



Digitalisation of SMEs in Romania

An assessment of the level of digitalisation of SMEs in Romania and recommendations to increase their level of digitalisation

June 2023



European
Investment Bank



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Commission

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This report was prepared at the request of the Romanian Ministry of Investments and European Projects to EIB Advisory to undertake a study to support efforts to drive the level of digitalisation of SMEs in Romania. The study was to include an assessment of the barriers to digitalisation, the most appropriate types of support and the tools that can be used to enable additional finance to be provided to drive the digitalisation agenda across the SME sector.

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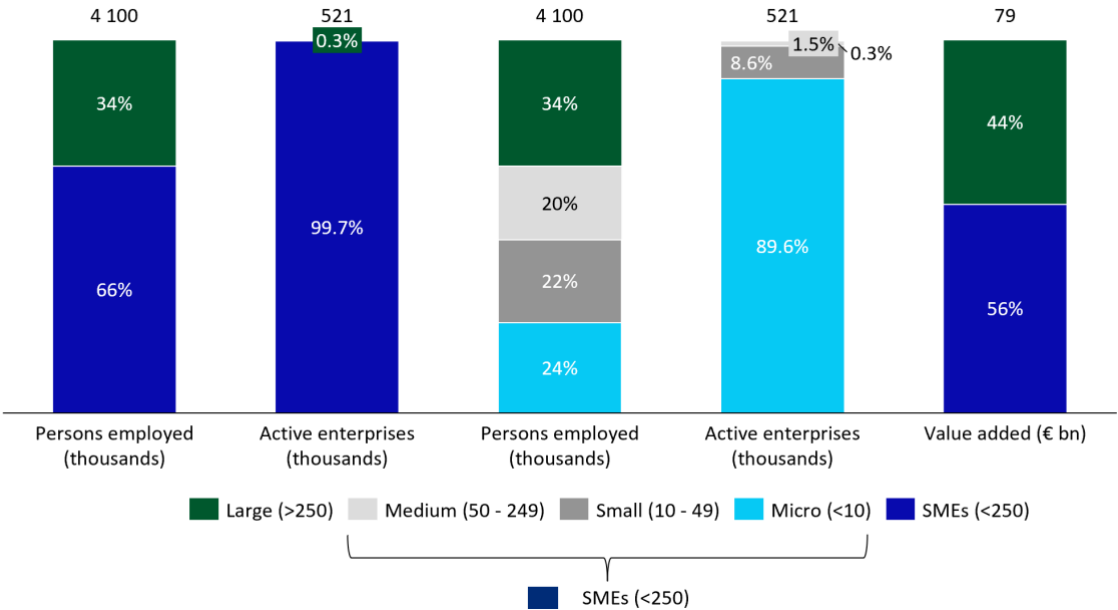
The European Investment Advisory Hub¹ and Oliver Wyman have conducted a study to identify the barriers that are preventing the digitalisation of Romanian small and medium-sized enterprises (SMEs) and to offer recommendations to reduce them. The analysis refers to digitalisation as “the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business.”² The study is based on a four-step approach, as outlined below:

1. **Assessment of the current status of business digitalisation in Romania.**
2. **Identification of the barriers to digitalisation of Romanian SMEs**, looking at both the demand side and the supply side of digital solutions and existing government initiatives to facilitate access to them.
3. **Review of approaches undertaken across peer jurisdictions**, identifying case studies on SME digitalisation worldwide (including France, Estonia, Portugal, Germany, Poland, Croatia and Hungary).
4. **Identification and prioritisation of recommendations** to increase the level of digitalisation of Romanian SMEs.

SME landscape in Romania

Small and medium enterprises play a central role in the Romanian economy. They account for 99.7% of the total number of active companies (approximately 521 000 SMEs), around 66% of total non-financial private sector employment, and about 56% of gross value added (GVA).³ Microenterprises (with fewer than ten employees and less than €2 million of turnover) are the largest segment in terms of active enterprises (approximately 90% of all SMEs). Interestingly, although large enterprises are fewest in number (they only account for 0.3% of active enterprises), they provide the highest share of employment (approximately 34% of total non-financial private sector employment).

Figure 1: SMEs in Romania in 2021 — SME percentage share of key variables⁴



¹ The [European Investment Advisory Hub](#) (EIAH) is a partnership between the European Investment Bank Group and the European Commission under the Investment Plan for Europe. The EIAH is designed to act as a single point of access to various types of advisory and technical assistance services. It supports the identification, preparation and development of investment projects across the European Union. Building on the success of the EIAH and other advisory programmes, the EIB and the European Commission agreed to provide technical, financial and strategic expertise to project promoters, regional and national authorities, and financial intermediaries under the [InvestEU Advisory Hub](#).

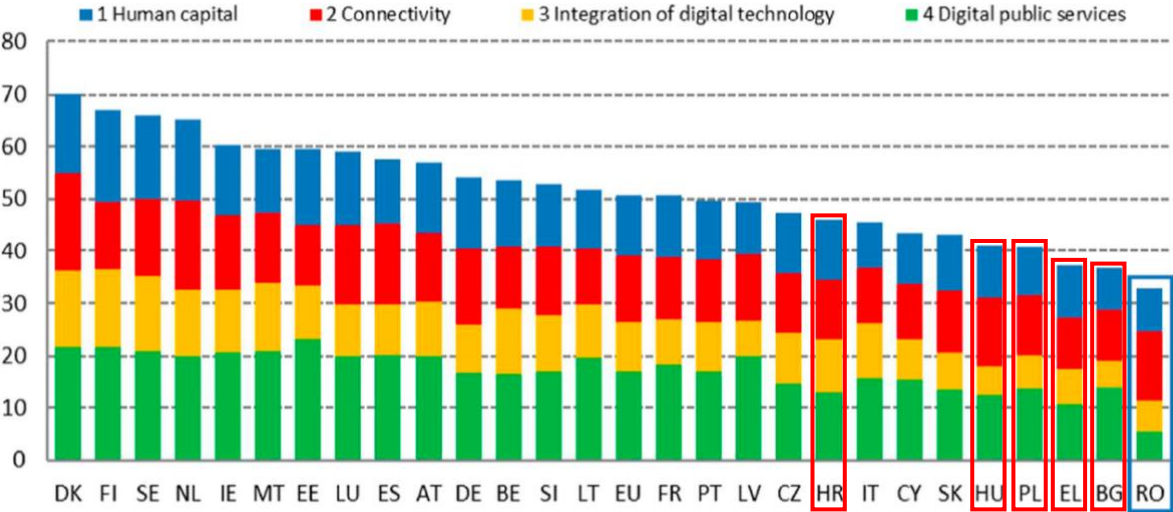
² Gartner. Information Technology glossary. Available at: <https://www.gartner.com/en/information-technology/glossary/digitalization>

³ European Commission (2021). Romania SME Fact Sheet 2021. Available at: <https://ec.europa.eu/docsroom/documents/46088>

⁴ European Commission (2021). Romania SME Fact Sheet 2021. Available at: <https://ec.europa.eu/docsroom/documents/46088>

However, the overall productivity of Romanian small and medium businesses appears to be lower than the EU average and peers. SME value added per person employed is approximately €16 500 for small and medium enterprises overall, and €16 200 for microenterprises. This is significantly lower than the EU average of around €40 000 for small and medium enterprises as a whole and €31 000 for microenterprises. It is a similar story when they are compared to peers such as Hungary, Croatia and Poland. The approximate value added per employee is €19 800 in Hungary (an increase of around 20% compared to Romania), €20 500 in Croatia (roughly 25% more than Romania), and €20 700 in Poland (also around 25% more than Romania).

Figure 2: Digital Economy and Society Index (DESI) 2021 ranking⁵



According to EU-wide metrics, the level of digitalisation of Romanian small and medium enterprises is also lower than in most other European countries, including their closest peers.⁶ In the 2021 Digital Economy and Society Index (above), an annual assessment of the digitalisation of EU countries, Romania ranked last: 27th out of 27 countries. The index measured digitalisation across four components — human capital, integration of digital technology (within business activities), digital public services, and connectivity.⁷

Within Romania, productivity varies quite significantly between regions, and so does the level of digitalisation. Using the purchasing power standard (PPS)⁸ as a metric of productivity, Bucharest is the most productive region, followed by Cluj and the North-West region, with more rural areas lagging behind on both metrics. As we have observed at a country level, there also appears to be a correlation between productivity and the level of digitalisation at a regional level, with the level of digitalisation highest in the regions with the highest productivity: Cluj, Bucharest and the North-West.⁹

The lower cost of labour in Romania compared to other European countries could partly explain the low level of digitalisation of Romanian SMEs compared to their peers; however, a more detailed assessment of the hurdles to digitalisation is required. A positive correlation between DESI performance and labour cost (as a

⁵ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2021>

⁶ To assess the level of digitalisation in Romania, this study takes into consideration several metrics available at a European level (e.g. DESI and the Digital Intensity Index (DII); Eurostat and SBA fact sheets). This is important to be able 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.

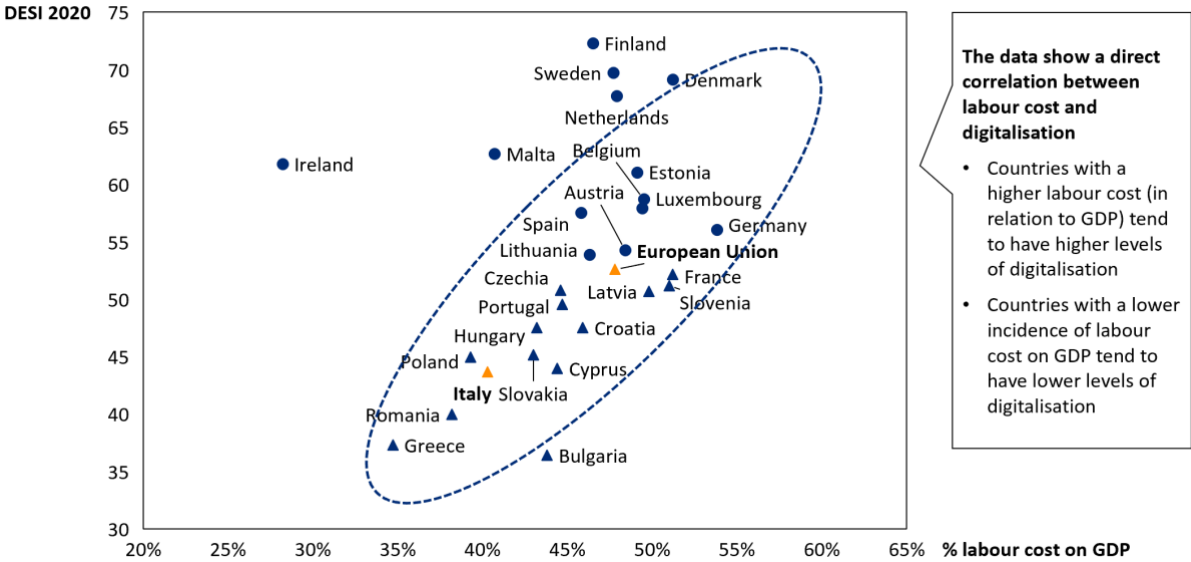
⁷ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/policies/desi>

⁸ Eurostat. Available at: https://ec.europa.eu/eurostat/databrowser/view/TGS00006/default/map?lang=en&category=na10.nama10.nama_10reg.nama_10r_g_dp; the purchasing power standard is a value expressed in relation to the EU average, which is set as equal to 100. As such, if a country/region's PPS is higher than 100, this means that this country's level of GDP per capita is higher than the EU average. Although it is still not a perfectly objective metric, PPS allows for meaningful volume comparisons of GDP between countries by providing a common metric that eliminates differences in price levels. Note that the index provides point in time comparisons between countries rather than temporal comparisons.

