



The digitalisation of small and medium-sized enterprises in Italy

Models for financing digital projects

Summary report



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COTEC Italia
and the European Investment Advisory Hub

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**This report was produced with funding from the European Union
through the European Investment Advisory Hub**

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Summary report

Key messages

Findings

- **As in other EU countries, Italian small and medium-sized enterprises (SMEs) have a pivotal role in the economy.** There are about 4.3 million SMEs in Italy, 95% of which are micro-enterprises. They account for 80% of employment and 70% of value added. Their contribution to exports is larger than in other EU countries (53% of exports in Italy vs. an EU average of 40%, and 25% in both France and Germany).
- **The productivity of Italian SMEs appears to be lower than the EU average and its closest peers** (France and Germany). While part of that gap might be linked to different sectoral mixes, most of the difference in productivity remains unexplained. While there is also a regional divide, even Italy's best performing regions have a significant productivity gap compared to the rest of Europe.
- **According to several European metrics, the level of digitalisation of Italian SMEs is lower than in other countries.** The lower level of digitalisation of Italian SMEs may play a crucial role. Given its relevance, **the digitalisation of Italian SMEs is high on the Italian government's agenda.**
- **Italian SMEs have access to a broad and diverse innovation ecosystem to sustain their digitalisation efforts,** including among others business associations, digital innovation hubs and competence centres.
- However, **despite extensive public intervention and the support of the innovation ecosystem,** this study suggests that **Italy still shows pain points and barriers to digitalisation, particularly for SMEs.**
- **A number of knowledge gaps limit the ability of SMEs to adopt digital solutions.** Gaps include:
 - Awareness: Italian SMEs invest less than EU peers in digitalisation. This leads to lower levels of adoption and sophistication of digital technologies. The complexity of the ecosystem makes it difficult for SMEs to navigate different options and for other digital players to scale up their expertise.

- Capabilities: According to the available data, Italian SMEs have a limited digital skillset compared to EU peers.
- In addition, **the offer of digital solutions from large tech vendors is fragmented** and not always suited to the specific needs of SMEs. Smaller tech vendors face significant challenges preventing them from being as effective as possible in providing innovation solutions to SMEs.
- In terms of funding, **the availability of banking credit is often a barrier to SMEs willing to digitalise**. While financial institutions support SMEs in accessing resources for their digitalisation investments, there is no clear evidence of “digitalisation-specific” financial instruments.

Recommendations

- **Recommendation 1: Increase the digitalisation awareness and capabilities of Italian SMEs**
 - Initiative 1a: Create a single source of information for SMEs willing to digitalise, coordinating resources from all existing stakeholders in the ecosystem (e.g. business associations, digital innovation hubs, competence centres).
 - Initiative 1b: Accelerate SMEs’ digitalisation through large corporates’ and government procurement levers.
- **Recommendation 2: Address the demand-supply matching gap**
 - Create mechanisms to steer the development of solutions to match the needs for the market’s demand side.
 - In particular, the government could sponsor the creation of an integrated digitalisation platform to match demand and supply for digital solutions.
- **Recommendation 3: Reinforce the availability of debt and equity financing**
 - Initiative 3a: Reinforce the availability of credit through the banking system targeting digitalisation and innovation financing to SMEs. For example, the European Investment Bank (EIB) could expand its thematic SME lines to cover digitalisation and innovation in Italy in the form of intermediated loans to financial intermediaries or guarantees/senior loans for granular portfolios of SME loans. Importantly, such an initiative could benefit from the resources made available by the European Union’s Recovery and Resilience Facility in the form of guarantees, first-loss pieces or junior tranches.
 - Initiative 3b: The EIB could enhance access to equity financing for innovative SMEs in Italy by contributing to scaling up the availability of funds of key players in the Italian private equity and venture capital landscape, or by setting up country-specific investment schemes to provide financial and strategic support to private equity and venture capital funds willing to invest in Italy.

Background

The European Investment Advisory Hub (EIAH) has been engaged by COTEC Italy, an organisation that supports research and technological innovation, to identify the barriers that are preventing digitalisation of Italian SMEs and suggest recommendations to lower them.

The purpose of this assignment is supporting COTEC's goal to reinforce the technological competitiveness of the Italian economy. To conduct the study, the Hub engaged the EIB's Innovation Finance Advisory Division and Oliver Wyman.

This study leverages the findings and experience of a previous report on the digitalisation of SMEs in Portugal, conducted by COTEC Portugal and the EIB.

It is based on a three-step approach, outlined as follows:

1. **Assessment of the current status of business digitalisation in Italy and identifying barriers to digitalisation of Italian SMEs**, looking at both the demand side and the supply side of digital solutions and to the government initiatives currently in place to facilitate access to them;
2. **Review of approaches undertaken across peer jurisdictions**, identifying case studies on SME digitalisation worldwide (Germany, Luxembourg, France, Singapore and the United Kingdom); and
3. Identification and prioritisation of **recommendations to increase the level of digitalisation of Italian SMEs**.

This study primarily focused on financing models for the digitalisation of SMEs. However, the analysis and research conducted revealed that there are also key issues of awareness of digitalisation benefits, technical knowledge for digitalisation, and other factors that create barriers to digitalisation of SMEs in Italy. These barriers also affect access to finance and the utilisation of the existing financing liquidity and instruments available. As such, the study took a holistic point of view in summarising its key findings and recommendations, acknowledging that the financing of digitalisation of SMEs in Italy is currently being affected by a broader set of factors than financing instruments alone.

