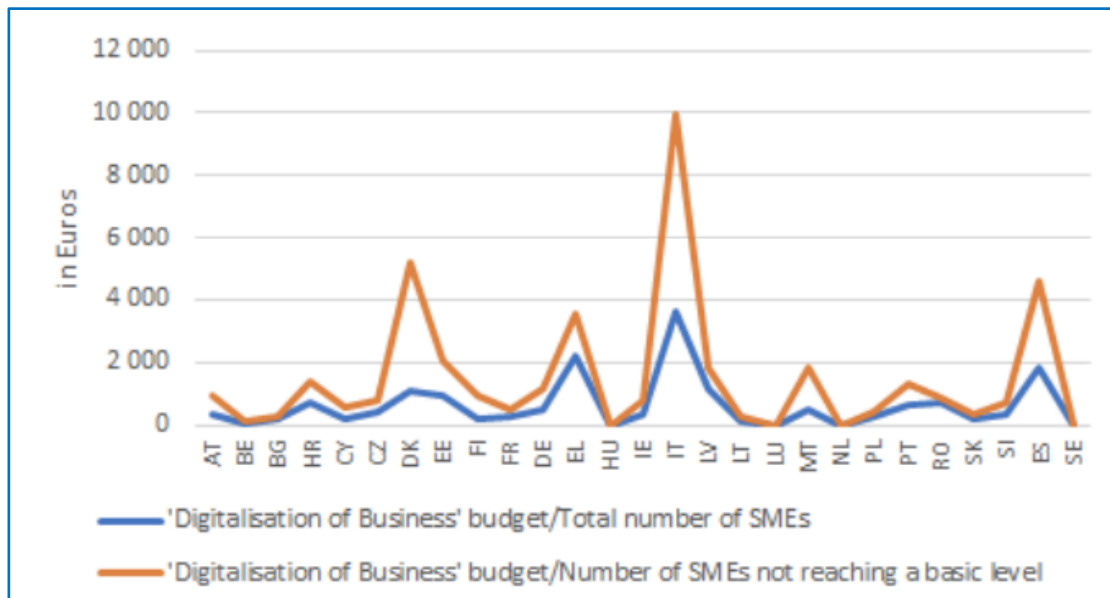
The biggest areas of lag behind the large companies are:

- Presence of ICT specialists (13.4% vs 75.0%)
- ICT training (19.3% vs 65.4%)
- E-commerce (13.4% vs 36.6%)

Both the significant progress in 2022 and the delays in high-level digitalisation can be traced back to the important efforts and commitment of the country system to the digitalisation of businesses – especially MSMEs – whereby significant financial support has helped in the achievement of basic results, in the first case, and will continue to be elevated to a high level, in the second.

Indeed, Figure 7 refers to the RRF budget shares calculated for SMEs and related to the national RRF plans. In other words, it shows the financial support related to the digitalisation of SMEs in the different EU countries.

**Figure 7.** Digitalisation of businesses. RRF budget calculated per SME – *Absolute values*



Source: European Parliament, 2022

It should be noted that Italy – followed by Greece and Spain – provided the highest level of funding when considered in relation to the number of SMEs. If SMEs that do not reach a basic level are taken into account, the emphasis of these countries on levelling up SMEs’ digital skills is even greater.

## Qualitative indicators on digital resilience and digitalisation of MSMEs in Italy: skills-gap and need assessments

The digital resilience and digitalisation of MSMEs in Italy are therefore in a state where a lot has been done in a short time to embark on the first basic strategies and see the first results, especially in the post-pandemic period and thus as resilience, but there is now a need for the greatest effort not to slow down the basic growth and to achieve qualitatively higher results. To do this, it is necessary to carry out a timely need assessment, and then proceed with targeted interventions to fill the digital skills-gap.

This section provides evidence regarding the qualitative indicators on digitalisation of MSMEs in Italy, especially analysing the skills-gap and providing the digital educational focal points to be addressed with a specific training.

Detailed analyses have identified a list of gaps preventing Italian MSMEs from unleashing the full potential of digital transformation. These are summarised as follows:

- Awareness / knowledge – resulting in lack of investment and planning in digital solutions
- Technical Capabilities – resulting in limited digital skillset
- Strategic Fit of MSME market (supply side) – complex digital solutions instead of more basic and standardised options
- Ability to implement
- Awareness and marketing
- Financial capabilities – resulting in limited own financial resources for scaling up

Training curricula should focus on the digital educational focal points such as:

- Digital skills literacy: The competence to use digital tools and technologies effectively, including basic computer skills, digital communication, and data analysis
- Online presence: The ability to establish and maintain a strong online presence, including website development, social media management, and online marketing
- Collaboration & Communication: The ability to collaborate and communicate effectively using digital tools and technologies, including video conferencing, project management software, and cloud-based file sharing
- E-commerce and internet-based sales: the capacity to sell products and services online, including setting up an e-commerce platform, managing online transactions, and optimizing the customer experience
- Digital financial management: The ability to manage financial operations using digital tools and technologies, including accounting software, online payment systems, and financial analytics
- Process digitalisation and automation: The knowledge to automate business processes using digital technologies, including workflow automation, robotic process automation, and artificial intelligence





## Opportunities: training available and operational tools

To address the challenges and meet the needs, the analysis highlighted numerous initiatives, both public and private, from which MSMEs derive opportunities. Whether programmes, initiatives, available training and/or operational tools, this section provides a list of opportunities for the digitalisation of Italian MSMEs.

First of all, the Italian government demonstrates its dedication to digital transformation through a wide range of initiatives provided to MSMEs. These initiatives encompass financial assistance, technical support, training programmes, and collaborative networks. Concerning political commitment, there is a wide range of opportunities – with the following examples and features:

- **Transition 4.0 Plan:** a package of instruments, financed by resources allocated in the PNRR. It promotes the digital innovation in the Italian enterprises in the post-pandemic period, with a focus on digitalisation of MSMEs. It does so through measures that include tax credits to be used as offsets in the budget and non-repayable incentives
- **Digital Innovation Hub (DIH):** they are 23 in Italy and play the role of promoters of digital evolution, through specific awareness-raising and training activities on new technologies and opportunities
- **Punto Impresa Digitale (PID):** structures located at the Chambers of Commerce. Established in 2016, there are now 88, a territorial reference point for training and information, both on policies/incentives/opportunities by the government, and for in-depth studies on specific technologies and applications
- **Innovation Manager (IM):** a new figure introduced with the 2019 Budget Law, represents a point of contact between MSMEs and public bodies to support digital innovation processes, often acting as a conduit for the provision of services between innovation hubs and the SMEs themselves. Today there are about 8000 Innovation Managers registered in the MISE lists

### Royal snc – examples of digitalisation strategies pursued by MSMEs

By utilising data collection and analytics tools like Google’s Keyword Planner and Facebook IQ, Royal snc, an Italian service company, have expanded their market reach and gained valuable insights into consumer profiles and behaviours.

Through the DigitaliseSME, Royal snc received expert guidance, enabling them to implement software for order management, energy consumption monitoring, and digital guest services.

They are also leveraging technologies like the Internet of Things and solar energy to automate operations and optimize staff presence. Royal snc highlights the importance of providing specific skills training to employees to fully leverage new software and technology in the digital transformation journey.

After providing a framework of opportunities stemming from the efforts of policymakers, here are examples of opportunities stemming from private initiatives, i.e., mostly activated by large companies for the benefit of the entire entrepreneurial ecosystem:

- **Motore Italia Digitale:** Motore Italia Digitale (Digital Engine Italy) is an initiative by Intesa Sanpaolo that makes available to Italian MSMEs a €4 billion plafond for digital transition, in line with the



guidelines of the PNRR. Among the tools offered by the programme is the new Digital Loan (D-Loan), a dedicated financial solution that grants a rate discount to companies that achieve certain important digital transformation objectives

- Poste Italiane and Microsoft – digital partners: the two organisations have structured a series of packages to offer Italian MSMEs the possibility of using – at a subsidised price – the digital tools of both through a single subscription. This solution will enable MSMEs to improve productivity, simplify collaboration, reach recipients, protect and certify data and documents



## Challenges

Digital entrepreneurship has become increasingly important for the growth and competitiveness of micro, small, and medium-sized enterprises (MSMEs) in Italy. However, MSMEs face several challenges and obstacles in their digital transformation journey. These challenges can be broadly categorised into the following areas:

- **Limited Digital Awareness:** Italian MSMEs lack awareness of the benefits and opportunities offered by digital technologies. Many MSMEs are not aware of the potential of digitalisation to improve their business processes, increase efficiency, and reach new customers. This lack of awareness can result in a reluctance to invest in digital solutions and a failure to plan for digital transformation
- **Lack of Digital Skills:** Italian MSMEs face a shortage of employees and managers with the necessary digital skills. They lack the technical capabilities to implement digital solutions effectively. This can result in a limited digital skillset, which can hinder the adoption of new technologies and limit the ability of MSMEs to compete in the digital economy
- **Capability in Accessing to Financing:** The access to capital needed to implement digital solutions and upgrade infrastructure is often limited. Many MSMEs face challenges in accessing financing for digital transformation projects. This can result in a lack of financial resources for scaling up and a failure to invest in digital solutions that could improve their competitiveness
- **Fragmented Digital Market:** The digital solutions offered by large tech vendors may not always align with the specific needs and capacities of Italian MSMEs, that face obstacles in finding digital solutions that are tailored to their specific needs and capacities. This can result in a fragmented digital market, where MSMEs struggle to find the right solutions to meet their digital transformation needs
- **Implementation Challenges:** Italian MSMEs encounter challenges in executing digital projects, including resource constraints and longer implementation times compared to larger players. Many They face challenges in implementing digital solutions effectively. This can result in longer implementation times, higher costs, and a failure to realize the full benefits of digital transformation
- **Cybersecurity Concerns:** Italian MSMEs face cybersecurity risks but often lack the necessary knowledge and resources to effectively protect their digital assets. Many MSMEs lack the expertise and resources to effectively manage cybersecurity risks. This can result in a failure to protect digital assets, which can lead to data breaches, financial losses, and reputational damage
- **Regulatory Compliance:** Compliance with evolving digital regulations and data privacy laws presents a challenge for Italian MSMEs. Ensuring compliance can be complex and time-consuming, requiring additional expertise. To address this challenge, MSMEs need to focus on developing a comprehensive understanding of digital regulations and data privacy laws and investing in the necessary expertise to ensure compliance
- **Digital Divide:** Disparities in digital infrastructure and internet connectivity across different regions in Italy create a digital divide. This can result in a lack of access to digital tools and technologies, which can limit the ability of MSMEs to compete in the digital economy. To address this challenge, MSMEs need to work with policymakers and other stakeholders to develop policies and initiatives that can help bridge the digital divide and ensure that all MSMEs have access to the digital tools and technologies they need to succeed



