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SME Digitalisation – charting a course towards resilience and recovery

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Deloitte.

Contents

Foreword

Small and medium enterprises (SMEs)[1] are the beating heart of Europe's economy, and our post-COVID-19 recovery will be dependent on how well they are able to recover and thrive, driving innovation and job creation across the continent.

There has been much discussion in recent months about how best to support small businesses through these difficult times. For example, at Vodafone we have focused on providing the services and tools that enable SMEs to empower themselves and increase their digitalisation capabilities in order to adapt and keep working safely and strongly.

But now is the time to systematise SME digitalisation, and consider how the EU Recovery Fund can be best used at a national level to support SME resilience and recovery. This study analyses the experiences of SMEs through the crisis, from the start of the pandemic up until July 2020 – and it clearly demonstrates how digital has supported SME resilience through the period.

We have also used this research to look to the future, and consider how government digital policy can best support SMEs and ensure we do not see the 'digital divide' that was already evident in this area become further entrenched as result of the COVID-19 crisis. We believe the findings are very relevant to governments as they put in place policies to ensure that SMEs have what they need to bounce back from COVID-19.

We hope the findings prove useful.

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[1] SMEs are defined as micro businesses with zero to nine employees, small businesses with 10 to 49 employees and medium-sized businesses with 50 to 249 employees. In some cases, this can also include businesses with up to 500 employees.

Executive summary

The existing 24 million SMEs play a significant role in the economic structure of Europe, driving economic growth and providing economic opportunities for Europeans. Their variety is immense, from fast-moving, digital-first start-ups through to more traditional, strictly analogue high street businesses that have yet to acquire the skills to benefit from the latest digital innovations.

Digitalisation is integral to the growth and resilience of enterprises, both large and small. An analysis across 21 Organisation for Economic Co-operation and Development (OECD) countries found that a 10% increase in mobile broadband penetration causes a 0.6%–2.8% increase in GDP[i]. Despite the wide-ranging benefits of digitalisation, data indicates SMEs lag behind in adoption of nearly all technologies in comparison to larger businesses[ii].

Vodafone Business SME research

To better understand the main challenges to SMEs and understand how digital has supported SME resilience during COVID-19, we commissioned Context Consulting to conduct new SME research that involved a survey of 1,200 SMEs in the UK, Spain, Germany and Italy, which was then overlaid with analysis from Deloitte as set out in Annex A.

The research findings were very informative, providing clear insights into:

- the significant challenges that SMEs have experienced both during the initial phase of the crisis and as they seek to ensure business resilience going forward. Fifty-seven per cent of SMEs across all sectors had a cancellation of orders or contracts due to COVID-19, with 35% of SMEs indicating that COVID-19 had significantly impacted customer demand and revenues;

- the impact of the crisis has been determined by factors such as the size of the SME, the sector they operate in and their digital readiness. The five categories of SMEs that emerged on the digital readiness scale, from most to least digitalised are: Digital Dynamos, Windfallers, Adaptors, Reinventors and Fadeaways. The most digitalised SMEs have identified new business opportunities during COVID-19 at more than double the rate of the least digitalised; and

- the important role that policies focused on supporting the digitalisation of SMEs have played during the crisis. Building on existing measures, support during the crisis has taken a variety of forms, including voucher schemes, online resources and lower-cost access to digital tools and services. SMEs are generally optimistic about the impact of these policies.

The findings highlight the complexity of designing policy responses for such a heterogeneous group and also provide valuable insights on how these challenges can be addressed in practice. In summary, we make the following policy recommendations:

1. It is vital for policymakers to maintain support for SMEs to sustain economic resilience and recovery.

2. Tailored national policy responses are required. In this document we outline a framework of how governments should best target their SME policy responses going forward and the resulting impact that this should have.

More detail on this policy framework, as well as its application to Vodafone's European footprint (Germany, Spain, Italy, the UK, Ireland, Greece, Portugal, Romania, Hungary, the Netherlands and the Czech Republic) is set out by Deloitte in Annex A.

Background

Europe is home to 24 million SMEs and they employ 95 million people. Overall, this amounts to a value-added contribution of €4 trillion to the EU[iii]. For example:

- EU studies found SMEs play an even bigger role in job creation and are credited for 85% of all new jobs[iv];

- SMEs are integral to European innovation, as they account for approximately 20% of biotechnology-related patents in Europe and in countries like Germany over 50% SMEs engage in innovation activities[v]; and

- in countries such as Spain and Italy, SMEs are embedded in the cultural fabric of society and contribute to 61% and 67% of the total value added respectively[vi].

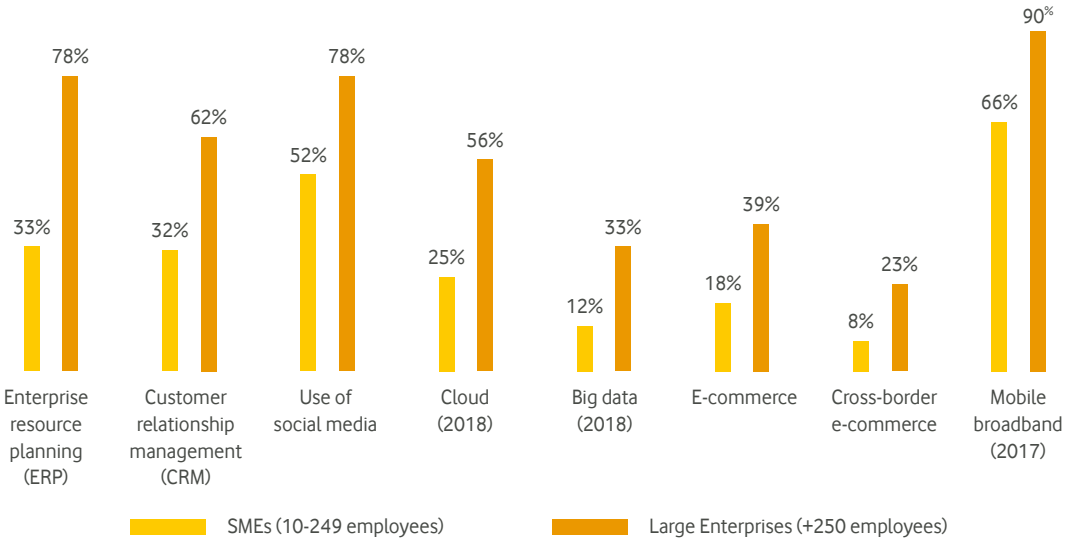
The important role of digital in supporting SME economic growth

As set out by Deloitte in Annex A, the wider benefits of digitalisation to SMEs include, but are not limited to:

- increase of financial performance by optimising revenue channels and reducing costs;
- productivity gains leading to greater efficiency through greater use of digital;
- access to new customers through expanded geographical reach; and
- more access to information and more productive processes foster innovation.

Despite the benefits of digitalisation, the Digital Economy and Society Index (DESI) 2020 data found SMEs lag behind larger businesses in adoption of nearly all technologies despite being connected to the internet at the same rate, as outlined in Figure 1. The largest gaps are in digitalisation of the internal organisational process, where the greatest efficiency gains are to be made.

Figure 1: Adoption of digital technologies by enterprises (% of enterprises), 2019[vii, viii]



Digital tools map for SMEs

European SMEs are diverse in terms of size, revenue, sector of operation and business models, hence their approach to digitalisation will also vary through the use of various different technologies. A number of digital tools and services can therefore help achieve digital transformation. Examples of the main categories (a detailed assessment is set out in Annex A) can be found in Table 1.

Table 1: Assessment of key categories of digital technologies relevant to SMEs

Category of digital technology	Function	Benefits to SMEs
Connectivity 	Connectivity in the form of fixed and/or mobile broadband is a basic and essential need for businesses across all sectors to be able to adopt digital tools and services.	A key building block for a variety of different business models, including online selling and flexible working.
Process digitalisation and automation 	Digitalisation of business processes means transforming manual operations into digital ones. This ranges from digitalisation of manual tasks to full automation with little need for human intervention, using products such as the Internet of Things (IoT).	Helps SMEs increase efficiency and capacity for more value-added work, while reducing errors.
Cloud 	Cloud removes the need for physical information and communications technology (ICT) infrastructure, with easily accessible, on-demand services hosted by specialist third parties as opposed to expanding a company's own IT infrastructure to accommodate it.	Cost-effective solution for SMEs, providing flexibility and scalability to manage disruption, business continuity and reduced IT costs, thus increasing margins or the ability to invest elsewhere.
Online presence, collaboration & communication 	Online presence along with collaboration and communication software allows businesses to operate in teams entirely digitally, avoiding the need for physical interaction.	Enabling resilience/remote working when unable to physically use the office.

As this environment may be challenging for many SMEs to navigate, Vodafone has placed significant emphasis on working with SMEs to ensure they have fit-for-purpose digital tools that they need during this period. The V-Hub advisory resource is one such example of what Vodafone Business is doing in this area, by providing expert support to SME customers on topics such as website construction, security, remote working and digital marketing.

The V-Hub knowledge centre will provide SME customers with access to online guides, videos and webinars, and a chat and phone service putting businesses directly in touch with experts about specific questions, while ensuring content caters to different levels of understanding.

The role of SME digitalisation in the economic recovery

The SME research that we commissioned sought to answer the following questions in order to inform an assessment of the emerging policy implications that need to be considered:

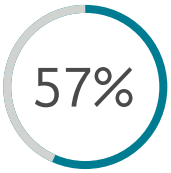
- how SMEs have been impacted and changed due to COVID-19;
- whether (and if so, how) digital readiness differs across SMEs;
- how digital has supported SME resilience during COVID-19;
- what is the future outlook of SMEs; and
- how SMEs view future government support.

Impact of COVID-19 on SMEs

An increase in business challenges

The survey found that prior to the COVID-19 crisis many SMEs expressed cautious optimism, with a positive economic outlook for growth and the opportunity to invest[ix]. COVID-19 shifted this optimism dramatically as SMEs now fight for survival. As detailed in Annex A, the impacts of COVID-19 and the pandemic economy on SMEs fall into three interrelated categories:

- drop in customer demand and fall in revenue, impacting cash flows and sustainability;
- supply chain disruptions; and
- challenges balancing employee capacity and welfare.

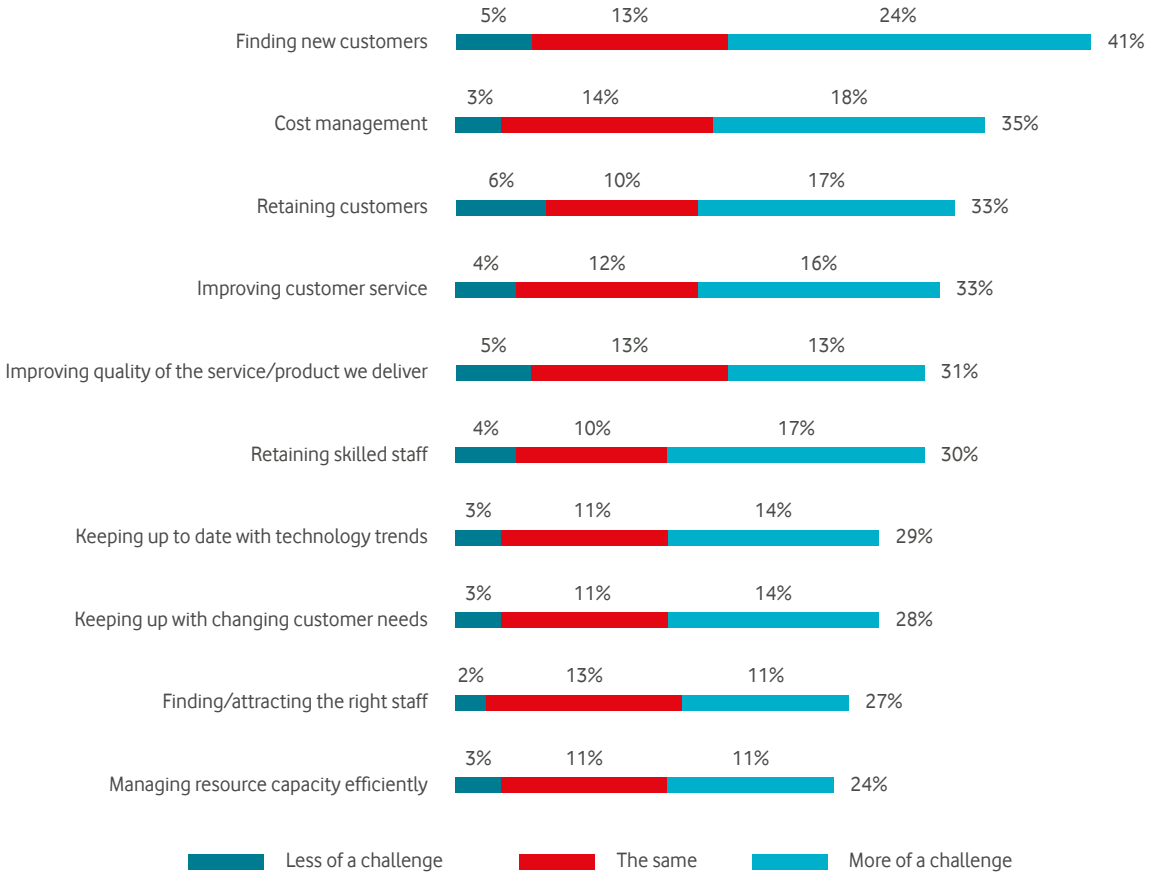


of SMEs had a cancellation of orders or contracts due to COVID-19

of SMEs indicated COVID-19 had significantly impacted customer demand and revenues

The research highlighted the shift in SME priorities from growing and resourcing business to managing business costs, streamlining business and staff, finding new revenue streams if core business is not operating, and most importantly finding new customers. COVID-19 has made these more of a challenge even in the long term, as set out in Figure 2 below.

