

STUDY

Requested by the ECON committee



# Addressing the challenges of the digital transition in national RRF plans:

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Measures to support digitisation of SMEs



External authors:

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*Supporting EU economic governance scrutiny*





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## Measures to support digitisation of SMEs

### **Abstract**

This paper considers initiatives funded by the RRF to support SMEs in the digital transition. It concludes that while there are many areas of good practice, risks remain due to the lack of outcome-based targets, the complexity of some schemes and relatively low levels of funding in relation to the ambition in some cases. Introducing targets based on (preferably harmonised) skills frameworks and digital maturity assessments could help establish the value add of initiatives to support SMEs.

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## LIST OF ABBREVIATIONS

<b>5G</b>	Fifth Generation mobile
<b>AI</b>	Artificial Intelligence
<b>CRM</b>	Customer relationship management
<b>DESI</b>	Digital Economy and Society Index
<b>DIH</b>	Digital Innovation Hub
<b>EU</b>	European Union
<b>FTTP</b>	Fibre to the Premise
<b>FWA</b>	Fixed Wireless Access
<b>HPC</b>	High Performance Computing
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>R&amp;D</b>	Research and Development
<b>RRF</b>	Recovery and Resilience Facility
<b>RRP</b>	Recovery and Resilience Plan
<b>SME</b>	Small and Medium size Enterprise

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## EXECUTIVE SUMMARY

### Background

Digital technologies are an important driver of economic growth. They can improve internal business processes and support development of products and services, including breakthrough innovations, as well as supporting businesses to expand in new markets and/or new geographies.

The European Commission's DESI index, which measures digital intensity of businesses in fields such as the use of e-commerce, cloud services and artificial intelligence (AI), shows that there has been progress in certain countries, but gaps remain and improvements have been gradual, particularly amongst SMEs. For example, in 2021 only 18% of EU SMEs were selling online and 14% of EU enterprises (of all services) were making use of big data. This falls far short of the Digital Decade targets which require that more than 90% of European SMEs should reach at least a basic level of digital intensity, and 75% of EU companies should use cloud, AI and big data.

### Initiatives to support digitisation of SMEs under the RRF

The Recovery and Resilience Facility (RRF) aims to provide funding to support initiatives which address this gap. The 26 plans that have been approved thus far contain measures worth €24 billion to support the digitisation of business with a further €18 billion supporting digital-related R&D and the deployment of digital capacities.

Some Member States have devoted significant resources via their Recovery and Resilience Plans (RRPs) to business digitisation. For example, authorities in Greece, Italy and Spain have targeted spending for the "digitisation of business" which amounts to around €2,000 or more per SME. An examination of the RRFs in 6 Member States reveals several examples of good practice, including:

- Providing "Digital Maturity" Assessments to SMEs and establishing a skills framework e.g. in Latvia
- Setting concrete outcome-based targets with reference to improvements in digital maturity and skills e.g. in Latvia and committing to produce an independent report on the achievements of the digital strategy e.g. in Denmark;
- Establishing European Digital Innovation Hubs as a "one-stop-shop" for a range of support to SMEs e.g. in Latvia;
- Digital transition and innovation in the production system in Italy
- Initiatives covering multiple facets of support to SMEs e.g. in Portugal and Spain
- Targeted support for quantum computing research in Austria
- Establishing a "steering group involving SMEs" to advise on a new Digital Strategy in Denmark

### Possible risks and recommendations

However, a number of gaps and risks remain that could undermine achievement of the RRF goals. These are described, alongside possible recommendations below.

Table 1: Gaps and solutions

	Problem or risk	Possible solution
1	Many initiatives extend or expand pre-existing initiatives and thus the value added of EU funding is unclear	To assess “additionality” of the RRF measures on digitising industry/SMEs, a record should be made regarding pre-existing initiatives and associated funding (and funding sources) prior to the RRF. The European Parliament has already made proposals to this effect in its June 2022 resolution on Implementation of the RRF. <sup>1</sup>
2	Some programmes may not cover (or effectively balance) the different forms of support that are needed to facilitate SME digitisation e.g. skills alongside investment and access to connectivity	Member States could consider complementing existing measures under the RRF to support SME digitisation with other measures that may be needed in tandem to ensure that it can be effectively utilised. MS could also usefully draw on the extensive array of best practices that have been developed through the EC’s digitising industry, skills and broadband initiatives.
3	There is a risk that some programmes could be too complex or lack co-ordination resulting in inefficiencies	Member States could consider consolidating or co-ordinating initiatives to simplify the interface with SMEs. One example could be to use Digital Innovation Hubs (DIH) (or another similar system) as a “one-stop-shop”
4	Funding could be too low in relation to the number of SMEs that require support. Funding may also not be targeted at the SMEs that require most support.	The level of funding in relation to the number of eligible businesses and the targeting of funds towards SMEs which lack basic and/or advanced digital capabilities should be assessed when reviewing RRFs. In addition, Member States should be encouraged to split out the amount of the digital budget that is expected to benefit SMEs specifically.
5	Not all countries have included support or training for more advanced technologies	Member States which have not already encompassed more advanced technologies within their support and training programmes, could expand the scope of those programmes to ensure these capabilities are addressed, alongside basic capabilities.
6	Not all countries are supporting broadband upgrades which meet the digital decade targets	Member States which are currently seeking to support access to broadband connectivity (including to SMEs) at speeds of 100Mbit/s could update their ambition to achieve the universal availability of Gigabit connections through FTTP and (in remote areas) through 5G Fixed Wireless Access (FWA). There may also be a need to update the indicator regarding very high capacity broadband so that it refers to the more recent Digital Decade targets for Gigabit connectivity.
7	There is limited clarity in many cases regarding how data should be gathered and few Member States set outcome targets which would allow an objective assessment of the effectiveness, efficiency and wider impact of the measures taken. This is a problem which affects the RRFs as a whole	It could be recommended that Member States should elaborate on existing targets, to clearly identify in which circumstances an SME could be counted as having received financial or non-financial support, and what measures will be taken to avoid double counting (e.g. relating to repeat support or use of different mechanisms by the same business). We also recommend that Member States should set targets for different time periods reflecting the potential ramp-up in the uptake of programmes and should implement digital capability assessment tools and set outcome targets which track to what extent SMEs which have received support and/or funding have improved their digital capabilities. A similar approach can be taken with training

<sup>1</sup> See point 21 European Parliament (June 2022) Implementation of the Recovery and Resilience Facility, [https://www.europarl.europa.eu/thinktank/en/document/EPRS\\_ATA\(2022\)733533](https://www.europarl.europa.eu/thinktank/en/document/EPRS_ATA(2022)733533)

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and is not specific to digitisation initiatives. <sup>2</sup>	to measure actual outcomes regarding levels of digital skills. In order to facilitate cross-border comparisons, an EU-wide tool to assess the digital readiness of companies and to assess the degree of awareness and skills within the labour force of more advanced technologies could also be envisaged.
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Source: *Own elaboration*

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<sup>2</sup> Idem

# 1. INTRODUCTION

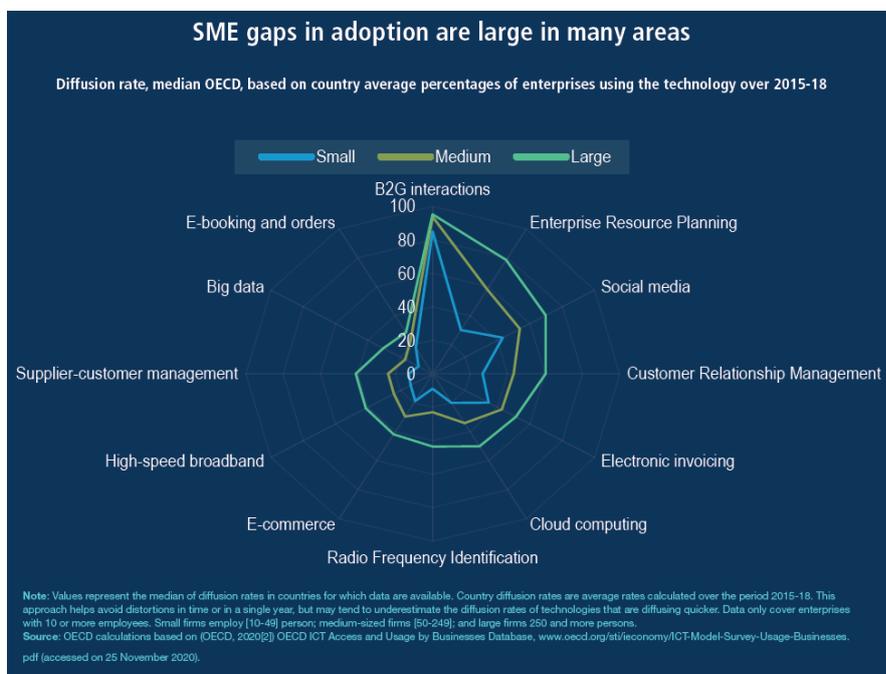
## 1.1. The importance of digitisation for SMEs

Digital technologies are an important driver of economic growth. They can improve internal business processes and support development of products and services, including breakthrough innovations, as well as supporting businesses to expand in new markets and/or new geographies.

However, making effective use of digital technologies can require investment in hardware and software (physically or in the cloud), as well as training in the skills to exploit the full potential of these technologies. Access to high-capacity broadband infrastructure is also a key element that businesses need to take advantage of data-driven tools.

An OECD report<sup>3</sup> from 2021 provides an interesting outlook on the status of digital transformation amongst SMEs. The report clearly shows that small firms are lagging behind in the digital transition compared with medium sized and large companies and that the digital adoption gap has widened further in recent years.

Figure 1: Gaps in SMEs adopting digital solutions



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

The report also underlines that there are significant differences in the intensity of digital adoption and types of tools adopted. For example, in knowledge-intensive sectors, such as information and communication services, adoption rates are significantly higher with 90% of employees in SMEs having access to devices with an online connection, compared with an average of 50% across all sectors. The importance of different digital tools varies between sectors. For example, while having a high-speed broadband connection, a website and using cloud services to store files adds significant value for SMEs in the accommodation and food services sector, in the wholesale sector, key technologies are electronic sales, the use of cloud to host databases and the training of ICT specialists.

<sup>3</sup> OECD (January 2022) *The Digital Transformation of SMEs* <https://www.oecd.org/industry/smes/PH-SME-Digitalisation-final.pdf>

Although, the COVID-19 crisis acted as a game-changer in driving companies towards digital transformation and new business models, the OECD report notes that longer term structural barriers remain for SMEs to embrace the digital transition, including gaps in digital skills, access to finance and access to appropriate infrastructure.

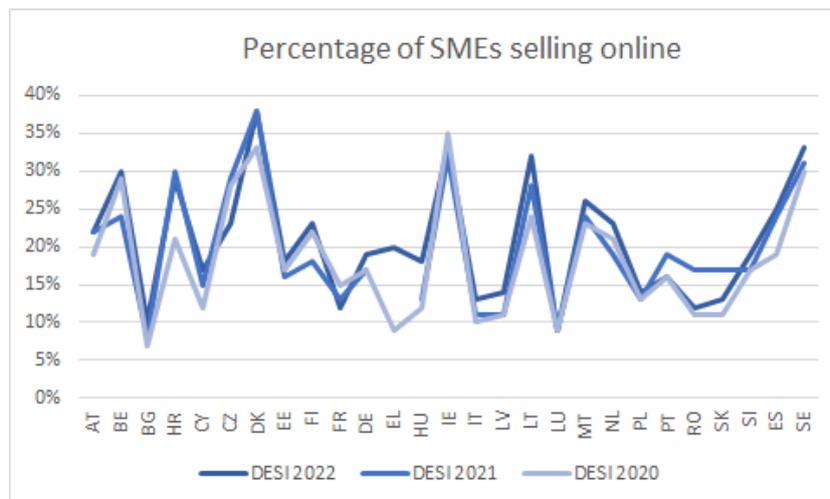
## 1.2. Progress in digitisation in Europe

At European level, the Digital Economy and Society Index (DESI) « Integration of new technologies » monitors the digitisation of businesses and e-commerce via a “Digital Intensity Index” (DII) as well as through metrics which track the adoption by businesses of advanced digital technologies such as cloud, AI, and big data processing.

The evolution of these indicators in the past 3 years shows that there has been progress in certain countries, but gaps remain and improvements have been gradual, particularly amongst SMEs. For example, as can be seen from the following two diagrams:

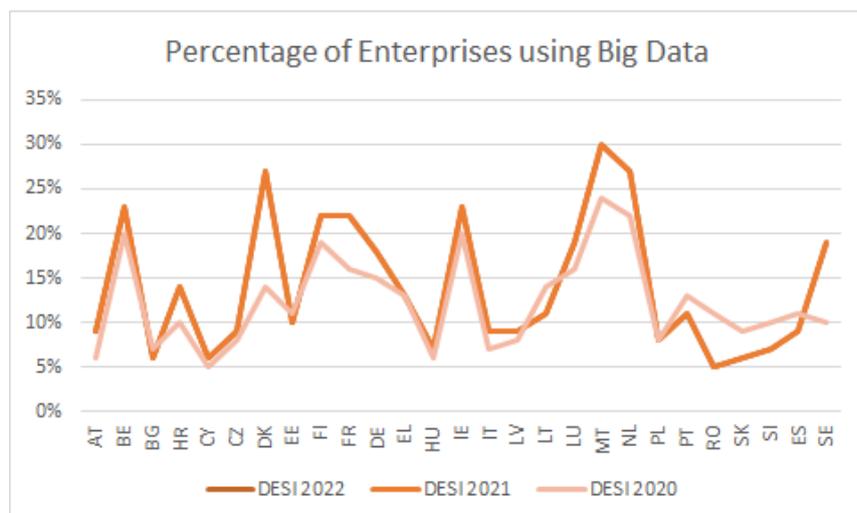
- Only 18% of EU SMEs were selling online in 2021; and
- Only 14% of EU enterprises (of all services) were making use of big data

Figure 2: Percentage of SMEs selling online



Source: European Commission – DESI EU Digital Scoreboard

Figure 3: Percentage of enterprises using big data



Source: European Commission – DESI EU Digital Scoreboard

### 1.3. EU targets for digitisation and the role of the RRF

In light of Europe’s weakness in the digitisation of businesses, the European Commission has set out ambitious targets in the context of Europe’s Digital Compass Strategy<sup>4</sup> for the integration of digital technologies by 2030:

- 90+% European SMEs should reach at least a basic level of digital intensity<sup>5</sup>
- 75% of EU companies should use cloud, AI and big data; and
- An ambition to grow scale ups & finance to double EU Unicorns.

In order to contribute to meeting these targets, the Recovery and Resilience Facility requires Member States to devote a minimum of 20% of the funding they seek in connection with their Recovery and Resilience Plans to measures related to digital technologies. This has meant that the 26 plans that have been approved thus far (representing in total €128m as the “digital budget”) contain measures worth €24 billion to support the digitisation of business with a further €18 billion supporting digital-related R&D and the deployment of digital capacities<sup>6</sup>.