## Conclusions

Based on the conclusions drawn from the challenges, trends, and projections concerning digitalisation of MSMEs in Italy, the following key takeaways have been compiled:

- Italian MSMEs play a vital role in the country's economy, accounting for 99.9% of all businesses and contributing to 76.8% of total employment, making their digital resilience and digitalisation crucial for economic growth
- The Digital Intensity Index (DII) reveals encouraging progress, with 69.9% of Italian MSMEs achieving at least a basic level of digital intensity in 2022, surpassing the European average (69.1%). However, there is room for improvement, as only 26.8% reach a high-level digital intensity, indicating a lag behind larger companies in presence of ICT specialists (13.4% vs 75.0%), ICT training (19.3% vs 65.4%) and e-commerce (13.4% vs 36.6%)
- Notable advancements in digital skills, online presence, e-commerce, and process automation have contributed to improved digital intensity among Italian MSMEs, driven by government efforts and financial support
- The skills-gap is a significant barrier to digital transformation among Italian MSMEs, necessitating targeted interventions. The list of gaps contains awareness and knowledge, technical capabilities, ability to implement, awareness and marketing and financial capabilities
- Addressing the gap requires investment in training to enhance digital skills literacy, online presence, collaboration & communication, e-commerce capabilities, financial management, and process digitalisation automation
- Conducting a thorough need assessment will enable MSMEs to identify their specific challenges and tailor digital education to suit their requirements effectively
- Empowering Italian MSMEs with the right digital skills is crucial for unlocking their full potential in the digital economy and ensuring sustained competitiveness in an increasingly digitalised global market
- The Italian government's commitment to supporting digital transformation is evident through various initiatives, including financial assistance, technical support, training programmes, and collaborative networks such as the Transition 4.0 Plan, the Digital Innovation Hubs (DIHs), the structures of Punto Impresa Digitale (PID) and the figure of the Innovation Manager (IM)
- Private organisations offer additional opportunities, providing tailored packages and resources to help MSMEs leverage digital tools effectively, such as the Motore Italia Digitale and the collaboration among Poste Italiane and Microsoft
- Limited digital awareness necessitates awareness-raising campaigns and education on the benefits of digital technologies for Italian MSMEs
- The shortage of digital skills requires investment in digital training and upskilling programs to facilitate effective implementation of digital solutions



- Overcoming financing constraints demands innovative financial solutions and partnerships to support MSMEs in digital projects
- Fragmented digital market challenges MSMEs to find tailored digital solutions, hindering their digital transformation
- Resource constraints and longer implementation times can increase costs and delay the full benefits of digitalisation
- Cybersecurity risks due to a lack of expertise and resources can lead to data breaches and financial losses
- Ensuring compliance with digital regulations necessitates understanding and expertise
- The digital divide caused by disparities in infrastructure requires collaboration with policymakers and stakeholders to bridge the gap



## 4. Country Snapshot – Spain

### Introduction

This report is a national analysis of the Spanish MSME ecosystem in relation to its digital resilience and is part of the DREAM - Digital Resilience for European Microenterprises project, specifically in its second work package aimed at identifying the training needs of these companies to improve and strengthen them digitally. These results will be used for the elaboration of the final results of the work package, which will lay the foundations for the future development of training to improve the digital skills of employees and managers of micro and small enterprises in the countries of the consortium and the European Union in general.

The business sector has experienced an accelerated digital transformation process in recent years, which has intensified in the context of the COVID-19 pandemic. In particular, micro, small and medium-sized enterprises (MSMEs) have been affected by the challenges of digitalising their production and business processes. In fact, according to one study, the COVID-19 pandemic greatly affected Spanish MSMEs in different areas (economic impact, employment, access to finance...), being small and micro enterprises the most affected and those that most reduced their employment and sales (Consejo General de Economistas de España, 2021).

Therefore, this report aims to identify the main challenges faced by Spanish MSMEs in their digitalisation process, as well as the opportunities and tools available to improve their digital resilience, while assessing the main quantitative and qualitative indicators related to the digitalisation of micro and small enterprises.

The first section of the report will present quantitative indicators on MSMEs in Spain, with a graph of the typology of existing companies according to their size and the geographical distribution of enterprises in the country's regions. Statistics and graphs will be included in order to understand the current situation of Spanish MSMEs. Further on, qualitative indicators on the resilience and digitisation of SMEs in Spain will be addressed, describing the skills gaps and assessing the educational and training needs in the post-COVID context. Areas of interest for curricular training will be identified, which will provide the digital competences and skills needed to improve the digital resilience of MSMEs.

The third section will present the training opportunities and operational tools available to Spanish MSMEs, mainly regarding public initiatives. It will also identify an example of good practice as an inspiration to improve the digital resilience of MSMEs. The fourth section will address the challenges faced by Spanish SMEs in their digitalisation process. It will analyse the barriers and gaps that hinder the adoption of digital tools and the digital transformation process in micro and small businesses.

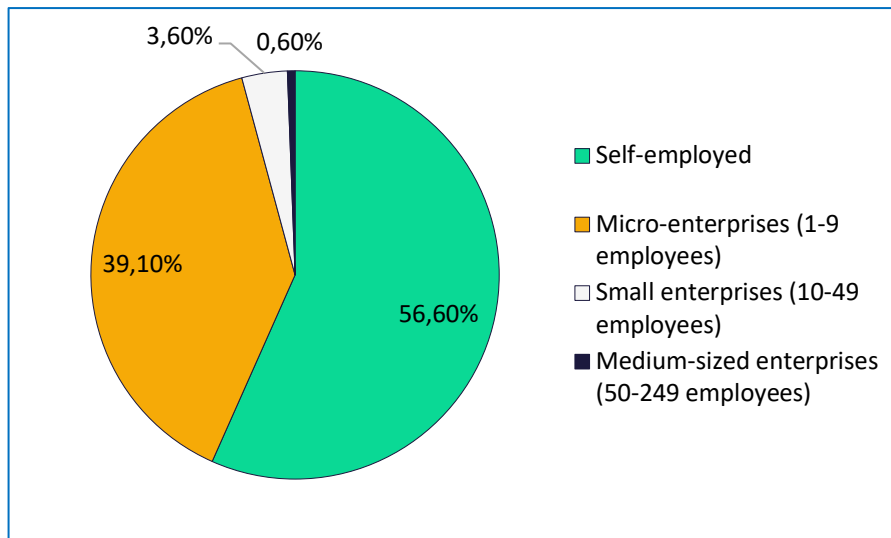
The report will conclude by presenting the main conclusions, lessons learned and recommendations for improving the digital resilience of Spanish MSMEs. The main challenges and opportunities identified throughout the report will be summarised in order to provide a rigorous and useful analysis for readers interested in digital entrepreneurship and the digital transformation of MSMEs in Spain.



## Quantitative indicators on digital resilience and digitalisation of MSMEs in Spain

As of 1 January 2022, there were 3,430,663 companies in Spain, of which 3,425,943, i.e. 99.9%, are SMEs with between 0 and 249 employees (DIRCE, 2022). If we focus on the distribution of this 99.9% of SMEs in Spain, thanks to the Directorate General for Industry and Small and Medium-Sized Enterprises in Spain we know:

**Figure 8.** Structure of MSMEs in Spain – Percentage Values

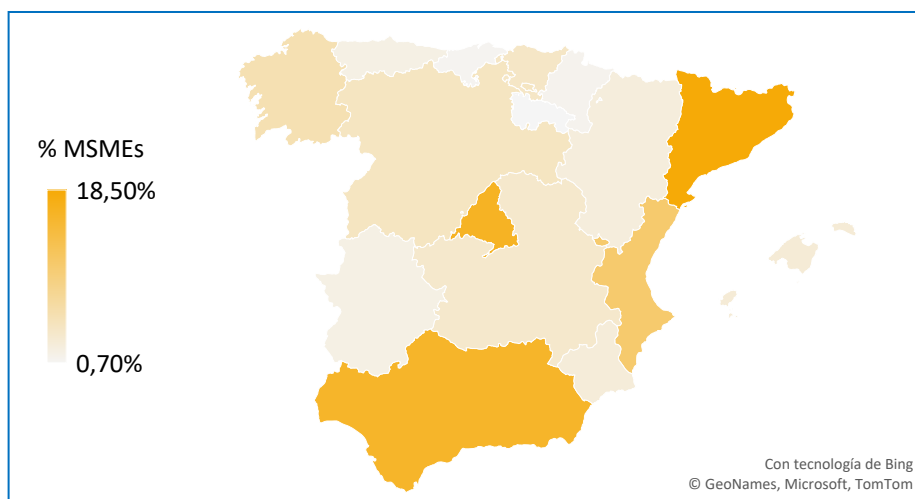


Source: DIRCE, 2022 (own elaboration)

If we look at the division of these companies by sector of activity, 5.6% belong to the industrial sector, 12.4% to construction, 20.8% to commerce, and 61.2% to other services (DIRCE, 2022).