Figure 2: Top 10 business challenges for SMEs and impact of COVID-19**



* Due to rounding, some totals may not correspond with the sum of the separate figures.

Short and long-term impact of COVID-19

COVID-19 will have a short and long-term impact, and SMEs have to navigate multiple stages (potentially more than once) to arrive at the 'new normal'. The time SMEs take to go through this process varies, depending on the type of service they deliver and their digital readiness.

Phase I: 'Shock and scramble'

Government policy: Complete lockdown (key workers only)

Example SME need: Advice on making the best use of banking and financial stimulus

Phase 2: Adaption

Government policy: Complete lockdown (key workers only)

Example SME need: Identifying opportunities to diversify and adapt products and services

Phase 3: Reactivation

Government policy: Partial lockdown (certain industries open)

Example SME need: Advice on opportunities to utilise new tech to overcome physical barriers

Phase 4: New normal

Government policy: More widespread return to work, safely

Example SME need: Advice on new regulations, e.g. social distancing set up for physical spaces

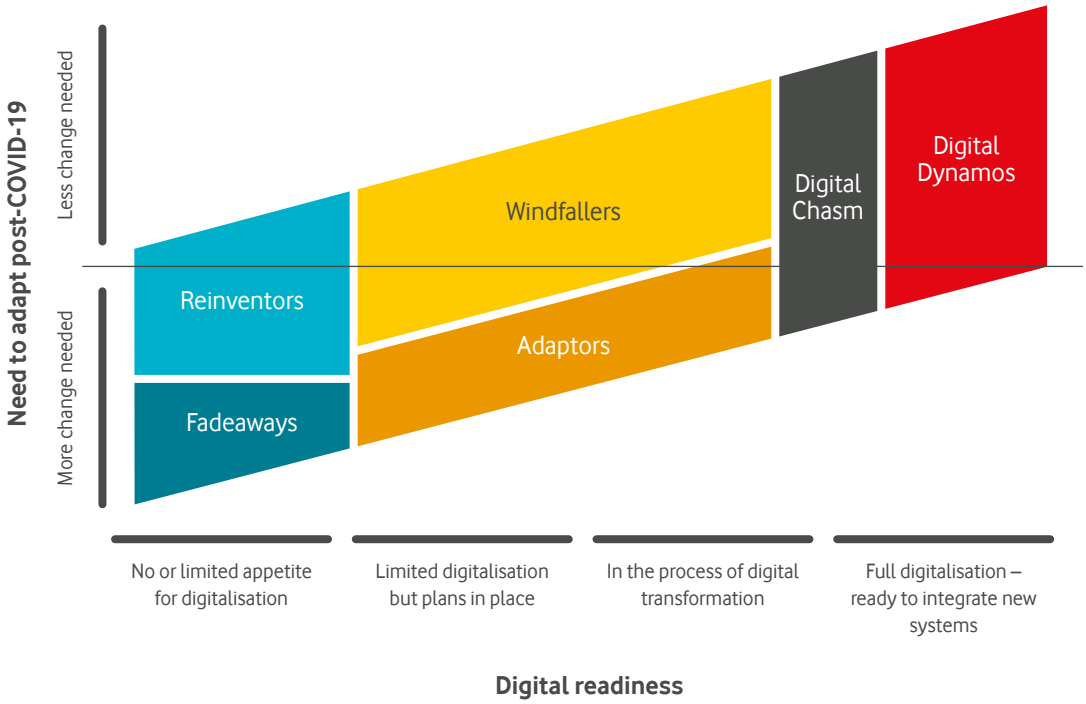
An increased focus on digital readiness

SMEs' ability and willingness to digitalise is driven by firmographics (size, sector, age of business, staff profile, product/service type) and behavioural characteristics (digital readiness, tech adoption profile, attitude to growth and business risk). Digital readiness is a key behavioural characteristic for SMEs as they navigate towards a 'new normal'.

There are various stages of digital readiness, but different degrees of change are required to adapt and resiliently emerge from the pandemic. Quantitative research, conducted by Context Consulting, identified five categories of digital readiness for SMEs, which are separated by a digital divide as set out in Figure 3.

The digital divide refers to the gap in skills, readiness, financing and attitude towards growth and use of digital technology. SMEs that cross this digital divide will improve their digital capabilities and create new ways of working.

Figure 3: Categories of SME digital readiness to respond to COVID-19[xi]



Digital Dynamos

SMEs that are self-sufficient and often see the transition to the 'new normal' as an opportunity for growth and see technology as a key enabler for products/services to be delivered through digital channels. These highly digital SMEs are unlikely to significantly change due to COVID-19 and even experience a positive impact through increased sales and use of services.

Examples of sectors SMEs operate in: Software, online retailers and financial services

Windfallers

SMEs that are well placed to take advantage of the transition to the 'new normal' but require support identifying digital opportunities. Windfallers do see technology as an enabler, but historically lack investment. Their services can be delivered via remote and digital channels or be seen as critical for society during the crisis.

Examples of sectors SMEs operate in: Legal services, insurance, logistics and healthcare

Adaptors

SMEs that are less well placed for the transition, and have to change their ways of working internally to keep the business operating. Such SMEs are more reliant on physical activities and are poised to survive the crisis, but need a lot of help transitioning to become more digital ready in the near future and manage their own tech.

Examples of sectors SMEs operate in: Construction, manufacturing and traditional professional services

Reinventors

Traditional SMEs that are not well positioned to take advantage of the transition and will only survive by diversifying their products or services. These SMEs offer primarily physical products that require person-to-person contact. Reinventors willing to invest in digital transformation could survive.

Examples of sectors SMEs operate in: Retail shops, hospitality and events

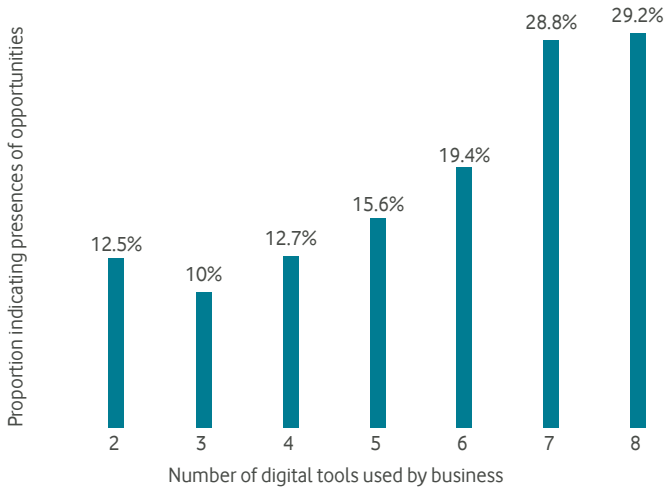
Fadeaways

SMEs that lack agility and willingness to invest into digitalisation are likely to fade away.

Role of digital in SME resilience during COVID-19

While all SMEs have been impacted and face risks due to COVID-19, it is clear that the more digitalised SMEs have identified new business opportunities in the pandemic economy at a higher rate than the less digitalised businesses. In particular, the most digitalised businesses have highlighted opportunities at more than double the rate of the least digitalised, as seen in Figure 4.

Figure 4: Proportion of SMEs indicating that COVID-19 has presented new opportunities for the business vs. the number of digital technologies[2] adopted by the SME[xii]



Diving deeper into the sectoral level, Deloitte found SMEs operating in sectors such as financial/insurance services and professional services, which could be categorised based on the Context Consulting classification as '**Digital Dynamos**' and '**Windfallers**', indicated that COVID-19 presented new business opportunities. Conversely, '**Adaptors**' and '**Reinventors**', or SMEs operating in the construction, manufacturing and hospitality sectors, indicated the greatest threat to their business.

The most digitalised businesses have highlighted opportunities at more than double the rate of the least digitalised

[2] The digital technologies covered here are: mobile devices and contracts, communication/collaboration tools, high-speed connectivity, fixed mobile connectivity, network management solutions, landline, IoT devices and cloud-based services.

The challenges related to availability, capacity and capability (set out by Deloitte in Annex A) impede the ability of SMEs to digitalise and ultimately find new business opportunities. The survey demonstrated how SMEs struggled with these challenges:

indicated at least one issue relating to implementation, including set up and implementation of new technologies, integration with existing technologies and business processes, migration from previous systems and decommissioning old technologies.

indicated at least one issue relating to planning or initiating their digital transformation, such as defining their requirements, selecting the right products or technologies, or choosing suppliers.

indicated that they needed support with either end user and operator training or administrator and/or manager training.

indicated that the cost of digital investments was an issue when considering digital transformations.

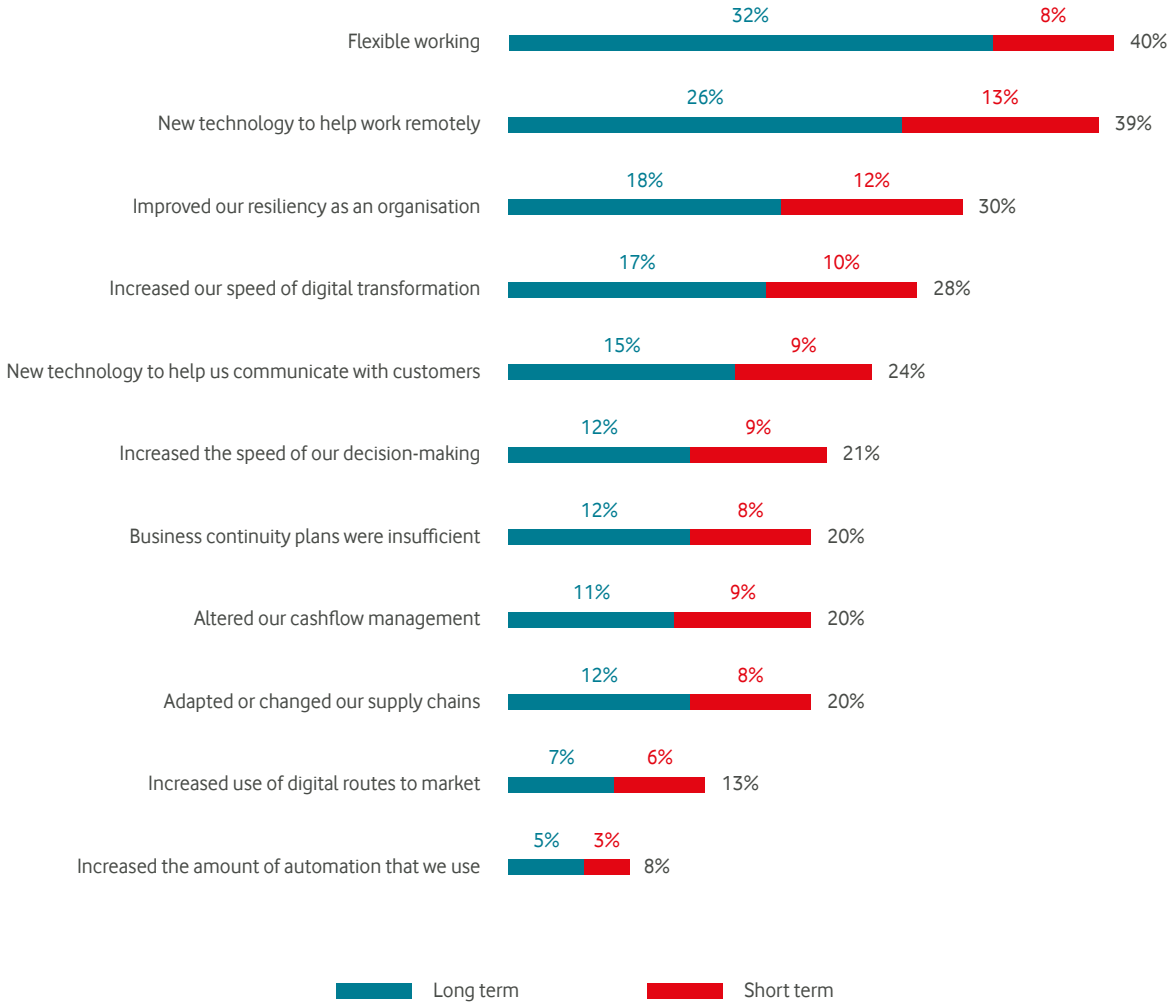
indicated issues in the availability of the right digital solutions for their needs when considering IT investments.

indicated the need for support with understanding regulation.