### 1.4. Purpose of the paper

In this paper we describe the overall levels of digital support measures for SMEs and examine 6 RRFs in more detail with a view to assessing to what extent the initiatives pursued and associated budgets are likely to meet the requirements of the programme, how their effects are monitored and what could be

<sup>4</sup> Europe’s Digital Decade [https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en)

<sup>5</sup> The EU Digital Intensity Index (DII) measures the use of different digital technologies by enterprises and its score (0-12) is determined by how many of the 12 selected digital technologies the enterprises use. In 2020 2020, the DII composition comprised the following 12 variables: more than 50% of persons employed having access to the internet for business purposes, employment of ICT specialists; fast broadband (30 Mbps or above); providing more than 20% of persons employed with a portable device allowing mobile internet connections; having a website; a website has sophisticated functionalities (at least one of: description of goods or services, price lists; possibility for visitors to customise or design online goods or services; tracking or status of orders placed; personalised content in the website for regular/ recurrent visitors); use of 3D printing; buying medium-high cloud computing services; sending invoices suitable for automated processing; use of industrial or service robots; having e-commerce sales accounting for at least 1% of total turnover; analysing big data internally from any data source or externally. <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20211029-1#:~:text=The%20DII%20measures%20the%20use,very%20low%20to%20very%20high.>

<sup>6</sup> Calculations based on the available RRF plans data, taking into account for each member state, its digital budget and the breakdown of expenditure towards digital objectives per policy area (Digital tagging)

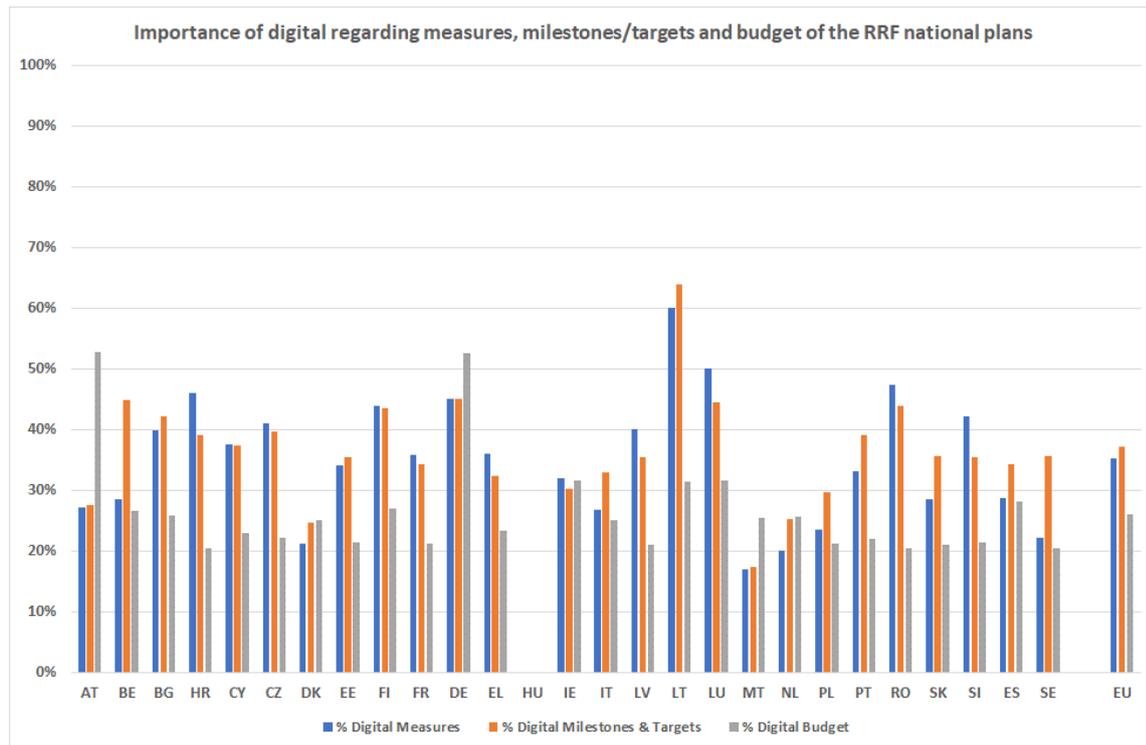
the potential gaps and risks. We conclude with recommendations based on best practice on how initiatives could be developed or adapted to boost the prospects of achieving digital transformation amongst SMEs.

## 2. DIGITAL POLICY MEASURES ENVISAGED BY MEMBER STATES FOR SMES

### 2.1. How much attention is being given to digitisation?

A review of the data provided on the RRFs shows that digital transformation projects are playing a substantial role in the RRF. From the 26 approved plans, digitisation accounts for more than one third of the measures, milestones and targets, and represents 26% of the overall budget.

Figure 4: Proportion of measures, targets and budgets devoted to digital transformation



Source: European Commission – Summary of the EC assessment of the RRF Plans (over 26 Member States)

The countries which have devoted the highest proportion of their budget to digitisation measures include:

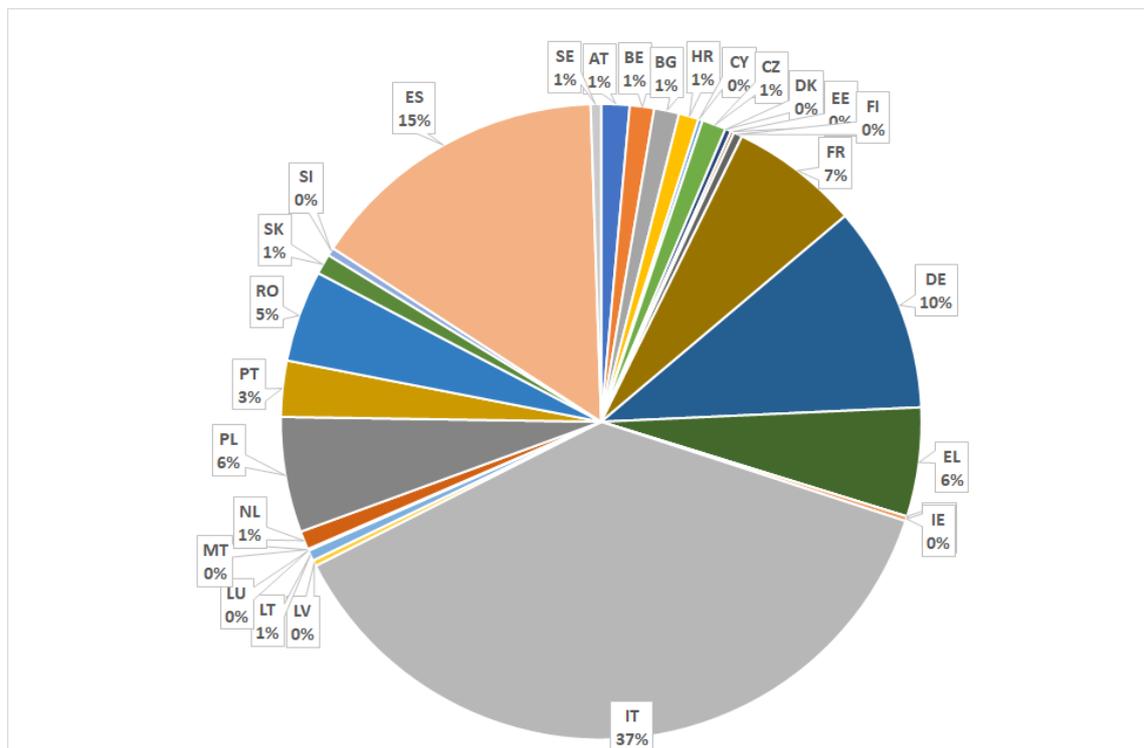
- Austria and Germany with more than 50% of their respective budgets; and
- Ireland, Lithuania and Luxembourg with more than 30%

In addition, although the proportion of the budget devoted to digital is lower, 40% of the initiatives planned under the RRF in Bulgaria, Croatia, Czechia, Finland, Latvia, Romania and Slovenia relate to digital initiatives.

Looking at absolute levels of expenditure, just 8 countries account for nearly 90% of the EU's spending on digital initiatives under the RRF.

- Italy (37%), Spain (15%), Germany (10%) : 62% in total
- But also France (7%), Greece and Poland (6% each), Romania (5%) and Portugal (3%) : 89% in total

Figure 5: Share of total digital budget between the Member States (Total €128 billion in grants + loans)



Source: European Commission – Calculation and analysis from the Recovery and Resilience Scoreboard (based on data from 26 Member States)

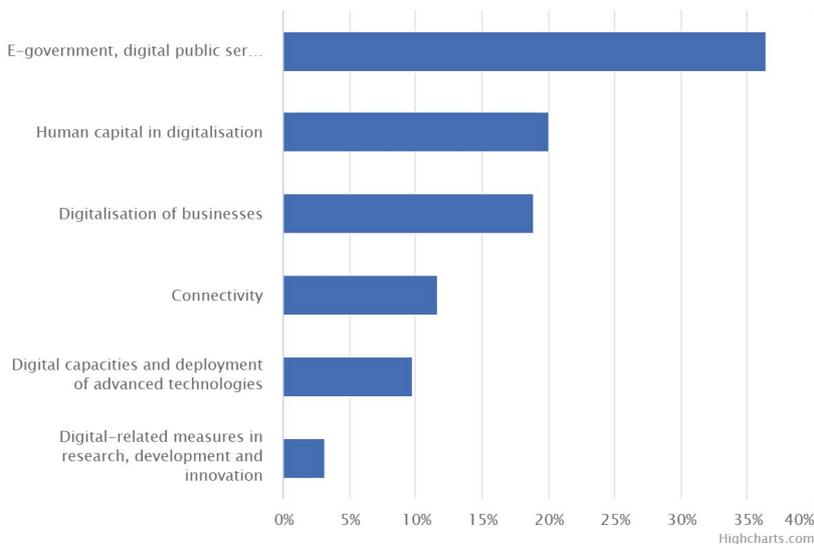
The relatively large proportion of the budget going towards the so-called “Prometheus” Member States (Spain, Portugal, Greece and Italy), has been highlighted by some observers,<sup>7</sup> and should in theory serve to help these countries to close the digital divide with neighbours which are more advanced in this respect.

## 2.2. How much money is going towards digitising businesses (including SMEs)?

As shown in the following diagram, the “digital transformation pillar” includes (alongside the digitisation of business), expenditure on different kinds of projects including those seeking to support e-Government, increase skills, connectivity, deployment of advanced technologies and digital-related measures in research development and innovation.

<sup>7</sup> See for example da Empoli et al (PromethEUs) July 2022

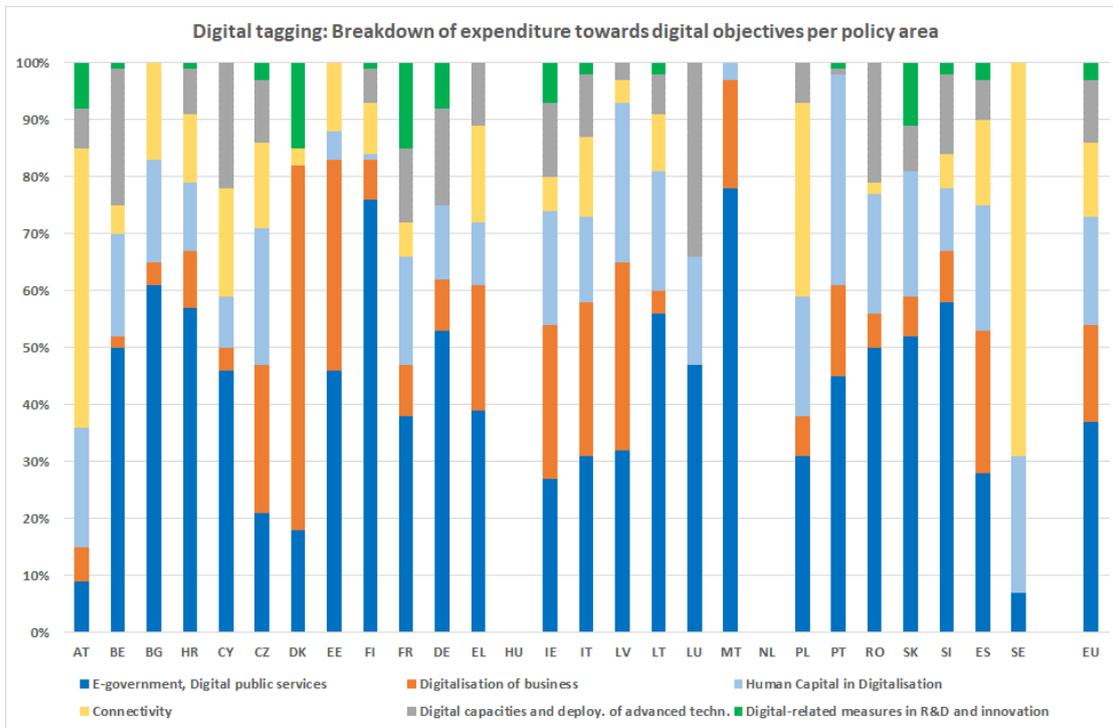
Figure 6: Proportion of RRF “digital” budget by category



Source: European Commission – Recovery and Resilience Scoreboard (based on data from 26 Member States)

The share of expenditure which is specifically dedicated to the digitisation of businesses (which typically involves programmes to improve the digital intensity of SMEs) varies significantly between countries. Denmark is a leader in this area, with 64% of the overall national digital budget targeted towards the digitisation of industry. Countries such as Czechia, Estonia, Ireland, Italy, Latvia and Spain have also allocated a significant share to the digitisation of industry, ranging between 25 to 37%.

Figure 7: Proportion of RRF “digital” budget by category and country



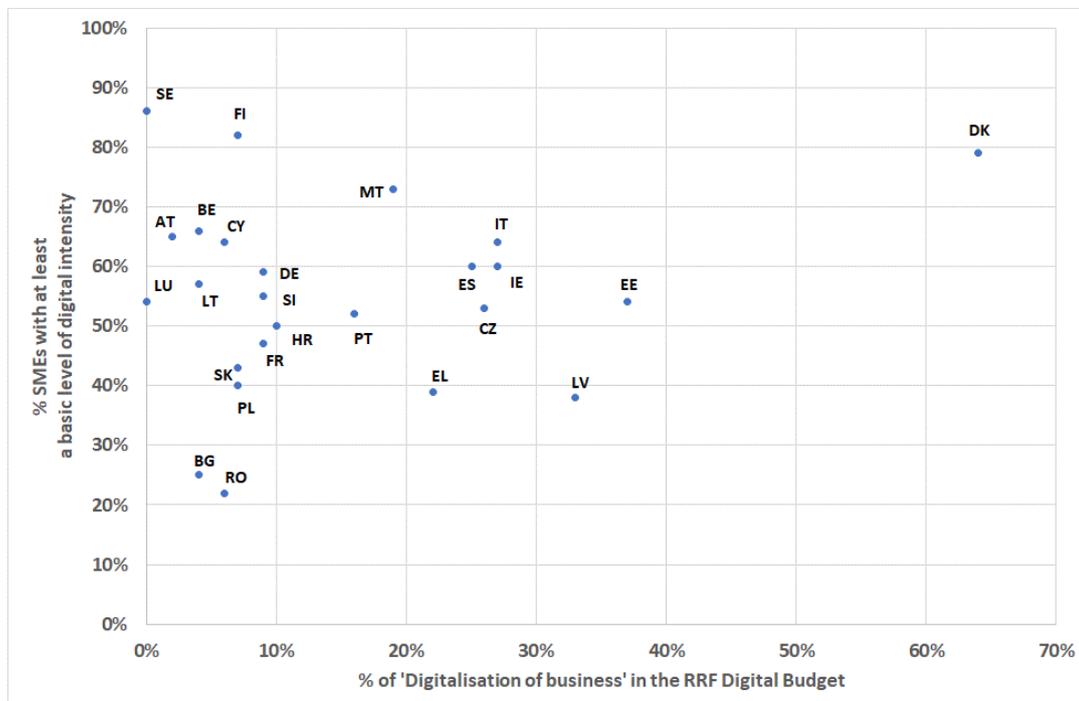
Source: European Commission – RRF Plans (25 Member States<sup>8</sup>)

<sup>8</sup> Netherlands data unavailable at November 2<sup>nd</sup>, 2022

On the other hand, we note that some countries such as Romania and Bulgaria have allocated a relatively limited part of the digital budget for the ‘digitisation of businesses’ (<10%), despite the fact that they are lagging in the DESI indicators relative to SME digitisation (such as ‘Percentage of SMEs with at least a basic level of digital intensity’ that is under 25%). This could be the result of other more pressing priorities or complementary national funding which is not recorded in the context of the RRF, but might also, if not explained by reasons such as this, represent a missed opportunity to target more support on measures that would help business to improve productivity through digital transformation.

The stark contrast between high prioritisation of digitisation of industry in Denmark, and apparently lower prioritisation of this topic in Romania and Bulgaria can be seen in the following chart, which shows the degree to which different Member States have focused their financial efforts on the ‘digitisation of business’ in relation to the basic level of digital intensity of their SMEs as measured by the DESI 2022.