Assessment of the current status of business digitalisation in Italy and identifying barriers to digitalisation of Italian SMEs

SMEs play a central role in the Italian economy. They account for 99.9% of the total number of active companies (4.4 million SMEs), circa 80% of employment and 70% of gross value added (GVA).¹ Micro-enterprises (with fewer than 10 employees and less than €2 million of turnover) are the largest segment in terms of active enterprises (94.9% of all SMEs) and employment (43.7%). In addition, SMEs contribute to 53% of the country's total exports, higher than the EU average (40%) and their closest peers in Germany and France (23% for both).²

The overall productivity of Italian SMEs appears to be lower than the EU average and peers, which may be partly explained by the sectoral mix; however, most of the difference in productivity remains unexplained and the lower level of digitalisation of Italian SMEs may play a crucial role. SMEs' value added per person employed is €42,000 in Italy vs. an EU average of €44,600 (i.e. Italian SMEs are 6% below the average EU productivity rate). The difference with Germany and France is even larger: Germany is 21% more productive than Italy, and France 29% more productive.³ The lower productivity of Italian SMEs may be partly explained by the sectoral mix: most SME employment is within wholesale and retail trade and manufacturing sectors, with relatively low productivity (while they cover about 42% of SME employment, they account for only 32% of total value).⁴ However, most of the difference in productivity remains unexplained and the lower level of digitalisation of Italian SMEs may play a crucial role.

According to several EU-wide metrics, the level of digitalisation of Italian SMEs is lower than in other European countries (including closest peers).⁵ Italy ranks 25th out of 28 countries in the EU Digital Economy and Society Index (DESI); among the five components of this index, Italy ranks 28th out of 28 in the "human capital" category.⁶ Italy also scores low on the Digital Intensity Index⁷, for which it ranks 21st out of 28:⁸ about 40% of Italian companies seem to have made very modest investments in digital technologies, possessing fewer than three of the 12 monitored technologies (France ranks 18th, however Germany ranks 9th, with only about 30% of companies having fewer than three of the 12 monitored technologies).

1 ISTAT and Eurostat

2 Eurostat (2017)

3 SBA Fact Sheet 2019 for Italy, France and Germany, gross value added (GVA) defined as the difference between the value and cost of a product

4 ISTAT

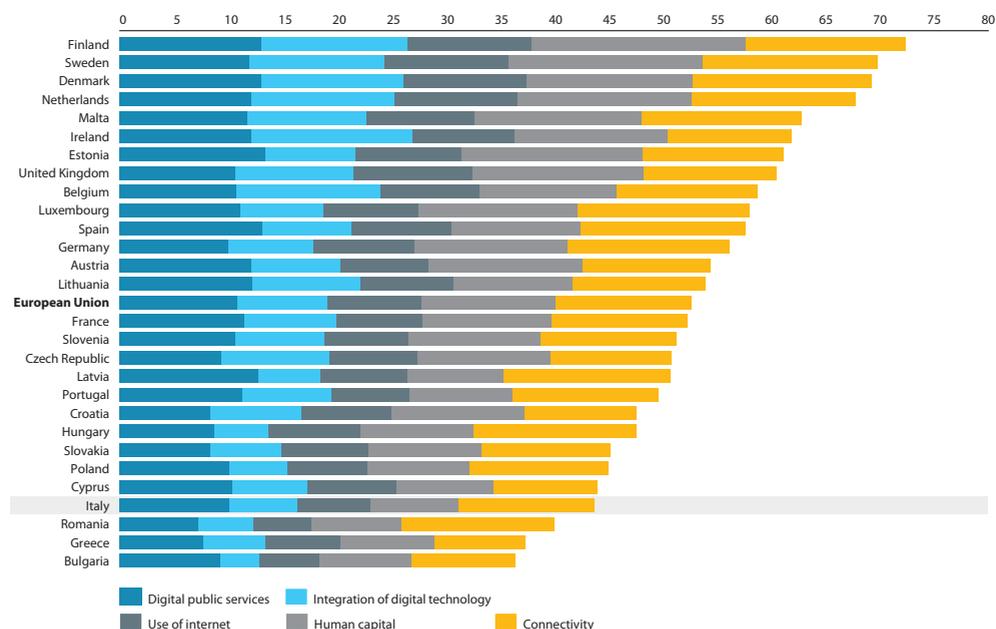
5 To assess the level of digitalisation in Italy, this study takes into consideration several metrics available at European level (e.g. DESI and DII; Eurostat and SBA fact sheets). This is important to make comparisons across countries on a set of comparable dimensions and pinpoint what is driving any differences. The availability of time series was another key element considered when selecting the indices and metrics for the analysis. Where possible, the study complements the results from those indices and metrics with surveys, interviews and studies.

6 DESI 2020

7 The Digital Intensity Index (DII) is a micro-based index that measures the availability at firm level of 12 different digital technologies: internet for at least 50% of employed persons, recourse to ICT specialists, fast broadband (30 Mbps or above), mobile internet devices for at least 20% of employed persons, a website, a website with sophisticated functions, social media, paying for advertising on the internet; the purchase of advanced cloud computing services; sending invoices, eCommerce turnover accounting for over 1% of total turnover and business-to-consumer (B2C) web sales of over 10% of total web sales.