On the other hand, the geographical distribution of SMEs in Spain gives us an idea of which autonomous communities have the most entrepreneurial culture and resources for starting up a business, although this cannot be considered a fully representative indicator either, as each community has very different characteristics in terms of size, number of inhabitants and business activities carried out there. Thus, the 3.4 million SMEs in Spain are distributed as follows:

**Figure 9.** Distribution of MSMEs in Spain by regions

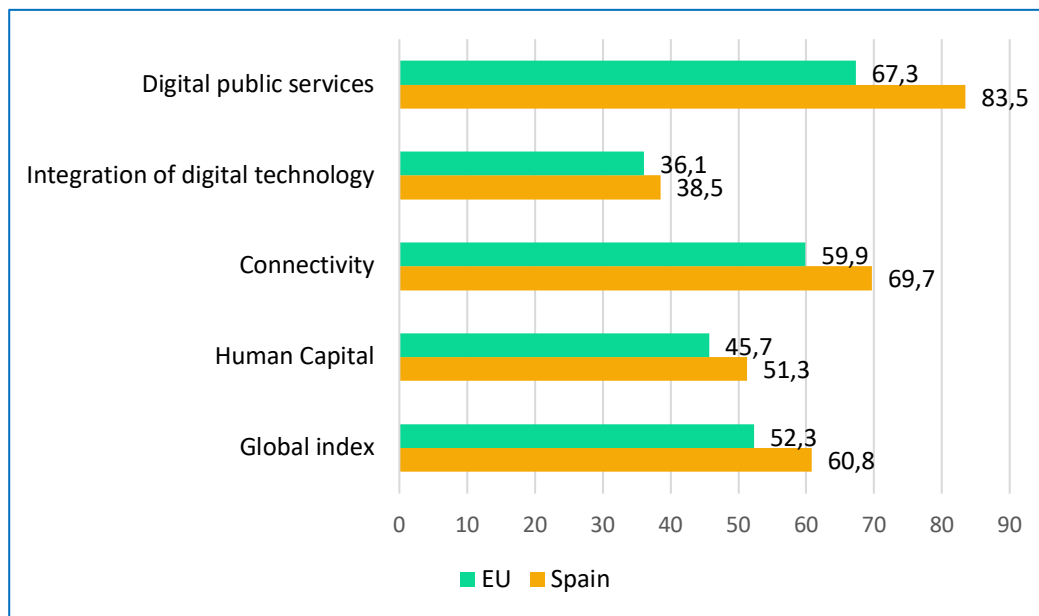


Source: DIRCE, 2022 (own elaboration)

Given that most of the business fabric in Spain revolves around the service, hotel and tourism sector, it can be seen that a higher proportion of MSMEs are concentrated in the coast and tourist areas, specifically in Madrid, Andalusia, Catalonia and the Valencian Community. In the interior regions, full of rural areas that are considered to be the “empty Spain”, there is a low percentage of entrepreneurs.

As a way of understanding the context of MSMEs in Spain, a comparison of the Digital Economy and Society Index (DESI) 2022 in Spain and the European Union is shown below, in order to understand the state of the variables measured by this index in the country, and its position compared to the European average:

**Figure 10.** DESI comparison – Spain and EU – Percentage Values



Source: European Commission, 2022c (own elaboration)

In terms of the digitalisation of Spanish companies, a study conducted by the National Observatory of Technology and Society (ONTSI) provides relevant conclusions. This report prepares a "synthetic digitalisation index" that considers the following variables: cultural change, process redesign, equipment and infrastructures, products and services, customer experience and training. This index indicates that, in general, Spanish companies are experiencing increasing digitalisation. However, the main gaps revolve around the presence of specialists and digital skills (ONTSI, 2021a).

This same report points out in its conclusions that in recent years, the percentage of companies with less than 10 workers that offer technology training activities to their employees has decreased to 20.8% in 2019, 2.6% less than in 2015. This stagnation in technology training in small companies makes it necessary to consider the need to boost the development of digital skills and the recruitment of specialists in Spanish MSMEs in order to accelerate their digitisation process, since without sufficient skills it will not be possible to take advantage of technology, despite the boost that the COVID-19 pandemic may have caused (ONTSI, 2021a).

Compared to the rest of the European Union, Spain is generally above average in terms of the aforementioned index, but it is below average in the areas related to cultural change, training and the use of e-commerce (ONTSI, 2021a), which is why the presence of a project such as DREAM is necessary to help overcome these types of shortcomings in Spain.



## Qualitative indicators on digital resilience and digitalisation of MSMEs in Spain: skills-gap and need assessments

Covid-19 has highlighted the needs of MSMEs in terms of digital resilience and digitisation, which is why the Spanish government has launched 8 specific digital plans to drive the digital transformation process, such as the SME Digitalisation Plan or the National Digital Skills Plan, combined with an ambitious agenda of structural reforms. Training is one of the actions aimed at driving the digital transformation (Gobierno de España, 2023). Other reports also suggest that MSMEs are failing to fully digitalise their activities due to a lack of skills (European Commission, 2022b).

This, together with the final conclusions reviewed in the previous section on quantitative indicators, leads us to the need for a project such as DREAM that is based on the digital resilience of MSMEs in the European Union. To this end, throughout the implementation of the project, a series of training courses will be developed around topics and areas that adapt to the needs and shortcomings found in the research of the different countries of the consortium and the European Union. The training contents will be focused on the following areas:

- Fundamentals of digital entrepreneurship in microenterprise settings: what are the skills needed to embrace digital transformation in MSME. In this sense, different official documents and reports highlight the need to improve digital skills:
  - There is an urgent need to improve digital skills at all levels, basic, intermediate and advanced, where Spain is below the European average (Gobierno de España, 2021)
  - It is fundamental to have the digital skills necessary to ensure an efficient and responsible use of the digital tools available (Ministerio de Asuntos Económicos y Transformación Digital, 2021)
  - The provision of advanced digital skills applied to the different productive sectors is required for the active population. The National Digital Skills Plan should ensure in its 6th objective that SMEs have the necessary digital skills to tackle their digitalisation (Gobierno de España, 2020). For this purpose, the European DigComp framework will be used, which will allow us to choose the most relevant competences
- Digital communication and branding: redefining processes and channels for the communication and marketing needs of a microenterprise. Social media and collaboration tools are considered to be some of the transformative technologies for the digitalisation of business, and therefore digital communication is seen as a key capability to make optimal use of the new digital channels and environments in the corporate and professional environment, fostering customer communication and branding (Acelera pyme, 2022b)
- Digital finance: payment systems, skills to manage start-up finance. At all stages of development, small business struggle more than large enterprises to access finance (European Commission, 2022b). In addition, access to financing instruments to carry out the innovation process is seen as one of the enablers of digitalisation in Spain (Gobierno de España, 2021), so it is important for small businesses to understand the basics of digital finance for their business and for raising external finance
- Cybersecurity: what are the dangers and how to avoid them. SMEs which have digitalised their activities tend to perceive cybersecurity challenges as key barriers (European Commission, 2022b).



In fact, the Digital Spain 2025 plan considers in its measure number 14 the need to reinforce cybersecurity in MSMEs and professionals in order to promote the adoption of measures to be safe in the digital world (Ministerio de Asuntos Económicos y Transformación Digital, 2021)



## Opportunities: training available and operational tools

In Spain, there is an awareness of improving digital resilience for MSMEs by the public sector, especially, but also through public-private collaboration through different initiatives and organisations supporting MSMEs.

One of the most important initiatives is the "Acelera pyme" programme, created by the Ministry of Economic Affairs and Digital Transformation to contribute to building an ecosystem of reference for the digital transformation of SMEs in Spain, within the framework of the SME Digitalisation Plan 2021-2025 with a budget of more than 4,000 million euros.

More specifically, a series of operational tools and training available to boost the digitalisation of microenterprises and improve the digital skills of their managers and employees are described below:

### Increasing visibility and web presence to resist Covid-19

Acelera pyme (2022a) includes several success stories, including that of "El Refugio de Cristal", an eco-sustainable rural accommodation micro-enterprise in Toledo (Spain). This company had to close due to confinement, which made it realise the need to reorient its digital strategy to foster a closer and more effective relationship with the customer.

At that point, they began to make use of tools such as Google Analytics and Google Ads to identify what motivated their potential customers, and were able to refocus their marketing and advertising strategy accordingly.

They implemented SEO and SEM strategies, an increased presence in social media and investment in keywords and ads, a comprehensive digitalisation strategy that was optimal for the business, and in this way they managed to increase their visibility and grow their business with a limited economic investment, and using analytics to study the evolution and continuously reduce investment costs.

- Generation D programmes to boost digital transformation for MSMEs. There are two parts, one for training and mentoring in digital transformation for people in management teams and the qualification of people employed in SMEs, and the other for training and mentoring young unemployed people and SME workers to become the experts who contribute to the digitalisation process of SMEs (Acelera pyme, n.d. a)
- Acelera pyme training. The programme has a section on its website where you can find different types of training resources for MSMEs (training pills, monographs, infographs, interviews with experts, real cases...) (Acelera pyme, n.d. d)
- Kit Digital. A Spanish Government initiative to grant subsidies for the implementation of commercially available digital solutions to achieve a significant advance in the level of digital maturity (Acelera pyme, n.d. c)
- Digital diagnostic test and self-assessment of digital transformation and cybersecurity. Acelera pyme provides self-diagnostic tools for MSMEs to know the level of digital maturity of their company and to know which areas to improve and how to do it (Acelera pyme, n.d. b)
- EOI training for MSMEs. The School of Industrial Organisation (EOI) has a wide range of training available for MSMEs, both in presential format throughout Spain, as well as in hybrid and online format (EOI, n.d.)
- Protect your company, by INCIBE. The National Cybersecurity Institute has a special section dedicated to companies, where various resources are proposed, such as sectoral training, awareness kits, or security policies for SMEs. Many of the resources are interactive and allow MSMEs to improve their cybersecurity performance (INCIBE, n.d.)



## Challenges

Micro and small enterprises are crucial to the European economy, playing a significant role in job and wealth creation in our societies. In Spain, MSMEs represent 72% of the workforce, 99% of enterprises and 61% of added value (European Investment Bank, 2021). However, the COVID-19 pandemic has had a significant impact on these businesses, especially in terms of their digital resilience.

The rise of remote working and the need to adapt quickly to new forms of business and online commerce have forced many MSMEs to accelerate their digital transformation process. But not all have been successful in this transition and have encountered a number of barriers and challenges, since the adoption of digitalisation by Spanish MSMEs is low for 75% of them (European Investment Bank, 2021).

In fact, the Government of Spain itself, through its axis 6 in the Spain Digital 2026 plan, considers that while large companies are quite advanced in the digital transformation process, MSMEs are still a challenge in themselves. So much so that the percentage of SMEs with at least a basic level of digital intensity is currently 62%, two points above the EU average but still far from the 90% target for 2030 set by the European Commission (Gobierno de España, 2022).