Figure 8: Expenditure on digitisation of businesses in relation to the digital intensity level of SMEs



Source: European Commission – Authors’ analysis based on RRF Plans and DESI 2022

However, the chart may not present a complete picture, because most Member States have not specified how much of the budget allocated to the digitisation of industry is targeted to (or reserved for) SMEs. Likewise, it is possible that, in addition to receiving support under the heading of digitisation of businesses, SMEs may have received support which they used to support digitisation measures under other headings of the RRF. In January 2022, the European Commission reported that all plans which they had endorsed, included measures relevant to SMEs more generally, and that reforms worth €44 billion had been identified as supporting SMEs (approx. 10% of the estimated RRF expenditure).<sup>9</sup> The share of resources targeted at SMEs reached around 15% or more of total budget in France, Greece and Portugal.

<sup>9</sup> European Commission (January 2022) Recovery and Resilience Scoreboard: thematic analysis SME support. [https://ec.europa.eu/economy\\_finance/recovery-and-resilience-scoreboard/assets/thematic\\_analysis/3\\_SME.pdf](https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/assets/thematic_analysis/3_SME.pdf)

### 2.3. What challenges do SMEs face in the digital transition and what kind of initiatives can help?

SMEs (and particularly those which are not directly involved in the ICT sector) face a number of specific challenges that hamper their ability to benefit from the digital transition and maintain a competitive advantage. These include:

- **Structural barriers** to digital adoption which may result from a gap in skills that impedes managers and employees from identifying the digital solutions they need and adapting business models and processes to take advantage of the potential productivity gains and improvements in trade (including cross-border transactions)
- **Financial barriers**, which may arise because SMEs may face difficulties in accessing finance for intangible digital investments that cannot be used as collateral to secure loans; and
- **Potential infrastructure gaps** (in particular in less densely populated areas), as smaller businesses may not be targeted for the installation of high-speed broadband by suppliers and may not have the resources to invest in dedicated connections that are a pre-requisite for the use of the most advanced technologies such as big data processing and AI.

Support for SMEs to address these challenges can be targeted at different areas and provided in different ways. The focus of support could for example include:

- Measuring the level of digitisation and identifying gaps;
- Upskilling workers with basic or advanced digital technologies;
- Support with the investments required to purchase hardware and software (physical or virtual);
- Support in obtaining high capacity fixed and/or mobile broadband connections;
- Support with business transformation or the digitisation of services (consultancy). The programme could leave the scope relatively open (and subject to application) or focus support for example on specific basic (e.g. e-commerce / CRM) or advanced (e.g. cloud / AI / HPC / quantum) facilities;
- Support for start-ups or scale-ups involved in technological development;
- Incentives to engage in Research and Development.

Different mechanisms can be used to provide the support:

- Advice, consulting support and training can be offered by publicly run centres such as Digital Innovation Hubs and/or could be provided or complemented by giving vouchers (fixed level) or grants (variable level / project specific) which enable SMEs to procure advice from an external consulting firm.
- Regarding investments in hardware or software, financial support can be given in the form of (project-specific) grants or loans or through tax credits for investments (e.g. extra-amortisation of the digital assets of the company developed during the project (and potentially including intangible assets such as R&D expenses, when relevant)).
- High-capacity broadband for SMEs can be supported on the supply side by providing public funds to support public or private entities (or public private partnerships (PPP)) to deploy high-capacity infrastructure in areas where this would otherwise not be commercially viable. Such supply-side support normally extends to all households and not just SMEs. Demand-side

vouchers can also be given (sometimes with a specific focus on SMEs) to subsidise the cost of installing a broadband connection (e.g. in a remote areas) and/or the monthly rental.

- Funding (grants and/or loans) as well as advice can be provided to support SMEs (potentially working alongside research institutions) with specific projects which involve the development of new technologies / innovation.

Examples of initiatives of this kind that have been funded through the RRF are provided in the following chapter.

## 3. ANALYSIS OF SME DIGITISATION INITIATIVES UNDER THE RRF

### 3.1. The requirements

Member States are required to demonstrate that 20% of the RRP's total budget is allocated to the digital transition, and must submit Recovery and Resilience plans which include:<sup>10</sup>

- an explanation of how the measures in the recovery and resilience plan are expected to contribute to the digital transition;
- milestones, targets and an indicative timetable for the implementation of the reforms, and investments to be completed by 31 August 2026;
- the envisaged investment projects and the related investment period;
- the estimated total costs of the reforms and investments backed up by appropriate justification and by explanations of how it is in line with the principle of cost efficiency and commensurate to the expected national economic and social impact;
- the arrangements for the effective monitoring and implementation of the recovery and resilience plan by the Member State concerned, including the proposed milestones and targets, and the related indicators;
- a summary of the consultation process and how the input of the stakeholders is reflected in the recovery and resilience plan.

In addition, Member States should take into account Country Specific Recommendations.

The Commission is in turn tasked with assessing the plans on the basis of relevance, effectiveness, efficiency, and coherence, and in this context should confirm that the plan contains measures that contribute to the digital transition, is expected to have a lasting impact, that it has been accompanied by an effective monitoring mechanism, and the amounts are plausible and in line with the principle of cost efficiency. The Council then approves the RRFs through an Implementing Decision, which lists the milestones and targets associated with each of the measures.

### 3.2. The Commission's assessment

The Commission has generally given a positive view on progress made regarding the RRF digital transition component. In its July 2022 review report on the RRF,<sup>11</sup> the Commission noted that 44 milestones and targets contributing to the digital pillar had been fulfilled. They provided the following examples which are relevant to the digitisation of SMEs:

<sup>10</sup> Article 18(4)f RRF Regulation

<sup>11</sup> European Commission (July 2022) Review report on the RRF [https://ec.europa.eu/info/sites/default/files/com\\_2022\\_383\\_1\\_en.pdf](https://ec.europa.eu/info/sites/default/files/com_2022_383_1_en.pdf)

- **Spain** adopted its Digitisation of SMEs Plan 2021-2025 and a Digital Competences Plan.
- **Portugal** selected 17 Digital Innovation Hubs which will support companies in their digitisation efforts.
- **France** adopted six 'acceleration strategies' for innovation in key digital technologies (quantum technologies, cybersecurity, Digital education, cultural and creative industries, 5G, cloud).
- **Greece** launched a call for commercial banks under their RRF loan facility. At least 20% of the funding will support digital objectives.

The Commission also noted that Member States had exceeded the target by allocating 26% of the RRF budget to digital transition (above the 20% required) and had put forward a significant number of measures which would directly or indirectly support SMEs.<sup>12</sup> They observed that the RRF would provide a significant contribution to digital transformation in the EU.

### 3.3. Compatibility and scope of programmes

In order to assess the relevance of measures concerning the digital transition of SMEs, we reviewed the RRFs of 6 Member States in more detail. We selected Austria, Denmark, Italy, Latvia, Portugal and Spain for this review. In addition to aiming for a degree of diversity in the size of countries and their geographic location, we included countries which had devoted a substantial proportion of their budget to the digitisation of industry and/or had been identified by the European Commission as having met relevant milestones in digitisation. The selected countries also provide a mix of high and comparatively low levels of baseline SME digitisation.

A review of the aspects of the RRFs relating to digitisation of SMEs suggests that these Member States met the threshold for expenditure on digitisation, engaged in a consultation process, made reference to country-specific Recommendations and took actions which are broadly relevant to addressing the issues identified in those Recommendations. The RRFs we reviewed also listed milestones and targets for each of the measures (discussed further in section 3.4). Thus, based on a review of the procedural steps taken and justifications given, the Member States which we studied appear to have met the specifications established in the RRF Regulation. However, it should be noted that the specifications are high level and the recommendations are rather broad,<sup>13</sup> and thus the onus lies mainly on Member States and the Commission, through its review process, to ensure that the measures are well-targeted.

As regards the specific initiatives:

In most cases, the RRFs build on previous programmes that were put in place to support the digitisation of SMEs (such as KMU-Digital/KMU-ecommerce in Austria, Industria 4.0 in Italy and SME: Digital in Denmark), and RRF funds have served to complement or extend these existing programmes. However, alongside extending previous programmes, in Denmark the RRF has included the adoption of a new

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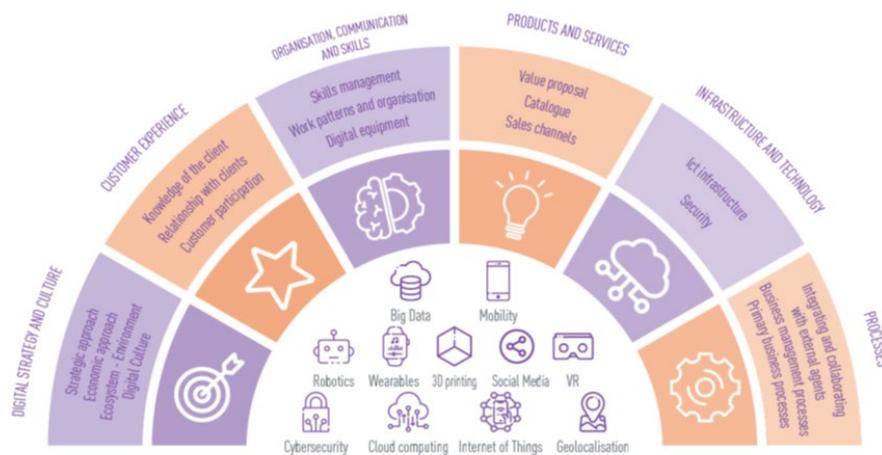
<sup>12</sup> The Commission noted that the 25 plans adopted by the Council as of 30 June, contribute to pillar 3 with around 235 billion promoting smart, sustainable and inclusive growth across a range of different policy areas.

<sup>13</sup> For example, in the case of Denmark, the Recommendations included in the 2020 European Semester country report note that Denmark is performing well in the field of digitisation, but should focus on investment in digital infrastructure as well as education, training and upskilling, in order to maintain this strong position (17) <https://www.consilium.europa.eu/en/documents-publications/public-register/public-register-search/results/?AllLanguagesSearch=False&OnlyPublicDocuments=False&DocumentNumber=8423%2F20&DocumentLanguage=EN>. Thus recommendations highlight broad areas which should be addressed, but do not provide guidance on how best to achieve the stated objectives. Its RRF duly includes measures addressing these areas.

digital strategy, based on recommendations from a steering group which includes SMEs, while Spain has used the RRP as a basis for the launch of its Digitisation Plan for SMEs 2021-2025.

Most countries have recognised through their plans the need to pursue a multi-faceted approach which addresses skills gaps and the promotion of innovation alongside measures to support SMEs in embracing digital technologies to improve internal efficiency and security as well as digitisation of the sales process and external communication. The following diagram from Spain illustrates how the strategy for the digitisation of SMEs encompasses many different elements.

Figure 9: Spain’s SME digitisation plan



Source: *SME Digitisation Plan’ Spain - Transformation dimensions of digitisation*

However, the countries reviewed vary as regards the mechanisms they use to deliver support. While some countries such as Portugal or Italy point towards a variety of different initiatives potentially delivered through different bodies (Digital Innovation Hubs, Competence Centres, Chambers of Commerce, etc.), the Latvian RRP notes that it is planning to establish European Digital Innovation Hubs which are intended to act as a “One-stop-shop”. Countries also vary in the extent to which they encompass support for more advanced technologies in their programmes (in the context of training, investments or awareness), with some programmes focused on more basic aspects of digitisation, while others make specific reference to advanced technologies such as quantum computing. This could in part reflect differences in the starting point (i.e. the % of SMEs which already have basic digital skills).

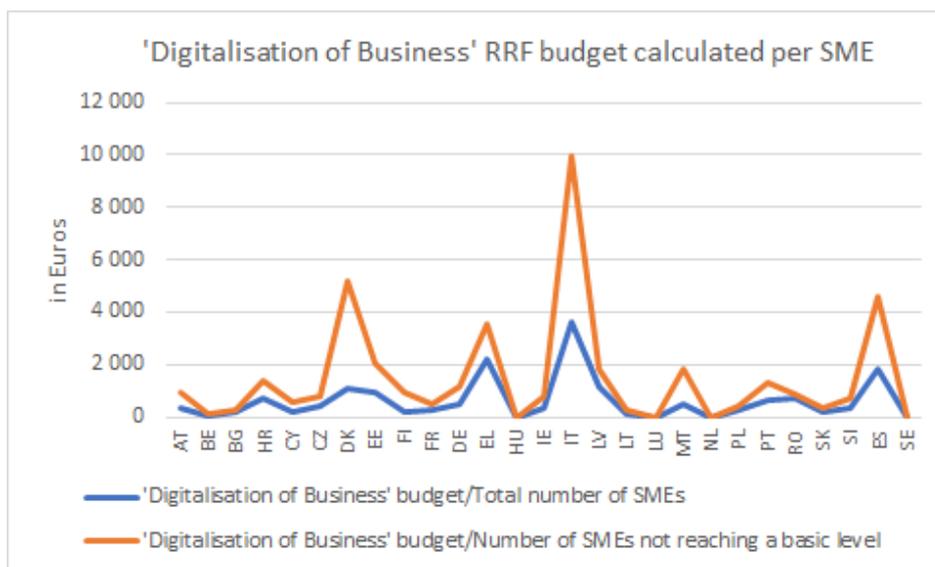
The scope of the measures and nature of the interventions to support the uptake of digital technologies by SMEs vary widely as shown in the summary overleaf. While a key target of funding relates to tax credits for investment or other fiscal incentives (in particular in Italy, but also in other countries such as Denmark and Austria), many countries (including Italy) also provide advice and digital maturity assessments from publicly funded centres and make available vouchers for the purchase of consulting, training and technologies from third parties. Most of the reviewed countries have also provided support for digital skills (including the development of educational frameworks, modification of curricula and direct provision of training to SMEs).

Alongside providing support for the use of digital technologies, most of the countries studied have dedicated a portion of the funding towards research and development in the digital field. R&D support includes tax incentives (Denmark), vouchers for start-ups as well as incubators and accelerators (Portugal), grants for research and support for projects under the Digital Europe programme (Latvia), while Austria has allocated €107m specifically to foster research on quantum computing.

Some Member States have also allocated funding to support high-speed broadband connectivity, either by funding deployment in rural areas generally, or specifically to support take-up amongst SMEs (Spain) through the use of vouchers. However, in some cases schemes seek to achieve download connection speeds of 100Mbit/s, which falls short of the Digital Decade targets.

The amounts allocated to business digitisation programmes vary widely. The following diagram shows the financial support ('Business Digitisation budget') related to SME Digitisation calculated per SME (either on the total number of SMEs or on the number of SMEs not reaching 'at least a basic level of digital intensity according to DESI 2022).

Figure 10: Digitisation of business budget against the number of SMEs



Source: European Commission – Authors’ analysis based on RRF Plans and DESI 2022

It is notable in this context that Italy, Denmark, Spain and Greece have provided the highest level of funding for ‘Digitisation of Business’ when considered in relation to the number of SMEs. These countries are followed by Latvia, Malta and Portugal. When taking into account the number of SMEs not reaching a basic level, the emphasis of these countries on levelling up SME’s digital skills is even higher.

The amount of funds allocated could provide an indication of the focus countries are placing on digitisation of businesses (including SMEs). However, not all countries have targeted or ringfenced digitisation of business spending towards SMEs, and it is possible that a high proportion of the budget may be utilised by larger businesses in some cases.

This could in particular be the case for Member States which have devoted a high proportion of the budget towards tax incentives, as this type of scheme would primarily benefit companies with high profit levels. Moreover, even if targeted at SMEs, as discussed in section 3.3.2, there is limited concrete evidence linking initiatives to digitise industry and outcomes,<sup>14</sup> and thus the effectiveness and efficiency of these initiatives cannot be predicted with certainty.