⁹ Eurostat Data Browser. For further information see section *Key characteristics of digitalisation in Romania*.

percentage of gross domestic product) can be observed across EU Member States. Countries with a lower incidence of labour cost relative to GDP (including Romania) tend to have lower levels of digitalisation. While additional analyses are needed to draw conclusions on the relationship between these two factors (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. Perhaps the corollary of this is a driving factor: there are higher incentives to digitalise for businesses in countries where the average labour cost is higher, to ensure that the most value is extracted from employees. For instance, Lithuania, Estonia and Croatia all have higher labour costs as a proportion of GDP than Romania and higher levels of digitalisation.¹⁰

Figure 3: Labour cost¹¹ (% of GDP) and DESI score (2020)

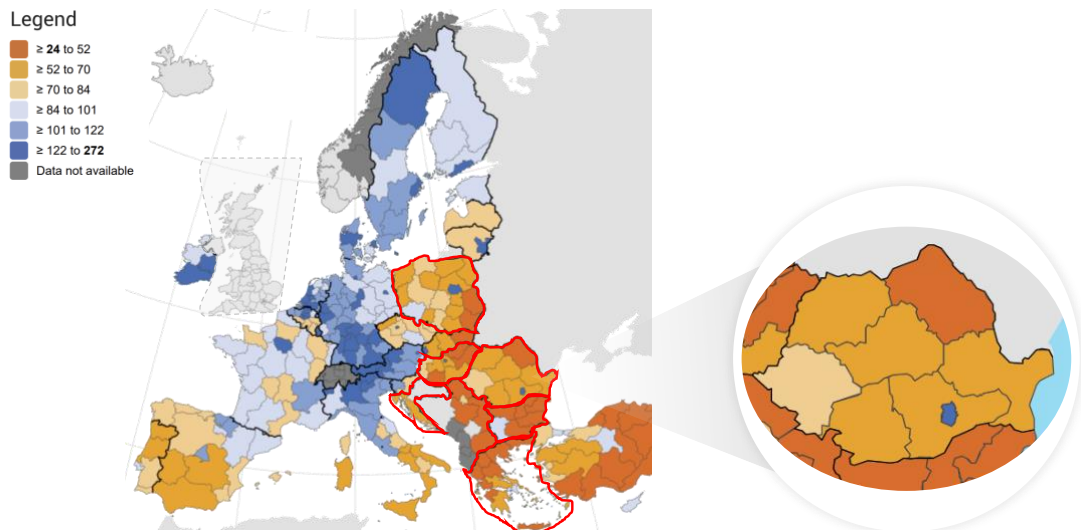


¹⁰ DESI 2020 and Eurostat (2019).

¹¹ Eurostat: Compensation of employees is defined as the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter. In particular, it also includes social contributions paid by the employer.

Digitalisation and SME productivity

Figure 4: Regional GDP across EU countries and within Romania measured in purchasing power standard per inhabitant as a % of the 2020 EU27 average, using NUTS 2 regions¹²



While multiple factors jointly impact productivity, one of the drivers of low productivity¹³ in Romania compared with the EU average may be the lower level of digitalisation of Romanian small and medium enterprises, which were ranked lowest in the 2021 Digital Economy and Society Index (an overall rating of 32.9 vs. the average of 50.7 for EU SMEs).¹⁴ For reference, the highest scoring country was Denmark with a score of 70.¹⁵ There appears to be some correlation between SME productivity in a country and that country's level of digitalisation (according to the DESI). For example, if we consider countries that score close to Romania in the index, for instance Bulgaria, Hungary, Greece, Poland and Croatia (circled in red on the map above), these countries are generally on the lower productivity end within the European Union (marked in orange).

If we compare the map in Figure 4 to the 2021 DESI rankings, there appears to be a correlation between low-ranking countries. There are some exceptions, for instance Spain. According to the above metric, it is on the lower end of the productivity spectrum, but is ranked ninth in the 2021 index with a score of 60.8 (out of 100), well above the EU average of 52.3.¹⁶ However, on the whole there seems to be some correlation, although this of course does not imply causation.

¹² Eurostat. Available at:

https://ec.europa.eu/eurostat/databrowser/view/TGS00006/default/map?lang=en&category=na10.nama10.nama_10reg.nama_10r_gdp

¹³ According to the OECD, the most prominent drivers of low productivity in Romania include the burden that a complex licence and permit system imposes on businesses, the inefficient insolvency regime hindering the “creative destruction” of non-viable companies to the detriment of more viable ones, low trust in institutions induced by unresolved corruption issues and legislative instability. Source: OECD. Economic Survey Romania 2022.

¹⁴ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2021>

¹⁵ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2021>

¹⁶ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/policies/desi>

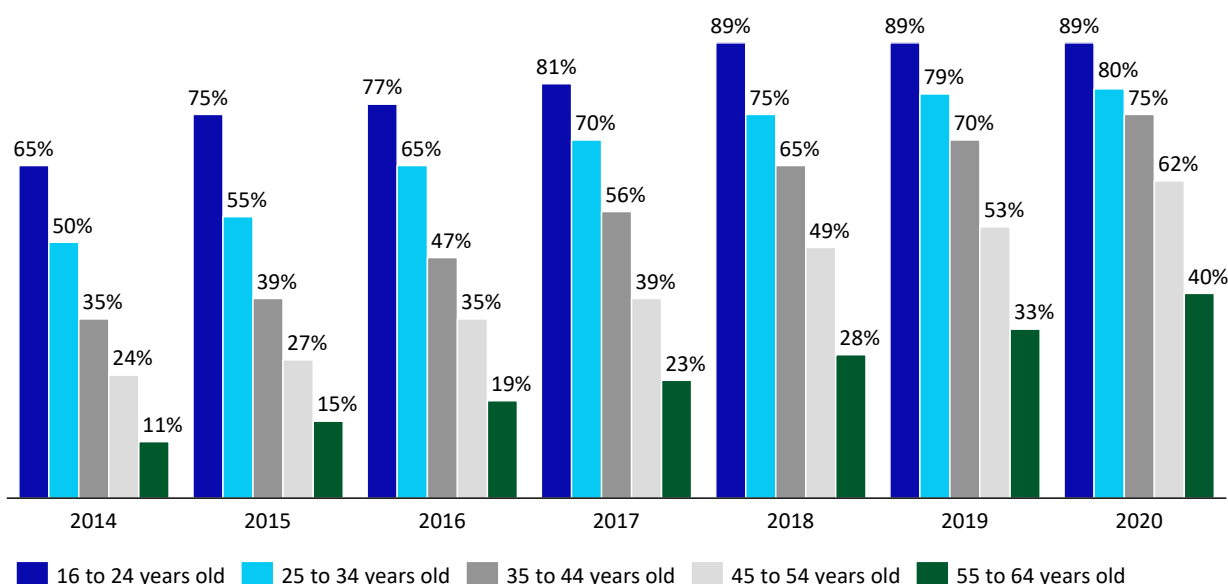
Key characteristics of digitalisation in Romania

Areas of strength

Despite the lower overall ranking, Romania leads in a number of important areas. **Connectivity infrastructure is the main one: it is the only area where Romania scores well above the EU average, ranking tenth out of 27.** Romania is at or above the EU average in multiple provision indicators, such as fixed very high capacity network (VHCN) coverage (76% compared to the EU average of 59%), which reflects the strong infrastructure-based competition in Romania, especially in urban areas. While 4G coverage reached the EU average of 99.7% in 2020, 5G readiness in 2021 was still significantly lower in Romania, at 21% compared to the EU average of 51%. This suggests that Romania has acquired at least some of the infrastructural preconditions for digitalisation and should therefore be relatively well placed to improve its digitalisation.¹⁷

Use of technology has been increasing steadily over the years; however, it varies between people of different ages, with skills and use highest among younger “digital natives” and lowest among older people, as the chart below shows. The chart also shows the growth in daily internet use among the Romanian population since 2014, showing growing comfort with and reliance upon digital technologies and the internet over time.