What is the future outlook for SMEs?

Acceleration in flexible working, aided by new technologies, could prove to be a lasting positive legacy of the pandemic, with 44% of businesses expecting these practices to remain in place for the long term[xiii]. Figure 5 outlines the long and short-term changes due to COVID-19.

Figure 5: Changes to business due to COVID-19[xiv]*

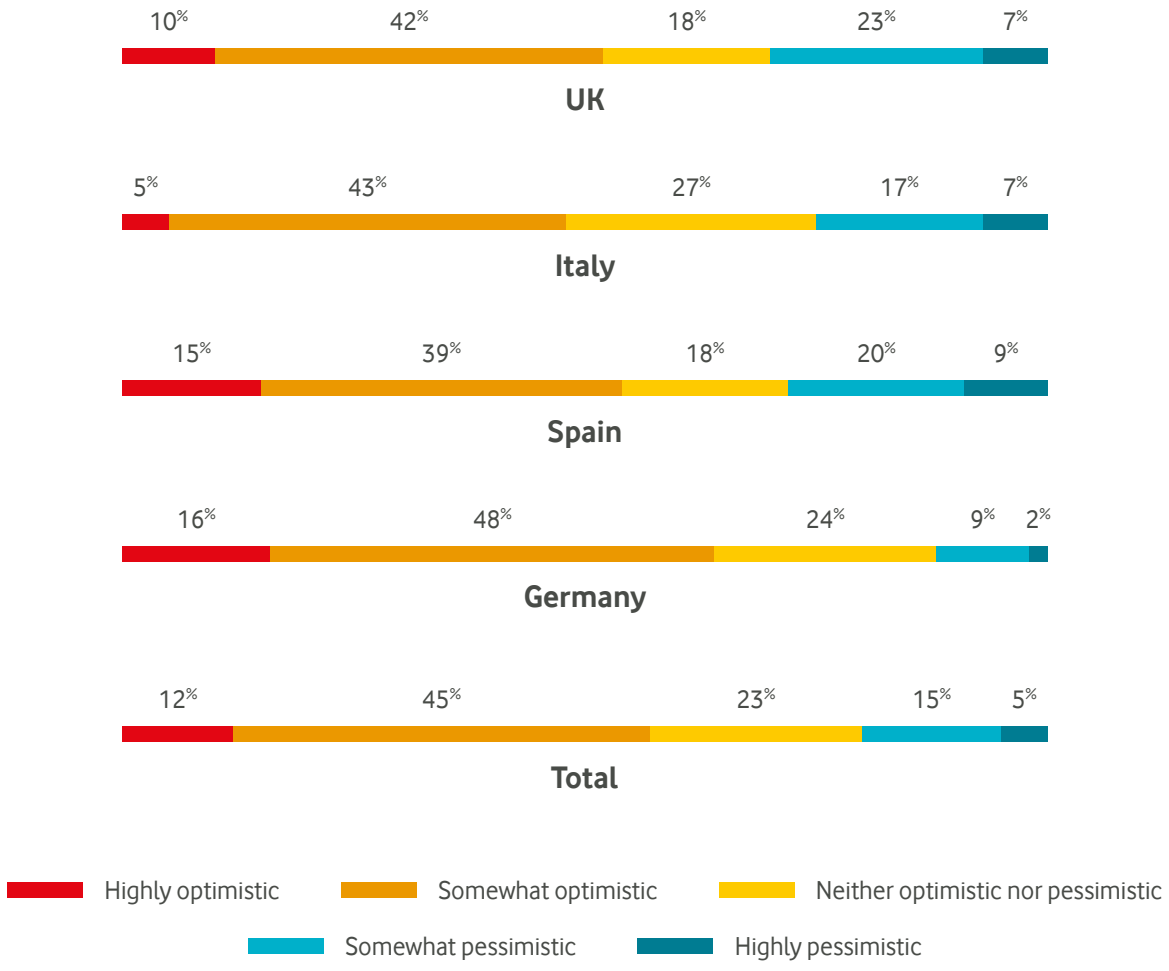


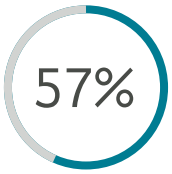
* Due to rounding, some totals may not correspond with the sum of the separate figures.

SME perceptions of ongoing government support

It is clear from the research that SMEs are more optimistic than pessimistic towards government support.

Figure 6: SME outlook on continued government support[xv]*





of SMEs are optimistic about the prospect of continued government support over the next 12-18 months

* Due to rounding, some totals may not correspond with the sum of the separate figures.

Three key policy implications arising out of this research

1

SMEs expect many impacts of COVID-19 to last in the long term, particularly reduced demand and a reduction in spend to match. There is also an increasing recognition that the growth of flexible working, aided by new technologies, could prove to be a lasting positive legacy of the pandemic. SMEs are generally positive about the role that government policy has to play in this area.

Policy implication – there is a need for ongoing government policy support, prioritising the opportunities presented by the use of digital.

2

Smaller, medium-sized firms have seen the greatest impact on demand, but have also been quickest to step up digital transformation. SMEs operating in the professional and financial services sectors have greater new business opportunities in comparison to those in the hospitality and construction sectors.

Policy implication – there is clearly no 'one size fits all' approach to ongoing SME support. Instead, a tailored approach is required, particularly to enable SMEs that are categorised as Adaptors and Reinventors to cross the digital divide.

3

Only the largest SMEs believe their spend on ICT will increase due to the COVID-19 crisis. Spend on IT is expected to decline overall, with the heaviest falls predicted in the public sector and manufacturing.

Policy implication – despite the strong evidence that digital is a key enabler of SME resilience, there is a divide between large and small SMEs and also across the sectors identified. Government policy should address this digital divide by addressing the financial constraints that impede the ability of SMEs to digitalise.

Policy recommendations to support SMEs

In the initial phases of the COVID-19 crisis, European governments prioritised support for SMEs by introducing short-term financial relief measures to mitigate the challenges faced by SMEs. A number of national best practices, as identified by Deloitte, are set out in chapter five of Annex A. The following policies have had an important role to play in enabling SMEs to remain resilient during the crisis:

- free or lower-cost access to digital tools and services;

- grants and voucher schemes;

- online informational resources and repositories; and

- training schemes and direct support.

In addition to short-term relief, the OECD has recognised that governments are increasingly focused on strengthening the resilience of SMEs in a structural way and supporting their further growth, through the adoption of new technologies and practices that may enable them to strengthen their post-crisis competitiveness[xvi]. We believe that this needs to be a key area of focus for governments going forward.

As we have set out, there are a number of policy implications arising from the Context Consulting research on SME attitudes and opinions in the context of COVID-19. The additional research and analysis carried out by Deloitte, set out in Annex A, builds on these insights. Deloitte found that to address these policy implications, national governments need to take into account the challenges SMEs face in digitalising, which are categorised into three main dimensions:

- **Availability** of the digital tools and technologies required for digitalisation, namely high-speed connectivity (in urban and rural areas) and suitable digital tools and services;

- **Capacity** of SMEs to engage with digital transformations, in the form of financial and time capacity; and

- **Capability** of SMEs to gauge, plan, implement and optimise their digital transformations through digital skills.

The situations in respect of each of these criteria differ across the EU, meaning policies should be tailored in terms of the size of the SME and the industry sector in which it is active to ensure effective and efficient solutions. Deloitte proposes a number of key dimensions for consideration, in the form of the following policy framework, for national governments to take into account when setting policies to address the challenges in this area going forward.

Policy Framework

Challenge:
Availability

Relevant policy dimension:
Ensuring access to high-speed connectivity

A prerequisite for all digitalisation policies is the sufficient access to high-speed connectivity. A lack of access prevents SMEs from adopting and optimally using digital solutions, even if there is a clear business case for digital investment. To address this, Vodafone's Digital Deployment report identified potential measures including, but not limited to, easier access to passive and active infrastructure, fewer obstacles to obtain building permits, and making spectrum available quickly and at a reasonable cost[xvii]. The EU Recovery Fund may be best placed to facilitate investment and ensure widespread access to high-speed connectivity at a national level.

As detailed in Annex A, this is most relevant to Greece and Portugal, where the access gap is the largest, followed by the Czech Republic, Germany, Hungary, Italy and Romania.

Challenge:
Capacity

Relevant policy dimension:
Closing the connectivity divide between large and small firms

In order to close the wider digitalisation gaps, and in particular, the usage and adoption gaps between large and small firms, a key starting point is closing the connectivity gap to enable further digitalisation. If SMEs are unaware or unable to gauge the benefits of digital tools for their business, they are less likely to adopt such technologies, particularly given their lower financial capacity. To address this, governments may want to consider voucher schemes to support high-speed connectivity targeted to SMEs in specific sectors that are most impacted financially and least digitalised, or to SMEs more widely. Funds from the EU Recovery Plan could provide the resources required to close this gap at a national level.

As detailed in Annex A, Germany, Spain, Italy, the UK, Ireland, Greece, Portugal, Romania, Hungary, the Netherlands and the Czech Republic all need to address the lower levels of SME usage of high-speed connectivity that is driven by capacity issues.