Among the main challenges these companies face in terms of digital resilience are the lack of digital competences and skills, lack of access to appropriate technology and lack of financial resources to invest in the digitisation of their businesses. In fact, according to the European Commission (2022a), MSMEs cannot fully benefit from the digital economy due to their shortage of digital skills that slow them down in integrating technological advances in their activity, and to the lack of ICT specialists.

Another major challenge facing these companies is the lack of flexibility in their business model and corporate culture. The companies that have been able to adapt more quickly to the changes imposed by the pandemic have been those with a more flexible business culture, more open to change and innovation.

According to the report on the digitalisation of MSMEs 2021, which offers a view by sector, it can be seen that in all sectors of activity, whether industry, construction, commerce, transport, etc., microenterprises have a lower digital presence than small and medium-sized enterprises (ONTSI, 2021b), which implies that there is a direct relationship between the size of the company and its digital resilience, since the larger the company, the greater the propensity to have a presence on the Internet (website, social media, e-commerce, etc.).

Finally, to achieve greater competitiveness and economic growth, micro and small enterprises must be able to foster collaboration and cooperation, both among themselves and with other enterprises and organisations. Digital communication can enable these enterprises to share knowledge and resources, and improve their ability to meet digital and other challenges.

In summary, digitalisation is a key necessity for the resilience and growth of micro and small enterprises. But to achieve effective digital transformation, it is necessary to address the barriers that limit the ability of these enterprises to improve their digital skills and capabilities, as well as to increase their flexibility and competitiveness. Digital communication, cybersecurity, digital finance and other skills needed to embrace digital transformation in MSMEs are key to achieving greater digital resilience in the post-COVID context.

## Conclusions

The development of this report highlighted several conclusions, recommendations and lessons learned with regard to the digital resilience of micro and small enterprises in Spain:

Firstly, it has been found that the digital resilience of micro, small and medium-sized enterprises (MSMEs) is a key factor for their survival and growth in an increasingly digitalised environment. Therefore, it is recommended that companies invest in their digitalisation and in training their employees in digital skills. Considering that MSMEs constitute 99.9% of companies in Spain (DIRCE, 2022), it is particularly important that smaller companies have the necessary competences and skills to be digitally resilient.

It has also been observed that there are significant challenges on the road to digital resilience, including lack of digital skills, lack of resources and resistance to change for the adoption of new technologies. Therefore, it is suggested that relevant actors, such as governments and business organisations, implement policies and programmes to support the digitalisation of MSMEs and foster a business culture that is more open to change. Spain has a wide variety of plans aimed at fostering digital skills for businesses and citizens in general, so it could be considered a benchmark country in terms of policy-making efforts. However, it is still necessary for these plans and programmes to achieve the objectives proposed for the coming years.

In addition, it has been found that there are opportunities for MSMEs in the training and operational tools available, such as training programmes tailored to MSMEs' needs and digital tools to facilitate their digital transformation. Companies are encouraged to take advantage of these opportunities to improve their digital resilience and competitiveness. However, although the typology of training is apparently useful for enterprises in terms of subject matter, there is not a wide enough variety to cover the whole spectrum of micro and small enterprises in Spain, nor is there sufficient visibility to do so.

Finally, it has been learned that the pandemic has accelerated the digitalisation of SMEs and highlighted the importance of digital resilience in times of crisis, but even so, micro and smaller businesses are the most affected and vulnerable by the transition to digital. Therefore, relevant actors are urged to continue working on improving the digital resilience of MSMEs, especially the smaller ones, with the aim of ensuring their survival and growth in the future, in order to continue providing value and employment in society.

The DREAM project during its implementation will provide a comprehensive analysis of the challenges of digital entrepreneurship for MSMEs, training tools to contribute to improve the digital resilience of European MSMEs, and guidelines after a pilot period in which the quality of the training materials will be tested and the main findings will be provided and made available on the project's open educational resources platform ([www.digital-dream-lab.eu](http://www.digital-dream-lab.eu)) to the most relevant stakeholders and policy makers in this field.

## 5. Country Snapshot – Slovenia

### Quantitative indicators on digital resilience and digitalisation of MSMEs in Slovenia

Digital resilience and digitalisation of MSMEs in Slovenia are crucial factors that can shape the country's economy in the coming years. The COVID-19 pandemic has significantly increased the importance of digitalisation, and MSMEs play a crucial role in driving economic growth. Therefore, it is essential to develop quantitative indicators that can measure the level of digital resilience and digitalisation of MSMEs in Slovenia.

Firstly, a quantitative indicator that can measure the level of digital resilience is the percentage of MSMEs that have access to reliable and high-speed internet. High-speed and reliable internet is essential for businesses to operate efficiently, particularly during the pandemic, where remote work and online transactions have become the norm. Therefore, it is crucial to ensure that MSMEs in Slovenia have access to high-speed and reliable internet to increase their digital resilience.

Secondly, the level of digitalisation of MSMEs in Slovenia can be measured by the percentage of MSMEs that have implemented digital technologies in their operations. Digitalisation can help businesses streamline their operations and increase efficiency. Therefore, it is crucial to encourage MSMEs to adopt digital technologies and provide them with the necessary support and training to do so.

Another quantitative indicator that can measure the level of digitalisation of MSMEs in Slovenia is the percentage of MSMEs that have an online presence. An online presence is essential for MSMEs to reach new customers and expand their business. Therefore, it is essential to encourage MSMEs to establish an online presence by providing them with the necessary support and resources.

Finally, the level of digital resilience and digitalisation of MSMEs in Slovenia can be measured by the percentage of MSMEs that have implemented cybersecurity measures. Cybersecurity is critical to protect businesses from cyber threats such as ransomware and malware. Therefore, it is essential to encourage MSMEs to implement cybersecurity measures and provide them with the necessary support and training to do so.

In conclusion, developing quantitative indicators that measure the level of digital resilience and digitalisation of MSMEs in Slovenia is crucial for driving economic growth and ensuring that businesses can survive during challenging times such as the COVID-19 pandemic. The indicators discussed in this essay, such as internet access, digital technology adoption, online presence, and cybersecurity measures, can help measure the level of digitalisation and digital resilience of MSMEs in Slovenia. By encouraging MSMEs to adopt digital technologies and providing them with the necessary support, Slovenia can ensure that its economy remains competitive and resilient in the digital age.

Source: Republica Slovenija, 2023

## Qualitative indicators on digital resilience and digitalisation of MSMEs in Slovenia: skills-gap and need assessments

During the epidemic of the Covid19, when social contacts were kept to a minimum, on the one hand, the importance of digitisation was confirmed, while on the other hand the developmental weaknesses of Slovenian digitisation.

In a crisis situation, the national digital communications infrastructure performed very well performed its tasks. Operators, users, the economy and society as a whole have been able to make the most of the benefits of years of large private and partly public and private investment in fibre and mobile electronic communications infrastructure and in the development of the Internet infrastructure. Nevertheless, the quarantine has further confirmed that some areas and households still lack access to the internet via high-speed fixed networks and that mobile coverage is also deficient in some areas.

As the digital communications infrastructure is in principle working well, we have seen during the COVID-19 epidemic, users faced complex problems with electronic services, both in terms of availability and the knowledge needed to use them, and with regard to the quality of the quality of the user experience.

These challenges were, for the average user were a major obstacle in their efforts to doing their job, learning, obtaining information, dealing with the state and as access to the internet and personal computers or mobile devices. On the one hand, they are digitally proficient in new and unconventional new digital situations, taking advantage of the possibilities of the Internet and electronic services, but on the other hand they are forced to situation, some citizens have for the first time seriously encountered the online implementation of various activities from home.

The experience of the digital society in the face of the metal-19 epidemic is a valuable guide for strategic planning for the future promotion of digitisation in Slovenia, which we need to address our development gaps.



## Opportunities: training available and operational tools

On 26 October 2021, the representatives of the EU SME Centre (the Centre) and Spirit Slovenia signed a new Memorandum of Understanding (MoU). This is the third partnership agreement signed with a Slovenian-based organisation proving the deep commercial interest of the Slovenian business community into the Chinese market.

We welcome this new partner and we are looking forward to being at the service of Spirit Slovenia and its network of SMEs. In the framework of this newly established partnership, both parties are working together in the organisation of a series of joint training webinars for the interest of the Slovenian business community.

To get notified about their upcoming events organised MSMEs have to register on the Centre's website, follow their social media and subscribe to the mailing list to get any updates sent directly to the users' inbox. All these actions are available free of charge, as all the services the Centre offers.

For the user is a business support organisation in the EU or the COSME-participating countries and have affiliated companies interested in the Chinese market, they can contact the Partnership Coordinator to obtain further information about partnerships and collaborations. The EU SME Centre offers a wide range of complimentary services to partners and affiliated SMEs to improve their readiness to the market.

The Slovenian Presidency of the Council of the European Union (EU) in the second half of 2021 is the third of a trio of presidencies that have developed an 18-month programme which takes forward the EU strategic agenda 2019-24. With the motto: 'Together. Resilient. Europe' Slovenia's six-month presidency's priorities and programme are oriented towards EU recovery from challenges posed by the COVID-19 pandemic, reinforcing resilience and reflecting on a common and shared vision of the future of Europe. In education, work will focus on several areas: new ways of learning and teaching (contributing to shaping of the Council Recommendation on blended learning for high-quality and inclusive primary and secondary education); development of digitalisation and artificial intelligence and their ethical use in education processes (contributing to implementation of the Digital education action plan); renewing the European Agenda for adult learning; education for sustainable development, micro qualifications, individual-learning accounts and access to vocational education and training and lifelong learning. Vocational education and training (VET) play a prominent role in Slovenia.