Figure 5: European Commission: Daily internet users within Romania by age range, 2020¹⁸



Challenges

However, Romania underperforms significantly in other important areas. The digitalisation of public services and the level of digital human capital are the areas where Romania ranks lowest of the EU27:

- In terms of **digital public services** for businesses, Romania scored 49/100, compared to the EU average of 84. This is a key driver of Romania’s low overall score, both numerically and in real terms, because it is a potential cause of low digitalisation among individuals and businesses. If government services are not digitalised and government is not serving as a role model for digital operations, individuals and businesses have less incentive to digitalise themselves.
- In terms of **human capital**, one of the main drivers of Romania’s low score is low digital skills: only 31% of the population have at least basic digital skills, compared to an EU average of 56%. Romania also noticeably lacks ICT specialists, with only 2.4% of the workforce being ICT specialists, compared to an EU average of 4.3%. Interestingly, the proportion of graduates that are ICT graduates is actually notably higher in Romania than

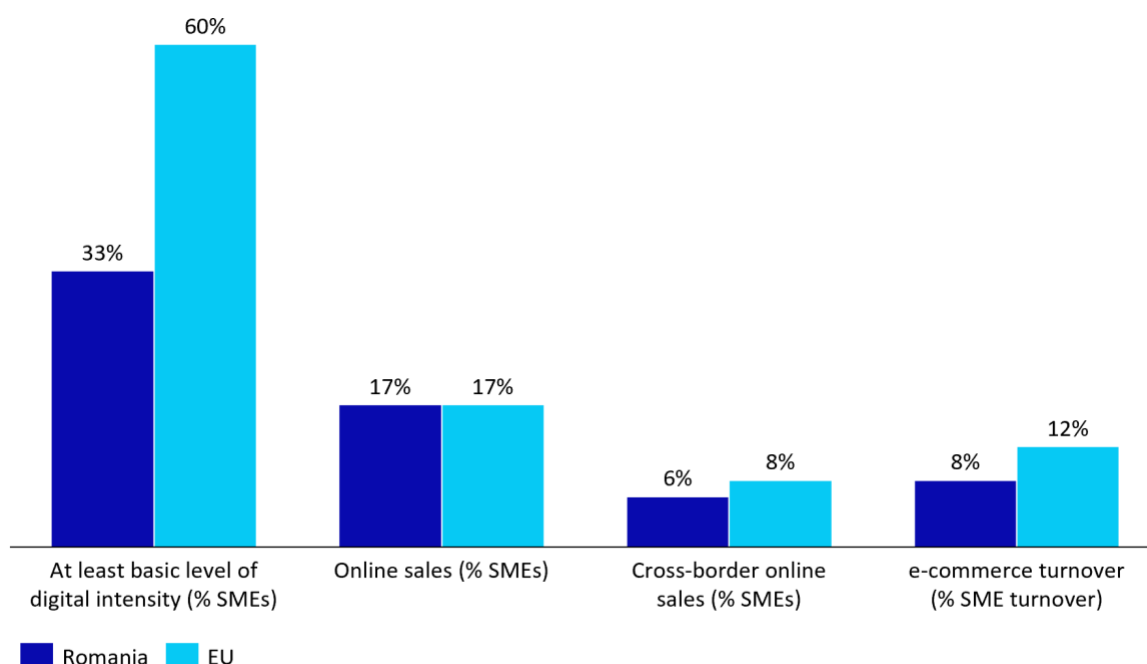
¹⁷ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/policies/desi>

¹⁸ Eurostat Data Browser.

the EU average — 6.3% vs. 3.9%. This suggests that Romanian ICT graduates are either not being employed in ICT roles or are leaving Romania for ICT jobs in a “brain drain”. The interviews and anecdotal evidence corroborate Romania’s low scores on both these elements.¹⁹

- In terms of the **digitalisation of businesses** (integration of digital technology [within business activities]), the picture is the same: Romania came 25th out of 27, scoring 23.8 compared to the EU average of 37.6. Only 33% of Romanian small and medium businesses were found to have at least a basic level of digital intensity (compared to an EU average of 60%), and they also lag in terms of digital tooling, such as using electronic information sharing, social media, big data and cloud computing/services. Romanian enterprises also lag significantly compared to the EU average in terms of employee ICT training: only 6% of enterprises in Romania provide this, compared to the EU average of 20%.²⁰

Figure 6: DESI 2021 integration of digital technology component: Romania vs. EU average²¹



Regional differences in digitalisation

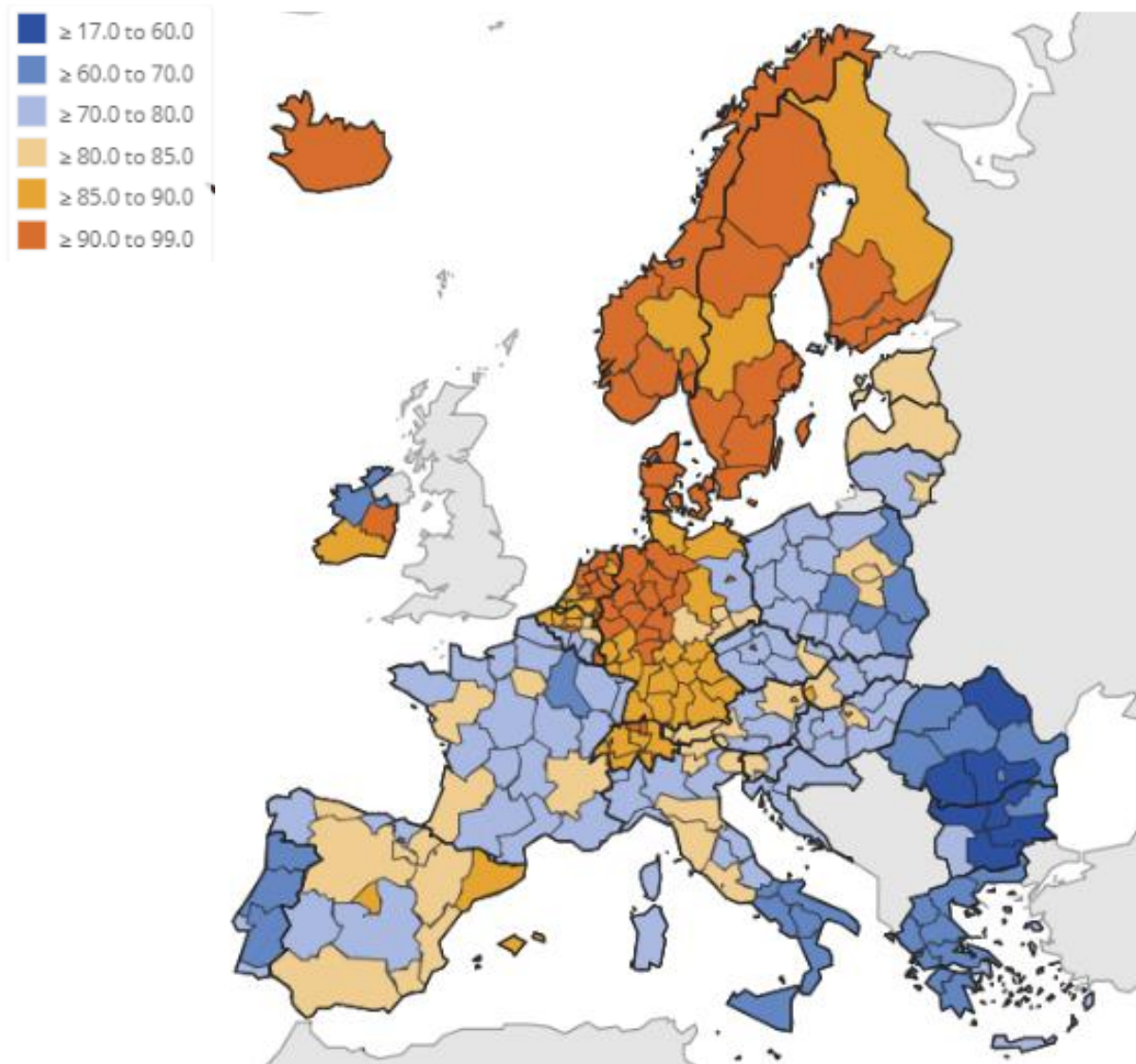
The level of digitalisation among Romanian businesses and individuals also differs between regions: unsurprisingly, for the most part, the level of digitalisation is greater in cities than in more rural areas, and highest in Bucharest, Cluj and the North-West. A useful indicator for digital development is the amount of daily internet users. In 2020, the percentage of adults accessing the internet every day was lower in Romania than nearly all the rest of the European Union. While the EU average was 80% of people, in Romania it was closer to 60%. Within Romania itself, the proportion of daily internet users was highest in Bucharest and the North-West. Unsurprisingly, our interviews revealed that due to the pandemic, these numbers have increased significantly in Romania and across Europe. Still, the general trend in Romania compared to other EU countries remains the same, even if the gap has somewhat narrowed.

¹⁹ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2021>

²⁰ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2021>

²¹ European Commission. Digital Economy and Society Index (DESI) 2021. Available at: <https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2021>

Figure 7: European Commission: Daily internet users across EU countries and within Romania, 2020²²



Digital skills are also higher among people who live in cities than those who live in rural areas. The European Commission and Eurostat report *Urban and Rural Living in the EU* analysed the proportion of people aged 16 to 74 with basic digital skills and whether they live in cities, towns and suburbs, or rural areas. For Romania, the report found a gap between rural areas, which are the least digitalised (just over 20%), towns and suburbs (just over 30%) and cities (40%). These data are from 2019, and the level of digitalisation among the population in Romania (and in other countries) has increased significantly since the COVID-19 pandemic. However, according to our interviews, the general trend we see below of greater digitalisation in cities than in rural areas still applies.²³

²² Eurostat Data Browser.

²³ European Commission, Eurostat, *Urban and Rural Living in the EU*, 2020. Available at: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20200207-1>

Digitalisation and gender-related differences

If we consider the level of digitalisation from a gender perspective, while there are some key strengths — for example, Romania ranks fifth in the European Union for the proportion of science, technology, engineering and maths (STEM) graduates that are women — there are also two main challenges:

- Firstly, on most indicators, especially for more basic digital skills, women perform slightly lower than men in Romania but generally not by a significant margin.
- Secondly, women in Romania perform significantly worse, on average, than women across the European Union.

The table below shows the results of the European Commission’s 2021 Women in Digital Scoreboard, which is the basis for these conclusions. It seems therefore that Romanian women’s low performance compared to the EU average is not driven by gender-specific factors, but rather by the same factors that drive the generally lower level of digitalisation across the population. There are some areas where women in Romania perform well compared to the EU average — for instance STEM graduates, where Romania ranks fifth in the European Union with 16 out of 1 000 women aged 20 to 29 being STEM graduates (vs. the EU average of 14 and the value for Romanian men of 19.3). Similarly, the 2021 Digital Economy and Society Index reported that 26% of ICT specialists in Romania were women in 2020, significantly higher than the EU average of 19%.