8 Eurostat, Community survey on ICT usage and e-commerce in enterprises

Figure 1: Digital Economy and Society Index (DESI) 2020 ranking



Source: DESI 2020

There is a large digital divide between SMEs in the northern and southern regions of Italy; however, even Italy's best performing regions have a significant gap vs. the rest of Europe.⁹

A recent study from the Politecnico di Milano shows that seven out of 12 regions with a DESI score above the country-level average are in northern Italy; the regions with the lowest score, on the other hand, are all in the south of the country.¹⁰ The seven regions at the top score between 39 and 50 points in the 2019 DESI edition, while the seven least performing regions (all in the south) scored between 20 and 28 points. However, even northern regions appear to be circa 18% less digitalised than peers (Germany and France); this gap increases to 55% for regions in the south of Italy.¹¹

Italy's lower cost of labour than other European countries could partly explain the low level of digitalisation of Italian SMEs compared to their peers; however, a more detailed assessment of the hurdles to digitalisation is required. There is a positive correlation between performance on the Digital Economy and Society Index (DESI) and the incidence of labour cost on GDP across EU Member States. Countries with a lower incidence of labour cost on GDP (including Italy) tend to have lower levels of digitalisation. While additional analysis is needed to draw certain

⁹ Politecnico di Milano

¹⁰ Politecnico di Milano, Italia digitale: la "macchina" è pronta a correre?, 2019

¹¹ DESI 2019 for Italian Regions, Germany and France – delta calculated based on average results

conclusions on the relationship between the level of digitalisation and the cost of labour (such as adjusting for the cost of living), the data points seem to suggest that where the cost of labour is lower, businesses might feel a less urgent need to digitalise. On the other hand, countries with a more significant incidence of labour cost may feel a more urgent need to digitalise and may be pushed to higher levels of digitalisation (for example, both Germany and France have a higher labour cost incidence than Italy and score much higher in digitalisation).¹²

Nevertheless, Italian SMEs have access to a broad and diverse innovation ecosystem to sustain their digitalisation efforts. This includes:

- **Business associations:** they represent reference points for SMEs and a direct access to centralised knowledge/expertise (also for digitalisation topics);
- **Digital innovation hubs:** digital innovation hubs are innovation centres born on the initiative of the Italian Ministry of Economic Development as part of its Enterprise 4.0 Plan (Italy's public policy intervention measures to support businesses' adoption of 4.0 technologies). They are present across regions, generally in close connection with the regions in which they operate. Digital innovation hubs are the backbone of the Italian government's digital transformation efforts and are aimed at supporting SMEs in the adoption of 4.0 technologies;
- **Competence centres:** they support digital innovation hubs in promoting Italy's 4.0 Plan, leading research and development efforts for 4.0 technologies and providing SMEs with concrete examples and use cases of the benefits related to digitalisation. They are usually present at a local level, but are increasingly becoming a national reference for their specific subject matter; and
- **Others:** there are at least seven additional stakeholder groups that participate in the digitalisation ecosystem in different ways (including tech clusters, districts, accelerators, etc.).

Large corporates also play a key role in supporting SMEs' digitalisation along their supply chain. Through supplier-dedicated programmes, many large corporates are raising awareness of the benefits from the adoption of digital technologies and providing targeted training to build up their digital capabilities. Also, large corporates often leverage their procurement offices to push for the digital transformation of their partners, which benefits both the individual SMEs as well as the entire supply chain (for example by assigning extra points in tenders to companies that can prove they are adopting specific processes or technologies).

While the COVID-19 outbreak has posed significant challenges to all SMEs in Italy, it has shown that the least digitalised sectors were the ones hit the most. This study finds an inverse correlation between the level of digitalisation within sectors of the economy and the severity of the crisis in the first few months of the pandemic (i.e. the more digitalised a sector, the less severe

12 DESI 2020 and Eurostat (2019)

the impact of the crisis). Sectors that were strategic in fighting the pandemic suffered less from the crisis, irrespective of their level of digitalisation (for example, food and pharma).¹³

The European Commission has made digital transition one of its two main pillars to bolster the EU economy, together with green transition, dedicating to it a significant part of its total budget for 2021-2027.¹⁴ **Given its relevance, the digitalisation of Italian SMEs is high on the Italian government's agenda.** Italy has launched a series of initiatives to support SMEs' digital transformation, including through the Enterprise 4.0 Plan, the Italy 2025 digital strategy, programmes like Smarter Italy and measures to promote the European Small Business Act.¹⁵

Despite extensive public intervention and the support of the innovation ecosystem, this study suggests that Italy still shows pain points and barriers to digitalisation, especially for SMEs. Public interventions may require time to show their full impact: while some initiatives were launched in 2016-2017 (such as the first 4.0 Plan), others, such as Italy 2025, are more recent. Nevertheless, Italian SMEs are clearly punching well below their digital potential, and a coordinated effort between the public and private sectors is required for a step change towards a more digitalised economy.

Detailed analyses and interviews have identified a list of gaps preventing Italian SMEs from unleashing the full potential of digital transformation. These are summarised in Table 1.