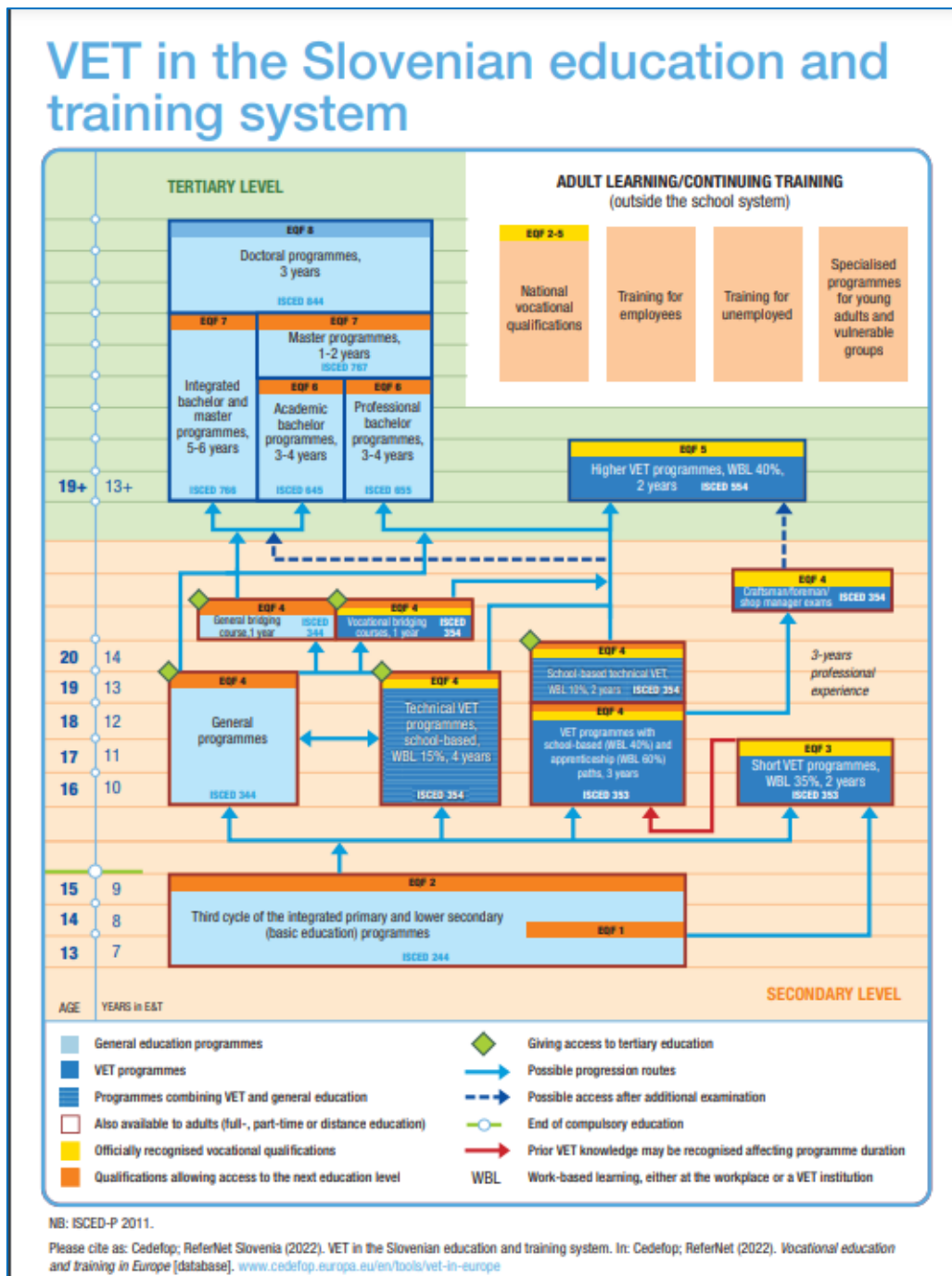
VET attractiveness is high, with the Slovenian education/VET system offering progression opportunities both horizontally and vertically; possibilities for work-based learning such as through intercompany training centres or recently reintroduced apprenticeship in upper secondary three-year VET; and comprehensive policies on scholarships. Slovenia has the highest share of VET learners in upper secondary education in the EU-27, and among the lowest rates of early school leavers. Further, the importance of raising adults' levels of skills is becoming more widely accepted. Along with facing challenges of an aging population and steadily decreasing participation in lifelong learning in the past decade, more than a quarter of workers are at high risk of seeing their job automated. A need to focus developments on strengthening digital skills and broadening opportunities for upskilling and reskilling is on the rise (Cedefop, 2021).

Formal vocational education and training (VET) in Slovenia starts at upper secondary level and is provided mainly by public schools that are founded and financed by the State. The education and labour ministries share responsibility for preparing legislation, financing, and adopting VET programmes, standards and qualifications. While the education ministry deals with VET at systemic level, the Institute of the Republic of Slovenia for VET (CPI) is responsible for VET at the practical level; it monitors and guides the development of VET and provides in-service teacher training and VET curricula. The CPI also acts as a link between ministries, schools and social partners.





Figure 11. VET in the Slovenian education and training system



Source: Cedefop, 2022

After completing compulsory basic education, learners can enrol in the following upper secondary programmes:

- technical upper secondary programmes (ISCED 354): 4-year programmes that consist of 40% of general subjects and at least 8 weeks of in-company work-based learning (15% WBL). After vocational matura (two general exams and one vocational-theoretical and one practical exam, partly external) learners can enter the labour market or enrol in tertiary education

- vocational upper secondary programmes (ISCED 353): 3-year labour-market-oriented programmes with two paths:
  - school-based path: approximately 20% (at least 24 weeks) of the programme is undertaken at an employer and the rest at the school (consisting of general subjects and professional modules)
  - apprenticeship path: a minimum 50% of the programme is undertaken at an employer, while at least 40% is delivered in school. Changing paths midway is possible. After final exams (first language and practical exam), students from both school and apprenticeship paths can enter the labour market or enrol in 2-year vocational technical education programmes at ISCED 354 that lead to vocational matura
- short vocational upper secondary programmes (ISCED 353): 2-year programmes that qualify learners for less demanding occupations (at assistant level) or continuing education in vocational programmes

In the school year 2020/21, 34.79% of students enrolled in general upper secondary programmes, 0.3% in a general matura bridging course and 64.91% in upper secondary VET programmes: 41.8 % in technical programmes, 0.2% into vocational bridging education, 16.27% in vocational programmes, 1.5% in short VET programmes and 5.14% in vocational technical education.

Graduates with a vocational matura can enrol in 2-year higher vocational programmes (ISCED 554) or first-cycle professional education (ISCED 655) and, after successful participation in an additional entry examination, also in first-cycle academic education (ISCED 645).

Higher vocational programmes are practice-oriented and include 40% of work-based learning in companies. These were developed to meet the needs of the economy, as they train graduates for managing, planning and controlling work processes. In 2020/21, 13% of all tertiary students enrolled into higher VET schools.

Adults can enrol in the same formal VET programmes as young people. Adults can also participate in continuing VET, offered by public and private providers; regulation of provision of such programmes is not covered by legislation. Many activities to support adult education are organised by adult education centres.

According to the most recent data available, in the school year 2019/20 16 276 adults participated in the upper secondary programmes; 75% of them were younger than 25. Of these adults, 4.5% were enrolled in general education, 59.9% in technical education, 34.9% in vocational education and 0.7% in short vocational education.

The recognition of non-formal and informal learning is possible within the national vocational qualifications (NVQ) system that has been in place since 2000. In 2021, an NVQ certificate can be obtained for approximately 178 qualifications. Candidates must prepare a personal portfolio and take part in a validation procedure.

The Strategy of digital transformation of economy was adopted by the Government of the Republic of Slovenia on January 2022. It is part of the Recovery and Resilience Plan, under the digital transformation of enterprises component.

The Strategy is focused on the processes of digitalisation, informatisation, and the EU digital single market, and highlights, among other things, advanced digital technologies such as artificial intelligence, the Internet



of Things, Big Data processing technologies, and data chain technologies that will drive economic growth and competitiveness. It builds on existing digital technologies and initiatives, the findings arising from the European Commission's recommendations and the indicators achieved in the area of digitalisation produced by European and global (OECD) statistics.

The Strategy is focused on three major goals:

- advanced digital technologies that enable the digital transformation of the economy
- efficient ecosystem for a competitive economy
- open and sustainable society as a basis for the growth of the digital economy

The major targets under the digital skills and competences pillar are the following:

- acquisition of knowledge and digital competences at the most appropriate time and in a relatively short time
- adaptation of lifelong learning systems with a continuous increase in digital literacy, capacity of human resources and digital competences for the digital transformation of the economy
- strengthening the knowledge and digital competences of personnel working in the field of ICT and the development and supporting talents in the field of advanced digital technologies

Advanced digital technologies also require more advanced digital competencies of people in all economic sectors. This requires a high-quality level of education and training and a strong collaboration between the government, employers and contractors (Digital Skills & Jobs Platform, 2022)

A big part of the agency's work is helping Slovenian SMEs to increase their competitiveness and accelerate their technological development. SMEs can attend numerous educational courses free of charge and can apply for vouchers to attend international trade fairs of their choice. SPIRIT Slovenia is also keen to help ambitious young entrepreneurs, encouraging them to start a business and giving them all the necessary information to get them started. Find out more about us and the ways we can help bring your ideas to life.



## PONI – Rising above the challenges

The Regional Development Agencies encourage and support the development of new entrepreneurs through its projects. In 2021, the government launched the project ENTREPRENEURSHIP ABOVE CHALLENGES - PONI - which will provide advice, mentoring and financial support to individuals who are just starting out on their entrepreneurial journey.

**MAIN PURPOSE:** Entrepreneurship training for people who want to realise their entrepreneurial idea. The aim of the project is to launch new businesses.

**TARGET GROUP:** Potential entrepreneurs (people with business ideas) regardless of age, gender and education. The condition is that they have the intention and interest in entrepreneurship.

**CONTENT:** The project participants will be employed by a regional development agency for a period of four months. During this time, they will acquire the entrepreneurial skills necessary to become self-employed. Under expert mentoring and with the help of qualified consultants, they will develop a business model and a business plan. They will network with entrepreneurs in a supportive and well-equipped entrepreneurial environment.

Project milestones:

Month 1: business idea description and business model development

Month 2: first draft of business plan

Month 3: Testing of the minimum acceptable product/service in the market, development of the second draft of the business plan

Month 4: Production of the final version of the business plan

**ENTRY INTO THE PROJECT:** Entry into the project takes place by applying to the call for proposals, which is published on the agency's website. Up to 10 persons are selected from among the applicants. During the whole implementation period, 60 participants will be included in the project.

**PERIOD OF IMPLEMENTATION:** 6 calls for proposals will be published in the period 2020-2023. The calls for proposals are expected to be published every four months.