Table 1: European Commission: Women in Digital Scoreboard 2021, Romania²⁴

	Romania				EU	
	Women		Men		Women	Men
	Value	Rank	Value	Rank	Value	
1. Use of internet						
1.1 Internet users <i>% individuals, 2020</i>	75%	23	78%	24	75%	87%
1.2 People who have never used the internet <i>% individuals, 2020</i>	15%	22	13%	20	10%	8%
1.3 Online banking <i>% internet users, 2020</i>	14%	27	16%	27	65%	67%
1.4 Doing an online course <i>% individuals, 2020</i>	4%	27	4%	27	15%	15%
1.5 Online consultations or voting <i>% individuals, 2019</i>	4%	26	5%	23	11%	12%
1.6 e-government users <i>% internet users submitting forms, 2020</i>	15%	27	16%	27	64%	64%
1 Use of internet Score (0-100)	30	27	-	-	60	-

²⁴ European Commission, Women in Digital Scoreboard 2021, Romania; link: <https://digital-strategy.ec.europa.eu/en/news/women-digital-scoreboard-2021>

	Romania				EU	
	Women		Men		Women	Men
	Value	Rank	Value	Rank	Value	
2. Internet user skills						
2.1 At least basic digital skills <i>% individuals, 2019</i>	29%	27	33%	26	54%	58%
2.2 Above basic digital skills <i>% individuals, 2019</i>	10%	27	11%	26	29%	33%
2.3 At least basic software skills <i>% individuals, 2019</i>	33%	26	38%	26	56%	60%
2 Internet user skills <i>Score (0-100)</i>	26	27	-	-	53	-
3. Specialist skills and employment						
3.1 STEM graduates <i>Per 1 000 individuals aged 20-29, 2019</i>	16	5	19.3	18	14	28
3.2 ICT specialists <i>% total employment, 2020</i>	1.5%	20	3.1%	26	1.7%	6.5%
3.3 Unadjusted gender pay gap <i>% difference in pay, 2019</i>	26%	22	-	-	19%	-
3 Specialist skills and employment <i>Score (0-100)</i>	42	17	-	-	47	-
Women in Digital Index <i>Score (0-100)</i>	32.6	27	-	-	53.2	-

Existing support structures for SME digitalisation

Romanian small and medium enterprises have access to a growing innovation ecosystem to support their digitalisation efforts. This includes:

- **Business associations:** These provide reference points for SMEs and direct access to centralised knowledge/expertise (including for digitalisation topics).
- **Digital Innovation Hubs (DIHs):** Romania has a burgeoning network of both local digital innovation hubs that have developed organically and ones that are funded by the European Union. These offer support to SMEs looking to digitalise by providing training, advice on digitalisation and how to access support, and networking opportunities with other SMEs and players in the innovation ecosystem.
- **Other players:** There are other additional stakeholder groups that participate in the digitalisation ecosystem in different ways, for instance industry clusters, large corporates and universities.

Additionally, the Romanian government has introduced multiple initiatives aiming to improve digitalisation across the country, including within SMEs. These include the Competitiveness and Human Capital Operational Programmes, the StartUp Nation programme (launched for a third time in July 2022), and the establishment in 2020 of the Authority for the Digitalisation of Romania (ADR), which has the primary task of driving the digitalisation of government and government services. Digitalisation initiatives are also a key feature of the Romanian Recovery and Resilience plan, both through component seven, 'Digital transformation', for which the

allocated budget is €1.8 billion (covering digital public services, digital connectivity, cybersecurity, digital skills, human capital, internet use and more) and through other components. These other components include digitalisation measures, such as the digitalisation of education, health and physical infrastructure, and Romania's participation in the multi-country Important Project of Common European Interest (IPCEI) focused on microelectronics, to which €500 million has been allocated as part of the plan.²⁵ Targeted specifically at enterprises (although not SMEs), the fund for digitalisation, climate action, and other areas of interest with an amount of €300 million will provide debt finance with 16% of resources allocated to digitalisation-related investment activities. On top of this, there are three other financial instruments under the Romanian Recovery and Resilience plan that would provide debt finance (€500 million under the InvestEU compartment for Romania) and equity finance (€400 million) to SMEs, including for digitalisation.

Other external factors driving digitalisation

The COVID-19 outbreak posed significant challenges for all small and medium enterprises in Romania, in particular those that were less digitalised (as in other countries). As has been observed in many other countries, COVID-19 prompted many companies to digitalise their operations. In terms of the short-term actions taken as a result of the pandemic, 45% of firms in Romania invested to become more digital, equal to the EU average. In Romania and across the European Union, this was the most commonly cited action as a result of COVID-19, followed by developing new products (29% for Romania) and shortening supply chains (20% for Romania). In Romania, large firms were more likely to have taken short-term action in response to COVID-19 than SMEs (67% vs. 54%), particularly in terms of investing in digitalisation (55% vs. 34%).²⁶

Digital transformation is becoming even more important in a context where the green transition is now also a key priority for small and medium businesses. On the one hand, these two priorities can reinforce each other; as emphasised in a recent study by the OECD²⁷, digitalisation is being increasingly recognised as a means to help unlock the benefits of more inclusive and sustainable growth and enhanced social well-being. In the environmental context, digitalisation can help decouple economic activity from the increasing use of natural resources and its environmental impacts. Digital technologies such as artificial intelligence, blockchain, the internet of things and cloud computing can facilitate the transition to a more resource-efficient and circular economy by helping to overcome obstacles that stand in the way of the large-scale deployment of greener business models, as well as the more effective delivery of circular economy policies. On the other hand, given the limited resources of SMEs, the fact that the green transition is a key priority for these companies means that there is even more pressure to keep digitalisation at the top of the agenda.

Despite several public interventions, a growing ecosystem, the higher participation of women in STEM and more supportive connectivity infrastructure than in many more digitalised countries, this study suggests that there are still major barriers to the digitalisation of Romanian small and medium enterprises. Public interventions may require time for their full impact to materialise; nevertheless, Romanian SMEs are clearly not yet reaching their digital potential. There are many actions that both the Romanian government, national institutions supported by the Romanian private sector, and also potentially European institutions can take to facilitate a step change in digitalisation for SMEs and, hopefully, a resulting uplift in productivity.

Key barriers to digitalisation

The study looks at SME digitalisation in Romania from three perspectives: the demand for digitalisation (from small and medium enterprises), the supply of suitable products, and matching mechanisms for supply and demand. On the demand side, it is critical that SMEs are aware and see the benefits of digitalisation and the digital tools available (such as workflow management, customer relationship management (CRM) and digital invoicing). Moreover, they need to have the technical and financial capabilities to access and use those tools. On

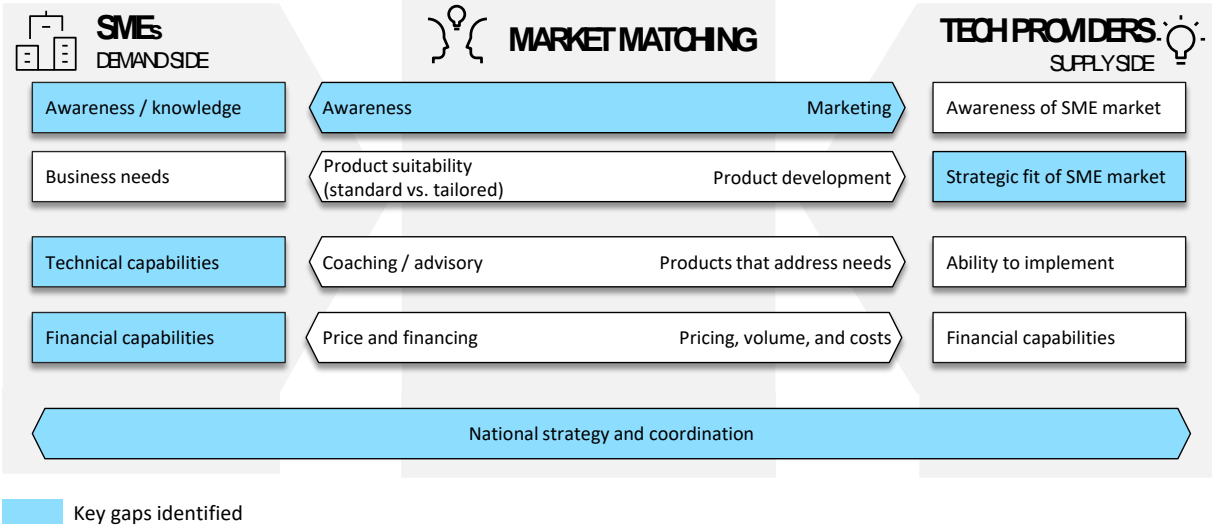
²⁵ European Commission. Romania in the Digital Economy and Society Index. Available at: <https://digital-strategy.ec.europa.eu/en/policies/desi-romania>; Romania's Recovery and Resilience Plan. Available at: <http://mfe.gov.ro/pnrr/>

²⁶ European Investment Bank (2021). "EIB Investment Survey 2021: Romania overview." Available at: https://www.eib.org/attachments/publications/eibis_2021_romania_en.pdf

²⁷ Barteková, E. and Börkey, P. (2022). "Digitalisation for the transition to a resource efficient and circular economy." OECD Environment Working Papers, No. 192, OECD Publishing, Paris. Available at: <https://doi.org/10.1787/6f6d18e7-en>

the supply side, tech vendors need to be aware of the needs and difficulties that small and medium businesses face. They also need to develop the right capabilities and business models to be able to offer a value-adding proposition that fits the strategic needs of companies of this size, and is affordable. Furthermore, a market matching system needs to be put in place that brings together small and medium businesses and tech providers in order to improve SME digitalisation while benefiting all parties involved. Finally, for small and medium enterprises to achieve their potential, this needs to exist as part of an ecosystem of digitalisation and innovation, with overall direction set at government level and with all players — local and national government, SMEs, tech companies, banks and other finance providers, digital innovation hubs, etc. — pulling in the same direction. The figure below provides a graphical representation of this framework, and highlights in blue the areas where the largest gaps were identified.

Figure 8: Digitalisation gap assessment framework



Detailed analyses and interviews have identified a list of gaps preventing Romanian small and medium enterprises from unleashing the full potential of digital transformation. These are summarised in the following table:

Table 2: Key gaps identified

Area	Description
Awareness/knowledge (demand side)	<ul style="list-style-type: none"> • Our interviews consistently revealed that a key (if not the primary) driver of low digitalisation among Romanian SMEs is limited knowledge of how to digitalise. • Romanian SMEs are investing less than their EU peers in digitalisation. <ul style="list-style-type: none"> ○ According to the EIB Investment Survey 2021, Romania has one of the lowest shares of firms considered to be “innovators” (that have invested significantly in research and development and introduced a new product, process or service) in the European Union — 5%, compared to an EU average of nearly 20%.²⁸ ○ In addition, just close to 50% of Romanian firms have implemented at least one advanced digital technology, compared to an EU average of around 60%. • 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"> ○ Romanian SMEs are less likely than their peers to implement and adopt even quite simple digital technologies: only 51% of SMEs have a website compared to an average of 78% in the European Union and 89% in

²⁸ European Investment Bank (2021). “EIB Investment Survey 2021: European Union overview.” Available at: https://www.eib.org/attachments/publications/eibis_2021_european_union_en.pdf