<sup>14</sup> Efforts have been made e.g. in the context of the 2019-2021 VVA WIK studies for the EC on “National Initiatives to Digitise Industry” to assess the impact of digitising industry initiatives, but the study concludes that “most measures associated with the digitisation of industry have been introduced too recently to assess concrete outcomes”. [https://ec.europa.eu/newsroom/dae/document.cfm?doc\\_id=69513](https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=69513)

Table 2: Overview of RRP initiatives relating to the digital transition for SMEs

	<b>% SME digital intensity</b>	<b>Budget on SME digitisation</b>	<b>Overall framework for digitisation</b>	<b>Incentives for innovation and investment / support for start-ups</b>	<b>Support for digitisation of SMEs</b>	<b>Support for skills</b>	<b>Other complementary actions</b>
Denmark	79%	€9 million specifically on SME digital programme but wider RRF digital budget of €89 million also includes measures relevant to SMEs	Aim to adopt and implement new digital strategy building on expert group recommendations in 2022	Tax incentives for R&D and investments in digital technologies	Scale-up of SME: Digital scheme, providing grants for the implementation of digital technologies and associated advice		Extension of scheme to deploy broadband at bandwidths of 100Mbit/s and above in rural areas
Portugal	52%	€650 million	Framework in place prior to RRP "Portugal Digital" – adopted March 2020	Vouchers for start-ups: new green and digital products. Vouchers for start-up incubators and accelerators to increase their capabilities to support start-ups with digitally based business models.	Digital commerce programmes including "Digital Trade Accelerators" (25 local, regional or sectoral accelerators); Digital commerce neighbourhoods (for shopping areas) and "internationalisation via e-commerce". "Coaching 4.0" to support businesses in adoption of advanced digital technologies. Expand Digital Innovation Hub (DIH) programme.	Review of content in National Qualifications for digital skills in the workplace. Academy Portugal Digital, Employment + Digital 2025	Legal and regulatory framework for creation of digital seals in cybersecurity, privacy etc
Latvia	38%	€125 million		Grant scheme supports new digital products	Establishment of European Digital	Establish Education	

				and services including industrial research; experimental development and support to projects under Digital Europe programme.	Innovation Hub supporting digital transition as a “one-stop-shop”, establishing a digital maturity test system. Grant schemes to support (a) digitisation of processes and functions in enterprises; and (b) introduction of modern automation, robotisation and labour control tools + personalised e-commerce solutions. Loans with grant elements for significant changes including advanced solutions (including IoT, AI, big data, HPC)	Development Guidelines which establish responsibilities for enterprises to educate employees, set-up and pilot individual learning accounts and three funds targeted towards skills. Skills training also via the EDIH (involving existing regional business centres). Development of advanced digital skills training modules including quantum technologies and HPC	
Spain	60%	€3 billion digital transition of SMEs and the self-employed	Digitisation plan for SMEs 2021-2025	Programme for disruptive innovation and SME digital transformation. Programme to support innovative business clusters, business innovation hubs and	Support for basic digitisation for SMEs incl. digital toolkit, SME connectivity voucher, Acelera pyme self-test for “digital maturity”: indicates areas that could be strengthened. Express	Training programme for experts in SME digital transformation. Management training programme.	National Plan for Digital skills: 80% of the pop to receive trainings in basic digital skills  Digital connectivity, cybersecurity, 5G deployment: the plan

Italy	60%	Tax credit scheme €13.4 billion	Pre-existing national plan 'Transition 4.0', evolution of Industria 4.0 from 2017	business entrepreneurship	test based on DESI and digital intensity index	Agents of change programme.	targets a digital connectivity of 100% of the population.
					Set up National Competence Centres facilitating Industry 4.0 transformational projects in all domains through training and awareness. Complement to network of 'Punti Impresa Digitale' that supports SMEs regarding digitisation. Tax credits, extension in eligible intangible investments and eligible % of incentivised investment.		Development of ultra-fast and 5G networks: fostering 1 Gbps connectivity across the country and providing 5G coverage
Austria	64%	€100 million	Follow-up of two existing subsidy programmes: KMU Digital and KMU e-commerce	Boosting future-oriented, transformative and innovative research: supporting digital infrastructure and cross-border research collaboration to foster quantum computing. €107 million	Extend existing subsidy programmes: (i) KMU-Digital provides advisory support by certified consultant while implementation support provides funding for the implementation of the digitisation projects; (ii) KMU-E-commerce supports SMEs in the implementation of concrete e-commerce projects, with funding for new e-commerce investments and services	Easing access to digital education: providing school pupils with computers and tablets. €172 million	Improved digital connectivity: reaching at least 50% of Austrian households with gigabit-capable connections supplying download and upload speed of at least 100 Mbit/s.

					from external providers at 20% (up to max €12,000). 14% investment premium to companies for investments in digitisation.		
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Source: Own elaboration based on RRFs.

### 3.4. Measurability

The implementation of the RRF should be monitored and evaluated through common indicators. Reporting is required twice a year<sup>15</sup> in alignment with the European Semester timeline. These indicators are intended to be used to report on progress and for the purpose of monitoring and evaluating to what extent the Facility is making progress in achieving the general and specific objectives referred to in Article 4 of the RRF Regulation.<sup>16</sup>

Relevant quantitative indicators for the digitisation of industry are. no 6 and 9 in the Annex to the delegated Regulation and refer to the number of enterprises which have (i) received support to either develop or adopt new or significantly upgraded services, products and processes based on digital technologies; and (ii) received monetary or in-kind support. The description of these indicators is provided in the following tables. Indicator 5, which refers to additional dwellings with Internet access provided via very high capacity networks, is also relevant in ensuring that SMEs have access to the relevant infrastructure.

Indicator	Pillar(s)	Definition
Enterprises supported to develop or adopt digital products, services and application processes	Pillar 2 Pillar 3	<p>Number of enterprises supported to develop or adopt new or significantly upgraded services, products and processes based on digital technologies, due to support by measures under the Facility. This includes advanced digital technologies such as automation, artificial intelligence, cybersecurity, block chain, cloud and edge infrastructures and data spaces, quantum and high performance computing. Significant upgrades shall cover only new functionalities. The information shall therefore be collected separately (i) for enterprises supported to <b>develop</b> digital technologies and solutions; and (ii) for enterprises supported to <b>adopt</b> digital solutions to transform their services, products or processes. It shall also be collected by size of enterprise.</p> <p>An enterprise shall be counted once regardless of how many times it receives support to digitalise by measures under the Facility.</p> <p>An enterprise and the disaggregation by size of enterprise shall be defined as per the definition adopted for indicator 9.</p>
Enterprises supported (of which small – including micro, medium, large)	Pillar 3	<p>The indicator shall count <b>all enterprises that receive monetary or in-kind support by measures under the Facility.</b></p> <p>The enterprise shall be defined as the smallest combination of legal units that is an organisational unit producing goods and services, which benefits from a certain degree of autonomy in decision making, especially for the allocation of its current resources, carrying out one or more activities at one or more locations. An enterprise may be a sole legal unit. Legal units shall include legal persons whose existence is recognised by law independently of the individuals or institutions which may own them or are members of them, such as general partnerships, private limited partnerships, limited liability companies, incorporated companies etc. Legal units shall also include natural persons who are engaged in an economic activity in their own right, such as the owner and operator of a shop or a garage, a lawyer or a self-employed handicrafts-person (Commission Eurostat), based on Council Regulation (EEC) No 696/93, Section III A of 15.3.1993).</p>

<sup>15</sup> Commission Delegated Regulation (EU) 2021/2106 of 28 September 2021 on supplementing Regulation (EU) 2021/241 of the European Parliament and of the Council establishing the Recovery and Resilience Facility by setting out the common indicators and the detailed elements of the recovery and resilience scoreboard [https://eur-lex.europa.eu/eli/reg\\_del/2021/2106/oj](https://eur-lex.europa.eu/eli/reg_del/2021/2106/oj)

<sup>16</sup> Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0241>

		The indicator shall be collected and reported by size of enterprise. For the purpose of this indicator, enterprises shall be defined as profit-oriented organisations that produce goods and services to satisfy market needs.
Additional dwellings with internet access provided via very high capacity networks	Pillar 2 Pillar 4	Total number of dwellings with access to very high capacity networks, as defined in the BEREC Guidelines on Very High Capacity Networks (BoR (20) 165 (6)) that only had access to slower connections or did not have internet access at all before the support by measures under the Facility. As such, it shall also consider 5G network coverage and upgrades to gigabit speed. The improved internet access must be a direct consequence of the support by measures under the Facility. The indicator shall measure dwellings with the possibility to access and not the actual take up.

In addition, Member States have established specific qualitative milestones (e.g. relating to the adoption of rules or implementation of support functions) and quantitative targets (e.g. relating to the number of businesses supported) for each of the investments described in their RRP. The Commission notes that one of the key features of the RRF is that RRF funds are disbursed only when Member States have satisfactorily fulfilled key steps in the implementation of the reforms, and thus sign-off by the Commission that a Member State has fulfilled a given target may have an important financial implication.

Amongst the Member States whose RRFs we reviewed, the depth and quality of targets vary widely. Milestones relating to the adoption of measures such as legislation or plans are common. One example is the milestone in the Spanish RRF that the “Digitisation of SMEs plan for 2021-2025) should be published in Q1 2021, following approval by the Council of Ministers. This could be seen as an “input” measure relating to the existence of a Government plan or target. There are also examples relating to the implementation of support bodies and functions such as the milestone set by Latvia that the EDIH should be fully operational and the digital maturity test should be available on the EDIH website by Q2 2022. This could be seen as a further step in the “input” measures to assess the establishment of a body. Quantitative output indicators (targets) have also been used in RRFs, consistent with the quantitative indicators established in the RRF COM delegated Regulation. An example of this type of indicator is that in Denmark “at least 550 SMEs should receive funding for digital projects (relating to digital transition and trade) by Q4 2023”, while in Austria at least 15,300 digitisation projects should be completed by SMEs by Q4 2023. In line with its detailed list of interventions, the Portuguese plan introduces more specific outcome targets including the number of training participants, the number of SMEs supported through the digital commerce accelerators, the number of pilot products developed in the national test beds network, the number of digital commerce neighbourhoods, the number of SMEs and start-up incubators directly supported by digitisation programmes and the number of start-ups mapped on the platform of start-up Portugal, the number of DIH consortiums selected.

However, only one of the RRFs which we reviewed contains targets which relate to “outcomes” i.e. the improvement in the digitisation levels of SMEs that could in theory be attributed to the support received. The Latvian RRF sets a target for the number of companies supported to digitise processes (in 2024 and 2026) where the result of the digital maturity test has improved. The RRF also clarifies that the target will be executed when a contract has been concluded between the company and the EDIH for the receipt of the grant and improvements to the test result are observed in the repeated Digital Maturity Test. Meanwhile in relation to digital skills, the Latvian RRF sets targets not only for the number of businesses to whom the acquisition of basic digital skills has been ensured, but also the share of

Latvian inhabitants with at least basic digital skills. In addition to setting outcome measures, the Latvian RRP benefits from setting incremental targets over time i.e. relating to the programme, its implementation, and its uptake in two separate periods and defines in which circumstances the target should be considered as met. While not strictly required to meet the conditions of the RRF, this approach strikes us as offering the best opportunity for objective measurement of progress. Moreover, only programmes which achieve effective outcomes (in terms of actual levels of digitisation) as a result of funding that would not have been available in the absence of the RRF are likely to achieve the macroeconomic improvements that have been attributed to the RRF.

## 4. ASSESSMENT OF RISKS AND POTENTIAL GAPS

Although a more comprehensive review of all RRFs would be needed to draw definitive conclusions, some indications can be drawn from the review of the 6 programmes on which we focused regarding potential risks and gaps that may hamper the potential of the RRF to effectively and efficiently support the digitisation of SMEs.

1. Many of the initiatives serve to extend or prolong pre-existing programmes relating to the digitisation of SMEs. While this is not per se negative, and can serve to provide continuity and take advantage of existing communications channels known to SMEs, **it is not clear from the RRFs to what extent the RRF has resulted in an expansion in funding compared with the status quo** including national funds which may previously have been earmarked for the continuation of these programmes, but which may have been replaced by EU funds. This may make it challenging to assess to what extent the RRF has delivered EU added value. As noted in a 2022 study by CEPS,<sup>17</sup> this issue goes beyond the digitisation of SMEs and applies to the RRFs more generally.
2. **Some of the programmes place a significant focus on certain aspects (e.g. investment in assets), which may come at the expense of others such as training to effectively make use of technologies and pursue business transformation.** A combination of tools is needed (coupling investment with training and connectivity), in particular in countries where there are gaps in multiple aspects of SME digital capabilities.
3. The different facets of support for SMEs should be delivered in a coherent way so that it is easy for SMEs to understand where they can obtain support in a variety of fields. However, **some plans seem to involve multiple programmes and delivery bodies.** This could risk confusion for SMEs or duplication of resources and inefficiencies, as well as risking double counting of the support provided.
4. The **amount of funding provided and targets for the number of SMEs to be supported is in some cases low as a proportion of the overall number of SMEs** and taking into account their baseline level of digitisation (and thus potential need for support). This could undermine the effectiveness of the programmes concerned. Furthermore, **some of the countries with the lowest levels of basic SME digitisation have not put in place specific programmes to address this under the RRF.** Such countries risk falling further behind in supporting productivity, innovation and growth in these challenging times. A related concern is that it is not clear to what extent funding to support the digital transition has been channelled towards

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<sup>17</sup> CEPS (2022) The European added value of the Recovery and Resilience Facility <https://www.ceps.eu/ceps-publications/the-european-added-value-of-the-recovery-and-resilience-facility/>

SMEs, as some measures such as tax breaks may result in subsidies also being provided for larger firms.

5. **Not all countries have included measures to boost investment and innovation in and use of advanced technologies such as quantum computing and AI.** There may be scope for further measures in this area, in particular once SMEs achieve a certain level of basic digital competence. Moreover, even countries with relatively low levels of basic digital capabilities could aspire to establish a head-start in more advanced technologies, through the education and training system as well as through incentives, subsidies and support. This could enable SMEs to directly benefit from more advanced solutions such as AI and cloud computing when they establish digital sales channels or internal processes rather than passing through an intermediate stage.
6. **Some countries are providing funding for broadband connectivity that falls short of the Gigabit broadband performance targets envisaged in the digital decade<sup>18</sup>.** This risks supporting technologies which are not future-proof and may require further subsidies to remain current in the years ahead. In this context, it should also be noted that indicator 5, which relates to “additional dwellings with internet access provided via very high capacity networks” (VHCN), refers to a definition of “very high capacity networks” elaborated by BEREC in 2020 that may not itself match the ambition of the Digital Decade targets.
7. **A critical gap that seems to be prevalent across many RRFs is that they do not clearly describe how data should be collected (e.g. in which circumstances support can be considered to have been received by SMEs) and they also do not establish outcome metrics which would allow an assessment of whether the support or funds provided has translated to an increase in digital competencies amongst SMEs and/or greater availability of digital skills. This makes it difficult to assess the effectiveness or cost-efficiency of specific measures and raises the serious risk that money could be spent on initiatives which provide limited return and fail to meet expectations regarding the macroeconomic benefits attributed to them.**

## 5. RECOMMENDATIONS

Based on the assessment of gaps and risks we can offer the following recommendations, which draw on certain aspects of the RRFs that represent good practice.