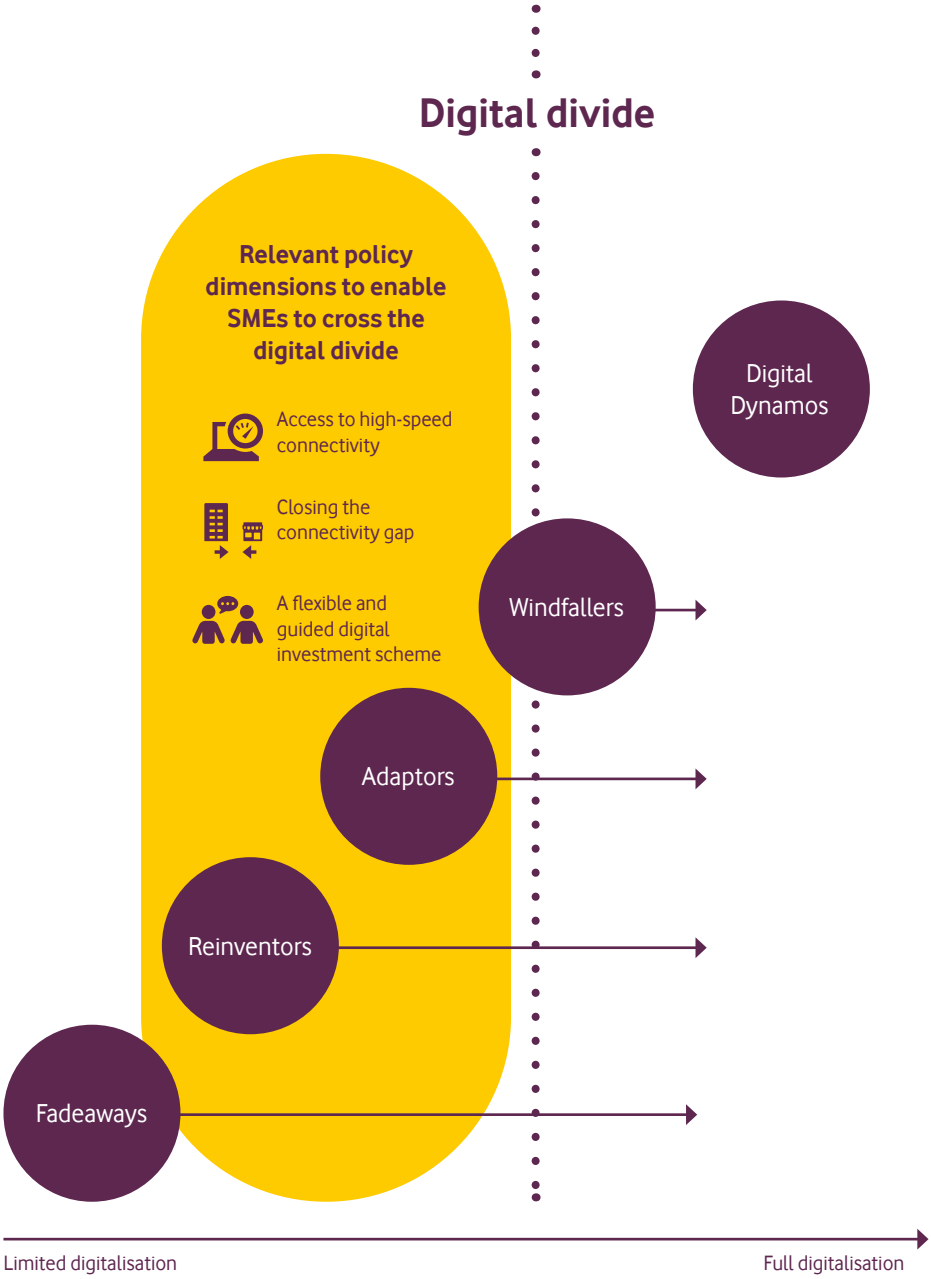
Challenge:
Capability & Capacity

Relevant policy dimension:
A flexible and guided digital investment scheme

Governments should provide further direct support to enable digital investment, but allowing for flexibility for SMEs to choose the most appropriate technologies or tools for themselves. SMEs across sectors, and even within sectors, are likely to have different digital investment needs, meaning advocating one-size-fits-all solutions is unlikely to be effective for all SMEs. To address this, governments may want to consider offering a mix of support measures, including flexible grants or vouchers earmarked for digital investment, incentives for the financial system to lend to SMEs for digital investment, training in sector-relevant digital skills and/or sector-specific online resources. The EU Recovery Plan could be an opportunity to support investment into the development of such measures.

As detailed in Annex A, Germany, Spain, Italy, the UK, Ireland, Greece, Portugal, Romania, Hungary, the Netherlands and the Czech Republic all have varying levels of opportunity to provide additional financial and/or skills support to enable digital investment.

Figure 7: Supporting SMEs to cross the digital divide



Performance on the European Commission's DESI index should be an essential element of defining success in this area. The recommendations set out here support Vodafone's call to action for all member states to achieve a DESI score of 90. The policy framework addresses the underlying challenges facing SMEs while enabling Adaptors, Reinventors and lagging Windfallers to cross the digital divide as outlined in Figure 7. By investing in SMEs and their digital transformations we have an opportunity to shape Europe's economic recovery in a way that delivers sustainable, long-lasting, impactful change.

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Annex A: Digitalising SMEs report by Deloitte

Deloitte.

Digitalising SMEs

The role of digitalisation and digital policy in supporting the SME economic recovery

A report for Vodafone Group Plc

MAKING AN IMPACT THAT MATTERS since 1845

Contents

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Executive summary

In response to the COVID-19 economic shock European governments have the opportunity to support small and medium-sized enterprises (SMEs) in their digitalisation journey and set up their wider economies for a sustainable long-term recovery path.

SMEs play an important role in European economies, but have been particularly vulnerable to COVID-19

Overall, SMEs account for the majority of employment and direct value add in the EU27 and the UK, with a particularly important role in economic inclusivity and in enabling economic growth, innovation, and flexibility. This means that they will be particularly important to European governments' objective to support and enable the economy to recover following the economic shocks from COVID-19, and the ensuing 'pandemic economy'.

This is essential given the significant impact COVID-19 has had on SMEs, with sectors where SMEs are prevalent most impacted by social distancing and movement restrictions, health concerns regarding human interactions, and the resultant lasting structural changes to the functioning of these sectors. This can be summarised into three main impacts:

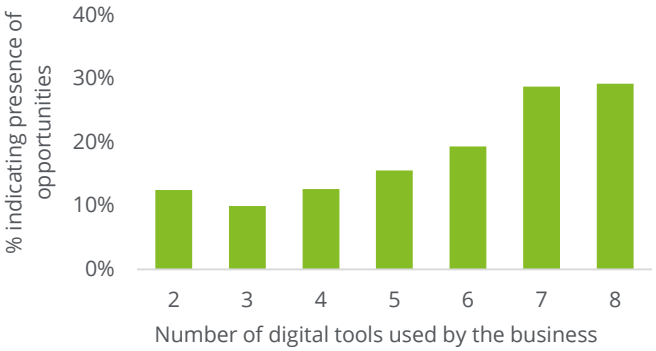
- **Falls in customer demand and in revenue**, with an ensuing cash squeeze risking the sustainability of SMEs.
- **Supply chain disruptions,** further disrupting sustainability across value chains.
- **Challenges balancing employee capacity and welfare,** with limited resources and finances meaning they are less able to respond to potential opportunities, and to invest in capabilities to ensure the welfare of employees and customers.

Given the likelihood of a prolonged pandemic economy, digitalisation can enable SMEs in responding to challenges and innovate to grow, supporting wider economic recovery.

Digitalisation can help businesses in a number of areas essential to their development, namely by helping them to optimise finances,[1 2 3] improve productivity,[4] expand to new markets and customers,[5 6 7] and use information to foster innovation.[8 9] Collectively, this supports potential for **overall growth of the economy,** given the importance of SMEs to the wider economic picture.[10]

As such, digitalisation can help SMEs respond to the challenges posed by the pandemic economy by becoming more efficient, flexible, productive, and innovative, with greater resilience and ability to take advantage of potential business opportunities in the economic recovery. A recent survey showed that the most digitalised SMEs have identified new business opportunities in the pandemic economy at **more than double the rate** of the least digitalised SMEs.

Proportion of SMEs indicating that COVID-19 has presented new opportunities for the business vs. the number of digital technologies adopted by the SME



Source: Deloitte analysis of the Vodafone SME Understanding Survey, 2020.

Closing the digital divide therefore presents an opportunity for policymakers, who must address its key drivers.

The most essential building block for digitalisation is access to and adoption of **fast and reliable internet connectivity,** such as fibre broadband and VDSL fixed connectivity or potentially 4G/5G mobile and fixed wireless connectivity. These enable a variety of digital technologies that can help SMEs, such as:

- Quick-win digitalisation, requiring minimal to no hardware investment.
- Process automation and digitalisation, removing the need for human input.
- Cloud-based services, reducing ICT infrastructure requirements.

However, **SMEs lag larger businesses in adoption of virtually all digital technologies,** ranging from the most basic elements such as connectivity to more advanced technologies such as cloud computing, and contributing to the overall 'digital divide'. This is partially driven by differences in sectoral digitalisation rates, but can be seen even within sectors with SMEs lagging larger counterparts in current and planned digital investments. Overall, this suggests that the **digital divide is likely to persist without intervention by policymakers** to address the key drivers of this divide

This report presents an emerging policy framework for governments to use as a stepping stone in support of SME digitalisation.

The framework can support governments in developing an initial policy outline. This outline could be developed further with refinements made on a country-specific basis capturing the following dimensions:

Ensure access to high-speed and reliable networks

Some of the more advanced digitalization applications this report talks about rely on high-speed connectivity. Although there has been progress overall, we argue that there is still a need for governments to consider policies to provide sufficient access to high-speed connectivity.

Make SMEs aware of the benefits and enable them to adopt high speed connectivity

SMEs' lower digital capability can make them unaware or unable to gauge the benefits of high-speed connectivity, and the technologies it enables, for their business. We also show that Covid-19 may result in them being more likely to allocate financial resources elsewhere and instead of investing in connectivity. Governments need to ensure that Covid-19 does not result in SMEs falling further behind. **Voucher schemes for high-speed connectivity** is an option that some EU governments have used.

Provide a flexible and guided digital investment scheme

We discuss how different digital tools can help SMEs in different sectors. We also present evidence of how Covid-19 has impacted different sectors. Therefore, blanket and one-size-fits-all support policies are not efficient for the longer term. Governments should provide **flexible grants or vouchers, and/or incentives for lending that is, earmarked for further digital investment.** This could be paired with a mix of additional support measures, namely:

Sector-specific, curated online resources.

Training in sector-relevant digital skills.

Incentives to encourage take-up and/or other proactive measures

Introduction

SMEs[i] are a significant part of the EU economy, with the 'digital divide' posing a key opportunity for policymakers to support SMEs and the economic recovery following COVID-19.

SMEs account for over 60% of employment across the EU27 and the UK, and over 55% of value add, indicating the significant role they play in the economic wellbeing of the EU.[11] SMEs are also a key driving factor for economic inclusivity, providing opportunities for socio-economic participation and mobility for young people, women, and ethnic minority groups.[12] For example, a recent survey found that 38% of European SMEs were either fully or majority owned by women.[13] Moreover, SMEs play an important role in pushing forward economic innovation and flexibility given their importance to entrepreneurship and new market entry, adoption of new innovative technologies, and overall wider benefits to market competition and ultimately to consumers.[14 15 16]

All this means that SMEs will have to be a key pillar of the EU's recovery from the economic shock of COVID-19 for it to be broad based, sustainable and one that leads to better, longer term outcomes for its citizens. To ensure this, SMEs will need to be enabled to invest and grow, in particular in the context of the stop-start lockdowns and concerns about human interaction that will typify the 'pandemic economy' and the longer-term resultant structural changes to different sectors.

In this context, a key focus of policymakers should be on ensuring healthy and resilient SMEs that are able to contribute effectively to wider economic growth by bridging the 'digital divide', namely SMEs' lower adoption of digital technologies versus their larger counterparts. This is because digitalisation has been shown by a number of studies to enable SMEs to be more flexible and productive through higher efficiency and innovation, and as a result be more competitive and better able to contribute to higher growth.

By focusing on policies that address the reasons why SMEs are not able to digitalise, particularly in the context of an economic downturn, policymakers can craft and implement policies and measures to bridge the digital divide and enable the economic recovery and long term benefits of a digitally connected economy. These policies are likely to be particularly important as governments become more selective on what support schemes to continue in response to COVID-19.

The purpose of this report is to illustrate the benefits digitalisation and different digital tools can have in enabling SMEs to be more resilient, develop their offerings, and take advantage of the opportunities arising from the impacts of the COVID-19 pandemic economy. This report then looks to investigate the reasons why SMEs are held back from investing in digitalisation. It provides a framework for thinking about the development of policies to address these challenges, including the issues to consider and how to increase effectiveness. This is evidenced by:

- a review of existing data from public sources and reports on selected European countries[ii] and the aggregate EU27 and the UK, and
- analysis of new survey data from Vodafone (the 'Vodafone SME Understanding Survey') of ICT decision makers from 1,200 SMEs[iii] across a range of sectors in four European markets – Germany, Italy, Spain, and the UK.

The rest of this report is structured as follows:

01

First, it provides an overview of the role and contribution of SMEs to the economy, and the impacts COVID-19 has had on SMEs.

02

Second, it discusses the role of digitalisation in supporting SMEs, and the opportunity for policymakers to address the digital divide and the challenges contributing to limited SME digitalisation.

03

Finally, it reviews existing measures around digitalisation and presents a framework for how countries can think about developing an effective package of measures to support SME digitalisation.

i SMEs are defined in the EU as micro businesses with zero to 9 employees, small businesses with 10 to 49 employees, and medium-sized businesses with 50 to 249 employees. In some cases, this can also include businesses with up to 500 employees.

ii European countries presented in this report are EU27 countries where Vodafone has operations and the UK, and where data is available from sources used, namely European Commission reports, Eurostat, and the Organisation for Economic Co-operation and Development (OECD).