Area	Description
	Germany; ²⁹ only 17% of Romanian SMEs use enterprise resource planning (ERP) software compared to an average of 38% in the European Union, ³⁰ and only 17% of Romanian SMEs use CRM software compared to an EU average of 32%. ³¹
Technical capabilities (demand side)	<ul style="list-style-type: none"> • Together with the limited knowledge of how to digitalise, our interviews consistently revealed that the other top driver of low SME digitalisation is the fact that digital skills are low in both Romanian SMEs and in the population more generally, and spoke of limited training opportunities and very basic digital education. • The Digital Economy and Society Index corroborated this, showing that Romania ranked lowest or nearly lowest on human capital (digital skills) and integration of digital technology (in business activities). <ul style="list-style-type: none"> ○ In 2018-2020, only 5-6% of enterprises provided ICT training to employees compared to an EU average of 20%. ○ In 2020, only 33% of SMEs had a basic level of digital intensity compared to an EU average of 60%. • Despite this, Romania does have a relatively strong population of ICT graduates (who are currently either not being employed in ICT roles, are working for non-Romanian companies, or are leaving the country to work elsewhere).
Strategic fit of SME market (supply side)	<ul style="list-style-type: none"> • In recent years, the Romanian tech market has experienced significant growth and some major success stories, for instance the unicorn UiPath. <ul style="list-style-type: none"> ○ It is one of the fastest growing IT markets in Central and Eastern Europe, with a growth rate of 3.1% in 2017-2021, reaching a value of RON 9.9 billion in 2021 (around €2.2 billion)³², the majority of which comes from software and services.³³ • However, there is still significant room for growth and the development of targeted products and solutions to facilitate SME digitalisation. <ul style="list-style-type: none"> ○ In 2021, Romania ranked last in the European Union for innovation, with performance well below the EU average.³⁴ ○ Romania's share of high growth enterprises is 3-4%, significantly lower than the EU average of 11-12%.³⁵ • Our interviews found that tech companies are often looking outside of Romania for funding due to the limited local venture capital market in Romania. This is stifling innovation and may lead to products being tailored to international investors rather than the needs of the Romanian market. There is significant room for growth in the venture capital market, which would have a positive impact on fostering innovative companies that can provide solutions for SMEs.

²⁹ Eurostat (2021).

³⁰ Eurostat (2021).

³¹ Eurostat (2020).

³² An RON/EUR exchange rate of 0.2 (January 2023) is assumed throughout this report.

³³ International Trade Administration (2021). Romania Country Commercial Guide. Available at: <https://www.trade.gov/country-commercial-guides/romania-information-communications-technology-ict>

³⁴ European Commission (2022). SME Country Factsheet Evidence Background Document — Romania. Available at: https://ec.europa.eu/growth/smes/sme-strategy/sme-performance-review_en#paragraph_887

³⁵ European Commission (2022). SME Country Factsheet Evidence Background Document — Romania. Available at: https://ec.europa.eu/growth/smes/sme-strategy/sme-performance-review_en#paragraph_887

Area	Description
Awareness and marketing (market matching)	<ul style="list-style-type: none"> ○ While venture capitalists are active in Romania, and increasingly so, most early-stage startups seek external incubator and accelerator programmes due to the nascency of the industry in Romania.³⁶ ○ While this may be true of many countries in Europe, in Romania this happens at much earlier stages of development.
Financial capabilities (demand and supply side)	<ul style="list-style-type: none"> ● When they do seek tech solutions, SMEs face some difficulty in navigating the existing tech options on offer and finding those that are most appropriate for their needs. <ul style="list-style-type: none"> ○ Some services exist to help match SMEs with solutions — for instance there are private sector companies providing a marketplace service and some digital innovation hubs support SMEs in finding solutions or even run matching “events” — but these services are fragmented and often regional, rather than national, meaning that SMEs do not have equal access across the country and that the service could be improved. ● Access to finance is a significant problem for Romanian SMEs. <ul style="list-style-type: none"> ○ According to the European Central Bank survey on the access to finance of enterprises (SAFE) for September-October 2021, the SMEs surveyed rated access to finance 6/10 in terms of the challenge it poses — this was the highest score in the EU27, where the average is 4.3/10.³⁷ ○ Only 19% of SMEs surveyed said they believed the availability of bank loans would improve in the next six months. ● Romanian SMEs engage less with banks than other EU countries, due to multiple factors. <ul style="list-style-type: none"> ○ Anecdotally, our interviews revealed feelings of hesitance on the part of SMEs towards banks, which is backed up by data showing that 31% of the Romanian adult population was unbanked in 2021.³⁸ ○ Our interviews also found that SMEs were often not creditworthy due to low income and high liabilities. OECD data supports this, showing that the total liabilities of Romanian companies (the vast majority of which are SMEs) on average accounted for 60% of total assets, and the average share of current liabilities to non-liabilities was 65%, compared to 23% in Austria and 46% in Germany. These figures are for 2018, but since the COVID-19 pandemic liabilities are likely to have only increased, given the reliance on financial support during the pandemic. ○ There is a significant issue of undercapitalisation of SMEs in the country. In 2020, the number of companies with negative capital was the second largest in Europe, with only 20% of companies being bankable and 22% of loan applications by SMEs rejected, compared to an EU average of 8%.³⁹ ○ In the SAFE survey for the third and fourth quarter of 2021, Romania had the highest proportion of SMEs reporting that their debt-to-asset ratio was increasing — 26% compared to an EU average of 18%. ○ Cost of finance is another barrier for SMEs. According to the SAFE survey, 23% of SMEs who had not accessed bank loans said that the reason was interest rates or prices being too high, and 20% reported that they were experiencing worsening interest rates. These data are from the third and

³⁶ European Commission (2022). SME Country Factsheet Evidence Background Document — Romania. Available at: https://ec.europa.eu/growth/smes/sme-strategy/sme-performance-review_en#paragraph_887

³⁷ European Central Bank. Survey on the access to finance of enterprises. Available at: https://www.ecb.europa.eu/stats/ecb_surveys/safe/html/index.en.html

³⁸ World Bank (2021). “The Global Findex Database 2021.” Available at: <https://www.worldbank.org/en/publication/globalindex>

³⁹ European Commission (2022). SME Country Factsheet Evidence Background Document — Romania. Available at: https://ec.europa.eu/growth/smes/sme-strategy/sme-performance-review_en#paragraph_887

Area	Description
	<p>fourth quarter of 2021; given the current global situation, this figure would likely be much higher if SMEs were surveyed now.</p> <ul style="list-style-type: none"> • Many SMEs do not view digitalisation as an investment priority, or feel they cannot afford it compared to other competing priorities. <ul style="list-style-type: none"> ○ This is partly due to some SMEs not seeing the benefits of digitalisation for their business, but also largely because there is a relatively long pay-off period for investment in digitalisation and, for SMEs with a small amount of money to spend, such investment is crowded out by other, more urgent priorities. ○ This is supported by data from the survey on the access to finance of enterprises, which shows that Romanian SMEs most commonly accessed financing for inventory and other working capital (49% of SMEs seeking financing for this). The second to last area for investment was to develop and launch new products or services, which include digitalisation efforts (24% of SMEs seeking financing for this). It should be noted that these figures are broadly in line with the EU average. ○ Other data also support the view that SMEs are more focused on managing short-term financial requirements than longer-term investment in productivity gains — 60% of Romanian SMEs reported the use of credit lines or overdrafts, as opposed to bank loans, which is significantly higher than the EU average of 48%. These are typically high-fee, last-resort methods of finance and not typically something a bank would advise an SME to rely on or use to source finance for an investment in, for instance, digitalisation. This suggests that SMEs are regularly experiencing unforeseen cashflow issues, which our interviews supported. ○ All the factors outlined above, such as perceived cost of debt, high leverage levels and debt-to-asset ratio for Romanian SMEs, also contribute to the current lack of adoption of digitalisation. • Most SMEs lack confidence/expertise (/cause) to talk to venture capitalists and equity investors, compared to banks. <ul style="list-style-type: none"> ○ Only 18% of Romanian SMEs feel confident talking to venture capitalists and equity investors, compared to 52% who feel confident talking to banks. • According to our interviews, there are no specific bank loans or similar financial products that are specifically targeted at digitalisation. While there is funding focused on this in the Recovery and Resilience plan (which includes a €300 million guarantee and direct lending financial instrument devoted to digitalisation, climate action and other areas, with a 16% target for digitalisation), the target beneficiaries are large mid-caps and large corporates, not SMEs.
<p>National strategy and coordination</p>	<ul style="list-style-type: none"> • While there is significant work taking place across government to digitalise both the government and the economy, Romania does not currently have a unified and coherent national strategy for the digitalisation of SMEs to provide overall coordination of efforts.

In summary, there are multiple, interconnected factors that are driving the relatively low digitalisation of Romanian small and medium enterprises:

- Broadly speaking, perhaps the primary challenge is that **digital skills are fairly low among the Romanian population** at large and therefore among many SME owners/employees. While the majority of the population do use digital technologies and the internet very regularly, the figures for use are lower than in many other European countries. Although there are high-quality ICT university courses and a relatively high proportion

of ICT graduates, this is not translating into ICT jobs within Romanian companies. Instead, specialists are working abroad (in a “brain drain”) or as independent contractors, where they can get more work and be better compensated.

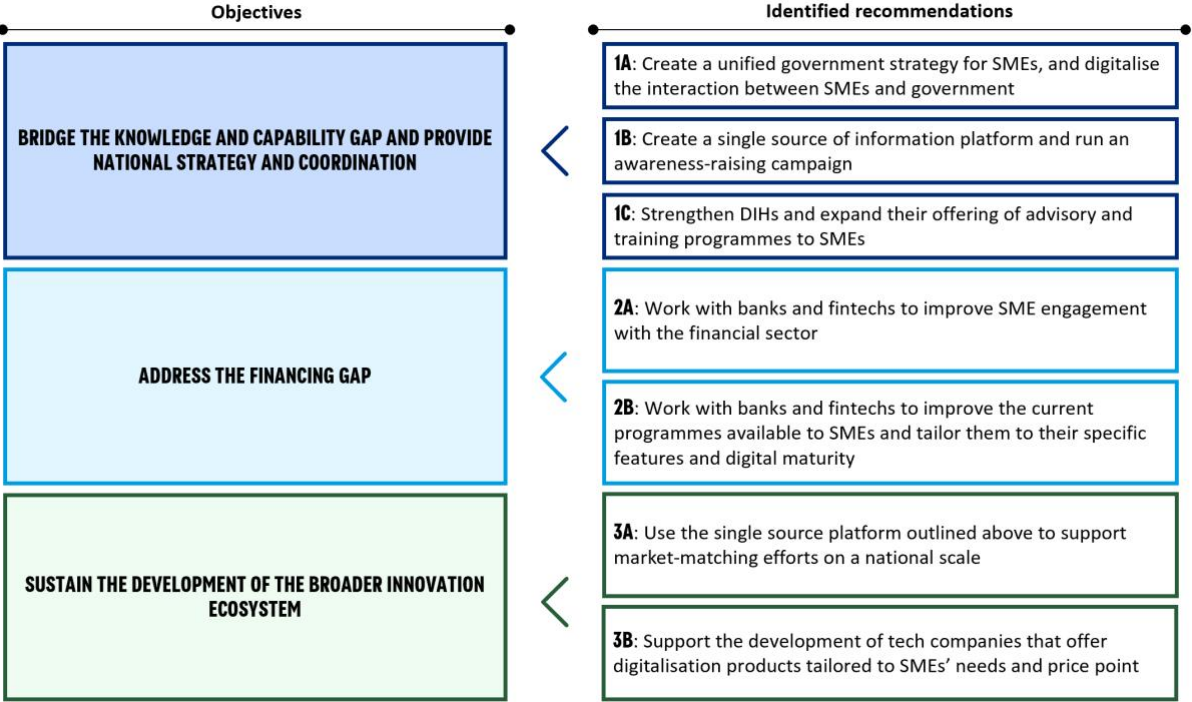
- Furthermore, very **limited digital skills training is provided within small and medium businesses**, on average. In turn, this drives low confidence among SMEs when it comes to digitalisation, with many either not fully aware of the benefits it can bring to their business or, more likely, not fully aware of how to digitalise and reap those benefits, with many perceiving the challenge of doing this to be greater than it is in reality. For the SMEs that do know how to get there, the financial realities of running an SME often mean that they cannot afford to digitalise, due to short-term financial pressures taking precedence or inability to access finance due to low creditworthiness.
- Finally, for those SMEs that can afford to digitalise, it can be **challenging to find the most appropriate products or services to help them get there**, either due to low awareness (or, on the flipside, limited marketing by tech companies offering these solutions). In addition, setting up or implementing these digital products or solutions would require greater in-house or contracted technological expertise (such as an IT specialist) than SMEs have or can afford, as the products are often not tailored to be accessible to non-experts.