Table 3: Gaps and solutions

	Problem or risk	Possible solution
1	Many initiatives extend or expand pre-existing initiatives and thus the value added of EU finding is unclear	To assess “additionality” of the RRF measures on digitising industry/SMEs, a record should be made regarding pre-existing initiatives and associated funding (and funding sources) prior to the RRF. The European Parliament has already made proposals to this effect in its June 2022 resolution on Implementation of the RRF. <sup>19</sup>

<sup>18</sup> Europe’s Digital Decade: digital targets for 2030 [https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en)

<sup>19</sup> See point 21 European Parliament (June 2022) Implementation of the Recovery and Resilience Facility [https://www.europarl.europa.eu/thinktank/en/document/EPRS\\_ATA\(2022\)733533](https://www.europarl.europa.eu/thinktank/en/document/EPRS_ATA(2022)733533)

2	Some programmes may not cover (or effectively balance) the different forms of support that are needed to facilitate SME digitisation e.g. skills alongside investment and access to connectivity	Member States could consider complementing existing measures under the RRP to support SME digitisation with other measures that may be needed in tandem to ensure that it can be effectively utilised. MS could also usefully draw on the extensive array of best practices that have been developed through the EC’s digitising industry, skills and broadband initiatives.
3	There is a risk that some programmes could be too complex or lack co-ordination resulting in inefficiencies	Member States could consider consolidating or co-ordinating initiatives to simplify the interface with SMEs. One example could be to use Digital Innovation Hubs (DIH) (or another similar system) as a “one-stop-shop”
4	Funding could be too low in relation to the number of SMEs that require support. Funding may also not be targeted at the SMEs that require most support.	The absolute level of funding in relation to the number of eligible businesses and the targeting of funds towards SMEs which lack basic and/or advanced digital capabilities should be assessed when reviewing RRP, to ensure that funding levels are adequate to reflect ambitions. In addition, Member States should be encouraged to split out the amount of the digital budget that is expected to benefit SMEs specifically.
5	Not all countries have included support or training for more advanced technologies	Member States which have not already encompassed more advanced technologies within their support and training programmes, could expand the scope of those programmes to ensure these capabilities are addressed, alongside basic capabilities.
6	Not all countries are supporting broadband upgrades which meet the digital decade targets	Member States which are currently seeking to support access to broadband connectivity (including to SMEs) at speeds of 100Mbit/s could update their ambition to achieve the universal availability of Gigabit connections through FTTP and (in remote areas) through 5G Fixed Wireless Access (FWA) There may also be a need to update the indicator regarding very high capacity infrastructure so that it refers to the more recent Digital Decade targets,
7	There is limited clarity in many cases regarding how data should be gathered and few Member States set outcome targets which would allow an objective assessment of the effectiveness, efficiency and wider impact of the measures taken. This is a problem which affects the RRP as a whole and is not specific to digitisation initiatives. <sup>20</sup>	It could be recommended that Member States should elaborate on existing targets, to clearly identify in which circumstances an SME could be counted as having received financial or non-financial support, and what measures will be taken to avoid double counting (e.g. relating to repeat support or use of different mechanisms by the same business). We also recommend that Member States should set targets for different time periods reflecting the potential ramp-up in the uptake of programmes and should implement digital capability assessment tools and set outcome targets which track to what extent SMEs which have received support and/or funding have improved their digital capabilities. A similar approach can be taken with training to measure actual outcomes regarding levels of digital skills. In order to facilitate cross-border comparisons, an EU-wide tool to assess the digital readiness of companies and to assess the degree of awareness and skills within the labour force of more advanced technologies could also be envisaged.

<sup>20</sup> Idem

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- VVA, WIK (2020): Study on Monitoring Progress in National Initiatives on Digitising Industry [https://ec.europa.eu/newsroom/dae/document.cfm?doc\\_id=69513](https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=69513)

## ANNEX

### AUSTRIA

#### a. Objectives regarding digitisation of SMEs

After the COVID-19 crisis, Austria considers an effective digital connectivity is essential for a dynamic and flexible economy and that it enables an overall societal participation. Austrian companies are being challenged to digitize their business processes and to accompany employees in flexible working from home. This cultural change not only makes it necessary to provide the necessary mobile tools, but entrepreneurs also must deal with strategic issues such as change/adaptation of business models and of processes while developing e-commerce opportunities and reinforcing IT and cybersecurity to increase the resilience of their operations.

The 2020 'Digital Action Plan Austria' has formulated a strategic framework for digitisation, emphasising Austria's long-term target to become a 'Digital Responsible Society'.

To increase the competitiveness of the Austrian economy and to enable a more inclusive society, the country has the following objectives:

- A high priority of a nationwide supply with a fast Internet connection, supported by a platform for an efficient coordination of all stakeholders.
- Digitization in the education sector, strengthened by the provision of digital devices
- Development of a modern, citizen-oriented, and efficient administration
- Digitization and greening of companies

Overall, digital transformation represents 52.8% of the country's RRF budget, thus exceeds widely the 20% target set by regulation.

#### b. Status of SME digitisation

Austria has a high Digital Intensity Index (64%) above EU 27 average (55%) but is still far in terms of digital adoption and technological innovation. In the most advanced technologies Austria is lagging, except regarding Artificial Intelligence (9% compared to 8% in EU 27).

Status level	Metrics	Austria	EU27
Digital Intensity Index	SMEs with at least a basic level of digital intensity	64%	55%
Standard advanced technologies	SMEs selling online	22%	18%
	Enterprises using Electric Information Sharing	45%	38%
	Enterprises using Social Media	38%	29%
Most advanced technologies	Enterprises using Cloud solutions	29%	34%
	Enterprises using Big Data solutions	9%	14%
	Enterprises exploiting Artificial Intelligence	9%	8%

Source: DESI 2022

### c. SME digitisation initiatives under the RRF, associated funding and antecedents

In the RRF plan, the digitalization of companies is mainly covered by Sub-component 2D “Digitalization and greening of companies”.

It is supported by two existing subsidy programmes designed for SMEs (KMU: Kleine und Mittlere Unternehmen): KMU-Digital and KMU-e-commerce:

- KMU-Digital has two modules “Consulting support” and “Implementation Promotion” that help SMEs to accelerate their digitalization, financed through subsidies.
- KMU-E-commerce supports SMEs in the implementation of e-commerce projects

The sub-component 2D serves EU Commission’s previous recommendations:

- CSR 2019:

“Support productivity growth by stimulating digitalisation of businesses and company growth...” “In addition, further investment could generate major productivity gains and innovation outcomes including into eco-innovation, the innovation capacity of small and medium-sized enterprises and in complementary intangible assets.”

“Digitalisation of smaller firms, including micro-enterprises, is particularly important, as they form the backbone of the Austrian economy. The considerable take-up of the programme ‘*KMU Digital*’ shows demand and interest among small and medium-sized enterprises in getting advice on digitalisation. Prolonging and expanding this programme would help, as well as further policy focus on business digitalisation under Austria’s overall digitalisation strategy.”

- CSR 2020:

“In line with the general escape clause, take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment. Improve the resilience of the health system by strengthening public health and primary care.”

“Ensure an effective implementation of liquidity and support measures, in particular for small and medium-sized enterprises, and reduce administrative and regulatory burden. Front-load mature public investment projects and promote private investment to foster the economic recovery. Focus investment on the green and digital transition, in particular on innovation, sustainable transport, clean and efficient production and use of energy.”

“The weak diffusion of digital technologies and business models among smaller companies represents a bottleneck for productivity growth.”

The overall Digital budget represents an estimated **total investment of €1.8 billion** and comprises 4 sets of measures:

- “Broadband deployment Internet Platform”
- “Digitalization of schools”
- “Digitalization of public administration”
- “Digitalization and greening of companies”

The part regarding “Digitalization and greening of companies” comprises:

- An investment in the ‘Digitalization of SMEs’

- An investment in ‘Digital investment in companies’
- An investment in ‘Ecological investments in companies’

The weak uptake of digital technologies and business models among smaller companies represents a bottleneck for productivity growth. It is important to raise awareness among SMEs of the relevance of digitisation of their business processes and products to reap the full range of benefits from adopting digital technologies. There is an overall population of 341,000 enterprises in Austria.

In the continuation of existing measures (KMU Digital, KMU e-commerce and the “COVID-19 Investment Premium” scheme), the RRF support regarding ‘Digitalization of SMEs’ and “Digital investment in companies” is designed to trigger the digital transformation of companies (widely SMEs) in the post-pandemic recovery phase. It represents altogether a **budget of €100 million** for digital investments (covering expenses regarding consulting, hardware, software, infrastructure, e-commerce...).

#### d. Key elements of RFF digitisation initiatives

The subcomponent “Digitalisation and greening of businesses” dedicates significant investments to the digitisation of businesses, especially SMEs. The “Digitalisation of SMEs” part aims to help SMEs to get advice on the state and opportunities of digitisation in their business at to assist them designing, implementing, and scaling up their digitisation projects to remain competitive in future digitalised markets. The “Digital Investment in Enterprises” measures aim at encouraging companies to invest in digitisation and to direct them towards forward-looking priority areas. All this should boost the competitiveness of firms and significantly address the Austrian challenges regarding the adoption of digital technologies. These investments are expected to have long-lasting effects contributing to the economy’s resilience and growth.

The key elements of these digitisation initiatives are the following:

- Fostering the digitisation of SMEs through KMU Digital providing advisory support on digital business models and processes (including resource optimisation), e-commerce and online marketing, IT and cybersecurity, and digital administrative processes and providing incentives for financing new investments in digitisation projects for SMEs.
- Supporting the implementation of e-commerce projects of SMEs, new investments in connection with e-commerce, and related services by external providers through KMU-e-commerce.
- Promoting new investments in digital solutions and digital infrastructure through the “COVID-19 investment premium” scheme through an additional depreciation of fixed assets.

The “Digitalisation of SMEs” measures are based on two support programmes KMU Digital and KMU e-commerce:

- KMU Digital shall provide both advisory support and implementation support for concrete digitisation projects. Advisory support involves personalised advice to Austrian SMEs by certified consultants on four topics: (1) business models and processes (including resource optimisation), (2) e-commerce and online marketing, (3) IT and cyber security, and (4) digital administrative processes. Implementation support provides funding for the implementation of the digitisation projects for which advisory support was provided.

- KMU e-commerce shall support SMEs in the implementation of concrete e-commerce projects and shall provide funding for new investments into e-commerce and related services from external providers at a rate of 20% (up to a maximum amount of €12,000 per recipient).

KMU Digital was launched in 2017 as a pilot program. It initially trained consultants and certified them on a topic-specific basis to ensure the best possible advice for companies. In the pilot program, around 10,000 consultants were trained and certified and subsequently around 7,700 consultations for SMEs were carried out.

KMU E-commerce was launched in 2020 as a pilot program. The funding was exhausted within a very short time. With this pilot call, around 150 new investments were funded.

The “Digital investments in enterprises” measure consists of a 14% investment premium to companies for investments in digitisation. It extends an existing “COVID-19 Investment Premium” scheme. Support shall be granted for new tangible and intangible investments in depreciable capital assets of companies. The measure shall encourage investments in the digitisation of business models and processes, including for industry 4.0 and e-commerce, as well as in the introduction or improvement of IT and cyber security measures.

The “COVID-19 investment premium” is handled by Austria Wirtschaftsservice GmbH (AWS), the federal funding agency and the monitoring body of Austria’s ERDF and ESF programmes. Since 2002, AWS and its predecessor organisations “BÜRGES” and “ERP-Fonds” have been implementing funding since 1995 within the framework of the ERDF and the EAFRD.

#### **e. Compatibility of measures with specifications**

The plan’s objectives are to create opportunities for small and medium-sized enterprises to design, implement and transfer digitisation projects to the digital market. The measures target that the digitisation opportunities are exploited by SMEs as broadly and comprehensively as possible. The measures target also to trigger now, but also in the future, entrepreneurial investments and to set an economic stimulus in the field of digitisation.

Indeed, more and more often, established companies suddenly find themselves under pressure from dynamic market entrants who take advantage of digitisation strategies. Austrian SMEs therefore need a sustainable push to introduce them to digitisation, as broadly as possible, and to support them in remaining digitally competitive going forward.

As an example, the Austrian RRF Plan mentioned that according to Statistik Austria around 88% of companies have a website and although the number of online shops in domestic Internet retail has almost tripled in the last decade, only 22% of retail companies based in Austria sell through the Internet.

In addition, since digitisation not only impacts the core business but all functional areas in companies, it makes the projects extremely complex as it reshuffles organizational structures and management concepts. Projects have often also to address hurdles in the implementation, such as data protection and cybersecurity, the need of financial resources and the lack of know-how. Digitisation strategies must then be well thought out and professionally implemented.

SMEs should benefit at a large scale from the Austrian RRF measures regarding digitisation, as these measures will provide opportunities to adapt their business capabilities and their process transformation. The support brought by KMU Digital and KMU E-commerce and by the “COVID-19 investment premium” scheme should be instrumental for reaching the objectives in SMEs’ digitisation.

The implementation of the planned measures will have a lasting effect, providing a sustainable change and an improvement regarding resilience.

#### **f. Measurability and targets**

The measures regarding “Digitalisation of SMEs” and “Digital Investment in companies” in the RRF plan are based on milestones and but also specific targets:

- Digitisation of SMEs:
  - o 2 milestones based on the approval and publication of funding guidelines and conclusions of contracts with the Austrian Economic Chamber (WKÖ) and with the Austria WirtschaftService GmbH (AWS) for KMU Digital 3.0 and KMU E-commerce by Q1 2021.
  - o 1 target of at least 15,300 digitisation projects completed by SMEs by Q4 2023
- Digital investment in enterprises:
  - o 1 milestone based on the entry into force by Q2 2021 of the amendment to the Investment Premium Act to reflect the budget increase thanks to the RRP
  - o 2 targets of at least 3,000 digitisation investments under the RRP by Q1 2023 and 7,000 by Q1 2025

#### **g. Lessons learned**

- Good practices and wider applicability

In the Austrian RRF plan, the measures regarding SME digitalization address a large scope of company types and needs (from e-commerce implementation to large organisational transformations) and is backed by a wide variety of support packages (strategy, implementation, investment premium, etc.). The plan also provides detailed numerical targets to track impacts.

- Risks and gaps

At this stage, three major risks/gaps can be identified:

- While there is in the Plan a wide coverage of company types and digitisation needs, there is no focus on specific industries where digitisation is at the core of the business (such as manufacturing or logistics with “Industry 4.0”).
- The financial support size (€100 million) looks relatively low considering the large size of the industry (341,000 enterprises). It represents only about 5% of the digital budget.
- There are no specific measures regarding the development of AI and Big Data. Although, Austria has allocated €107 million for research on Quantum computing.

## DENMARK

**a. Objectives regarding digitisation of SMEs**

In 2022, the Danish authorities launched a new National Strategy for Digitisation,<sup>21</sup> based on recommendations from the Danish Government Digitisation Partnership. The total budget for the digitisation programme is reported as more than DKK 2 billion over 5 years. The strategy contains nine visions to boost Denmark's digital development including (Vision 4) "increased growth and digital SMEs". The main aim regarding SMEs is to achieve the digital transformation of business, in which all Danish businesses – large and small – take part in and benefit from the digital transformation.

Another relevant strategy is Denmark's Digital Growth Strategy 2025<sup>22</sup> which seeks to support the development of a highly-skilled talent pool of qualified professionals. The digital skills objectives include, alongside improving digital skills of children and support individual skill development in the labour market "Improving access to skill trainings and programmes for small and medium sized enterprises and enabling them to exploit the commercial potential of new and emerging technologies".

**b. Status of SME digitisation**

Denmark benefits from a very high level of Digital Intensity (79%), which is well above the EU 27 average (55%). Danish enterprises significantly exceed the EU average in all measures regarding digital adoption. However, it is understood that SMEs fall behind larger companies when it comes to the use of more advanced digital technologies.

Status level	Metrics	DK	EU27
Digital Intensity Index	SMEs with at least a basic level of digital intensity	79%	55%
Standard advanced technologies	SMEs selling online	38%	18%
	Enterprises using Electric Information Sharing	50%	38%
	Enterprises using Social Media	36%	29%
Most advanced technologies	Enterprises using Cloud solutions	62%	34%
	Enterprises using Big Data solutions	27%	14%
	Enterprises exploiting Artificial Intelligence	24%	8%

Source: DESI 2022

**c. SME digitisation initiatives under the RRF, associated funding and antecedents**

Digitisation of SMEs is a key element of Denmark's RRF, and falls under the heading of measures to support the "digital transition".

<sup>21</sup> <https://en.digst.dk/news/news-archive/2022/may/the-government-launches-the-new-national-strategy-for-digitalisation/>

<sup>22</sup> <https://investindk.com/insights/the-danish-government-presents-digital-growth-strategy>

The SME digital support scheme is expected to help small and medium companies overcome barriers to investing and using new and advanced technology and e-commerce solutions through the new digital strategy.

The overall Digital budget involves an estimated total investment of €89 million, and includes the following measures. Support for the digitisation of SMEs specifically is allocated **€9 million**, but it should be noted that the other measures will also provide some support to SMEs.

- Digital strategy: further digitalising the public administration and strengthening digitisation within businesses and industries
- High-speed Internet: rolling out high-speed internet access in rural areas of Denmark.
- SME's digital transition: supporting small and medium-sized enterprises in digitalising their business systems.