The **PROJECT OBJECTIVE** is newly established business entities (s.p., d.o.o. and other forms of business entities). The result to be achieved is the inclusion of 62 potential participants in the PONI training programme, the production of 62 new business plans and the transfer of minimally acceptable products to the market, and the creation of 30% (or 19%) of the newly established business entities in the area of the Coastal Carpathian Region over the whole period.

**PROJECT FINANCING:** The investment is financed by the Republic of Slovenia and the European Union from the European Regional Development Fund. The project is implemented under the "Operational Programme for the Implementation of the European Cohesion Policy 2014-2020", priority axis "Dynamic and Competitive Entrepreneurship for Green Growth", in the framework of the implementation of the priority investment "Promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and encouraging the creation of new enterprises, including business incubators", specific objective 1 "Promoting the creation and operation of enterprises, especially start-ups."

More info: <https://www.gov.si/assets/ministrstva/MKRR/DRR/PONI/Navodila-projekta-Podjetno-nad-izzive-v2.pdf>



## Challenges

Several factors have an impact on the development and implementation of a Toolkit for MSMEs (Micro, Small, and Medium Enterprises) digital resiliency in a post-COVID business and operational setting. Here are some potential considerations:

- **Technological Infrastructure:** The availability and reliability of digital infrastructure, such as internet connectivity, bandwidth, and access to devices, significantly impact the implementation of the toolkit. Unequal access to technology creates disparities among MSMEs, affecting their ability to adopt and benefit from digital solutions
- **Digital Literacy and Skills:** The level of digital literacy and skills among MSME owners and employees can influence the adoption and effective utilization of digital tools. Training and support programs are required to enhance their digital capabilities, ensuring they can leverage the toolkit effectively
- **Financial Constraints:** MSMEs, particularly those adversely affected by the COVID-19 pandemic, face financial challenges. The availability of resources and funding to invest in digital infrastructure, software, training, and ongoing maintenance impacts the adoption and implementation of the toolkit
- **Regulatory Environment:** Government policies and regulations related to digital technologies, data privacy, cybersecurity, and e-commerce shape the development and implementation of the toolkit. MSMEs must navigate these regulatory landscapes, ensuring compliance while leveraging the benefits of digital solutions
- **Market Dynamics and Customer Behaviour:** Changes in consumer behaviour and market demands post-COVID influence the relevance and effectiveness of the toolkit. MSMEs need to adapt their digital strategies to align with evolving customer preferences and market trends to ensure the toolkit's successful implementation
- **Collaboration and Partnerships:** Collaboration among stakeholders such as government bodies, industry associations, technology providers, and financial institutions plays a vital role in the development and implementation of the toolkit. Establishing partnerships and alliances can provide the necessary expertise, resources, and support to enhance the toolkit's effectiveness
- **Trust and Security Concerns:** MSMEs have concerns related to data security, privacy, and trust in digital solutions. Addressing these concerns by implementing robust security measures, ensuring data protection, and promoting transparency can foster trust and encourage wider adoption of the toolkit
- **External Disruptions:** The possibility of future disruptions, such as natural disasters, cyber-attacks, or economic downturns, should be considered when developing the toolkit. Building resilience against such disruptions and incorporating contingency plans is crucial for its long-term effectiveness

MSMEs often face various barriers and skill gaps when it comes to digital upskilling and these common challenges include:

- **Limited Awareness:** Many MSMEs have limited awareness of the benefits and potential of digital technologies. They may not fully understand how digital tools and skills can improve their operations, expand their customer base, or streamline their processes



- **Lack of Resources:** MSMEs, especially those with limited financial resources, may find it challenging to allocate funds for digital upskilling initiatives. They could struggle to invest in training programs, acquiring new technologies, or hiring skilled professionals with expertise in digital tools and strategies
- **Digital Literacy and Skills Gap:** MSME owners and employees often lack the necessary digital literacy and skills to effectively use and leverage digital technologies. They have limited knowledge of basic computer operations, software applications, online marketing, data analytics, or cybersecurity
- **Resistance to Change:** Resistance to change is a common barrier when introducing digital upskilling initiatives. MSMEs may be hesitant to adopt new technologies or change established processes due to fear of disruptions, lack of confidence in new methods, or the perception that digital tools are complex and time-consuming to learn
- **Access to Training and Support:** MSMEs face challenges in accessing quality training and support for digital upskilling. Limited availability of training programs, lack of tailored resources for MSMEs, or insufficient guidance and mentorship opportunities can hinder their ability to acquire the necessary skills
- **Fragmented Information:** MSMEs often struggle to find reliable and relevant information on digital upskilling. The rapidly evolving digital landscape, multiple sources of information, and lack of centralized platforms can make it difficult for MSMEs to navigate and identify the most suitable digital skills and training resources
- **Time Constraints:** MSME owners and employees often have limited time and bandwidth to invest in learning new digital skills. They are often occupied with day-to-day operations and may find it challenging to dedicate sufficient time to engage in training programs or self-directed learning
- **Scalability and Adaptability:** MSMEs may find it challenging to scale and adapt digital upskilling initiatives across their organization. Limited internal capacity, absence of a structured approach to training, or difficulty in aligning digital skills with evolving business needs can hinder the implementation and sustainability of upskilling efforts

To address these barriers and skill gaps, it is essential to develop targeted and accessible digital upskilling programs that cater to the specific needs of MSMEs. These programs should focus on raising awareness, providing affordable training options, offering ongoing support, and promoting a culture of continuous learning within MSMEs. Public-private partnerships, industry collaborations, and government support can also play a significant role in bridging these gaps and helping MSMEs overcome digital upskilling challenges.

Digital Slovenia 2030 is the Government of the Republic of Slovenia's response to development challenges of digitisation and is intended to provide strategic planning to promote digital transformation Slovenia in the development period up to 2030.

In this context, it is essential to recognise that the needs of different segments of society or of different target groups, and that it is necessary to cater for the economic development, progress and competitiveness, and to ensure that public institutions, local communities, other key stakeholders and individuals with the necessary means and resources to together to enter the digital advanced society and to benefit from the advantages of digital technologies.

Digital Slovenia 2030 is an upgrade in line with the new European and national strategy documents. For greater efficiency, the following sections of the document discuss priority areas for digital transformation, which are identified as key following a review of the implementation of the DSI2020 and following the results of studies of a number of strategic documents.

Digital transformation. Given that digital transformation is a distinctly horizontal and interdisciplinary and inherently embedded in all aspects of people's daily lives, economy, public administration and society, the need for regular multi-stakeholder cooperation and coordination.

The overview and summary of the SWOT analysis for DSI2020 show that Slovenia has key strengths in the area of a well-developed and capable electronic communications infrastructure, a well-trained and agile economy, wide access to formal and non-formal education, high maturity in opening up public sector data, and experience in the development of e-services, we have a systematic approach to the provision of cybersecurity with an established competent national authority.

In reviewing the shortcomings, we highlight as key the high cost of building a powerful high-capacity broadband infrastructure in areas of white spots, the lack of digital literacy, the lack of adequate ICT professionals, the backlog of investment in ICT equipment, software and databases, the siloed approach of ministries and authorities in digitisation of content under their respective competences, a significant shortage of human resources and technology in authorities and organisations in the field of cyber security.

In the area of opportunities, education should be adapted to include digital curricula, raising awareness among businesses of the importance of integrating advanced digital competences into the curricula and position Slovenia as an advanced reference environment for the deployment of new digital technologies. (Artificial Intelligence, data curation), implement the principle of "default digital by default" in public services and seize opportunities for better cooperation between all stakeholders in the field of cyber security.

In the case of threats, care is needed to reduce the development lag of rural areas. and to reduce the risk of digital exclusion of the population, to draw attention to the disintegration of ICT R&D capacities, the lack of stakeholder interest in implementing the necessary measures, the poor responsiveness of end-users of public services, and the outflow of cybersecurity experts abroad.



## Conclusions

Key measures to support SMEs and entrepreneurs' liquidity include: EUR 2 billion Liquidity Aid of loan guarantees for micro firms and SMEs (up to 80% guarantee); a EUR 378 million Support Scheme for self-employed in the form of grants; or EUR 115 million Slovenian Enterprise Fund for SMEs where the Slovenian Regional Development Fund offers companies to roll over debt. Structural measures have also been implemented: - EUR 660 million Recovery Scheme, including EUR 248 million in grants. The scheme focuses on SMEs, liquidity, the green transition and digitalisation. - National Recovery and Resilience Plan with developments in green transition (fostering cooperation between energy-intensive industries and innovative SMEs to strengthen energy efficiency), and in digital technologies (fostering SMEs/start-ups and blockchain, e-commerce and the cloud computing, as well as cooperation between SMEs and start-ups). - EUR 100 million Support Scheme for SMEs and R&D with grants and zero interest loans.

Stringency of government measures SME&E policies in Slovenia are defined as part of the “Industrial Strategy 2021-30”. The Strategy includes a focus on SMEs and entrepreneurship with guidelines for digitalisation, start-ups, innovation, internationalisation, investment, skills, sustainability and the business climate. The “Action Plan - Slovenia - Land of Innovative Start-ups” (2018) sets the strategic directions for startups. The Government Office for Development and European Cohesion Policy (GODE) supports and coordinates SME policy development. Several cities support SME&E and have set-up steering boards to coordinate action.

Slovenia was less exposed to business disruptions during the pandemic: the most affected sectors account for 36.6% of total employment (OECD average 39.7%). Western Slovenia is the most vulnerable region, with about 24% of jobs at risk. This is due to the high regional concentration of wholesale & retail trade services. Slovenia counts less self-employed (13.7%). Before COVID-19, tourism accounted for 7.7% of total employment in Slovenia (OECD 6.7%).

In Slovenia, small firms are engaging in the digital transition, and uptake in different areas is on par with OECD averages (OECD, 2021).

Digital transformation of businesses: by 2030, three out of four companies should be hiring cloud computing, big data and artificial intelligence services, and more than 90% of SMEs should have achieved at least a basic level of digital and the number of EU unicorns should double.

The priority areas of the Digital Slovenia 2030 strategy are:

- Gigabit infrastructure
- Digital Competences and Inclusion
- Digital transformation of the economy
- The road to Smart Society 5.0
- Digital public services
- Cybersecurity





## 6. Country Snapshot – Greece

### Introduction

The 4th industrial revolution is changing the global balance between states and businesses in an unprecedented way and speed. The painful experience of the pandemic accelerated the adaptation of thousands of small and medium-sized enterprises to the demands of the digital age and, at the same time, enabled them to take advantage of the competitive advantages of digital technology and participate in a global digital community.