However, the tide is already turning for digitalisation in Romania. There is a growing ecosystem of support for SME digitalisation, with high performing digital innovation hubs and clusters. The government is undertaking significant efforts to support digitalisation within its own operations (through the Authority for the Digitalisation of Romania’s work programme) and within the economy, most clearly shown through the focus on digitalisation in the Recovery and Resilience plan. The recommendations for further actions take this context into account and seek to build on the existing work and ecosystem in Romania, rather than to replace it.

Recommendations and international case studies

The study has identified three major objectives and grouped the recommendations in line with these. The recommendations should be read in the context of the European Commission’s Recovery and Resilience Facility (RRF), which fundamentally changes the quantum and type of finance in the SME market (and has a specific focus on the digital transition, among other key priorities). The assessment of the status of SME digitalisation and its financing in Romania, in combination with case studies worldwide, has highlighted the potential for improvements in the existing landscape. The bottlenecks identified require a strategic and comprehensive public-private response. Accordingly, the study identifies several potential initiatives that could address the Romanian government’s key objectives and be taken forward with relevant public and private sector organisations.

Figure 9: Overview of recommendations



(1) Bridge the knowledge and capability gap and provide national strategy and coordination

Our interviews found that perhaps the primary driver of low digitalisation among Romanian small and medium enterprises is limited digital skills and knowledge of how to digitalise, due to a lack of understanding of the benefits of digitalisation, what it entails and how to do it. As such, the study identifies several recommendations to increase their skills, awareness and capabilities.

Recommendation 1A: Create a unified government strategy for SMEs, and digitalise the interaction between SMEs and government

Despite significant work in this area, the Romanian government has not yet published an official digital strategy or similar plan to digitalise the economy in the way that many other countries' governments have (such as Denmark), although there are of course digital elements to many strategies and policies, in particular the national Recovery and Resilience plan.⁴⁰

Given the importance of small and medium enterprises for the Romanian economy and the country's very low performance in the Digital Economy and Society Index, we recommend that the government publish a digitalisation strategy focused on SMEs. This strategy does not necessarily need to create new initiatives, but is rather an opportunity to combine all the digitalisation efforts under a coherent vision (incorporating the initiatives already in place and those that are planned). This will provide direction and cohesion, and clarity for small and medium businesses, and reinforce the proposed initiatives. We recommend that initiatives within this policy are governed separately to the Romanian government's digitalisation programme led by the ADR, but it could be an additionally helpful step to govern all external-facing digitalisation policies, or at least those that relate to digitalising businesses, within one government department (at present, multiple departments cover digitalisation). We understand the Ministry of Entrepreneurship and Tourism is working on a strategy for innovative SMEs (covering the period 2022-2027), so an assessment could be carried out on whether that is the right place to include it.

⁴⁰ <http://mfe.gov.ro/pnrr/>

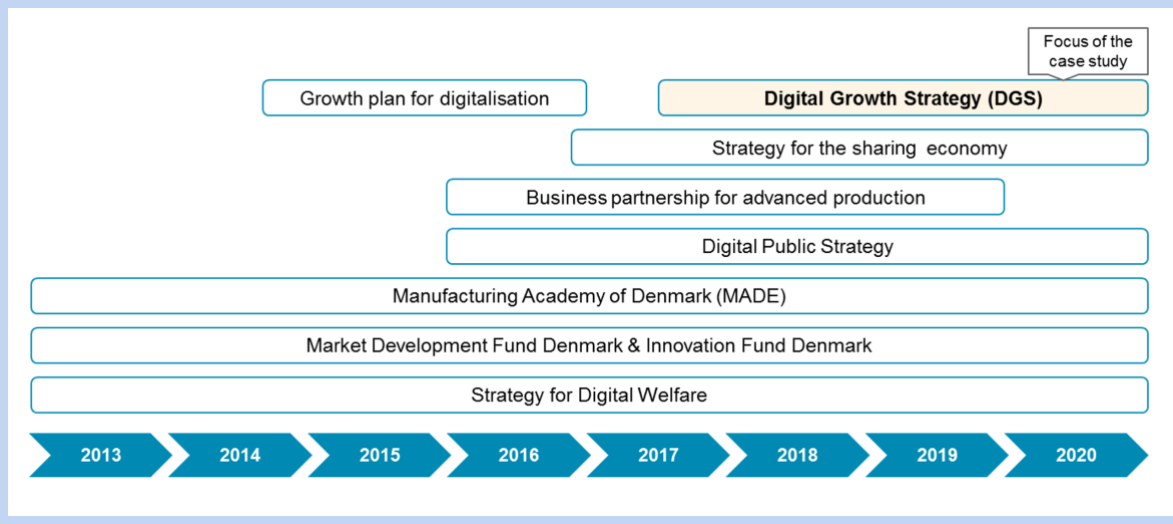
Case study: Denmark's digital growth strategy

Denmark has been among the most digitalised countries in the world for many years, regularly ranking near or at the top of the DESI.

Successive Danish governments have been strongly committed to the digitalisation agenda from an economic growth perspective. In 2011, the government commissioned “growth teams” composed of experts to provide recommendations for specific growth plans in areas with a competitive potential for Denmark. The development of a national digital growth strategy has been on the political agenda since 2013 when the first government growth team for ICT and digital growth (comprised of 12 experienced business leaders, entrepreneurs and knowledgeable individuals from the Danish ICT community) was commissioned to come up with ideas to support ICT strongholds in Denmark and to strengthen the competitive power of Danish companies through the increased use of digitalisation.

On 26 February 2018, the Danish government launched the Digital Growth for Denmark Strategy (DGS), consisting of 38 initiatives that aim to put Denmark at the forefront of digital development. One of the strategy's key objectives is to create a more dynamic business environment for Denmark's small and medium-sized enterprises and to support their digital transformation.

Figure 10: Overview of national initiatives related to digitalisation in Denmark⁴¹



Moreover, having historically been very analogue, the Romanian government is currently undergoing a significant programme — largely driven by the ADR — to digitalise both its own internal operations and the way in which it interacts with people and businesses. In relation to this, there has been a cross-government effort to digitalise interaction with businesses, for instance through e-signatures and by taking tax-related matters online. This is a positive step — we have seen examples in other countries of government taking similar measures and small and medium businesses going on to further digitalise other processes as a result of their improved digital literacy, for instance the e-Estonia programme. However, our interviews revealed that some SMEs are struggling to meet the requirements as they are simultaneous rather than sequential, and many do not have the in-house expertise to ensure compliance with the new requirements within the requisite timelines. This may be due to a lack of communication rather than planning.

Given the high potential for the positive impact of such measures, we recommend that the Romanian government systematises and doubles down on these efforts and provides additional guidance and support to small and medium businesses on meeting the new requirements. For instance, systematising could consist of spreading out the deadlines for when the requirements need to be met by and coming up with and communicating a programme of current and future requirements with a staggered timeline, so that businesses can plan ahead but also manage requirements capacity-wise. In terms of doubling down, we recommend

⁴¹ Oliver Wyman analysis based on Denmark as a digital frontrunner, Digital Growth Panel, May 2017.

increasing the number of interactions and processes that are digital, ultimately aiming to digitalise all touchpoints.

Case study: e-Estonia and the digitalisation of central government

Despite its relatively small size, Estonia is a highly developed digital economy, ranking seventh in the European Commission's 2021 Digital Economy and Society Index, ahead of many larger and richer nations such as France, Germany and Italy. This result is driven mainly by digitally enabled government services and a digitally skilled population.⁴² In particular, Estonia leads Europe in the digital public services dimension of the index, having digitalised many bureaucratic services. It scored 91.8 in this area, which is 23.7 points higher than the EU average of 68.1⁴³.

In the 1990s, the government introduced the "e-Estonia initiative", which has been a key contributor to Estonia's digitalisation (especially regarding digital public services) and aims to facilitate interactions between Estonian people, businesses and the government via the provision of thousands of public e-services and solutions.⁴⁴ These e-services and solutions, such as the e-ID, the x-Road and the e-business register have streamlined many processes and enabled numerous initiatives such as the e-residency programme, further boosting Estonia's economic development, and saving individuals and businesses resources by reducing bureaucratic complexity.

It is estimated that the e-Estonia initiative has contributed an additional €27 billion to €31 billion to Estonia's GDP (according to a study carried out by Enterprise Estonia).⁴⁵ E-services and solutions are claimed to have made the interaction between people, businesses and the government faster and more effective: it is estimated that the reduction in bureaucratic complexity has saved Estonia 2% of GDP every year.⁴⁶ This initiative has also helped to create a business and private population that has a high propensity to use digital solutions. Today, most Estonians use the government e-services and solutions daily (99% of Estonians now declare their income online).⁴⁷ Moreover, these services have contributed to the growth of a vibrant ICT sector that accounts for 7% of GDP and employs 5.9% of the workforce.