The SME digital transition initiative seeks to address concerns identified at the time of the RRP's adoption<sup>23</sup> that productivity gaps between smaller and larger firms were expanding and that SMEs were falling behind in the otherwise high levels of digital intensity reported by Danish firms on average. 85.3% of large firms had high levels of digital intensity in 2020, but this applied to only 43.8% of SMEs. Access to skills was also reported to be a key issue for SMEs, in particular in areas such as artificial intelligence, high-performance computing, cybersecurity and machine learning. In 2020, 58.1% of enterprises who were looking for ICT specialists reported hard-to-fill vacancies.

The initiative builds on previous measures which included:

- The 2020 digital programme for SME development: This programme provided public subsidies to strengthen small businesses' trading capabilities, digital transformation and e-commerce activities, in turn strengthening digital skills in SMEs. Over 900 enterprises benefited from the programme in 2020. The RRF funding serves to prolong this scheme.
- Additional funding for ICT training: €13.7 million was allocated to create more STEM study places in December 2019, increasing intake in STEM education programmes by 9% in Summer 2020.<sup>24</sup>

The Commission also notes that general tax schemes are expected to make a significant contribution to the digital transformation, and particularly measures to increase the basis for depreciation of investments and deducting R&D taxes.

#### **d. Key elements of RFF digitisation initiatives**

The main reform is the commitment to adopt and implement a new digital strategy, building on the recommendations of an expert group ('digitisation partnership'). The expert group suggesting new measures includes representatives of SMEs alongside other business representatives and experts. This was due to be executed in Q1 2022 in the context of the revision of the Finance Act, and has been elaborated through the Danish National Reform Programme for 2022.<sup>25</sup>

Measures to increase the basis for depreciation of investments and deducting R&D taxes account for almost 50% of the plan's total budget and boost private investments in innovation and digital technology.

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<sup>23</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021SC0154&qid=1624626503568>

<sup>24</sup> <https://ufm.dk/aktuelt/pressemeddelelser/2020/rekordmange-er-optaget-pa-en-videregaende-uddannelse>

<sup>25</sup> [https://ec.europa.eu/info/sites/default/files/denmarks\\_national\\_reform\\_programme\\_2022\\_en.pdf](https://ec.europa.eu/info/sites/default/files/denmarks_national_reform_programme_2022_en.pdf)

The plan also allows the scaling-up of the existing **SME: Digital** support scheme, which supports inter alia implementation of new e-commerce solutions, technical support for start-ups, development, integration of digital sales for new international markets and the purchase of new technologies and digital solutions, e.g. automation technology and software. The RRP provides for a DKK 65 million budget for this measure, which is complemented with significant national resources. The grant scheme is open for applications several times each year, under which applications are assessed on a first-come, first served basis. The RRP notes that a maximum grant of DKK 100.000 per company is foreseen, which could allow support for an additional 550 SMEs. However, the SME: digital website<sup>26</sup> notes that up to DKK250,000 is available of which DKK200,000 is provided for new technology and DKK50,000 for related advice. A subscription-based solution can be supported for up to 2 years. Examples of supported technologies and applications include:

- Business and management systems - ERP, MRP, MES/MIS
- Systematic customer processing - CRM
- Production and supply chain optimization
- Internet of Things and cloud technology
- Big Data / Business Intelligence - data application
- Robotics and cells
- Advanced material technology incl. 3D printing
- E-commerce platform, webshop and system selection, payments
- Online marketplaces, digital sales tools, dropshipping
- Integration of web sales in systems, ERP, PIM, storage and logistics
- Digital security

This investment prolongs an existing scheme, **Bredbåndspuljen**, which deploys very high-speed internet access (minimum 100 Mbps) in rural areas of Denmark where existing coverage is poor due to lack of sufficient market incentives. The scheme is an applicant-based funding scheme for households and business. Extending high-speed rural broadband coverage to areas where such connection was not available before on market terms will allow the digitisation of several new SMEs. The plan is expected to provide DKK 100 million under the 'broadband pool', which could finance the connection of approximately 3 500 - 5 000 households and/or companies.

The objective of the 'securing digital professions and the digital jobs of the future' sub-reform is to strengthen the digitisation and digital readiness of Danish companies, in particular SMEs, and to support their access to employees with adequate digital and technological skills, and the use of advanced technologies.

#### **e. Compatibility of measures with specifications**

Overall, digital transformation represents 25% of the country's RRF budget, which exceeds the 20% target set by regulation. The Danish authorities clearly explain how the measures in the RRP will contribute to the digital transition and the measures correspond with country-specific recommendations on the need to "focus investment on the [...] digital transition" (CSR 2, 2020) and to "Focus investment-related economic policy on education and skills" (country-specific

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<sup>26</sup> <https://smvdigital.dk/content/ydelsers/tilbud/4e84e652-3d63-4b24-b5f5-a278d2ad27e6/>

recommendation 1, 2019). They are also consistent with the 2022 Recommendation on the National Reform Programme of Denmark,<sup>27</sup> which notes that the Danish economy is advanced in terms of smart, sustainable and inclusive growth, and Denmark ranked top of the European Commission's 2021 Digital Economy and Society Index, but further digitisation efforts are needed for small companies<sup>28</sup> and public administration, alongside development of skills in the labour force to address shortages. Further support for R&D within SMEs is also encouraged.

#### f. Measurability and targets

The aim of the digitisation component of the Danish recovery and resilience plan is to promote a digital transformation across all sectors of society advancing welfare and equality, growth and employment, the green transition and prepare the public administration for the emerging challenges in this area.

The RRP includes 6 milestones which are relevant for the digitising SME component:

- **Adoption of a new “Digital Strategy”** in the Finance Act 2022 and of the implementation plan foreseen for **Q1 2022**
- Implementation of the Digital Strategy. Under this milestone at least **50% of the measures in the digital strategy should have been implemented into relevant regulatory and legislative acts** and should have entered into force by **Q4 2023**.
- **Independent report on the achievements of the digital strategy** to be produced by **Q4 2025**
- **At least 500 SMEs should receive funding for digital projects** (relating to digital professions and jobs for the future) by **Q4 2025**
- **At least 3,500 households and/or businesses** should be served with very **high speed Internet** (at least 100Mbit/s connections) by **Q1 2022**
- **At least 550 SMEs** should receive **funding for digital projects (relating to digital transition and trade)** by **Q4 2023**.

The milestones include concrete targets relating to the number of companies that should benefit from support alongside milestones relating to the adoption of the Digital Strategy and associated legislative measures. This should ensure that funding is received by the target stakeholders. However, targets relating to “outcomes” e.g. in relation to improvements in skills and digital intensity amongst SMEs are not included, although we note that the Danish Government reports separately that 93% of businesses that received advice through SME: Digital have invested in new technology or plan to do so.<sup>29</sup> The goal of upgrading connection speeds for selected rural areas to at least 100Mbit/s also falls short of the EU-wide targets under the Digital Decade for universal availability of Gigabit-capable connections. This risks the need for subsequent funding rounds to achieve further upgrades for SMEs present in more rural areas.

#### g. Lessons learned

- Good practices and wider applicability

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<sup>27</sup> [https://ec.europa.eu/info/system/files/2022-european-semester-country-report-denmark\\_en.pdf](https://ec.europa.eu/info/system/files/2022-european-semester-country-report-denmark_en.pdf)

<sup>28</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021SC0154&qid=1624626503568>

<sup>29</sup> <https://en.digst.dk/media/27861/national-strategy-for-digitalisation-together-in-the-digital-development.pdf>

The Danish plan includes an innovative steering group, involving the participation of SMEs which is tasked with developing the digital strategy. It also combines measures to provide financial support for SMEs to implement digital technologies with support for skills development, as well as offering incentives for investment and R&D through the tax system. This provides a broad-based programme which encompasses the key elements required to boost digitisation amongst SMEs. The programme also explicitly seeks to support the adoption of more advanced digital technologies, which is appropriate for Denmark's already high degree of digital intensity. Another positive aspect is the incorporation of a commitment to produce an independent report regarding achievements of the Digital Strategy.

- Risks and gaps

The Danish plan appears comprehensive, but some possible gaps can nonetheless be identified:

- The €9 million provided for the SME digitisation plan is a small fraction of the overall support budget, and (along with the target to support 550 SMEs) seems limited in view of the estimated 300,000 SMEs active in Denmark. However, we note that a much more significant budgetary allocation has been given to support tax incentives
- The milestones and targets do not provide for an outcome-based assessment of the impact of the measures on closing the productivity and skills gap between SMEs and larger companies. However, this is mitigated by the commitment to produce an independent report on the achievements of the Digital Strategy by 2025.

## ITALY

### a. Objectives regarding digitisation of SMEs

Italy sees the digital revolution as a huge opportunity to increase productivity, innovation, and employment, to guarantee a wider access to education and culture and to bridge territorial gaps.

Despite recent improvements, Italy is in 24th place among the 27 EU member states in the latest update of the DESI index. The government intends to recover lost ground and make Italy one of the first countries to achieve the objectives recently illustrated by the EU Commission in the "2030 Digital Compass" Communication to create a full digital society.

The country has the following objectives:

- A homogeneous high-speed connectivity across the country for residents, businesses, schools, and hospitals;
- An investment in the digital transformation of the Public Administration through a "cloud first" strategy;
- A strengthening of IT security, from law enforcement to operational activities as well as a widespread improvement of population's basic digital skills;
- An improvement in the innovation rate of the industrial and entrepreneurial fabric and a fostering of investments in cutting-edge technologies (Plan for Transition 4.0).

Overall, digital transformation represents 25.1% of the country's RRF budget, thus exceeds widely the 20% target set by regulation.

### b. Status of SME digitisation

Italy has a significant Digital Intensity Index (60%) above EU 27 average (55%) but is still far in terms of digital adoption and technological innovation. In advanced technologies Italy is lagging, except regarding the use of Cloud solutions (52% compared to 34% in EU 27).

Status level	Metrics	Italy	EU27
Digital Intensity Index	SMEs with at least a basic level of digital intensity	60%	55%
Standard advanced technologies	SMEs selling online	13%	18%
	Enterprises using Electric Information Sharing	32%	38%
	Enterprises using Social Media	27%	29%
Most advanced technologies	Enterprises using Cloud solutions	52%	34%
	Enterprises using Big Data solutions	9%	14%
	Enterprises exploiting Artificial Intelligence	6%	8%

Source: DESI 2022

### c. SME digitisation initiatives under the RRF, associated funding and antecedents

In the RRF plan, the digitisation of companies is mainly covered by Milestone 1 Component 2 "Digitalization, Innovation and Competitiveness of the Production". Its cornerstone is the national plan

'Transition 4.0' which has been one of the main instruments used to support the digital transformation of Italian enterprises. It is based on tax deductions for investment in capital goods through a super and a hyper-depreciation. These measures have proven their effectiveness for stimulating digital uptake, but as for now mainly reached medium and large enterprises and predominantly in the North of Italy.

This Component 2 serves EU Commission's previous recommendations:

- On Education and Skills (partially): 2019.2.4 and 2020.2.4
- On Research and Innovation (fully): 2019.3.1, 2020.3.1, 2020.3.2 and 2020.3.5
- Digital Infrastructure (fully): 2019.3.1, 2020.3.1, 2020.3.2 and 2020.3.1.8
- Business environment and competition (fully): 2019.3.3 and 2020.3.2
- Financial markets and access to finance (partially): 2019.5.1 and 2019.5.2

The overall Digital budget represents an estimated **total investment of €23.9 billion** and comprises a set of 26 measures:

- Supporting the digital transition and the innovation of the production system by incentivising the investments in advanced technologies, research and innovation;
- Realizing investments in very high-capacity networks (optic fiber and 5G);
- Strengthening participation in the development of space economics and of earth observation systems for land monitoring;
- Fostering and facilitating the widespread deployment of very high-capacity networks;
- Promoting the development and the competitiveness of Italian companies on international markets, including through innovative financial instruments.

The support to the digital transition and the innovation in the production system comprises:

- An investment in 'Transition 4.0';
- An investment in 'Innovation in micro-electronics technologies';
- An investment in 'High-capacity networks';
- An investment in 'Satellite technologies and spatial economy';
- An investment in 'Industrial policy of supply chains and internationalisation';
- An investment in the 'Intellectual Property system';
- A reform in the 'Intellectual Property system'.

Interventions are planned to support small and medium-sized enterprises, a fundamental element of the Italian productive fabric. Micro and small businesses represent almost 70 percent of non-financial industrial added value and 80 percent of the workforce.

In the continuation of an already existing plan, the 'Transition 4.0' investment is designed to promote the digital transformation of processes production and investment in intangible assets in the post-pandemic recovery phase. The incentives will also be eligible for investments in support of the technological and digital transformation of the editorial supply chain. It represents a set of **3 tax credit measures (budget €11.1 billion)** for investment in 4.0 technologies, research, development and innovation as well as training in digital skills.

#### d. Key elements of RFF digitisation initiatives

The plan for Transition 4.0 has the objective of strengthening the innovation rate of the country's industrial and entrepreneurial fabric and encouraging investments in:

- Cutting-edge technologies;
- Research, development, and innovation;
- Digital and managerial skills.

Notably, in the infrastructure sector (transport, electricity distribution, etc.) digital technologies represent a new paradigm of quality and effectiveness in asset management, through an extensive use of sensors analysing key parameters of infrastructures in real time.

In fact, the Plan constitutes an evolution of the previous “Industria 4.0” program, introduced in 2017 for 4 years. This program addresses the emergence of a fourth industrial revolution based on connections between physical and digital systems, complex analysis of big data and real-time settings, backed by smart machines, inter-connected and connected to Internet.

It expected multiple benefits for industrial companies: (1) Higher flexibility given by small batches production with economies of scale of mass production, (2) Higher speed from prototyping to mass production using innovative technologies, (3) Increased productivity and scrap reduction thanks to real-time production monitoring through advanced sensors and (4) Higher competitiveness of products thanks to additional Internet of Things functionalities.

“Industria 4.0” has two major sets of goals:

- Innovative investments: Stimulating innovative investments in Industry 4.0 technology drivers, increasing private expenditure in R&D&I and expanding open innovation relationships between mature companies and high-tech startups;
- Skills: Spreading the Industry 4.0 culture through the programs called “Scuola Digitale” and “Alternanza Scuola Lavoro”, developing the industry 4.0 skills through vocational training and strengthening the “Istituti Tecnici Superiori”, financing the “Industry 4.0” technology clusters and industrial PhDs, creating competence centers and Digital Innovation Hubs.

One specific measure was to set up National Competence Centers facilitating Industry 4.0 transformational projects in all domains through training and awareness, in addition to Digital Innovation Hubs that could support the development of innovative investment plans and support the access to public and private financing solutions. All that complements a network of ‘Punti Impresa Digitale’ that supports SMEs regarding digitisation and is backed with a web portal called “Atlante 4.0” that provides a mapping of all the available centres.

“Industria 4.0” cornerstone was a set of tax measures generating substantial savings on industry 4.0 investments: (1) Hyper-depreciation of equipment, (2) Tax credit for research, (3) Tax deduction on private investments.

Transition 4.0 introduced 3 main differences compared with “Industria 4.0”:

- The scope expansion (already in place from 2020) thanks to the replacement of a hyper-amortisation (which by its nature constitutes only a benefit for companies with a positive tax base) by specific tax credits depending on the amount of the investment, but in any case, compensable with other tax and social security debts.

- The recognition of credit no longer on an annual horizon, thus giving companies a more stable framework for planning their investments;
- The extension of eligible intangible investments and the increase in credit percentages and the maximum amount of incentivized investments.

All these additional measures will enable the engagement of more companies with more investments.

#### **e. Compatibility of measures with specifications**

The Plan focuses on stimulating the uptake of industry 4.0 technologies thanks to a system of tax credits supporting and accelerating the digital transformation of companies. It puts capacity building at the core of investments, not only the acquisition of 4.0 tangible and intangible goods, but also training on digital skills.

A truly transformative effect can be obtained by linking the acquisition of capital goods with investments for the reskilling and upskilling of the workforce, including the upskilling of business owners, and the offering of apprenticeships opportunities for young people.

SMEs should significantly benefit from the measures regarding digitisation contained in the Plan, as they will provide opportunities to increase their capabilities, notably, Digital Innovation Hubs and National Competences Centres should develop some enhanced knowledge-sharing across the Italian industry regarding digitisation best practices.

All this represents a comprehensive framework of measures fitting with the objective of supporting the digital transformation of SMEs towards the Industry 4.0 revolution.