It is extremely important for Greek entrepreneurship that the European Union promotes digital transformation in a practical way.

The digitalisation of MSMEs in Greece has been slow and limited, with disparities across regions and sectors. Before the pandemic, many Greek SMEs lacked an online presence and e-commerce capabilities, indicating a lack of digital readiness and integration. The COVID-19 pandemic acted as an accelerator for digital transformation, but challenges like the technological lag, limited investment in modern technologies, and lower productivity persist.

To enhance digital resilience and competitiveness, efforts are needed to bridge the digital skills gap and promote digital upskilling. Collaboration between the government, local authorities, private organisations, and educational institutions is crucial in supporting MSMEs' digital transformation journey. Design Thinking principles can be employed to tailor solutions to MSMEs' specific needs and address challenges effectively.

Online and personalised training, as well as the use of operational tools like website builders and cybersecurity measures, play vital roles in helping Greek MSMEs leverage digitalisation for growth and efficiency. Embracing digital solutions will be essential for businesses to stay competitive and succeed in the evolving global market landscape.

The very small, small and medium-sized enterprises should use all the new possibilities of the digital economy, such as modern mobile services, cloud technologies and social media, to actively participate in the digital transformation. At the same time, it should make use of all the possibilities provided by the state with the specialised interventions in Electronic Government. One of the most pivotal digital reforms is e-invoicing promoted by the central tax administration, accelerating the reform of business taxation with the aim of an automated, simple and modern framework.



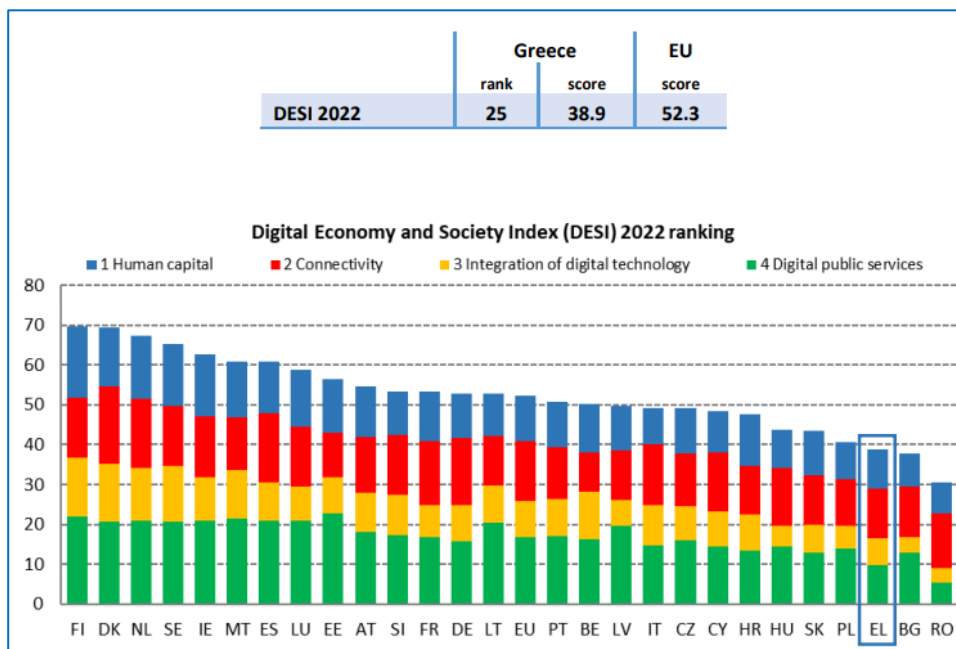
## Quantitative indicators on digital resilience and digitalisation of MSMEs in Greece

Until now, few specific quantitative indicators or statistics exist on the spatial distribution of digital resilience and digitalisation of MSMEs in Greece. However, some studies provide relevant information on the digitalisation of Greek SMEs.

A study by the National Bank of Greece (NBG) in 2020 found that only 39% of Greek SMEs had an online presence, compared to the EU average of 55%, while 14% of them had an e-shop. The study also showed that 60% of Greek SMEs did not engage in any form of e-commerce.

According to the European Commission's report on the Digital Economy and Society Index (DESI), Greece is still among the lowest in Europe (25th out of 27). At the same time, it is also low in terms of the integration of digital technology by businesses. (European Commission, 2021).

**Figure 11.** DESI ranking in 2022 with focus on Greece



Source: European Commission, 2022

Based on IOBE (2020) data, although Greece has made rapid progress in growth, it is still in an unfavourable position regarding digital readiness. One of the reasons for this situation is the lack of digital skills and the limited participation of enterprises in specialisation activities for staff and the workforce in general. The report also indicated that Greek SMEs faced significant challenges in digital skills and e-commerce.

As the Institute of Small Enterprises (IME GSEVEE) states, the digital and technological adaptation and maturity in small businesses (0-49 staff which constitute 99.6% of Greek businesses) is mitigated by the high costs for them and the difficulty in the lack of liquidity- financing and is considered a critical barrier to the strengthening of their digital solutions. We could therefore state that there is a slow and limited adoption of digital technology based on small-scale equity investments, as cost and lack of capital are the main barriers to the consolidation of technological equipment or the adoption of digital solutions and technologies.

These studies suggest that Greek SMEs have slowly adopted digital tools, with significant disparities across different regions and sectors. However, the COVID-19 pandemic seems to have accelerated the digitalisation process and highlighted the importance of digital resilience for businesses.

Although the pandemic acted as an accelerator for digital transformation actions, in Greece, the discrepancy between large and small and medium enterprises in adopting digital technologies is visible, which does not allow the latter to strengthen their already low competitiveness.

According to a special report of the SEV, entitled "4th industrial revolution: Greece can take the lead in the faster implementation of strategies by the state and businesses", before the pandemic, the technological lag of SMEs was evident in Greece - which are often characterised as "backbone" of the economy –, in relation to big business. Indicatively, before the pandemic crisis, only 9% of MSMEs had digitised their supply chains (compared to 29% of large ones) and only 15% of SMEs used customer management systems. The corresponding percentage for large companies was 40%. Also, 13% leveraged their data with the help of analytics, while the corresponding percentage for large enterprises reached 20%.

Of course, this is not only a Greek problem, given that in the E.U., initiatives to transition to the 4th industrial revolution are mainly implemented by large enterprises, with 54% of them having successfully integrated digital technologies into their operations compared to 17% of MSMEs. However, in Greece, according to the special report, small and medium-sized enterprises, due to their smaller size, lag significantly in terms of productivity, creating added value equivalent to 11,400 euros per employee, compared to 40,000 euros in the EU. At the same time, in 2020, when the effects of the pandemic started to become more visible, MSMEs lost almost 20% of their added value, compared to 7.6% in the EU.

According to the SVE, the majority of businesses in Greece still do not invest in modern technologies and focus on outdated systems, as a result of which it is ranked 24th among the 27 EU countries in terms of digital maturity. Overall, however, Greece is low in terms of technological and digital maturity, and now, despite the improvement of recent years, it ranks 25th. At the same time, it is among the countries with limited research capabilities, ranking 20th on the Commission's Innovation Scoreboard. According to the research, of the 20 projects included in the Digital Transformation Bible promoted by the Ministry of Digital Governance and concerning actions to strengthen businesses in the context of the 4th industrial revolution, 4 are in the development phase, and the rest are planned.



## Qualitative indicators on digital resilience and digitalisation of MSMEs in Greece: skills-gap and need assessment

MSMEs (Micro, Small, and Medium Enterprises) in Greece have faced a multitude of challenges and opportunities in the context of digital resilience and digitalisation, especially in the post-COVID scenario. The pandemic has accelerated the need for digital transformation, forcing businesses to adapt and embrace new technologies to remain competitive and survive in the evolving market landscape. Some qualitative indicators of the digital resilience and digitalisation of MSMEs in Greece include:

- **Skills gap:** One of the key challenges facing Greek MSMEs in the digital era is the skills gap in their workforce. Many SMEs lack the necessary digital skills and knowledge to take advantage of digital technologies opportunities. This has been a long-standing issue in Greece, but it has been further exacerbated by the COVID-19 pandemic, which has accelerated the adoption of digital technologies
- **Need assessments:** There is a growing need to assess MSMEs' digital needs and capabilities to address the skills gap and other digitalisation challenges. Such assessments can help identify the specific digital skills and tools MSMEs need to acquire or develop to improve their digital resilience and competitiveness
- **Emerging digital priorities:** In the post-COVID scenario, there is a growing recognition of the importance of digital skills and tools for MSMEs in Greece. Some emerging digital priorities for MSMEs include developing online presence and e-commerce capabilities, improving digital marketing and customer engagement, and enhancing digital security and data protection
- **Areas of interest for training curricula:** Given the skills gap and emerging digital priorities, the training curricula for MSMEs in Greece should focus on building digital skills and knowledge in online marketing, e-commerce, social media management, digital security, and data analytics. The training should be tailored to the specific needs of different MSMEs sectors and regions and should be delivered through flexible and accessible formats, such as online courses and webinars

Overall, the digital resilience and digitalisation of MSMEs in Greece require a concerted effort from various stakeholders, including policymakers, business associations, and educational institutions. By addressing the skills gap and providing relevant training and support, MSMEs in Greece can improve their digital resilience and competitiveness in the increasingly digitalised business environment.