Table 1: Key gaps identified

Area	Description
Awareness / knowledge (demand side)	<p>Italian SMEs are investing less than EU peers in digitalisation.</p> <ul style="list-style-type: none"> • Many Italian SMEs are not planning to invest in digital solutions over the next three years: <ul style="list-style-type: none"> - 18% of Italian firms have no investments planned for the next three years vs. 10% in Europe and 8% in Germany and France.¹⁶ - Only 31% of Italian firms have investments planned to replace existing machinery and equipment, buildings and IT vs. 37% in Europe and 45% and 38% in Germany and France.¹⁷ • Low digital investments lead to lower levels of adoption and sophistication of digital technologies and to a lower increase in productivity: <ul style="list-style-type: none"> - Italian SMEs are less likely than their peers to implement and adopt digital technologies (only 72% of SMEs have a website vs. 77% in Europe; 88% in Germany, but only 71% in France).¹⁸ - Italian SMEs' websites appear to be less sophisticated than elsewhere in Europe (only 34% have a description of goods/services and price lists vs. 54% in Europe).¹⁹

13 Oliver Wyman SCALE Tool; OECD Taxonomy of Sectors by digital intensity

14 https://ec.europa.eu/info/publications/mff-factsheets_en

15 For details, please see chapter 1.5

16 EIB Investment Survey

17 EIB Investment Survey

18 Eurostat

19 Eurostat

<p>Technical capabilities (demand side)</p>	<p>Italian SMEs have a limited digital skillset compared to EU peers.</p> <ul style="list-style-type: none"> • SMEs in Italy find it more difficult to access staffing resources with appropriate digital skills compared to their EU peers: <ul style="list-style-type: none"> - Italian SMEs are penalised by a large proportion of the population still lacking basic digital skills, translating into a lower level of information and communications technology (ICT) graduates (1.0% of graduates vs. EU average of 3.6% – France and Germany have values respectively of 3.0% and 4.7%) and specialists (2.8% of total employment vs. EU average of 3.9% – France and Germany both have values of 3.9%).²⁰ - Italian SMEs have a lower level of commitment in offering ICT training to their employees vs. European peers (19% vs. 23% – France and Germany have values respectively of 20% and 30%).²¹
<p>Strategic fit of SME market (supply side)</p>	<p>Large tech vendors provide a rich but fragmented offering of digital solutions, not always suited to the specific needs of SMEs.</p> <ul style="list-style-type: none"> • Our interviews point to a misalignment between SME needs and large tech vendors’ offering.²² Several interviewees told us that: <ul style="list-style-type: none"> - Suppliers seem to be underinvesting in terms of time spent trying to understand SME needs. - Suppliers might have a tendency to sell ‘perfect’ or complicated solutions, when SMEs could be better off with more basic and standard solutions.
<p>Ability to implement (supply side)</p>	<p>Smaller tech vendors face significant challenges preventing them from being as effective as possible in providing innovative solutions to SMEs.</p> <ul style="list-style-type: none"> • Our interviews have shown that there are three main challenges that smaller tech vendors face when dealing with traditional SMEs: <ul style="list-style-type: none"> - Tailoring solutions to traditional SMEs: smaller players have neither the scale nor, typically, the experience required to address the variety of needs and problems traditional SMEs face. Their offering is more specific and needs re-engineering in case new features are required or requested by clients. This could also lead to significant fragmentation in the market. - Executing several projects: smaller tech vendors can suffer from execution-related constraints, such as not having capacity/resources to dedicate to multiple projects simultaneously. In addition, when compared to larger players, smaller vendors typically lag behind in terms of time needed to complete a project or ancillary services that could be offered during the implementation period (e.g. sharing of benchmarks/learnings on what is happening in other sectors/geographies). - Scaling up financially: smaller suppliers have less solid financial positions and resources to scale up. This reinforces their difficulty in quickly and exhaustively meeting their clients’ needs and driving execution as fast as possible.
<p>Awareness and marketing (market matching)</p>	<p>The complexity of the ecosystem makes it difficult for SMEs to navigate different options and for other digital players to scale up their expertise.</p> <ul style="list-style-type: none"> • Most business associations have their own reference stakeholders, which creates complexities and might prevent scaling up of expertise and options available to SMEs: <ul style="list-style-type: none"> - The portal Atlantei4.0.it lists more than 600 different stakeholders available to SMEs willing to digitalise, with potential overlaps/underlaps of roles.²³ - A number of business associations have created their own version of digital innovation hubs (such as Confindustria, Confcommercio) and/or their own tools to assess digital maturity (such as CNA, Assolombarda). • Such abundance of stakeholders may also confuse SMEs and discourage them from taking on a digitalisation journey.
<p>Financial capabilities (demand and supply side)</p>	<p>Availability of banking credit is often a barrier to SMEs willing to digitalise.</p> <ul style="list-style-type: none"> • Italian SMEs typically turn to banks to deal with their financing needs, including for digitalisation projects: <ul style="list-style-type: none"> - The proportion of SMEs sourcing credit lines, bank loans or trade credit is larger in Italy than elsewhere in Europe. Bank loans are a relevant source of financing for 50% of Italian SMEs vs. 46% in Europe.²⁴