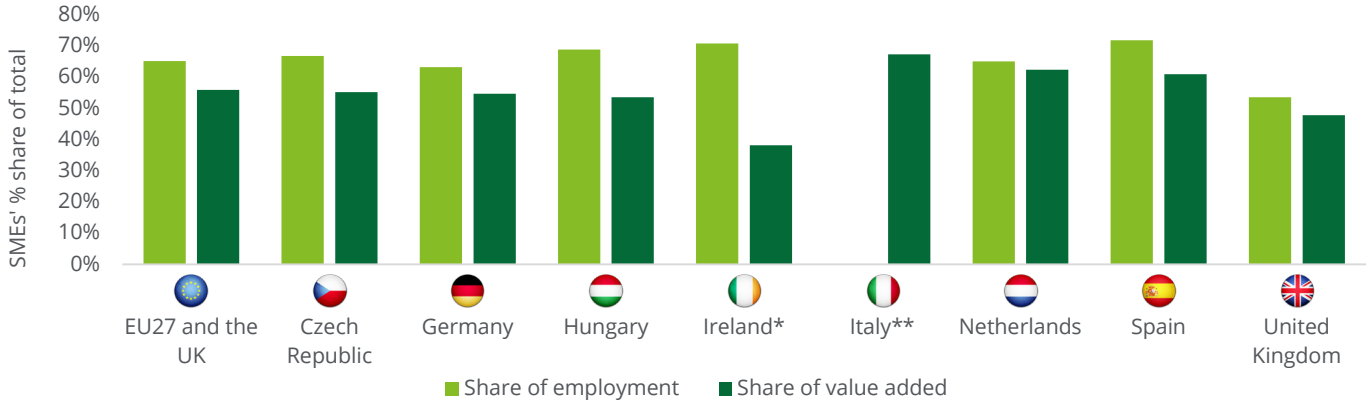
iii The survey covered businesses with 10-149 employees in the UK, 10-99 employees in Italy and Spain, and 20-499 employees in Germany. In analysis presented in this report, German SMEs with 250 employees or more are not included in line with the EU definition of SMEs.

SMEs in the economy and the impact of COVID-19

SMEs play an important role in the EU economy, with significant contributions to employment and economic value added. For example:

- **In terms of employment,** SMEs represent 65% of all employment in the EU27 and the UK in 2017, equating to 95 million employees across 24 million enterprises.[17] This proportion is even greater in some countries. For example, SMEs account for 69% of employment in Hungary, 71% of employment in Ireland, and 72% of employment in Spain.
- **In terms of value add,** SMEs generate 56% of direct gross value added in the EU27 and the UK, equating to over €4 trillion in 2016. However, the contribution of SMEs to value add also varies by country, and is above the EU average in some countries such as Spain (61%), Italy (62%), and the Netherlands (67%).

SMEs' share of employment and value add in selected countries and across the EU27

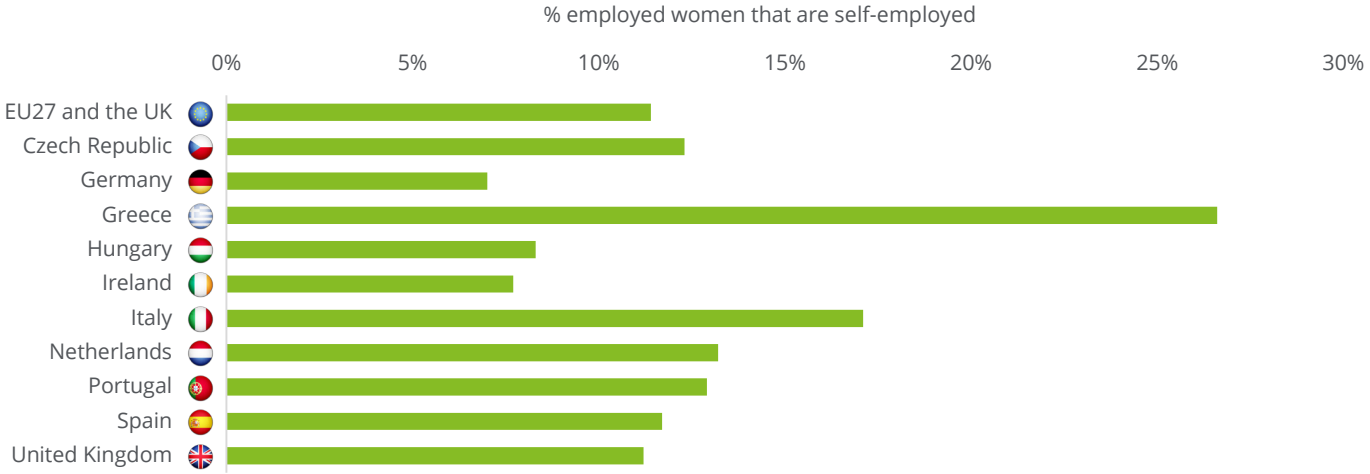


Source: Eurostat, accessed 27 July 2020. Value add figures for 2016; Employment figures for 2017. Data unavailable for Greece, Portugal, and Romania. *Figures for 2017. **Employment figures unavailable for Italy.

Moreover, SMEs also contribute more widely to overall economic activity. This is because the income SMEs pay to the 65% of the EU workforce drives a significant proportion of overall consumption and therefore spending. This leads to a 'multiplier effect', whereby income spent leads to more income for others, further driving overall consumption, and creating a virtuous economic cycle.

Finally, SMEs also play an important role in terms of benefits to society and inclusivity, presenting opportunities for the economic empowerment of women, young people, and ethnic minorities.[18] For example, across the EU27 and the UK more than one in ten women was self-employed in 2019, with this as high as 27% in Greece, suggesting an important role for entrepreneurship in economic empowerment.[19]

The share of employed women that are self-employed in selected countries and across the EU27 and the UK



Source: OECD, accessed 27 July 2020. Figures for 2019. Data unavailable for Romania.

Given this large direct contribution and wider impact, SMEs play an important role in economic recoveries in particular, with the growth of existing businesses and the development of new businesses contributing to employment and inclusive recovery.[20] This is because the growth of SMEs, and in particular new SMEs in the form of entrepreneurship and new market entry, means that they can contribute longer-term to higher levels of innovation, with wider benefits to market competition and ultimately to consumers.[21 22 23 24 25]

Impacts of COVID-19 on SMEs

Along with their contributions to growth, SMEs can also face challenges during recovery that can hinder growth. This is particularly due to the fact that, as small businesses with a greater perception of risk driven by non-established customer bases and lower economies of scale, they may have lower cash reserves and be unable to access finance in the case of economic shocks. [26 27] This can mean that in deteriorations of business environments as a result of shocks, they can be the first to fail, and with finance availability recovery being slow, the wider economic recovery hindered.

This effect can be viewed in the context of the COVID-19-induced economic shock. As a whole, European economies have been significantly impacted by COVID-19, with data showing decreases in year-on-year growth rates since February 2020 across all key segments of the economy. However, given the vulnerability of SMEs to economic shocks, SMEs have fared particularly badly as a result of COVID-19 and the negative impacts on the economy.

The focus of public health policies in response to COVID-19, has been to limit, or avoid entirely, human interactions. In terms of business impacts, this means temporary closures. In addition, post-lockdown health concerns are likely to slow customer returns, and hit sectors most dependent on human interaction, such as physical retail, accommodation, leisure activities, and food services.

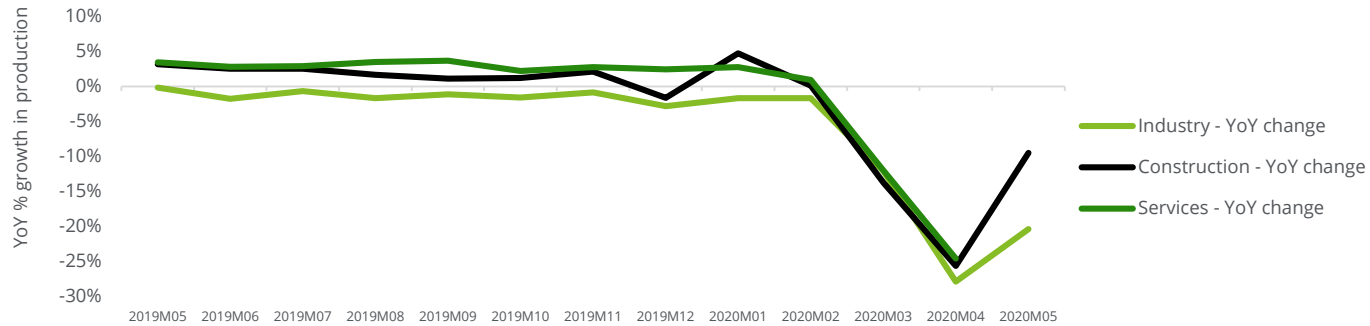
Overall, the impacts of COVID-19 and the pandemic economy on SMEs can be summarised across three, interrelated categories:

Fall in customer demand and fall in revenue, impacting cash flows and sustainability.

Supply chain disruptions.

Challenges balancing employee capacity and welfare.

Year-on-year growth in production activity, by sector across the EU27 and the UK



Source: Eurostat, extracted 28 July 2020.

Fall in customer demand and fall in revenue

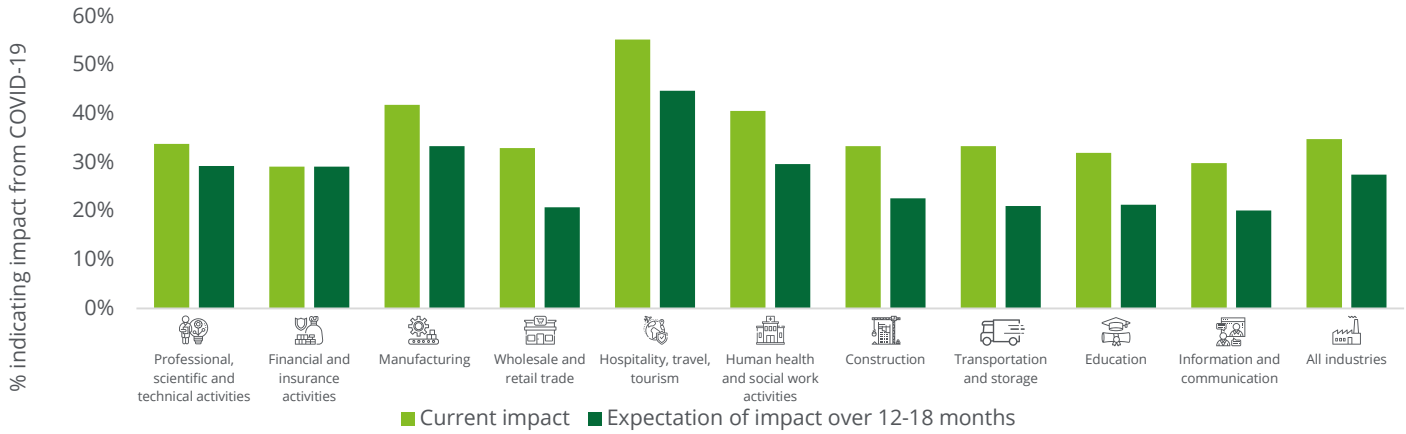
While making up the large majority of all sectors, SMEs are particularly highly represented in the sectors most reliant, and therefore susceptible to restrictions on, human interaction and movement. Across the EU27 and the UK, they make up 99.9% of wholesale and retail trade businesses, and 99.7% for hospitality and foodservice businesses, in terms of numbers.[28] Overall, this has meant that SMEs as a whole have been particularly impacted by public health restrictions and faced a significant hit to customer demand and, as a result, revenues.

Evidence across a number of countries highlights the scale of this:

- In the UK, the Office for National Statistics' (ONS) 'Business Impact of COVID-19' survey found that in May 2020, around 65% of SMEs experienced a decrease in turnover compared to the same time last year. 25% of SMEs experienced decreases of over half their revenue compared to 20% for larger businesses. SME intensive sectors, such as accommodation and food service activities, were the most affected sectors, with 66% of businesses experiencing a fall in turnover of over 50%.[29]

- In a survey of Spanish businesses, those in the telecommunications, media, and leisure sectors, which had the largest proportion of businesses with less than 100 employees at 43%, had the highest rate of reporting a decrease in turnover in Q1 2020, with 79% reporting this compared to a sample average of 58%.[30]
- In the Vodafone survey of SMEs across Germany, Italy, Spain, and the UK, 36% of SMEs said COVID-19 had significantly impacted customer demand and revenues, with 27% saying they expect this to continue into the next 12-18 months. SMEs in the hospitality, travel, and tourism sector reported the most significant impacts, with 55% reporting a significant impact on customer demand and revenues and 45% expecting this to continue over the next 12-18 months.

Proportion of SMEs indicating that COVID-19 has significantly impacted customer demand and revenues, by sector[iv]



Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented but included in aggregate totals.