Trends and Dynamics Impacting MSMEs Digital Resilience and Digitalization in Greece:

- **Digitalization as a Survival Imperative:** The pandemic highlighted the urgency for MSMEs to adopt digital solutions to sustain operations during lockdowns and restrictions. Businesses that quickly embraced e-commerce, digital marketing, and remote working models fared better during the crisis
- **Shift in Consumer Behavior:** Consumers in Greece, like elsewhere, have increasingly turned to online shopping and digital services during the pandemic. This change in consumer behaviour has necessitated MSMEs to enhance their online presence and offer seamless digital experiences to attract and retain customers
- **Technology Adoption Hurdles:** Many MSMEs in Greece face limited digital literacy and resource challenges. The cost of implementing new technologies and the lack of skilled personnel have been barriers to digitalisation

- Digital Security Concerns: As businesses adopt digital solutions, the risk of cyberattacks and data breaches increases. Ensuring robust cybersecurity measures has become crucial for MSMEs to protect their operations
- and customer data

#### Design Thinking in Enhancing MSMEs Digital Resilience:

Design Thinking is a problem-solving approach that puts human needs at the centre of solution development. Applying Design Thinking principles can help enhance MSMEs' digital resilience by:

- Empathizing with MSME Owners: Understand the challenges and concerns MSME owners face when it comes to digitalisation. Identify their pain points and aspirations related to adopting digital solutions
- Ideating Tailored Solutions: Generate creative ideas and concepts for digital tools, platforms, or services that address the specific needs of MSMEs in Greece. Focus on user-friendly, cost-effective, and easily accessible solutions
- Prototyping and Testing: Create prototypes of digital solutions and gather feedback from MSME owners to refine and improve them. Iterate the design based on user input to ensure the final product meets their requirements

#### Educational Digital Priorities in the Post-COVID Scenario:

- Digital Literacy Training: Offer comprehensive training programs to MSME owners and employees to improve digital literacy. This should cover basic digital skills, online communication, and digital tools for business operations
- E-Commerce and Digital Marketing: Provide specialised training on setting up and managing e-commerce platforms, digital marketing strategies, and social media to expand MSMEs' online presence and reach
- Data Protection and Cybersecurity: Educate MSMEs about the importance of data protection, cybersecurity best practices, and methods to safeguard customer data and business information

#### Areas of Interest for Training Curricula:

- E-commerce and Online Sales Strategies: Focus on equipping MSMEs with the knowledge and skills required to establish and run successful e-commerce platforms, including product listing, payment gateways, and order fulfilment
- Digital Marketing and Social Media: Teach effective digital marketing techniques to promote products and services online, including social media marketing, email campaigns, and content creation
- Cloud-Based Tools and Collaboration: Introduce MSMEs to cloud-based productivity tools and collaboration platforms that enhance remote work efficiency and enable seamless team communication



- Data Analytics and Business Intelligence: Provide training in data analytics to help MSMEs gain insights into customer behaviour and market trends and make data-driven decisions to improve business outcomes
- Cybersecurity and Data Protection: Offer courses on cybersecurity awareness, data protection regulations, and measures to safeguard business and customer data from potential threats

By incorporating Design Thinking principles into the development of training curricula and educational digital priorities, MSMEs in Greece can be better equipped to navigate the challenges of digitalisation and build digital resilience for a sustainable and thriving future.



## Opportunities: Training available and operational tools

The digitalisation of MSMEs (Micro, Small, and Medium Enterprises) is an important trend in Greece, as it can lead to increased productivity, improved efficiency, and enhanced competitiveness. However, there are some challenges and needs regarding training and tools that MSMEs in Greece may need help with.

### Training Challenges:

- Lack of awareness: Many MSMEs in Greece may not be aware of the benefits of digitalisation or may not know where to start
- Lack of technical knowledge: MSMEs may lack the technical expertise required to implement digital solutions and may require training in website development, social media marketing, and e-commerce
- Lack of resources: Some MSMEs may not have the financial resources to invest in digital tools and training
- Resistance to change: MSMEs may be resistant to change and reluctant to adopt new technologies, especially if they perceive it as disrupting their existing processes and workflows

### Training Needs:

- Basic digital skills: MSMEs need basic digital skills such as using email, navigating websites, and using basic software tools such as Microsoft Office
- Digital marketing: MSMEs must learn to use digital marketing tools to reach customers and promote their products and services
- E-commerce: MSMEs must learn to set up and run an online store and manage online transactions
- Cybersecurity: MSMEs must learn how to protect their digital assets and sensitive information from cyber-attacks

### Training Trends:

- Online training: With the pandemic and the rise of remote work, online training has become more popular and accessible for MSMEs in Greece. This can be a cost-effective way to train employees and can be accessed from anywhere
- Personalized training: MSMEs may require personalised training tailored to their specific needs and goals. This can be achieved through one-on-one coaching or customised training programs

#### EIB Trade Finance Facility for Greece

- New agreement marks third expansion of the EIB's Trade Finance Facility (TFF) for Greece reaching a total of EUR 550 million
- Financing will directly support the trade and export finance services provided by participating Greek banks to local private companies across the country
- Greece is the only country in Europe to benefit from such an initiative

The [EIB's Trade Finance Facility](#), to which HSBC has been a key partner from the outset, was developed especially for SME's and Midcaps in Greece and will continue to support letters of credit and trade-related guarantees covering exchange rate, political and payment risks.



- Gamification: Training can be made more engaging and interactive through gamification techniques such as rewards, badges, and leaderboards

### Operational Tools:

- Website builders: MSMEs can use website builders such as Wix, Squarespace, or WordPress to create and manage their website without requiring technical expertise
- Social media management tools: MSMEs can use social media management tools such as Hootsuite or Buffer to schedule posts, monitor engagement, and analyse social media metrics
- E-commerce platforms: MSMEs can use e-commerce platforms such as Shopify, WooCommerce, or Magento to set up and manage their online store
- Cybersecurity tools: MSMEs can use cybersecurity tools such as antivirus software, firewalls, and encryption software to protect their digital assets and sensitive information

The digitalisation of MSMEs in Greece is an important trend that requires investment in training and operational tools to help them stay competitive in the digital age. Some structured digital training programs in Greece are tailored to MSMEs.

The National Centre for Public Administration and Local Government (ESDDA) offers training programmes on digital skills for SMEs, including e-commerce, social media, and website development (National Centre for Public Administration and Local Government, 2023).

In addition, the Greek government has launched various initiatives to support the digitalisation of SMEs, including funding programs and partnerships with industry associations and universities to offer training programs. While some structured training programs are available, there may be a need for more customised training tailored to the specific needs of individual MSMEs.

There are formal provisions of educational services in Greece that are tailored to digital skills training for MSMEs.

- Vocational education and training (VET) institutions, such as the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP), offer training programs for digital skills and entrepreneurship for MSMEs (EOPPEP, 2023)
- Higher education institutions, such as the University of the Aegean and the University of Thessaly, offer undergraduate and graduate entrepreneurship and digital innovation programs that can benefit MSMEs (UTH, 2019)
- Moreover, other organisations offer educational services tailored to MSMEs, such as the Athens Centre for Entrepreneurship and Innovation (ACEin), which offers a range of training programs on digital transformation and entrepreneurship (ACEin, 2023)

Several public agencies in Greece have developed easy-to-use tools to contribute to MSMEs' digitalisation, modernisation, and economic growth and redirect the education and training offered.



One such agency is the General Secretariat for Commerce and Consumer Protection, which has developed the “Doing Business in...– COVID-19 Challenges and Opportunities” platform. This platform provides MSMEs with various digital tools and services to help them improve their online presence and e-commerce capabilities, including website development, online payments, and online marketing (Enterprise Greece, 2023).

Additionally, the Greek Ministry of Digital Governance has launched the "Digital Skills for All" initiative, which aims to provide training and support to individuals and businesses to develop their digital skills and knowledge (Digital Skills & Jobs Platform, 2023).



## Challenges

Developing and implementing a Toolkit for MSME's digital resiliency in a post-COVID business and operational setting in Greece can face several challenges and barriers. Here are some key challenges and skill gaps that MSMEs might encounter:

- **Digital Infrastructure:** In some regions of Greece, especially rural areas, the digital infrastructure may not be robust enough to effectively use digital tools and technologies. Limited access to high-speed internet could hinder MSMEs from fully benefiting from digital upskilling initiatives
- **Digital Literacy:** Many MSME owners and employees in Greece might lack basic digital literacy skills, making it challenging to understand and utilise digital tools effectively. This gap could hinder the Toolkit adoption and the digital transformation process
- **Financial Constraints:** MSMEs often operate on tight budgets and might find it difficult to allocate resources for digital upskilling programs or invest in the necessary hardware and software to implement digital solutions
- **Resistance to Change:** Some MSMEs might be hesitant to embrace digital technologies due to a fear of change, lack of awareness of potential benefits, or concerns about disrupting existing workflows
- **Language Barriers:** While English is widely used in the digital world, some MSMEs in Greece might face language barriers when accessing online resources or participating in digital upskilling programs conducted in English

To address these challenges and skill gaps, concrete needs arise to increase flexibility, competitiveness, and economic growth for MSMEs in Greece:

- **Tailored Training Programs:** Developing digital upskilling programs specifically tailored to the needs of MSMEs in Greece, considering factors such as language, sector-specific requirements, and the varying levels of digital literacy among business owners and employees
- **Government Support and Incentives:** The Greek government can provide financial incentives, grants, or subsidies to encourage MSMEs to invest in digital transformation and upskilling initiatives
- **Public-Private Partnerships:** Collaboration between the government, local authorities, and private organisations can help create a conducive environment for the development and implementation of the Toolkit. These partnerships can also facilitate training and support services delivery to MSMEs
- **Digital Hubs and Incubators:** Establishing digital hubs and incubators in different regions of Greece can serve as centres for MSMEs to access training, resources, and mentorship in their digital transformation journey
- **Awareness Campaigns:** Conducting awareness campaigns about the benefits of digital transformation and upskilling can help dispel myths and misconceptions, encouraging MSMEs to embrace change and be more receptive to adopting digital solutions
- **Collaboration with Educational Institutions:** Partnering with universities, colleges, and vocational training institutes can ensure that the upskilling programs are aligned with industry needs and can offer certifications recognised by businesses and customers



By addressing these challenges and fulfilling the concrete needs of MSMEs in Greece, developing and implementing a Toolkit for digital resiliency can significantly increase flexibility, competitiveness, and economic growth for these businesses in a post-COVID business and operational setting.

The unprecedented growth of the digital economy has contributed to its accounting for 25% of the world's total economy in 2020, up from 15% in 2005. As this growth continues at an accelerating pace, business models of interconnected digital solutions represent an ever-increasing percentage of the total. Characteristically, the top 15 public digital platforms already represent more than \$5 trillion in market capitalisation worldwide while attracting unprecedented investment. For the next decade, both on a global scale and in the Greek market, the adoption of digital solutions that will allow the effective interconnection of the market will not simply be a matter for technology companies but a development tool for every pioneering company, which will recognise the opportunities through digital solutions and its integrated connection with the market.



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