Over the last 20 years, various government services and solutions have been launched in their digital iteration, such as government ID cards, medical prescriptions and electronic voting for government elections.

Recommendation 1B: Create a single source of information platform and run an awareness-raising campaign targeted at SMEs

We recommend that the government creates a single source of information on SME digitalisation in order to help reduce the complexity and fragmentation related to the many stakeholders involved in the innovation ecosystem and the services they offer. This could be an online platform working as a single point of access for all digitalisation-related information, pointing small and medium enterprises to the most appropriate type of support and/or stakeholder. This single point of entry would leverage content and materials that already exist, helping to reduce the complexity of the ecosystem. Key innovation stakeholders (such as business associations, digital innovation hubs and tech clusters) would also have the opportunity to improve coordination and scale up their expertise. Such a platform could be built iteratively — starting with the bare bones of information and going from there, with a facility for adding new information and resources as they are developed. Additionally, part of the Recovery and Resilience Facility funds could potentially be deployed via this platform, for instance a business could access such funding for digitalisation through the platform. We also understand that the Ministry of Entrepreneurship and Tourism is working on a new platform (the "SME mentor") that aims to be a single source of information for small and medium businesses on digitalisation.

⁴² European Commission. Estonia in the Digital Economy and Society Index. Available at: <https://digital-strategy.ec.europa.eu/en/policies/desi-estonia>

⁴³ European Commission. Estonia in the Digital Economy and Society Index. Available at: <https://digital-strategy.ec.europa.eu/en/policies/desi-estonia>

⁴⁴ E-Estonia guide (2023). Available at: <https://e-estonia.com/facts-and-figures/>

⁴⁵ E-Estonia guide (2023). Available at: <https://e-estonia.com/facts-and-figures/>

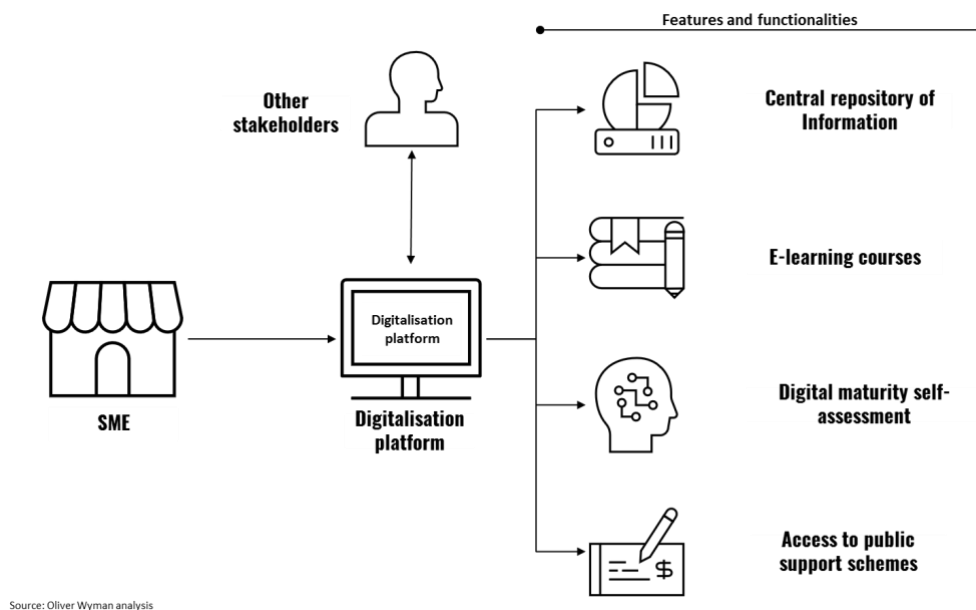
⁴⁶ E-Estonia (2019). Estonia to share its e-government know-how. Available at: <https://e-estonia.com/global-digital-society-fund/>

⁴⁷ E-Estonia guide (2023). Available at: <https://e-estonia.com/facts-and-figures/>

In terms of structure, the single source of information could include:

1. Central repository of information, for example on the role of different stakeholders for each sector, the available technologies, services, regulation (e.g. on data privacy and cybersecurity)
2. E-learning courses/training materials (e.g. on changing business processes, redesigning jobs and upskilling the workforce, and managing the implementation of digital technology)
3. 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)
4. Streamlined access to public support schemes and financing programmes available to the industry (e.g. the Recovery and Resilience Facility).

Figure 11: Overview of functionality of the single source of information (digitalisation platform) for SMEs



Source: Oliver Wyman analysis

In conjunction with the single-source platform, the government should launch an awareness-raising campaign targeted at small and medium businesses. Such a campaign could be run at a local and/or national level, but should be sure to include parties with whom such businesses already interact and trust, whether these are business associations, chambers of commerce, digital innovation hubs, clusters, accountants or others. The campaign should focus on the benefits of relatively low-cost investment in digitalisation and make it clear where SMEs can find additional information. Ideally, a campaign would surround the launch of a single-source and/or government digitalisation strategy and include other key players in the ecosystem. An example of such a campaign is the European Digital SME Alliance's post-COVID campaign #digitalSME4skills that used this hashtag and badge with participating organisations that offered digital skills training to raise awareness.

Recommendation 1C: Strengthen digital innovation hubs and expand their offering of advisory and training programmes to SMEs to improve their digital skills, help them identify opportunities from digitalisation, and set out the business case for digital investments

Digital innovation hubs are a key player in the national innovation ecosystem, with a strong presence at European level. The European Commission defines them as "a support facility that helps companies to become more competitive by improving their business/production processes, products and services through digital technologies." These hubs focus specifically on small and medium enterprises, mid-caps and low-tech companies, involving different kinds of entities such as technology suppliers, universities, industry associations, incubators and investors and operationally managed by an assigned coordinator. They provide many different types of support to Romanian small and medium businesses. This can include education and skills-based training, providing information and advice on how to undergo digital transformation, accessing finance, and making connections with other small businesses with similar experiences or tech companies offering relevant solutions to firms that want to digitalise a particular part of their business. Digital innovation hubs are run regionally and can therefore offer a tailored solution to the SMEs in their area. Many local hubs were established before the European Commission established the European digital innovation hub (EDIH) programme, and some have now successfully applied to become EDIHs.

Despite various initiatives that exist at a national and regional level, Romanian small and medium enterprises still face significant hurdles in their attempts to digitalise, with the limited digital skills and knowledge of how to digitalise acting as a persistent, pervasive barrier. Working with other players in the ecosystem (such as business associations, tech clusters and accountants), digital innovation hubs could expand their offering of advisory and training programmes to SMEs in order to improve their digital skills, help them identify opportunities from digitalisation, and set out the business case for digital investments (to improve their chances of getting financing). This should be done alongside and in addition to recommendations 1A and 1B (to avoid creating further fragmentation). This offering should be fine-tuned to different classes of small and medium businesses, for example:

- Less advanced (and likely smaller) SMEs that need to be “accompanied” throughout the whole digitalisation journey, from the identification of the opportunity to the integration in their business.
- More advanced (and likely larger) SMEs that only need support in a specific step of the digitalisation journey (such as developing the business case for digitalisation financing).

Due to their key role in the market, the Romanian government should ensure that there is sufficient coverage of digital innovation hubs (or affiliates) across the country, including and most importantly the regions that are lagging behind. In Romania, the first hubs were established in 2020; as of June 2022, it had seven in regions across the country.⁴⁸ More broadly, the Romanian government could focus on strengthening its role via some of the recommendations included in the recent EIB report on the topic (such as diversifying their funding sources, expanding their network, providing training to hubs), possibly also leveraging Recovery and Resilience Facility funds for that purpose.⁴⁹

(2) Address the financing gap

A key factor preventing many Romanian small and medium businesses from digitalising is a lack of access to capital to invest in digital products and solutions, or in building digital skills. As outlined above, this is driven by several factors: their apparent reluctance to seek traditional financing, for instance bank loans; competing priorities, meaning that investments with a long-term view such as digitalisation are typically low on the agenda, and many companies’ low creditworthiness, meaning they are not or would not have loans approved even if they applied.

Recommendation 2A: Work with banks and fintechs to improve SME engagement with the financial sector

Many small and medium businesses are currently excluded from traditional financial services in Romania. Getting them to engage with financial services, either through banks or through more innovative fintech players, is a key step to supporting their digitalisation journeys, in particular through providing access to finance. Anecdotally, we have been told that this is partly driven by resistance on the part of SMEs, which is backed up by data showing that a large proportion of the Romanian adult population is unbanked (this figure was 42% in 2017 and went down to 31% in 2021).⁵⁰

Supporting banks in deploying targeted outreach efforts to small and medium businesses should be the first step to increasing their engagement with financial services. The Romanian government and the EIB Group already work extensively with banks in Romania, such as Banca Transilvania, CEC Bank, ProCredit Bank and others to provide finance products to SMEs. The Romanian government also launched the new IMM Invest Plus Programme with guarantees for loans and grants that will cover six different areas (IMM Invest Romania, Agro IMM Invest, IMM Prod, Garant Construct, Innovation and Rural Invest), including an innovation window that will provide guarantees for up to a total of €153 million. It is our recommendation to double down on these initiatives, and work with these and other banks on targeted outreach efforts to engage an increasing share of small and medium businesses in the financial system, particularly in those areas and sectors where their engagement with financial services is the lowest.

In addition to banks, the Romanian government and the EIB Group (in particular the EIF) could work with other financial services players and alternative finance providers, such as non-banking financial institutions and

⁴⁸ European Commission (2020). EDIH evaluation — Romania. <https://www.adr.gov.ro/wp-content/uploads/2022/06/EDIH-eval-panel-overview-Romania.pdf>

⁴⁹ European Investment Bank (2020). “Financing the digitalisation of small and medium-sized enterprises: The enabling role of digital innovation hubs.” Available at: https://www.eib.org/attachments/thematic/financing_the_digitalisation_of_smes_en.pdf

⁵⁰ World Bank (2020). “Financial Inclusion In Romania: Issues and Opportunities.” Available at: <https://documents1.worldbank.org/curated/en/830431587015032573/pdf/Financial-Inclusion-in-Romania-Issues-and-Opportunities.pdf>; World Bank (2021). “Global Findex Database.” Available at: <https://www.worldbank.org/en/publication/globalfindex>

fintechs, to diversify and improve their engagement with small and medium enterprises. We were told in interviews that non-banking financial institutions have already proven a successful operating model with the EIB Group under the Employment and Social Innovation (EaSI) Programme for example. Moreover, fintechs have proven to be attractive financing partners for SMEs as they often use non-traditional data to assess creditworthiness and for this reason are more likely to offer credit with less credit history. Fintechs are also typically more comfortable than banks in offering long-term unsecured loans, which is an attractive offering for SMEs.⁵¹ There is also significant room for growth in the Romanian fintech market in terms of number of players and number of organisations engaging with them. The EIF could work with local and international players operating in Romania to support outreach efforts, leveraging both its guarantee and venture capital products to support their expansion in favour of the unbanked SME population.