Overall, this means that SMEs face an adverse environment in recovering revenues to pre-pandemic levels, which challenges their ability to invest and grow to contribute to the wider economic recovery. This is especially so as businesses still have outlays and fixed expenditure which must be met, including labour, rent, insurance, taxes, utilities, and debt payments, creating a cash flow constraint for many SMEs in particular, who need to cover fixed costs with little to no revenue:

- In the European Central Bank's (ECB) latest yearly 'Survey on the access to finance of enterprises' (SAFE) over the period March-April 2020, the proportion of Eurozone SMEs reporting major difficulties in running their business and servicing debts increased by 1.6 percentage points (from 3.1% in April 2019-September 2019 to 4.7% in October 2020 to March 2020).[31]
- In the May 2020 wave of the ONS's 'Business Impact of COVID-19' survey, only 46% of UK SMEs said their cash reserves could last more than 4 months, compared to 51% of larger businesses. Additionally, 32% of UK SMEs said their cash reserves would last 3 months or less, compared to 23% for larger businesses, while 4% of UK SMEs stated they had no cash reserves at all. In the accommodation and food service sector, this was even higher at 9% of businesses and the highest across sectors.[32]

All this is exacerbated by the gap in capital and financing needed to fund growth investment, particularly for fast-growing SMEs. SMEs generally face issues accessing finance during economic shocks due to banks' and creditors' perception of a higher risk to repayment, with evidence suggesting a financing shortfall for fast-growing SMEs and a perception across all SMEs that access to external finance will be an issue going forward:

- According to a recent report by Deloitte, Innovate Finance, and the ScaleUp Institute, fast-growing SMEs in the UK face a financing shortfall this year of £15 billion due to a withdrawal of capital by investors. This is because investors are instead focusing on shoring up businesses where they already have equity, leaving scale-ups without financing for growth investments and potentially hampering the scope for wider recovery.[33]
- The ECB survey found that a majority of Eurozone SMEs agreed with the statement that the deterioration in revenues and profits posed an impediment to being able to get external finance (-18% net), with this perception particularly strong for Italian and Spanish SMEs (-24% net for both). Similarly, more SMEs perceived that the wider economic outlook had negatively affected access to finance (net -30%), with this particularly high in Italy (net -36%) and Germany (net -34%).[34]

iv Expectations over the next 12-18 months were given only by those who had indicated a current impact, but reported here as % of total responses.

Sector-level data from the Vodafone survey on net risks and opportunity impacts, and expectations on growth over near- and medium-term, show the overall impact this has had on SMEs across sectors:

- Looking at the net difference between SMEs indicating that COVID-19 has caused risks to business sustainability and SMEs indicating that it has presented new opportunities, certain sectors appear to have been most significantly impacted in net terms, in particular transportation and storage, manufacturing, hospitality, travel and tourism, and construction.
- Other sectors appear to be relatively closer to net neutral impacts, for example wholesale and retail trade and health and social work, while some that are better able to take advantage of distance work, including professional and financial services and education, appear to have faced more opportunities.
- However, overall SMEs across all sectors are pessimistic about the impacts on their business given the large scale of operational changes and the wider economy due to the pandemic. For example, 63% of SMEs in the Vodafone survey expect either no or negative growth over the next year.

Overall, this suggests that SMEs may face a challenge in maintaining resiliency through the challenging phases of the pandemic economy where confidence and activity remain low and lockdowns may be re-imposed, potentially leading to business failures of otherwise healthy businesses that hinder the economic recovery.

Net difference between those SMEs that indicated that COVID-19 posed risks and those that indicated that COVID-19 presented new business opportunities

Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented.

SME growth expectations over the next 12 months, by sector

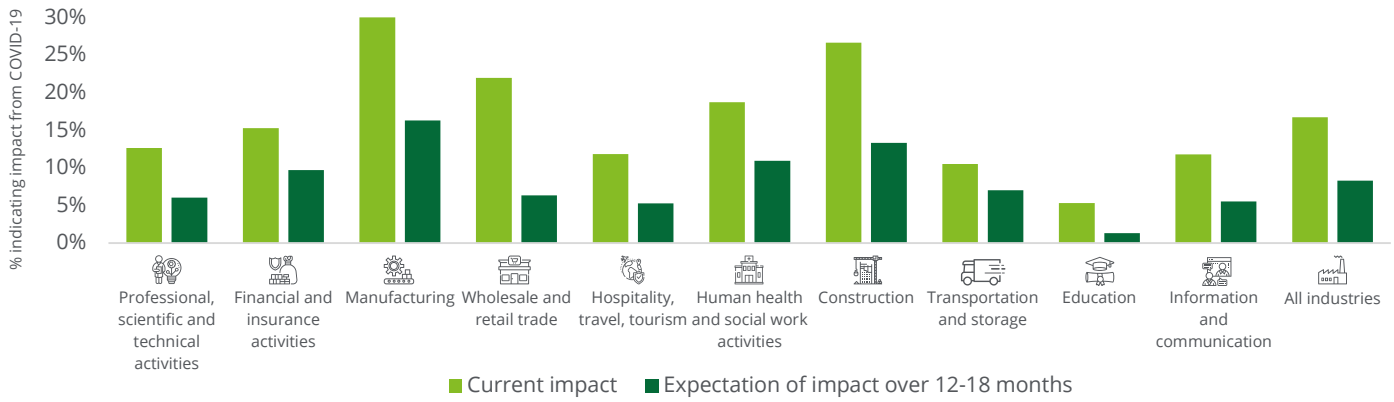
Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented but included in aggregate totals.

Supply chain disruption

An additional consequence of limiting human interaction has been disruption to normal business operations for many businesses, particularly sectors requiring on-premise work, with public health measures and employee health concerns requiring alterations to work environments. This means businesses are unable to operate at normal capacity or to move goods, resulting in supply chain disruptions across value chains and cash flow issues reverberating throughout. This can be particularly problematic for SMEs, as they are more likely to be dependent on a concentrated number of suppliers and have weaker supply chain risk management, creating difficulties in dealing with supply chain disruptions and finding alternative suppliers.[35 36]

As expected, evidence suggests that the importance of this varies depending on the complexities of the supply chain. In the Vodafone survey, 18% of all responding SMEs reported that the COVID-19 pandemic, and resultant restrictions, had impacted their ability to source materials from their suppliers. The sectors that were particularly impacted were those with more complex supply chains and more inputs, such as manufacturing (31%) and construction (27%). SMEs in other sectors with more simple inputs or less complex supply chains, such as education, reported lower rates of supply chain disruption (5%). Impacts on supply chains also appear to be particularly higher for businesses with cross-border supply chains. In the ONS's survey, 58% of importing SMEs (those that imported in the last 12 months and attempted to import during COVID-19) reported at least one challenge in the importing process, with the largest issue being transport restrictions (34%).[37]

Proportion of SMEs indicating that COVID-19 has impacted their ability to obtain production inputs, by sector[v]



Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented but included in aggregate totals.

As the lockdowns relax further, it is likely that supply chain issues will reduce with the reopening of the economy and restrictions on travel across countries. However, there remains a risk, particularly for cross-border supply chains, that business failures could mean the loss of important elements of the supply chain in the short and medium-term. This is also paired with risks of further European border closures and varying tightening and easing of lockdowns in the pandemic economy, potentially impacting cross-border trade within Europe. As such, SMEs will have to adjust to more autonomous supply chain processes to insure them against potential further disruptions as well as to enable them to grow in the longer term.

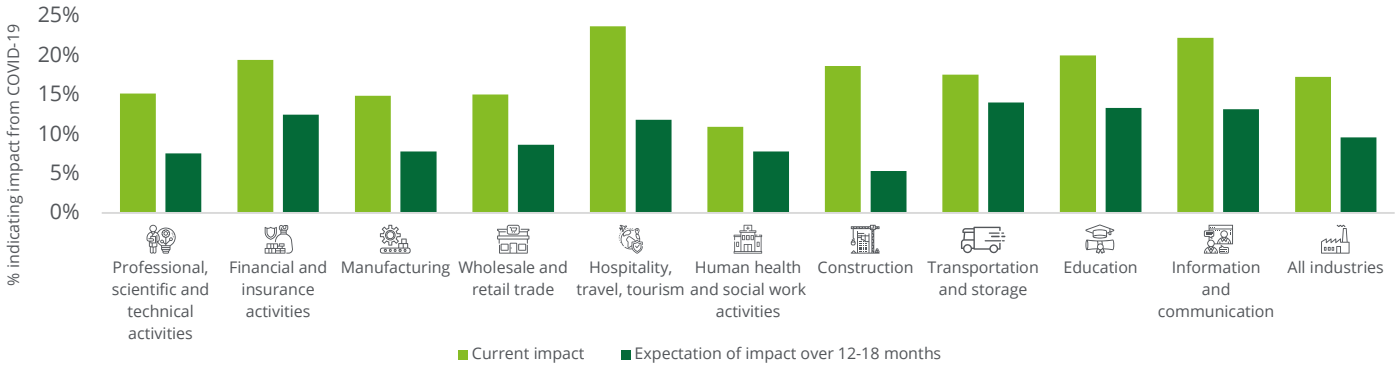
Challenges balancing employee capacity and welfare

As the economy reopens, businesses will need to ensure that they have the labour needed to recover and develop. However, this may be a particular challenge for businesses that have laid off workers, as well as businesses uncertain about their earning potential going forward. If current expectations mean that they reduce employee capacity, they may be unable to take advantage of a pickup in activity flexibly thereafter.

The potential for this can be demonstrated by the responses of SMEs in the Vodafone survey. Across all sectors, 27% of SMEs in the Vodafone survey expect lowered customer demand and revenue in the next 12-18 months. As such, 17% of SMEs reported that they had made redundancies to staff to reduce costs, with one in ten expecting to do more in the next 12-18 months. Certain sectors, including transportation and hospitality in particular, appear to be particularly pessimistic on potential for growth and so more likely to implement further redundancies going forward, making them potentially more susceptible to having reduced capacity for activity turnarounds.

v Expectations over the next 12-18 months were given only by those who had indicated a current impact, but reported here as % of total responses.

Proportion of SMEs indicating that COVID-19 has caused them to make redundancies, by sector across Vodafone survey sample countries[vi]



Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented but included in aggregate totals.

These challenges are likely to be paired with further issues in ensuring the welfare of their employees as well as their customers by limiting human interaction wherever possible, and adhering to public health guidelines. In the ONS's May 2020 wave of its monthly 'Business impacts of COVID-19' survey, UK SMEs consistently noted that they plan to use different safety measures asked about in the survey at a lesser rate than larger businesses, with size of differences varying by measure. For example, only 38% and 30% of SMEs reported plans to introduce shift working and working in fixed teams, compared to 50% and 36% of larger businesses. For hygiene measures and using personal protective equipment (PPE), the differences between larger and smaller businesses were relatively non-existent, however, with these at 1 percentage point and 2 percentage points respectively.[38] Nevertheless, as businesses adapt to the pandemic economy and expectations, or mandated regulations, to protect employee and customer welfare, this suggests that SMEs may face a challenge in making the necessary investments to be able to return to business and recover to pre-pandemic levels of activity.

vi Expectations over the next 12-18 months were given only by those who had indicated a current impact, but reported here as % of total responses.

The role of SME digitalisation in the economic recovery

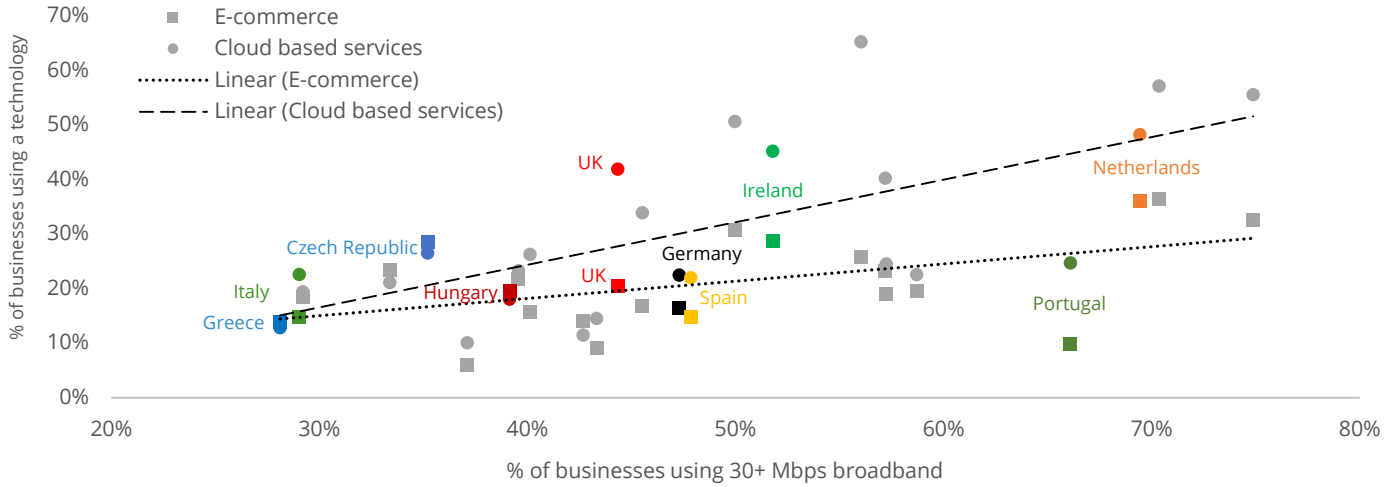
It is very likely that the pandemic economy will stay for at least the medium-term, with business conditions and restrictions not returning to normal until after the development of effective pharmaceutical treatment or prevention due to the need to limit human interaction wherever possible. It may even be that business conditions are fundamentally altered to a new normal, with greater competition and innovation needed in order to grow. As such, SMEs must be able to withstand temporary lockdowns limiting human interaction, e.g. local lockdowns as in the UK, Germany, and Spain,[39] be flexible enough to ramp up and down in response to changes in activity and sentiment, and be efficient and innovative enough to continue to operate and compete in these new business conditions.