#### **f. Measurability and targets**

The RRF plan provides 3 specific milestones and targets regarding the plan for Transition 4.0:

- Entry into force of legal acts to make Transition 4.0 tax credits available to potential beneficiaries and establishment of the Scientific Committee (Milestone by Q4 2021)
- Transition 4.0 tax credits granted to firms based on tax returns presented in 2021-2022 (Target: 69,900 tax credits by Q2 2024)
- Transition 4.0 tax credits granted to firms based on tax returns presented in 2021-2023 (Target: 111,700 tax credits by Q2 2025)

In an official presentation on “Industria 4.0”, the Italian government indicated back in 2017 that its targets were to develop skills in Industry 4.0 of 200,000 students and 3,000 managers, to double the number of students attending vocational schools on Industry 4.0 topics and to get 1,400 PhDs specialised in Industry 4.0 (out of 5,000 foreseen in the Italian National Research Plan). It was also targeting to trigger an increase of more than €10 billion of private investments over the following year (2018), to generate over 2017-2020 €11 billion of R&D&I private expenditure and €2.6 billion of early-stage investments.

#### **g. Lessons learned**

- Good practices and wider applicability

In the Italian RRF plan, the financial effort in measures regarding the SME digitalization is clearly massive (more than €10 billion) with the aim to transform the whole Industry (towards 4.0). The development of a large and diverse supporting network can also be seen as a good practice.

- Risks and gaps

At this stage, four major risks can be identified:

- The strong "Industry 4.0" focus could limit the digitisation impact to already well-developed mid-size companies and tech start-ups, excluding de facto "standard" small enterprises (e.g., e-commerce, digitisation of administrative processes, etc.).
- The large focus on tax credits could generate an opportunistic approach on already scheduled investments, instead of engaging massively companies into digitisation.
- The absence of metrics and targets could spoil the programme's efficiency. We would recommend to complete this approach through a detailed scoreboard per measure.
- There are no specific measures regarding the development of AI and Big Data.

## LATVIA

**a. Objectives regarding digitisation of SMEs**

Latvia's plan for SMEs seeks to address its key digital challenges – poor skills, insufficient rural connectivity and low level of business digitisation. A key aim is to support the digital transformation of businesses, in particular SMEs and R&D inter alia by creating the necessary framework for Latvia's participation in the network of European of Digital Innovation Hubs. The plan includes measures to deploy very high-speed broadband that will help further improve the digital infrastructure.

**b. Status of SME digitisation**

The basic level of digital intensity for SMEs in Latvia is 38%, which is significantly below the EU 27 average (55%). A further analysis of the figures shows that Latvian firms are less digitally engaged than the EU average on a wide range of metrics, with low levels of advanced digitisation tools such as cloud computing and limited exploitation of online sales.

Status level	Metrics	LV	EU27
Digital Intensity Index	SMEs with at least a basic level of digital intensity	38%	55%
Standard advanced technologies	SMEs selling online	14%	18%
	Enterprises using Electronic Information Sharing	39%	38%
	Enterprises using Social Media	26%	29%
Most advanced technologies	Enterprises using Cloud solutions	22%	34%
	Enterprises using Big Data solutions	9%	14%
	Enterprises exploiting Artificial Intelligence	4%	8%

Source: DESI 2022

The EC also reports that as of 2019, the low level of digital skills in Latvia was hampering its digital transformation, with 57% of the Latvian population lacking basic digital skills and Latvia also had the lowest share of ICT specialists among its workforce in the EU. The EC noted that the shortage of digital skills is a key obstacle to more widespread use of digital solutions by the private sector. Almost half of Latvian firms that tried to fill vacancies for digital specialists find it difficult to do so.

**c. SME digitisation initiatives under the RRF, associated funding and antecedents**

Component 2 of Latvia's RRP focuses on digital transition for a total budget of €365.3 million. This component includes public sector digitisation alongside support for digitisation of companies and associated skills. The element associated with digitisation of businesses accounts for €125 million, while expenditure on reskilling and upskilling including basic and advanced digital skills amounts to €95 million.

**d. Key elements of RRF digitisation initiatives**

A key measure to support the digital transformation of businesses is the establishment of a European Digital Innovation Hub (EDIC), supporting digital transition as a one-stop-shop, establishing a digital maturity test system; ensuring the regional contact points provide new digital transition support functions.

In addition, Latvia plans a grant scheme for digitisation of the processes and functions in enterprises. Support may be granted for acquisition of IT solutions, both software and hardware, acquisition of sensors, purchase of IT equipment, IT infrastructure, implementing digital integration processes.

A separate grant scheme covers introduction of modern automation, robotisation and labour control tools in the manufacturing and service development processes, as well as to support the introduction of personalized e-commerce solutions. Supported activities for new digital products and services include feasibility studies; industrial research; experimental development, including prototyping; and support to projects under Digital Europe programme.

Lastly, Latvia plans to provide loans with grant elements for businesses making significant changes to the overall production or service development process, to digitalise traditional processes in companies, introduce Industry 4.0 solutions (internet of things, artificial intelligence, machine learning, block chain, big data, and cloud computing high performance computing).

Regarding skills, Latvia plans to introduce Education Development Guidelines which would establish responsibilities for enterprises in the education of their employees, set up and pilot individual learning accounts and pilot three funds targeted towards skills. Provision is also made to offer enterprises basic, medium and high-level digital skills training via the European Digital Innovation Hubs in cooperation with sectoral associations, educational institutions and involving the existing Regional Business Centres.

The RPP also includes provision for advanced skills by developing approximately 20 advanced digital skills training modules in quantum technologies, HPC and language technologies to be included in formal and adult education programmes.

#### **e. Compatibility of measures with specifications**

The Commission's analysis of Latvia's RRP<sup>30</sup> notes that Latvia's plan includes sizeable investments in basic and advanced digital skills that so far are keeping back Latvia's digital transition. Latvia's plan also includes measures for the digital modernisation of public administration and the digital transformation of providing public services, including centralised public solutions. Latvia addresses the digital CSRs (CSR 3, 2019, CSR 3, 2020) also by supporting the digital transformation of businesses, in particular SMEs and creating a better environment for R&D as well as by creating the necessary framework for Latvia's participation in the network of European Digital Innovation Hubs.

#### **f. Measurability and targets**

Concrete targets are provided for the different measures, with interim targets. For example, regarding the DIH, targets are set for the EDIH (i) to be fully operational and for the digital maturity test to be available on the EDIH website by Q2 2022; and (ii) to have started providing specific services (digital maturity tests, access to testing and piloting and mentoring and digital skills training) by Q3 2022. A specific target is set for the number of companies which should have received non-financial support from the EDIH in 2024 and then in 2026 – and the type of support is specified (digital maturity test and mentoring to create a digital transformation path map). Very specific milestones have also been set for the provision of financial support including outcome measures. For example, a target is set for the number of companies supported to digitise processes (in 2024 and 2026) where the result of the digital maturity test has improved. It is clarified that the target will be executed when a contract has been concluded between the company and the EDIH for the receipt of the grant and improvements to the test result are observed in the repeated Digital Maturity Test. In addition to setting targets relating to

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<sup>30</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021SC0146&qid=1624628529752>

the number of grants and loans offered in relation to digital transformation, the targets also include the amount of private finance attracted, which should be at least 25% of the eligible costs in the case of loans.

As regards the upskilling of the workforce and provision of educational support to SMEs, the targets include not only the number of businesses to whom the acquisition of basic digital skills has been ensured, but also the share of Latvian inhabitants with at least basic digital skills. Targets are also provided for the number of citizens with advanced digital self-service skills who have participated in technological innovation activities. For certain metrics – in particular the development of a sustainable and socially responsible support framework for adult learning, a survey is envisaged to assess the share of adults involved in adult learning in the last four weeks.

#### **g. Lessons learned**

- Good practices and wider applicability

The Latvian RRP is remarkable for the breadth of support provided for the digitisation of SMEs (measurement of capabilities, advice, grants and loans and educational support), while maintaining a unified framework (via the EDIHs) under which diverse forms of support are provided (a “one-stop-shop”). This approach should serve to ensure a coherent approach to the digitisation of industry that is also accessible to and understandable by the businesses concerned.

The inclusion of a “digital maturity test” and a skills framework also help to ensure that progress on outcomes can be measured.

The Latvian RRP makes full use of this ability to track outcomes by including within its targets not only milestones relating to the take-up of programmes, but also targets which relate to the achievement of outcomes including improvements in digital maturity and higher proportions of the population benefiting from at least a basic level of digital skills. Targets are also provided for different stages in the introduction of measures to track e.g. the establishment of an EDIH, its provision of a full range of services, and the number of companies it has supported in 2024 and then in 2026.

- Risks and gaps

Latvia’s comprehensive approach to its plan and clearly specified targets should serve to limit risks of underperformance and difficulties in monitoring progress. The plan also envisages that a high proportion of firms will be provided non-financial advice by the EDIH. However, the number of firms targeted to receive financial support is low relative to the estimated 100,000 SMEs active in Latvia. Thus, the success of the measure may depend on the degree to which monitoring, mentoring and education alone can support digitisation of SMEs.

PORTUGAL

**a. Objectives regarding digitisation of SMEs**

Portugal’s economy is characterised by micro-enterprises concentrated in traditional sectors. Key digital challenges include the need to invest in the digital transition, particularly in the development of digital skills, both basic and advanced, in the use of digital technologies to ensure equal access to quality education and training, and to boost firms’ competitiveness.<sup>31</sup>

The Portuguese administration’s key aims with regard digitisation of SMEs are:

- Strengthening of the digital skills of employees in the business sector;
- Modernisation of the business model of companies as well as their production processes, including the digitisation of workflows such as business management, innovative products and invoicing;
- Creation of new digital marketing channels for products and services;
- Innovation and incorporation of advanced digital technologies into the business model of firms; and
- Fostering of digitally based entrepreneurship.

**b. Status of SME digitisation**

The basic level of digital intensity for SMEs in Portugal is 52%, which is slightly below the EU 27 average (55%), but the picture overall is mixed. Only 16% of SMEs engage in selling online and Portugal lies below the EU average when it comes to using advanced solutions such as cloud and big data, but performs above the EU average with respect to the use of electronic information sharing and exploitation of AI.

Status level	Metrics	PT	EU27
Digital Intensity Index	SMEs with at least a basic level of digital intensity	52%	55%
Standard advanced technologies	SMEs selling online	16%	18%
	Enterprises using Electronic Information Sharing	52%	38%
	Enterprises using Social Media	26%	29%
Most advanced technologies	Enterprises using Cloud solutions	29%	34%
	Enterprises using Big Data solutions	11%	14%
	Enterprises exploiting Artificial Intelligence	17%	8%

Source: DESI 2022

**c. SME digitisation initiatives under the RRF, associated funding and antecedents**

Portugal’s recovery and resilience plan supports the digital transition with investments and reforms in the areas of skills, digitisation of education and business as well as digitisation of the public sector

<sup>31</sup> [https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/portugals-recovery-and-resilience-plan\\_en](https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/portugals-recovery-and-resilience-plan_en)

(general public administration, health, justice system and tax administration). 22% of Portugal's RRP is devoted to digital objectives overall.

The business sector digitisation programme involves €650 million supporting small and medium enterprises and their workers with tailored digital skill training and tailored coaching and support to adopt digital technologies.

In March 2020, Portugal approved the action plan 'Portugal Digital' to accelerate its digital transformation around three pillars: (i) training and digital inclusion; (ii) digital transformation of businesses; and, (iii) digitisation of public administration. This was followed in April 2020 by the adoption of the Digital Transition Action Plan (DTAP).

#### **d. Key elements of RFF digitisation initiatives**

Component 16 of the Portuguese RRP relates to "Enterprise 4.0" and seeks to address the challenges related to the low digitisation of enterprises. The component includes 1 reform, and 3 investments, with a total estimated cost of EUR 650 million.

##### Reform TD-r31: Digital transition of the business environment

The objectives of the measure are to enhance the growth of the business environment making it digitally more competitive and resilient in the current global economic and social context. This reform is part of the wider Digital Transition Action Plan (PATD) that Portugal adopted in April 2020 and includes the following elements:

- Review of the formative content included in the National Qualifications Catalogue, specifically relating to digital skills for use in a professional context. This renewal is aligned with the latest technological developments and the most pressing needs of companies in various economic sectors. To this end, new training pathways and training course of short duration may be made available from 2021.
- Establishing the legal and regulatory framework necessary for the creation of digital seals in the areas of cybersecurity, privacy, sustainability and usability. This framework and the promotion of digital trust is a pre-condition for the implementation of the investment for digital seals foreseen in this component.

##### Investment TD-C16-i01: Digital Empowerment of Enterprises

The objectives of the measure are to increase the digital skills of the employed workforce, including employees and managers, with a particular focus on enterprises in the industry, commerce, services, tourism and agriculture sectors, in order to increase the number of digitally skilled workers and improve the competitiveness and resilience of enterprises, thereby also contributing to maintaining and creating jobs. This investment shall help increase the number of skilled jobs in existing companies and foster the creation of new businesses. The investment shall consist of two interlinked training programmes that shall be set up to address gaps in the digital skills of workers (employees and managers) and businesses. The investment is expected to influence new policies and to contribute to the development of lifelong vocational skills and training practices. The investment is also expected to improve the ability of companies to face challenges and seize the opportunities brought by technology. The two actions are:

- Academy Portugal Digital: with the target to reach 800 000 participants in online, blended, and face to face digital skills training

- Employment + Digital 2025: with the target to offer to 200 000 participants a deeper face to face and blended digital skills training

#### Investment TD-C16-i02: Digital Transition of Enterprises

The objectives of the measure are to contribute to the transformation of the business models of Portuguese SMEs and their digitisation. This is particularly relevant in view of the fact that the Portuguese economy is dominated mainly by micro-enterprises, which are less digitally active than larger companies. Thus, by engaging SMEs in the digitisation of businesses, the aim of the investment is to transform the business model of the Portuguese economy and to contribute to greater competitiveness and resilience. The investment consists of four groups of actions:

- **‘National Test Beds Network’**: the creation of a national Test Beds network aimed to create the conditions for businesses to develop and test new products and services and accelerating the digital transformation process, either via physical equipment and infrastructure testing equipment or virtual/digital simulators. The target is to establish **30 test bed infrastructures and test at least 3 600 pilot projects**.
- **Digital Commerce**: a programme for the digitisation of SMEs, with a focus on microenterprises in the commercial sector, to activate their digital trading channels, to incorporate technology into business models and to dematerialise processes with customers and suppliers through the use of information and communication technologies. It shall comprise three projects: i) **‘Digital Trade accelerators’ with the creation of 25 local, regional or sectorial accelerators** (entities that provide coaching, mentoring, funding support to start-ups and SMEs to help them grow) and a system of financial incentives to digitise SMEs’ business models (with target of 30 000 SMEs); ii) ‘Digital Commerce Neighbourhoods’ that shall support the digitisation (with local e-commerce and delivery platforms) of 50 shopping areas located in urban centres, suburban or rural areas in order to boost these areas and promote territorial cohesion and the local economy; iii) ‘Internationalisation via Ecommerce’, to help enterprises to develop new sales channels abroad via online sales.
- **Support to the digital transition of the business models: Coaching 4.0**, a programme to support businesses in the adoption of advanced digital technologies
- **Entrepreneurship**: with measures such as i) **‘Voucher for Start-ups — New Green and Digital Products’** a voucher programme aimed at supporting start-ups that want to develop digital and green based business models; ii) ‘Strengthening the National Entrepreneurship Structure — Startup Portugal’ with investments in mapping the start-up environment as to identify challenges and solutions connected with the entrepreneurship agenda and the implementation of the respective action plans; and iii) ‘Startup Incubators/Accelerators vouchers’ to support incubators and accelerators in their development, including adoption of new digital technology, improve resources at their disposal and to reinforce their knowledge and capabilities in order to support start-ups with digitally based business models.