20 DESI 2020

21 Eurostat

22 Expert interviews

23 <https://www.atlantei40.it/>

24 SAFE survey

Financial capabilities
(demand and supply side)

- Most SMEs seem to lack confidence or expertise to talk to venture capital firms and equity investors instead of banks (54% of SMEs are confident talking with banks vs. 11% with venture capital firms and equity investors).²⁵
- **Interest expenses for SME loans in Italy increased through Q4 2019 – Q1 2020 and could increase even more in case of a shortage of liquidity:**
 - Irish and Italian SMEs reported the highest increase in interest expenses (respectively 16% and 14%, from 12% and 9%) in the October 2019 – March 2020 edition of SAFE, the European Central Bank's survey on the access to finance of enterprises.²⁶
 - The SAFE survey shows a deterioration of SMEs' expectations on availability of bank loans (-11%) for the first time since 2013.²⁷
- **Italian SMEs have higher leverage than their European peers, which could prevent them from investing in digitalisation and innovation in the future (especially in the wake of COVID-19):**²⁸
 - A recent OECD study highlights that the leverage of Italian corporates, at aggregate level, is similar to that for German and French corporates; however, when data is broken down by firm size, Italian SMEs appear to have a high debt-to-equity ratio.
 - During the COVID-19 pandemic, Italian SMEs have further increased their level of indebtedness through the use of new financing support offered by the government. The increased level of indebtedness could negatively affect SMEs' ability to invest in digitalisation and innovation in the future.
- **According to our interviews, negotiations between banks and SMEs for financing digitalisation investments typically face four specific issues:**²⁹
 - **Nature of investment and collateral**
 - Digitalisation investments differ from more traditional ones as they typically do not have a tangible asset to offer as collateral (e.g. machinery and equipment, real estate); therefore, banks often process these as intangible investments and ask for specific collateral (e.g. entrepreneurs' personal guarantee), making it more difficult for demand and supply to meet.
 - **Banks' digital due diligence capabilities**
 - While the credit granting process is the same as for traditional investments, banks need dedicated due diligence capabilities to assess and evaluate the digital transformation investments with which they are presented. The difficulty in identifying the expected benefits of such investments on corporates' creditworthiness can be a significant challenge to overcome.
 - **SMEs' ability to articulate digitalisation investments**
 - Assessing the expected benefits of a digitalisation investment is difficult for SMEs too, preventing them from preparing effective and articulated business plans.
 - **SMEs' focus on growth in business plans**
 - When drafting their business plans, SMEs tend to focus on their growth strategy, to which the majority of resources are dedicated. Such a focus can translate into concerns from credit institutions with respect to SMEs' ability to repay the financing for which they apply.
- **While financial institutions support SMEs in accessing resources for their digitalisation investments, there is no clear evidence of "digitalisation-specific" financial instruments. The same holds for key public sector stakeholders: digitalisation and innovation are referred to as key focus areas, but we could not identify digitalisation- or innovation-specific products offered by them.**
- **On the equity side, while venture capital investments are growing in Italy, they are still small compared to Germany and France.**
 - In the first half of 2019, investors invested almost €400 million in Italian start-ups (located in Italy or abroad with Italian founders).³⁰
 - Venture capital markets in France and Germany are more developed and attract more investments, respectively €5 billion and €1.7 billion.³¹

25 SAFE survey

26 SAFE survey

27 SAFE survey

28 <https://www.oecd.org/corporate/ca/OECD-Capital-Market-Review-Italy.pdf>

29 Expert interviews

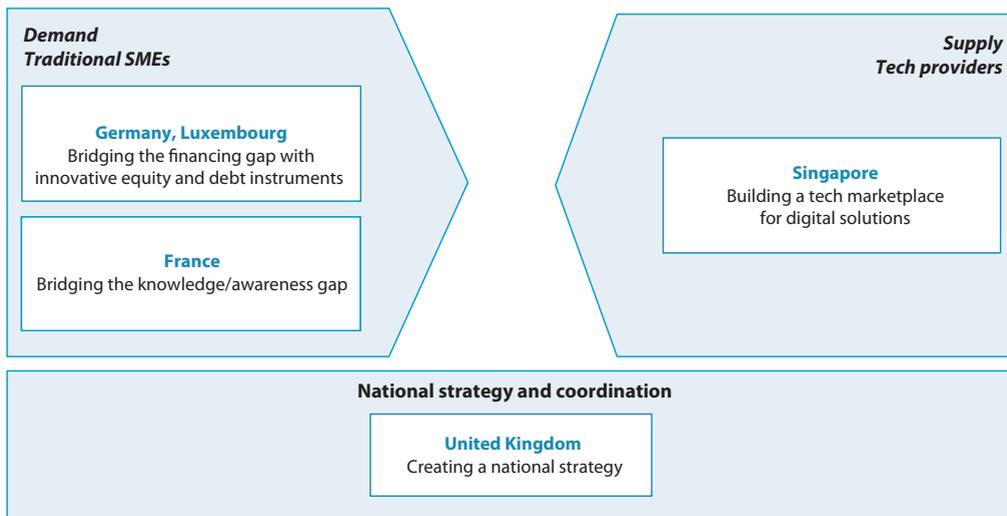
30 [https://uk.practicallaw.thomsonreuters.com/w-012-6561?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/w-012-6561?transitionType=Default&contextData=(sc.Default)&firstPage=true)