Digitalisation may be able to support SMEs in responding to these challenges, in particular by allowing them to be more flexible and reducing the need for human interaction wherever possible, while also setting SMEs up to innovate and grow through the pandemic economy and beyond.[40] This is because digitalisation can help businesses in a number of areas essential to their development, namely:

- Optimising revenue opportunities and lowering costs.[41 42 43]
- Improving productivity.[44 45 46]
- Increasing their geographical reach and accessing new customers.[47 48 49]
- Providing greater access to information and more productive processes to foster innovation.[50 51]

Given the varying types, business models, and needs of SMEs, the digital tools adopted and shape of digital transformations are likely to vary, ranging from quick-win adoptions to more complex implementations. Across all these, however, the most essential building block is access and adoption of **fast and reliable internet connectivity,** such as fibre broadband and VDSL fixed connectivity or potentially 4G/5G mobile and fixed wireless connectivity. There is evidence suggesting that connectivity, when paired with other organisational investments, can increase firm productivity and entrepreneurship.[52 53 54 55 56 57] The importance of connectivity to digital adoption more broadly can be illustrated at a macro level, with broadly positive correlations that, although not causal, are in line with expectations on the relationship between adoption of high-speed connectivity and use of different technologies requiring fast and reliable internet connectivity.

The correlation between 30+ Mbps connectivity adoption and use of e-commerce and cloud by all businesses in European countries



Source: OECD, ICT Access and Usage by Businesses, accessed 7 Aug. 2020. Figures for 2018. Data for European countries.

As connected businesses, SMEs would be able to digitally transform in a number of ways to either generate sales in the pandemic economy or change internal processes to proactively address customer and employee needs and reduce costs. This can include:

Quick-win digitalisations, requiring small or minimal investment in hardware, integration and implementation effort. These vary by business and sector, with their role and implementation in responding to COVID-19 varying even more so given the diversity of business models. Examples include:

Online communication and collaboration software, enabling agility and unlocking productivity by allowing teams to work together remotely by communicating seamlessly across text, voice, and video, sharing and editing online documents, organising meetings, and developing common knowledge repositories.[58] [59]

Increasing digital routes-to-market, from selling goods online and delivering these to customers (in the UK, one in ten wholesale and retail businesses have newly started selling goods online, with 44% reporting an increase in online sales)[60] to providing services to customers digitally, for example personal training and fitness classes provided over videoconferencing software to more customers at once.[61]

Adopting internet-based solutions to reduce customer interactions and free-up human resources, requiring either implementation of relatively simple hardware, such as near-field communication (NFC) terminals to enable contactless payments,[62] or no new hardware at all, such as tableside printed QR codes for restaurants to allow customers to access online menus with their own devices.[63]

CASE STUDY

When the UK government introduced lockdown restrictions to respond to the pandemic, many cafés and restaurants had to close. For one owner-run café and bakery in England selling chocolate and baked goods for over 10 years, this meant an immediate cease to business. Having stocked up on seasonal chocolate Easter eggs, it donated them all to local charities rather than letting them go to waste.

However, this was only a temporary setback. Turning to social media and online communication tools, the café built a following of over 75,000 followers across platforms and started interacting directly with customers through baking videos and tips. Sensing demand, this developed into a home delivery business in the local area, building a dedicated website interface to provide sweet treat boxes, which it plans to continue going forward.

Having had a taste of digitalisation and given the likely ongoing public health measures, the café now plans to deepen its digital adoption. It is investing in new ordering screens throughout its café, helping it streamline the customer experience while reducing the need for face-to-face interactions when ordering to ease customers back into the café.[vii]

Process automation and digitalisation, reducing the need for human input through use of connected devices. This can range from:

- **relatively simple transformations,** such as using devices to digitalise manual business processes (e.g. e-signing documents); to
- **more sophisticated, connected sensors and hardware ecosystems** (the Internet-of-Things, or IoT), reducing high-touch processes (e.g. contactless check-in/check-out and keyless room entry in hotels)[64] and optimising industrial processes across large estates (e.g. connected and/or automated machinery in manufacturing and agriculture).

CASE STUDY

For the German Mittelstand, which accounts for the majority of German value add and 60% of employment, engineering and innovation have always been important. According to a senior executive from Grandcentrix, an IoT specialist focused on supporting the Mittelstand, these family-run, highly specialised product manufacturing SMEs measure success from investments in terms of decades, not quarters. Understanding the need for and benefits of technology and, therefore, digitalisation, they are willing and able to put their finances behind ensuring that their products are innovative and high quality.

With the onset of COVID-19, many of these businesses have as a result been able to use their financial resources and technical acumen to take advantage of trends accelerated by the pandemic, investing further in digital technologies and in particular IoT. Sensing a lull in demand for existing products, some Grandcentrix clients have even been able to shift focus to new product lines entirely, taking advantage of their familiarity with IoT products. This includes one business, for example, that shifted to providing connected sustainability-focused products after sensing an impending downturn in its core products. As well-resourced and technically capable SMEs, these businesses provide a model for how digitalisation can enable an SME, with the right resources, to invest for success in the coming decades.[viii]

vii Based on Vodafone online focus groups with SMEs
viii Based on an interview with a senior executive from Grandcentrix

Particularly for the latter, this enables continuity during public health restrictions and concerns on movement by allowing activities to be carried out with little to no need for direct, physical human input, all while increasing efficiency and capacity for more value add work. This can be enhanced even further through automation, using connected devices with machine-to-machine (M2M) communication capabilities. In a study of the impact of automation on labour productivity in the construction sector, average project time savings were estimated to be 30% when using a high level of automation.[65]

Cloud-based services, reducing the need for ICT infrastructure and allowing remote access to data and services. Beyond the essential function of enabling accessibility from any place and at any time through any internet-enabled device during the pandemic,[66] this can have a range of benefits for SMEs including:

Increasing efficiency and flexibility by converting expensive infrastructure investments into variable, service costs, with the scale efficiencies that larger data centres can provide and the ability to adapt services to suit their needs.[67]

Enabling data-driven innovation by providing much higher, cloud-based computing power to identify new insights and potential business opportunities from data. In a previous Deloitte study, SMEs that used data-driven innovation were found to be able to increase their productivity by 8.9%.[68]

Providing more reliable ICT infrastructure, with redundancy and system optimisation software used by specialist, third-party cloud providers ensuring smooth and reliable operations on behalf of their SME clients.[69]

Supporting better data security processes by allowing SMEs to benefit from the expertise of specialist ICT providers in implementing protections for their and their customers' data, and compliance with data protection regulations such as the General Data Protection Regulation (GDPR).[70]

CASE STUDY

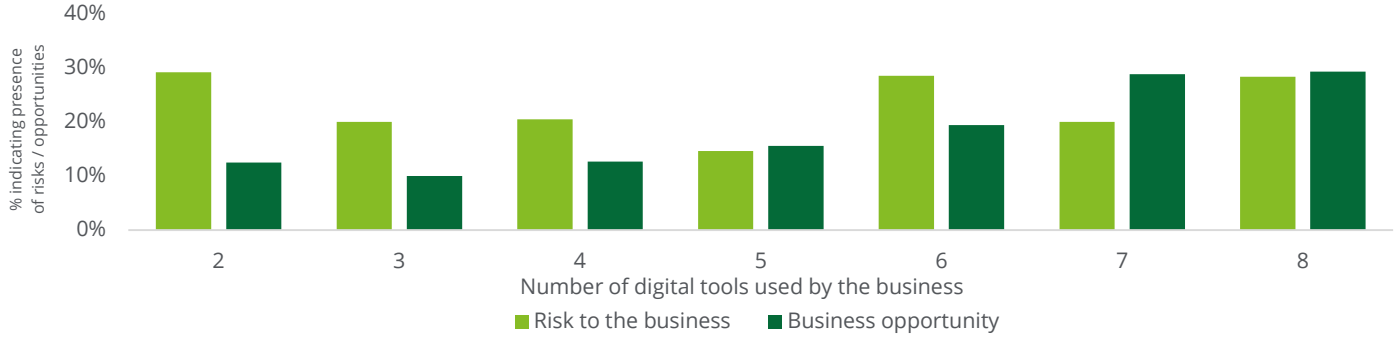
With the start of lockdown, business insurance providers faced a surge of demand for support from their clients. This required businesses to be able to work efficiently and effectively, dealing with clients' claims with the utmost care in a tough environment for them.

One Spanish insurer was therefore grateful for a well-timed investment at the end of 2019 to upgrade its digital capabilities. Having implemented a full cloud transformation, shifting all its data and operations to the cloud and adopting a suite of cloud-based productivity software, the insurer was able to adopt teleworking smoothly, without missing a beat in its operations.

Having seen the changes in the business environment as a result of the pandemic, however, the insurer plans even further investments in digitalisation, seeing it as an incentive to adapt its business model for the future. As such, it is accelerating the launch of its web platforms, expanding internet and digital marketing, and aiming to become a fully 'digital insurer', reaching many more customers and radically improving its efficiency with automated platforms enabled by cloud-based AI capabilities.[ix]

The Vodafone survey provided evidence consistent with the benefits that come with increased adoption of digital tools. While all SMEs have faced risks due to the impacts on the economy, it is clear that more digitalised SMEs [x] have identified new business opportunities in the pandemic economy at a higher rate than less digitalised businesses. In particular, the most digitalised businesses have highlighted opportunities at **more than double the rate** of the least digitalised.

Proportion of SMEs indicating that COVID-19 has presented risks / new opportunities for the business vs. the number of digital technologies [xi] adopted by the SME



Source: Deloitte analysis of the Vodafone SME Understanding Survey, 2020.

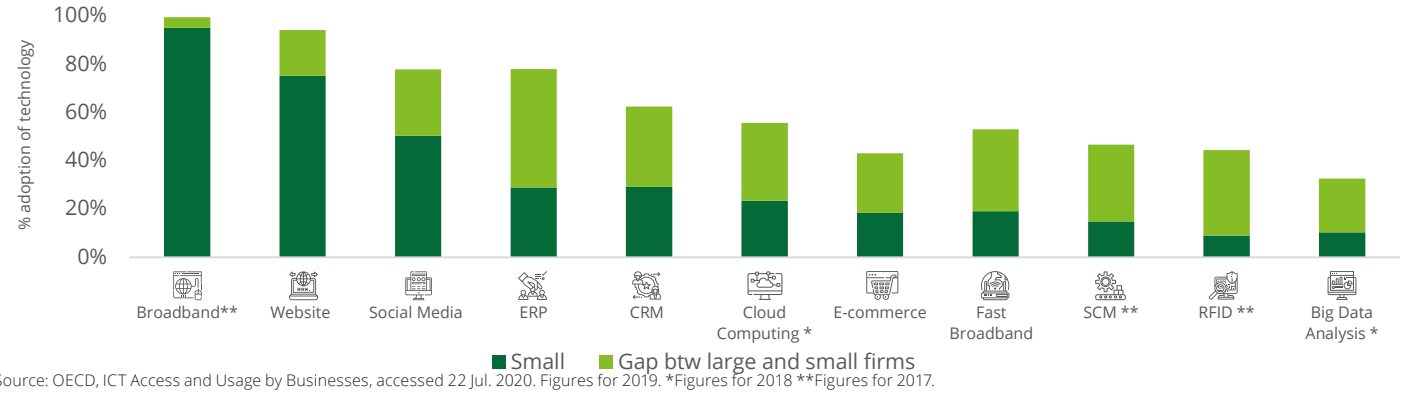
ix Based on Vodafone online focus groups with SMEs
x As measured by the number of technologies implemented in their business.
xi The digital technologies covered here are: mobile devices and contracts, communication/collaboration tools, high-speed connectivity, fixed mobile connectivity, network management solutions, landline, IoT devices and cloud-based services.