#### Investment TD-C16-i03: catalyst for the Digital Transition of Enterprises

The objectives of the measure are to contribute to the digital and environmental transition of society and business. The investment shall consist of the following three actions:

- ‘Dematerialisation of invoicing’, with a project aimed at reducing paper use through a digital invoice sending platform;

- ‘Cybersecurity, Privacy, Usability and Sustainability Certification Seals’ — an investment in: creating four new cybersecurity, privacy, usability and sustainability certification seals; the set-up of platforms that support communication between all partners and entities involved in the process (as well as generating procedural data relevant to the monitoring of the program); a campaign to disseminate the initiative and empower conformity assessment bodies or technical assessment entities that support the certification seals in those areas; and
- ‘Digital Innovation Hubs (DIH)’: a service to support companies to become more competitive in the digital sphere, in order to improve their production processes, through automation or incorporation of disruptive technologies. This investment shall reinforce and complement the network already under development within the Digital Europe Program, to reach a total of 16 DIHs established in Portugal.

#### **e. Compatibility of measures with specifications**

Overall, digital transformation represents 22% of the country’s RRF budget, which exceeds the 20% target set by regulation. The measures correspond with Country Specific Recommendations related to the support of the use of digital technologies, to ensure equal access to quality education and training, to boost firms’ competitiveness, and to support employment and prioritise measures to preserve jobs (Country Specific Recommendation 2 2020). The component also supports addressing the Country Specific Recommendations to improve the skills level of the population, in particular their digital literacy, including by making adult learning more relevant to the needs of the labour market (Country Specific Recommendation 2 2019) and to focus investment on the digital transition (Country Specific Recommendation 3 2020).

The RRP also includes measures which address the recommendations made in the Commission’s analysis of Portugal’s RRP<sup>32</sup> which notes that:

- Portugal continues implementing the national strategy for the digitisation of the economy, committed to the development and deployment of advanced technologies. However, greater efforts targeting key strategic technologies are needed to boost growth and jobs
- A major barrier to the digitisation of SMEs is the digital knowledge gap. Adopting digital technologies and improving skills levels would increase productivity and help the country’s numerous micro-enterprises to grow.
- Promoting and, where appropriate, co-financing the European Digital Innovation Hubs would benefit the digitisation of the Portuguese companies.

#### **f. Measurability and targets**

The Portuguese RRP establishes 15 milestones in relation to Enterprise 4.0. These involve:

- Entry into force of the review of the training content included in the National Qualifications Catalogue regarding modules on the field of Digital Skills and the legislation or regulation for the creation of digital signatures and seals (legislative measure – by Q1 2022);
- Start of the Portugal Digital Academy and Employment + Digital programmes. Online platform should be operational, relevant partners and stakeholders are identified and the training programme is launched (by Q1 2022);

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<sup>32</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021SC0146&qid=1624628529752>

- Specific numeric targets regarding the number of training participants, the number of SMEs supported through the digital commerce accelerators, the number of pilot products developed in the national test beds network, the number of digital commerce neighbourhoods, the number of SMEs and start-up incubators directly supported by digitisation programmes, the number of start-ups mapped on the platform of start-up Portugal, the number of DIH consortiums selected, the establishment of platforms for digital invoices and cybersecurity, privacy, usability and sustainability certifications and the number of beneficiaries of consultancy services via the Digital Innovation Hubs.

The inclusion of specific numeric targets has the benefit of being concrete and measurable. However, there may be a risk that the large number of programmes and associated targets may result in a lack of focus for the programme, and potential overlaps if businesses benefit from multiple programmes. It should also be noted that the targets focus on outputs in the form of delivery of support to a given number of individuals or businesses, or the creation of a given number of support hubs, but it is not indicated in the RRP how this could be expected to improve performance in the indicators where Portugal is currently below the EU average.

#### **g. Lessons learned**

- Good practices and wider applicability

The Portuguese RRP contains a wide range of measures which seek to address different aspects of the digitisation and skills gap for SMEs. The programmes seek to target a relatively high proportion of Portugal's close to 1m SMEs.

An interesting aspect which could also be relevant in other countries where it has proved challenging to reach SMEs in all sectors of the country is the Digital Trade accelerators, involving the creation of 25 local, regional or sectorial accelerators (entities that provide coaching, mentoring, funding support to start-ups and SMEs to help them grow).

- Risks and gaps

Although the range of programmes and measures can be seen as a strength, it also risks complexity for the target group (SMEs), and the potential for overlap and lack of co-ordination. Likewise while setting ambitious and concrete targets is positive, care will be needed to ensure that figures are accurately reported and that when an SME is recorded as receiving support, that this is meaningful or measurable in some way. A clearer definition of metrics such as "number of SMEs supported" could be helpful alongside a system where feedback is taken from the SMEs concerned regarding the usefulness of the support and what it meant for the transformation of their business.

## SPAIN

**a. Objectives regarding digitisation of SMEs**

Following the COVID-19 pandemic and its economic, social and territorial consequences, Spain has accelerated the digital transition as in order to ensure overall the connectivity, to increase business digitisation notably of SMEs, to develop Research, Development and Innovation and, last but not least, improve digital skills of the population.

Spain is already a leading country in fiber optics deployment, is well positioned on the DESI index and has a vibrant IT industry and start-up ecosystem. However, the country has still 3 major shortcomings, leading to the following objectives:

- A full connectivity throughout the territory;
- An overall improvement regarding the digital skills of the population;
- A large digitisation of SMEs.

The RRF Plan supports 7 of the 10 strategic plans of the “Digital Spain 2025 agenda” that was set up by Spain in 2020 including the Connectivity Plan, the 5G Promotion Strategy, the National Strategy for Artificial Intelligence, the National Plan for Digital Competences, the Digitalization Plan for Public Administrations, the Digitalization Plan for SMEs and the Spain Audiovisual Hub Plan for Europe.

Overall, digital transformation represents 28.2% of the country’s RRF budget, thus exceeds widely the 20% target set by regulation.

**b. Status of SME digitisation**

Spain has a significant Digital Intensity Index (60%) above EU 27 average (55%) but still far from Sweden (86%) or Finland (82%). Regarding the “Standard advanced technologies” such as e-commerce, Electronic Information Sharing, Spain is ahead in the EU, but not regarding the “Most advanced technologies” such as Cloud, Big Data and AI.

Status level	Metrics	Spain	EU27
Digital Intensity Index	SMEs with at least a basic level of digital intensity	60%	55%
Standard advanced technologies	SMEs selling online	25%	18%
	Enterprises using Electronic Information Sharing	49%	38%
	Enterprises using Social Media	39%	29%
Most advanced technologies	Enterprises using Cloud solutions	27%	34%
	Enterprises using Big Data solutions	9%	14%
	Enterprises exploiting Artificial Intelligence	8%	8%

Source: DESI 2022

**c. SME digitisation initiatives under the RRF, associated funding and antecedents**

In the RRF plan, the digitalization of companies is mainly covered by **component 13 (“Boost to SMEs”)** but also partially by component 12 (“Reforms and investments in the field of Industrial Policy Spain 2030”)

and by component 14 (*"Tourism sector modernization and competitiveness plan"*). The RRF plan targets specific strategic productive sectors such as agri-food, mobility, health, tourism or commerce. It promotes innovation, entrepreneurship and addresses the start-up ecosystem.

Component 13 (*"Boost to SMEs"*) aims at strengthening the Spanish business ecosystem with special attention to the needs of SMEs. This component deals with a massive digitization plan, with a horizontal approach (providing a basic digitization package to a significant percentage of SMEs) and vertical (promoting the digitization of processes and of technological innovation in companies).

This component serves the following EU Commission's previous recommendations:

- 2019.3.1. Focus economic investment policy on promoting innovation.
- 2019.4.1. Advance in the application of the Market Unity Guarantee Law, ensuring that, at all levels of government, the regulations for those governing access to economic activities and their exercise -particularly in the field of services- are consistent with the principles of said Law and improving cooperation between administrations.
- 2020.1.1. Take all necessary measures, in line with the general safeguard clause of the Stability and Growth Pact, to combat the COVID-19 pandemic.
- 2020.1.3. Strengthen the capacity and resilience of the health system in terms of health workers and medical products and infrastructure essential.
- 2020.2.1. Support employment through measures to preserve jobs, effective hiring incentives and development of capabilities.
- 2020.2.4. Improve access to digital learning
- 2020.3.1. Ensure the effective application of the measures aimed at providing liquidity to SMEs and the self-employed, particularly avoiding payment delays.
- 2020.3.2. Anticipate public investment projects that are in an advanced stage of development and promote private investment to drive economic recovery.
- 2020.3.3. Focus investment on the ecological and digital transition, and particularly on promoting research and innovation, on production and use of clean and efficient energy sources, energy infrastructure, management of water resources and waste and the sustainable transport.
- 2020.4.1. Improve coordination between the different levels of government.

It represents an estimated **total investment of €4.9 billion** and comprises:

- 2 reforms: "Improvement of regulation and business climate" and "Spain Entrepreneurial Nation Strategy"
- 5 investment fields: "Entrepreneurship", "Growth", "Digitization and innovation", "Trade support", "Internationalization"

The "Digitization and innovation" programme includes, among others, subsidy programs for SMEs for the costs of adopting digital solutions and of digital transformations, to support project to digitize the value chain of the different industrial sectors and support to Digital Innovation Hubs.

In the first phase (2021-23), the plan for digitisation of SMEs mainly relies on the implementation of the "Digitalization Plan for SMEs 2021-25" (€4.7billion).

#### d. Key elements of RFF digitisation initiatives

The Spanish “Digitisation Plan for SMEs 2021-25” has 5 objectives:

- Create a set of scalable programmes for the basic digitisation of SMEs, via public and private cooperation.
- Promote entrepreneurial and managerial training in digital skills, in order to enhance the transformation and productivity of SMEs, and to promote their growth and internalisation.
- Boost disruptive innovation and entrepreneurship in the digital field, encouraging SMEs and start-ups to take advantage of the opportunities offered by the green-data-driven digital economy.
- Establish sector digitisation programmes in line with the specific characteristics of SMEs in industry, tourism and commerce, within the context of ecological transition.
- Reduce the gender gap in digitisation.

It has 14 major initiatives:

Area	Measures
Basic Digitisation for SMEs	1. Digital Toolkit programme
	2. SME connectivity voucher
	3. “Protect your company”
	4. “Acelera Pyme” programme
Managing change	5. Management training programme
	6. Training programme for experts in SME digital transformation
	7. Agents of change programme
Disruptive innovation and digital entrepreneurship	8. Programme for disruptive innovation and SME digital transformation
	9. Programme to support innovative business clusters
	10. Programme to support business innovation hubs
	11. Programmes to support business entrepreneurship
Sector-by-sector support for digitisation	12. Active Industry programme
	13. Digital tourism programmes
	14. E-commerce programmes

It also includes 2 horizontal measures the area “Coordination, efficiency and reform”: 15. Integrated network of support measures for SMEs and 16. Digital certification for SMEs.

### e. Compatibility of measures with specifications

The cornerstone of the Digitalisation Plan is **the Digital Toolkit programme** which represents an investment of €3 billion Euros during the period 2021-2023. It aims at promoting a scalable, high-impact, public-private collaboration mechanism to facilitate/accelerate the digitisation of SMEs via the implementation of a set of basic digitisation resources (the Digital Toolkit), appropriate to each company's initial situation and specific needs.

Subsidies will be granted to SMEs by the Spanish government for the implementation of certain basic digitisation packages (DTK packages) which will allow them to make progress in their Digital Maturity Level. The following DTK packages have been initially identified:

- Digital Marketing: Digital presence, development of websites and apps, hosting service, positioning and digital marketing channels, development of product catalogues, customer management and analysis solutions (CRM), etc.
- E-commerce: e-commerce capabilities, point of sale terminal, etc.
- Digital business administration: Enterprise Resource Planning (ERP) systems, applications for digitizing and automating business processes (e.g., accounting, inventory management, logistics, etc.), electronic invoicing, integration with electronic administration and digital signature, collaborative environment, etc.

Besides the Digital Toolkit programme, the Digitalization Plan includes several **measures to support and train companies** towards digitalization (*budgets for 2021-2023*):

Regarding Basic Digitisation:

- Packages for SMEs to invest in connectivity, supported by a voucher programme (*€50 million*);
- Content, services and tools in the field of cybersecurity for the safe digitalization of SMEs (*€42 million*).

Regarding Digital Transformation:

- The Acelera Pyme provides advisory services together with Chambers of Commerce, including workshop, seminars, and a dedicated IT platform (*€26 million*);
- A managerial training programme to improve productivity and enhance possibilities for growth and internationalisation through digitalization (*€256 million*);
- A training programme for experts in SME digitalization, as agents of change (*€100 million*), combined with a financial support to SMEs hiring these experts (*€300 million*)

Regarding Digital Innovation and Entrepreneurship:

- A programme base on grants to promote disruptive innovation in SMEs, that could lead to a redesign of processes and the development of new products, services and business models based on the intensive use of data and the adoption of key advanced digital technologies (*€100 million*);
- Programmes to support innovative companies through Innovative Business Clusters (*€115 million*) and Digital Innovation Hubs (*€42 million*);
- A programme to support Digital Entrepreneurship (*€100 million*).

Regarding Sectorial Digitisation:

- A programme to digitize Industrial SMEs (in relation to Industry 4.0) through web platform support, advisory and consulting (€38 million);
- A programme to digitize the Tourism industry by leveraging advanced technologies (AI, IoT, 5G, ...) supported by innovation grants and/or repayable loans (€80 million);
- A programme to digitize companies in the retail and commercial distribution sector and to foster their internationalization (€324 million).

All this represents a comprehensive framework of measures fitting with the objective of supporting the digitalization of SMEs with significant measures deployed (1) to implement overall quickly and efficiently a basic digitisation in each and every SME, (2) to foster and to support digital innovation and business transformation and (3) to target key industries where the use and development of digital technologies drives the competitiveness.

#### **f. Measurability and targets**

The RRF plan provides 11 specific milestones and targets:

- Digitisation of SMEs Plan 2021-2025 (Milestone by Q1 2021);
- Budget committed to the Digital Toolkit Program (Target: 30% of budget by Q4 2022);
- Budget committed to Agents of Change Program (Target: 30% of budget by Q4 2022);
- Budget committed to Innovative Business Cluster Support Program (Target: 30% of budget by Q4 2022);
- Budget committed to DIHs Program (Target: 30% of budget by Q4 2023)
- SMEs supported by the Digital Toolkit program (Target: 100% of budget by Q4 2023);
- Budget execution of Agents of Change Program (Target: 100% of budget by Q4 2023);
- Budget execution of Innovative Business Cluster Support Program (Target: 100% of budget by Q4 2023);
- Budget execution of DIHs Program (Target: 100% of budget by Q4 2023)
- Completion of the Digital Toolkit program (Target 1 million companies by Q4 2024);
- SMEs having completed actions aiming at increasing their use of digital technologies (excl. digital toolkit): (Target 171,000 SMEs by Q4 2025).

On the web, the Spanish government indicates<sup>33</sup> that the digital toolkit's target audience is composed of 145,000 small businesses (10 to 49 employees), 1,100,000 micro-enterprises (1 to 9 employees) and 1,600,000 self-employed workers. The calls may specify the eligible companies by size or by sectors of economic activity to achieve an efficient process to promote digitization.

#### **g. Lessons learned**

- Good practices and wider applicability

In the Spanish RRF plan, the set of measures regarding the SME digitalization is clearly impressive both through its overall budget size (€3 billion) but also through the broadness and depth of its scope. The

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<sup>33</sup> <https://digidisa.com/kit-digital/>

coordination between the different public and private stakeholders and amongst the different administrative entities (ministries) can also be seen as a good practice.

- Risks and gaps

At this stage, three major risks can be identified:

- The complexity and the width of the programme can generate difficulties and delays in the implementation. Some measures could also overlap and create confusions.
- The absence of metrics and targets could spoil the programme's efficiency. We would recommend to complete this approach through a detailed scoreboard per measure.
- There are no specific measures regarding the development of AI and Big Data.

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This paper considers initiatives funded by the RRF to support SMEs in the digital transition. It concludes that while there are many areas of good practice, risks remain due to the lack of outcome-based targets, the complexity of some schemes and relatively low levels of funding in relation to the ambition in some cases. Introducing targets based on (preferably harmonised) skills frameworks and digital maturity assessments could help establish the value add of initiatives to support SMEs. This document was provided by the Economic Governance Support Unit at the request of the ECON Committee).

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