31 [https://uk.practicallaw.thomsonreuters.com/6-500-9525?transitionType=Default&contextData=\(sc.Default\)](https://uk.practicallaw.thomsonreuters.com/6-500-9525?transitionType=Default&contextData=(sc.Default)) and [https://uk.practicallaw.thomsonreuters.com/5-501-0204?transitionType=Default&contextData=\(sc.Default\)](https://uk.practicallaw.thomsonreuters.com/5-501-0204?transitionType=Default&contextData=(sc.Default))

Review of approaches undertaken across peer jurisdictions

This section outlines best in class practices worldwide supporting the adoption of digital solutions among SMEs. The selected cases look, through real life examples, at the different dimensions at stake for the Italian context.

Figure 2: Framework of analysis of digitalisation cases



Source: Olivier Wyman analysis

Demand side

Bridging the financing gap with innovative equity and debt instruments

In **Germany** and **Luxembourg**, the shortage of funding from the commercial banking sector is addressed by specific financing products, mainly grant or debt-based, specifically targeted to support SME digital projects.

- **Germany (Bavarian programmes)**

Under the management of the State Ministry of Economy and Media, Energy and Technology, the Bavarian Technology Promotion Programme provides funding to SMEs for innovative and digital projects in the form of grants (for products – up to 25% of the eligible costs) and loans (for processes – up to 100% of the eligible costs of the project). The projects should be aimed at developing technologically new or significantly improved products, production processes and knowledge-based services.

The Bavarian Innovation Voucher is intended to support the planning, development and implementation of new or improved products, production processes or services, and typically covers 40% of the eligible project costs (capped at €15 000 or €30 000 for particularly financially intensive or economically riskier innovative projects, requiring highly specialised support).

- **Luxembourg**

The Direct Loan for Research, Development and Innovation programme was launched at the end of 2011 by the Société Nationale de Crédit et d'Investissement (SNCI) with the objective of facilitating innovation in SMEs.

The SNCI loan supports technological innovation for products, services, processes or organisational methods that are new or substantially improved compared to the state of the art in the concerned industry sector, and which carry a risk of technical or industrial failure.

The loan covers up to 40% of the eligible costs with a maximum amount of €250 000. At least 35% of the investments and expenses must be co-financed by the company's own resources.

Bridging the knowledge/awareness gap for traditional small firms

In **France**, the digital knowledge gap faced by small businesses in traditional sectors has been addressed by Bpifrance, which provides tools to traditional SMEs to bridge the knowledge gap and increase awareness of the potential of digital technologies. Education and training is provided to entrepreneurs (for example by Bpifrance Université), and companies (mostly SMEs) are supported in developing implementation plans and roadmaps through dedicated coaching programmes (such as the Diagnostic Innovation programme).

Supply side

Building a tech marketplace for digital solutions

Government initiatives in **Singapore** have been oriented to facilitate the match between the demand for digital solutions, encouraged among traditional SMEs, and the supply of such technologies offered by local players from the start-up landscape, thus creating a digital market place and enhancing opportunities for local companies.

The Development Bank of Singapore (DBS) TechMatch Programme enables traditional SMEs to submit a business problem online and be matched with a tech solution provider. When the problem-solving exercise has been completed and a match has been found with a counterparty tech company, the programme envisages further initiatives to support the implementation and launch of the solution, such as grants, bridge loans for project financing and an intellectual property financing scheme upon completion of the project. Singapore's SME Go Digital Programme aims at helping SMEs operating in sectors where digital technology can significantly improve productivity. Digital plans are developed by government agency Infocomm Media Development Authority

(IMDA) for each of these sectors, which will make it easier for SMEs to adopt digital technology to boost growth and productivity and to participate in national innovation initiatives.

In addition to the above, Singapore offers funding for the digitalisation of SMEs on both the demand side (i.e. to SMEs) and the supply side (i.e. trade associations, accelerators or other local partners). On the demand side, SMEs can get funding from different agencies, for example a loan from one agency and a grant from another agency. Funding is available in various forms (including grants, loans, insurance, tax incentives and investments), depending on the needs and characteristics of the counterpart.