Recommendation 2B: Work with banks and fintechs to improve the current programmes available to SMEs and tailor them to their specific features and digital maturity

Even for those small and medium businesses that engage with the financial sector, this report has found that they struggle to access the required resources to prioritise investments in digitalisation (whether these are grants or loans). The EIB Group and the Romanian government should work with banks and fintechs to improve the current programmes available to SMEs and maximise reach and impact.

For example, the EIB Group and the Romanian government could explore ways to link existing EIB-backed financing to the digitalisation grants included in the Romanian Recovery and Resilience Facility. This would create a sort of blended SME financing programme available to small and medium businesses where EIB-backed financing (deployed through banks) is partly matched by the Romanian government through Recovery and Resilience Facility grants (up to a certain threshold and based on pre-defined eligibility criteria). In practice, this could work in different ways with one option outlined below:

- If an SME wants to finance a digitalisation project that costs €10 000, they would ask their bank for a loan (assuming it is an EIB partner bank). If the financing is approved by the bank and the digitalisation project meets pre-defined grant eligibility criteria (also checked by the bank), the company would have access to the digitalisation grant provided by the Romanian government (e.g. up to €3 000), with the remaining cost of the project being financed through the EIB-backed loan (in this case €7 000).
- The grant would only be available for projects for which loan financing has been approved, thus improving the accountability and incentives for the company to put the funds received to a good purpose (vs. a grant-only situation). Moreover, the grant agreements would only be signed after the signature of the associated financing contracts, and the two decisions will be distinct.
- This mechanism could be limited to grant-eligible digitalisation projects only. Instead, for projects that do not meet the pre-defined grant eligibility criteria, a standard financing route would apply.
- There could also be the possibility to vary grant eligibility criteria depending on certain SME characteristics, to incentivise those that are currently not engaging with the financial sector (so that for example they would have a higher grant proportion).

This mechanism (or a variation of it) could help small and medium businesses get financing that they would otherwise not have access to, and on better terms (such as lower interest rates due to the grant component). In addition, it would enhance their engagement with financial institutions thanks to one approval process covering both the grant and the loan.

The EIB Group has had good experience in partnering with banks in Romania. Below are some examples of these collaborations that could be used as a basis for testing the initiative described above in conjunction with the recently launched Recovery and Resilience Facility grants:

- **EIB loans for intermediaries:** The EIB has provided financing to commercial banks (for instance Banca Transilvania, CEC Bank, ProCredit Bank and others) that then use these funds to provide financing (typically through loans) to small and medium businesses with specific conditions tailored to their needs.
- **EIF guarantees on bank loans for Romanian SMEs, lowering interest rates charged by banks:** This was achieved through the **SME Initiative Romania**. The EIF used European Structural and Investment Funds (ESIF) resources, leveraged with commercial lending (CEC Bank, Banca Comercială Română (BCR), BRD — Groupe

⁵¹ European Central Bank (2022). "The real effects of FinTech lending on SMEs: evidence from loan applications." Available at: <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2639~849f8a2608.en.pdf>

Société Générale, Libra Internet Bank, ProCredit Bank, Raiffeisen Bank and UniCredit) to provide total funding under the SME Initiative Romania of up to €1.38 billion.⁵²

An example of similar EIB-backed blended financing already in place is the Alternative Fuels Infrastructure Facility, which is available at EU level alongside EIB loans with available EU grants.

(3) Sustain the development of the broader innovation ecosystem

Recommendation 3A: Use the single-source platform outlined above to support market matching efforts on a national scale

When small and medium businesses do seek tech solutions, they often face some difficulty in navigating the existing tech options on offer and finding those that are most appropriate for their needs. While some services exist to help match them with solutions — for instance there are private sector companies⁵³ providing a marketplace service and some digital innovation hubs/clusters⁵⁴ support SMEs in finding solutions or even run matching “events” — these services are fragmented and often regional, rather than national, meaning that companies do not have equal access across the country and that the service could be improved.

We recommend that the Romanian government use the single-source platform outlined above to better support SMEs in accessing available home-grown Romanian tech solutions and products by supporting market matching efforts. A first step would be to link existing matching services and providers (private sector solutions and tech clusters/digital innovation hubs offering this service) on the platform. The government could also support efforts to create similar solutions in other areas of Romania through other clusters or hubs, either financially or by providing connections and advice — all housed on the single source of information platform. A more significant solution — which would require more investment and time — would be to sponsor the creation of an additional offering on the platform to match demand and supply for digital solutions. Such an integrated platform would house a “menu” of pre-approved and curated digital solutions available to small and medium businesses in specific sectors (starting with selected strategic sectors). The purpose of the platform would be to facilitate the choice of suitable digital solutions (among the many available on the market). We understand the Ministry of Entrepreneurship and Tourism is developing a project to create a comprehensive platform to support SMEs under five pillars, which could be an opportunity to include a marketplace for SME solutions (e.g. administrative, technological and operational).

Case study: Singapore’s SME Go Digital programme

Launched in 2017 by two government agencies, the SME Go Digital programme aims to increase productivity by facilitating digitalisation among small and medium businesses via a marketplace platform to facilitate the matching of supply and demand for SME digital solutions. In particular, the programme includes **sector-specific one-stop portals for SMEs and tech vendors**, with practical support available at every stage:

- **Industry digital plan (IDP):** Guide on digital solutions and training required for each stage of SME business growth.
- **Start digital pack:** Foundational digital solutions for new SMEs, to help them get a head start in going digital.
- **Pre-approved solutions:** Proven SME-friendly digital solutions pre-approved by IMDA to meet business needs. Government grants, such as the Productivity Solutions Grant (PSG), are available for the adoption of these solutions.
- **Digital project management services:** Project managers with expertise in supporting SMEs in implementing digital solutions.
- **Consultancy services (SME Digital Tech Hub):** Expert advice SMEs can tap into to transform their business using digital technologies.
- **Grow digital:** Business-to-business (B2B) and business-to-consumer (B2C) e-commerce platforms that SMEs can leverage to go global.

⁵² European Investment Bank (2019). SME Initiative: EIB Group substantially expands its support to Romanian businesses, thanks to EU funds. Available at: <https://www.eib.org/en/press/all/2019-252-sme-initiative-eib-group-substantially-expands-its-support-to-romanian-businesses-thanks-to-eu-funds>; European Investment Fund (2018). SME Initiative Romania (original phase later expanded with additional ESIF funding). Available at: https://www.eif.org/what_we_do/guarantees/sme_initiative/sme_romania/index.htm

⁵³ For instance Softlead: <https://softlead.ro/>

⁵⁴ For instance, the Transilvania IT cluster/Transilvania DIH.

- **Digital resilience bonus:** Bonus to help enhance small and medium businesses' digital capabilities to emerge stronger after the crisis period, starting with the food services and retail sectors.

The most successful feature of this platform is the presence of proven SME-friendly digital solutions, which are pre-approved before being put on the platform. Companies that are interested can choose from among these solutions and get direct government grants (if they fulfil certain pre-defined criteria).

Recommendation 3B: Support the development of tech companies that offer digitalisation products tailored to SMEs' needs and price point

We recommend that the Romanian government, with EIB Group support where required, develop a programme to drive innovation in the country. This could be through multiple avenues:

- Increase funding for innovative companies, either directly or by incentivising/supporting finance providers such as venture capital and private equity; relevant financing products could take the form of, for instance, equity, venture debt and mezzanine. The EIB Group has already deployed a number of programmes in Romania, such as InnovFin and COSME (implemented by the EIF), although we understand that demand for these was relatively low in Romania.
- Launch competitions/hackathons to find targeted digital solutions and/or proof of concepts to address specific SME needs, potentially with a loan attached (see, for example, UK innovation loans).⁵⁵

Part of the funding for this could come from the €350 million set aside to support SME digitalisation as part of the Recovery and Resilience Facility.

Additional efforts to develop the innovation and digitalisation ecosystem

This study and other similar studies focused on the digitalisation of SMEs in other European countries have consistently found that they benefit in terms of digitalisation from the network effects of a strong innovation and digitalisation ecosystem. A strong ecosystem includes efforts and factors from across the public and private sectors like digital innovation hubs, tech clusters, government direction and programmes, focused public and private funding, a healthy venture capital and private equity environment, and thriving businesses and universities.

All of the proposals outlined above will help to develop the innovation and digitalisation ecosystem in Romania both individually and in combination. There are some additional measures that will also support this system that could be explored:

- Building greater links within Romania between leading businesses in different industries, for instance between manufacturing organisations (either Romanian or foreign organisations with operations in Romania) and leading Romanian tech organisations such as UiPath. Some interviews found that these relationships could be strengthened, bringing benefits to the network. For instance, this could involve creating networking opportunities, creating joint working groups on major digitalisation issues to bring these groups together, or supporting capacity-building efforts by tech organisations for manufacturing companies.
- Strengthening the relationship between universities and small and medium businesses. There are already well-established, high-functioning programmes between Romanian universities and major international companies such as Google, Amazon and Bosch, but according to interviews, there are no research activities which, on a large scale, involve SMEs. A potential way to do this would be to make some research funding for universities contingent on finding SME partners, or vice versa.

To conclude, it is important to also note that the timely implementation of Romania's Recovery and Resilience Facility will be key to effectively implementing the recommendations in this report. If executed well, the plan will deliver a strong combination of reforms and investments addressing some of the challenges that — as highlighted above — many Romanian small and medium businesses face on a daily basis, such as connectivity limitations in rural areas, digital skills gaps, and many others. The Recovery and Resilience Facility will work in synergy with the recommendations provided in this document, for example investing significant resources in promoting the adoption of advanced technologies (e.g. blockchain, artificial intelligence and quantum computing) specifically among SMEs, along with the digitalisation of several aspects of public administration. The Recovery and Resilience Facility and the implementation of the recommendations in this study represent a

⁵⁵ UK Research and Innovation. Innovation loans. Available at: <https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/guidance-for-specific-funds/innovation-loans/>

historical opportunity to pave the way for long-term success in lowering the barriers that are preventing the digitalisation of SMEs in Romania and ultimately to support their growth. Successful implementation will also need a consistent policy framework and commitment to “stay the course” and recognise that the benefits will come over time, as is evidenced in the case studies presented in this report.

Digitalisation of SMEs in Romania

An assessment of the level of digitalisation of SMEs in Romania and recommendations to increase their level of digitalisation

June 2023