National strategy

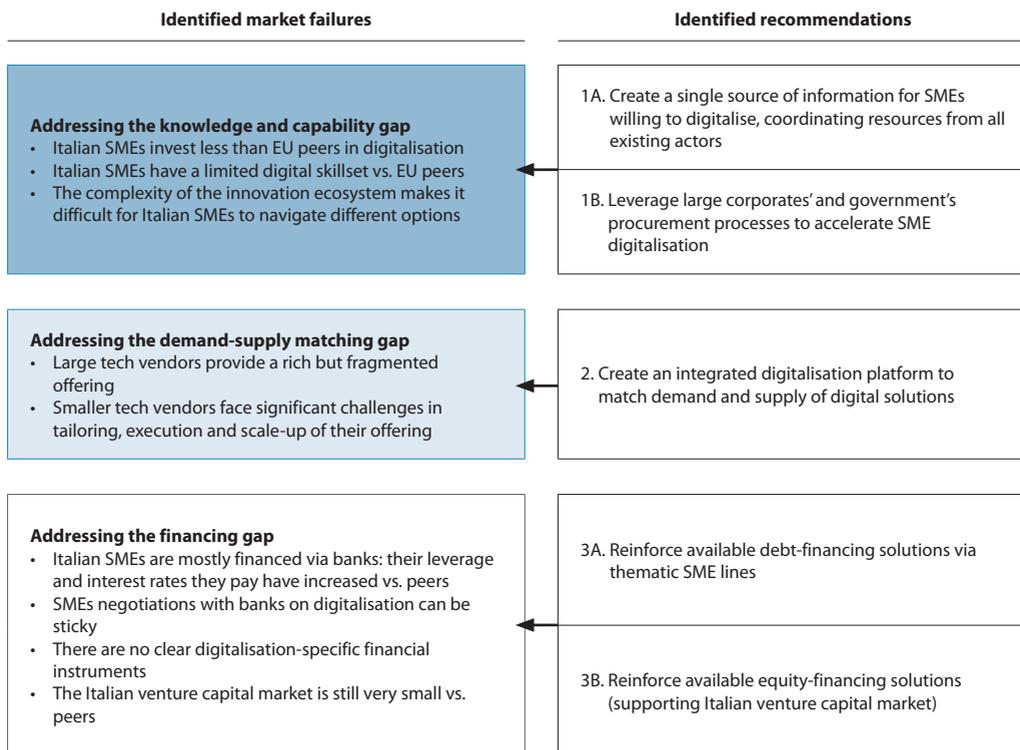
Developing a national and well-coordinated national strategy

The holistic digital strategy pursued by the UK Government spans different dimensions of the socio-economic environment, with initiatives targeting the digitalisation of traditional SMEs through dedicated training programmes, the establishment of public bodies to foster productivity and innovation, and the simplification of the regulatory framework.

The UK's digital strategy, published in March 2017, aims to build a new economy leveraging the country's strengths and tackling its weaknesses. The overcoming of barriers to growth and innovation in the digital sector, the delivery of digital infrastructure and skills and the closing of the digital divide are just some of the key objectives. At its core, the ambition is to create a world-leading digital economy that works for everyone.

public-private response. Accordingly, the study, thanks to a comparison with measures promoted in other countries, identifies several potential recommendations that could address three key objectives (see Figure 4 below). The EIB Group could play a key role in the recommendations addressing the financing gap, while it could activate Technical Assistance support for the infrastructure elements of the remaining recommendations.

Figure 4: Key objectives and identified recommendations



Addressing the knowledge and capability gap

Despite extensive public intervention and the support of the innovation ecosystem, the study identifies two key recommendations to increase the awareness and capability level of Italian SMEs. The first recommendation focuses on the creation of a 'point of entry' that SMEs can leverage as their single source of information for digitalisation. The second recommendation, meanwhile, details the role that large corporates and the government could play to accelerate SMEs' digitalisation through their supply chains.

A. The government could invest part of the RRF funds to create a single source of information for SMEs willing to digitalise, coordinating resources from all existing stakeholders

in the ecosystem (such as business associations, digital innovation hubs, competence centres) – this has worked well in other EU countries (as an example, see Bpifrance).

- i. This could be an online platform working as a single point of access for all digitalisation-related information, pointing SMEs to the most appropriate type of support/stakeholder. This would contrast with the complexity of the current ecosystem, which makes it difficult for SMEs to navigate different options (for example, the portal Atlante i4.0 lists more than 600 different stakeholders available to SMEs willing to digitalise, with potential overlaps/underlaps of roles).
- ii. This single point of entry would leverage contents and materials that already exist, helping to reduce the complexity of the ecosystem.
- iii. Key innovation stakeholders (such as business associations, digital innovation hubs, competence centres) would also have the opportunity to improve coordination and scale up their expertise, currently hindered by fragmentation.
- iv. This single source of information should include (not exhaustive):
 - a. Central repository of information on the role of different stakeholders for each sector, available technologies, services, regulation (such as on data privacy, cybersecurity);
 - b. E-learning courses/training materials (including on changing business processes, redesigning jobs and upskilling workforce, managing the implementation of digital technology);
 - c. Digital maturity self-assessment to measure companies' level of digital maturity and get guidance on the business case for digitalisation and how to achieve it; and
 - d. Streamlined access to public support schemes and to financing programmes available in the banking industry.

B. Large corporates and the government could leverage their procurement processes to accelerate the digitalisation of SMEs across their supply chain by providing them with incentives such as enhanced access, significant savings, simplified and shortened processes, and increased transparency.

- i. **The government could dedicate part of the resources from the RRF that are invested in partnership with large corporates to incentivise the digital transformation of SMEs in their supply chain.** For example, large corporates involved in RRF projects could adjust their procurement processes to embed incentives for SMEs willing to upgrade their digitalisation level.
- ii. **In a similar way, the government could deploy part of the resources from the RRF to create dedicated programmes (such as vouchers) to reinforce SMEs' execution**

capabilities. The government could benefit from the experience gained through similar exercises in the past (an example is the Innovation Manager Voucher) and collaborate with large corporates to support SMEs in their supply chain, improve their ability to execute (and not only buy) digital transformation projects and promote skills transfer mechanisms.

- iii. **The Italian government could revisit public sector procurement rules to push for a wider adoption of digital tools and technologies.** The government could adjust its procurement processes to make it easier (and possibly provide incentives) for digital SMEs to be selected as providers (e.g. assigning higher priority to specific digital processes or tools in place as opposed to meeting specific track-record requirements). The momentum created by the RRF has created very favourable conditions for this to happen.
- iv. **In addition, to reinforce its procurement lever, the government could invest part of the RRF funds in the creation and interoperability of large data centres across the public administration** to be made publicly available to businesses providing innovative solutions to the public administration's most pressing needs.

International case studies further prove the importance of making it easier for businesses to understand the benefits that could derive from a digital transformation. Through Bpifrance, for example, the French government has deployed several initiatives to increase SMEs' awareness of the benefits of digital transformation (such as coaching programmes, education programmes and SME-accelerating programmes).

Addressing the demand-supply matching gap

The study has shown that there is room to improve the matching between demand and supply of digital solutions.

- A. **The government could sponsor the creation of an integrated digitalisation platform to match demand and supply for digital solutions – this has worked well in other countries, for example in Singapore.**
 - i. Such an integrated platform (which could be linked to 1.A above: the government could invest part of the RRF funds to create a single source of information) would house a menu of pre-approved and curated digital solutions available to SMEs in specific sectors, starting from selected strategic sectors.
 - ii. The purpose of the platform would be to facilitate SMEs' choice of suitable digital solutions (among the many available on the market).
 - iii. Each solution could also be linked to specific funding options, streamlining the financing of SMEs' digitalisation projects.

- iv. For solutions that are not readily available in the market, the platform would also enable collection of enough data to support the launch of innovation competitions/hackathons dedicated to the development of digital solutions that close those specific gaps.

Singapore's example reinforces the importance of having pre-approved digital solutions to create a lively supply market and increase the chances of market matching. Singapore, in fact, has developed a digital platform of pre-approved digital solutions to facilitate SMEs' search for suitable digital opportunities and the matching of demand and supply (the DBS TechMatch programme).

Addressing the financing gap

The analyses and evidence produced by the study point to the importance for both the demand and the supply side of the market to have access to financial resources. The following recommendations address both the debt market and the equity market in order to increase the solutions available to businesses.

- A. Reinforce the availability of credit through the banking system, targeting digitalisation and innovation financing for SMEs. In particular, the EIB Group could expand its thematic SME lines to cover digitalisation and innovation investments in Italy. In addition, specific thematic loans could be delivered from special purpose vehicles combining public funds (including potentially RRF) leveraged with private (and possibly EIB) lending facilities.**
 - i. The thematic digitalisation and innovation financing (similar to current thematic SME lines) could take the form of intermediated loans to financial intermediaries (typically directly from the EIB) or loan/risk-sharing/guarantees for granular or non-granular portfolios of SME loans or a combination of the two.
 - ii. An income-contingent loan scheme could provide a new financing option for SMEs that are looking to implement digital projects end-to-end and/or finance transformational projects with highly technical solutions.
 - iii. The EIB Group could leverage its strong relationship with Italian banks to achieve a broad reach for this initiative. COTEC could also provide support to expand the reach in the Italian market.
 - iv. The EIB Group could also leverage its extensive expertise in structured finance and technical advice to SMEs in order to enrich the offering.
 - v. To harness the RRF funds, the eligibility criteria for such an instrument could be aligned with other related programmes included in the Italian RRF plan, e.g. the Italian Ministry of Economic Development's Industry 4.0 Plan.

- vi. **Importantly, such an initiative could benefit from the resources made available by the RRF.** More specifically, the Recovery Fund could work both in cases of thematic lines provided through intermediated loans and of thematic lines provided through risk-sharing mechanisms. In fact, the Recovery Fund could facilitate the creation of three different forms for the thematic lines:
 - a. Intermediated loans to financial intermediaries with first-loss piece from the Recovery Fund. While the EIB would play a crucial role in the implementation of such a mechanism, this would enable the inclusion of partnering intermediaries and smaller banks and financial institutions;
 - b. Risk sharing (guarantee) for granular portfolios of SME loans with first-loss piece from the Recovery Fund. The existence of the Recovery Fund would serve to increase the level of coverage of the guarantee to 70-80%; and
 - c. Risk sharing (guarantee) for non-granular portfolios to mid-cap and large companies with first-loss piece from the Recovery Fund. The existence of the Recovery Fund would enable investment in riskier counterparts than those typically selected for such programmes with longer tenors.

B. To harness the RRF funds, the EIB Group could enhance access to equity financing for innovative SMEs in Italy.

- i. The EIB Group (especially the European Investment Fund – EIF) could contribute to scaling-up of the availability of funds of key players in the Italian private equity and venture capital landscape for direct or indirect investments in strategic innovation projects.
- ii. The EIB Group (especially the EIF) could consider setting up country-specific investment schemes (similar to the EIF's theme-specific schemes, e.g. on artificial intelligence (AI)/Blockchain) to provide financial and strategic support to private equity and venture capital funds willing to invest in Italy.

Germany and Luxembourg provide examples of additional support governments can put in place from a financial perspective to bolster digitalisation. Germany and Luxembourg have created several dedicated financing instruments to support SME investments in digitalisation including both dedicated innovation loans and specific grant programmes (e.g. vouchers).



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