The Digital Divide

The previous analysis points to SME digitalization as an important opportunity for policymakers to support the wider economic recovery. This was also recognised in the European Commission's Next Generation EU economic recovery plan.[71] To seize the opportunity, policymakers will have to address the underlying challenges that limit SME digitalisation in the first place and lead to the 'digital divide'.

Overall, European SMEs lag behind larger businesses in terms of adoption across virtually all digital technologies, ranging from the most basic prerequisites, e.g. connectivity, to more complex and higher-return technologies, e.g. cloud computing, and includes all the technologies discussed in the previous section.

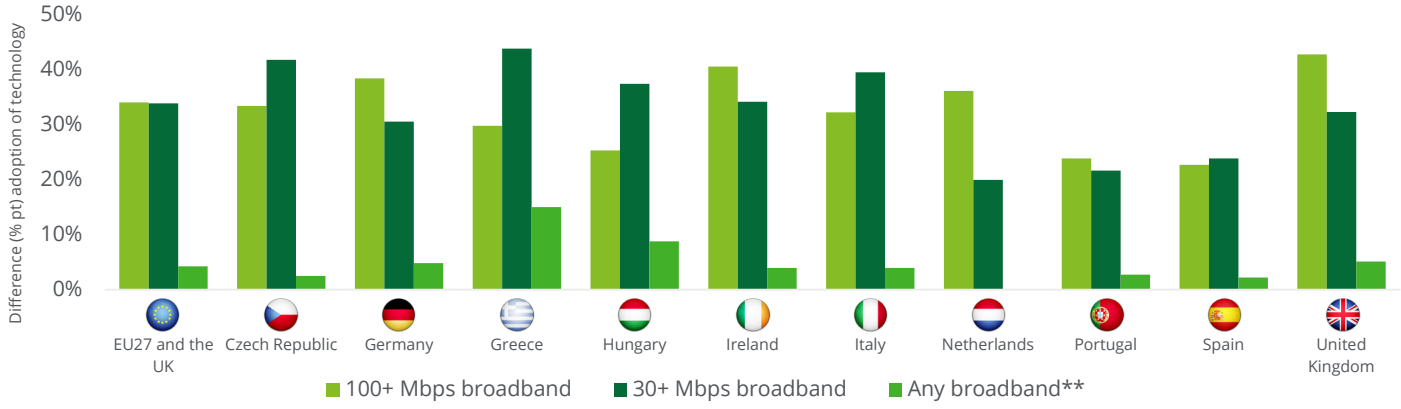
The digital divide between large firms (250+ employees) and small firms (10-49 employees) in the EU27 and the UK



Source: OECD, ICT Access and Usage by Businesses, accessed 22 Jul. 2020. Figures for 2019. *Figures for 2018 **Figures for 2017.

Looking at connectivity first, SMEs lag larger counterparts even in basic connectivity, with the gap much larger in certain countries. For example, in Hungary and Greece, small businesses lag larger businesses by 9 and 15 percentage points respectively. This gap grows significantly when looking at higher-speed connectivity; across the EU27 and the UK, only 46% of small businesses use 30+ Mbps broadband compared to 80% of larger businesses, with a similar-sized gap for 100+ Mbps usage at 19% versus 53%. Even relatively more connected countries have significant connectivity divides. In the country with the largest proportion of small businesses using 100+ Mbps internet, Portugal, the gap is still 25 percentage points, while the country with the largest gap is the UK at 43 percentage points.

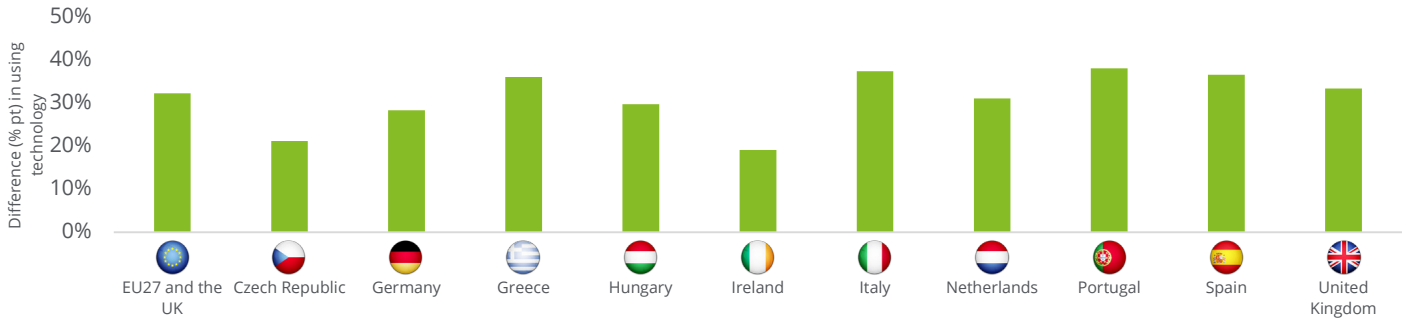
The connectivity gap between large firms and small firms across selected countries and the EU27 and the UK



Source: OECD, ICT Access and Usage by Businesses, accessed 22 Jul. 2020. Figures for 2019. *Figures for 2018 **Figures for 2017.

Beyond connectivity, and looking at the more advanced technologies enabled by high-speed connectivity, the digital divide between small and large businesses is much larger. Looking at cloud computing as an example of a technology that can easily be used across a variety of businesses, small businesses in the EU27 and the UK lag larger ones in adoption by approximately 32 percentage points. In the country with the highest rate of usage for small businesses, the Netherlands, small businesses lag by just below the average at 31 percentage points. This gap grows to between 36 and 38 percentage points for southern European countries such as Greece, Italy, and Portugal.

The cloud computing gap between large firms and small firms across selected countries and the EU27 and the UK

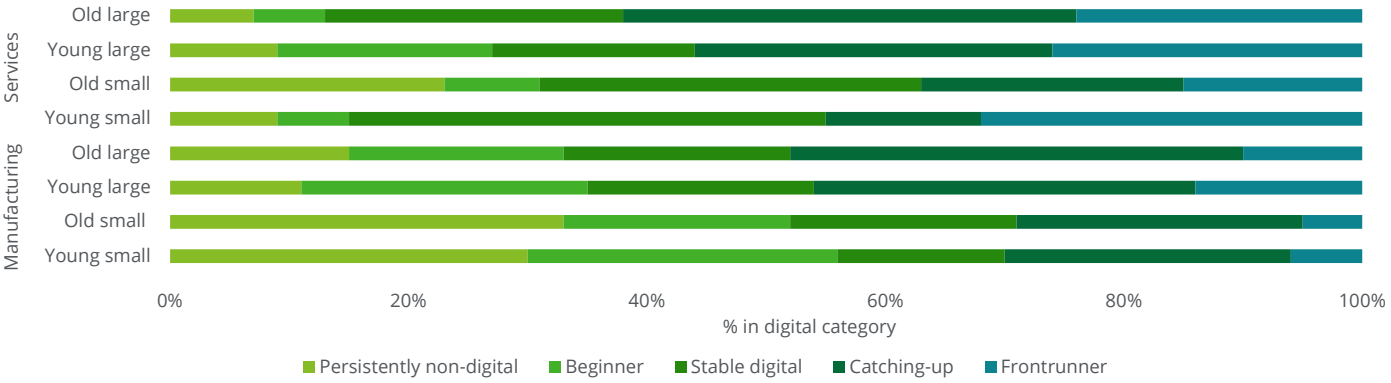


Source: OECD, ICT Access and Usage by Businesses, accessed 22 Jul. 2020. Figures for 2018. Data unavailable for Romania.

This digital divide may be partly explained by a lower capability for digital adoption across sectors and the degree to which SMEs are represented in those sectors, particularly when considering the technologies and digital solutions that have been widely available, and more easily adopted, to date. In a study by University of Oxford academics, researchers constructed a Remote Labour Index (RLI) for different sectors based on the mix of occupations in those sectors. They found that certain sectors (e.g. finance, IT, and professional and scientific services) are more easily able to shift to remote working as a response to COVID-19 than others (e.g. accommodation and food).[72] Another study also looked at the potential for different sectors to digitalise and the potential options for further digitalisation, finding sectors such as construction, hospitality, personal and local services, entertainment and recreation, and retail trade toward the bottom of the list.[73]

However, there is evidence to suggest that even within sectors, a digital divide persists between smaller and larger firms. In some cases, this is also related to divides across age of firms. For example, EIB research found that between 30% and 35% of smaller manufacturing firms in the EU and the US were categorised as 'persistently non-digital', compared to only c.10% to15% for larger manufacturing firms. In services, this gap was lower, with younger small firms relatively closer to larger firms in terms of digital adoption. However, older, small firms significantly lagged, with c.15 percentage points less digital adoption compared to younger counterparts and larger businesses.[74]

Digital divide by sector and age-size categories, across the EU and the US



Source: EIB, 2020. Young firms are less than 10 years old.

Overall, this points to a key concern for policymakers given the likelihood for the digital divide to persist, or even grow, without intervention, particularly in the context of economic pressures and constraints on resources as a result of COVID-19. This is because businesses that have not implemented any digital technologies are likely to remain non-digitalised, as they are less likely to invest in technology more broadly, and more digital businesses are likely to become even more digital. In the EIB study, researchers found that currently 'digital' businesses were 21% more likely than non-digital businesses to have further digital investment plans. For SMEs generally, they were approximately 20% less likely to be planning to invest in digitalisation than larger businesses.[75]

Challenges to digitalisation

The different elements and dimensions of the digital divide suggests the need for policymakers to consider where resources may be most effective in supporting SMEs to digitalise, particularly given the constraints on government resources. The challenges SMEs face in digitalising, which drive the digital divide, can be categorised into three main dimensions:

The **availability** of the digital tools and technologies required for digitalisation, namely good connectivity and suitable digital tools and services. This includes awareness of the availability of these digital tools.

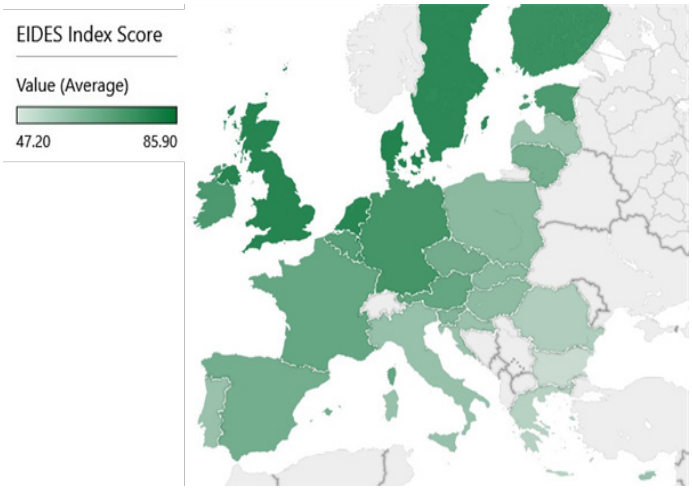
The **capacity** of SMEs to engage with digital transformations, namely in the form of financial and time capacity.

The **capability** of SMEs to gauge, plan, implement, and optimise their digital transformations.

Overall, these dimensions point to a mix of both issues relating to the nature of smaller businesses and wider business environment conditions. Looking holistically at these dimensions, the European Commission has developed views on which countries are more advanced or lagging in the environmental conditions for SME digitalisation, as measured by indices such as the European Index of Digital Entrepreneurship Systems (EIDES) developed by the EU Science Hub for the EU27 countries and the UK.[76] These environmental contexts are particularly important because it means that SMEs in the same sector across different countries may have different potential for digitalisation based on the business and socio-economic environments surrounding them.[xii] Overall, it shows that northern European countries offer more conducive environments for SME digitalisation, with southern European countries such as Italy, Greece, Hungary, and Portugal lagging further behind. The areas highlighted as the biggest challenges for these countries are the creation and dissemination of ICT-related knowledge (Greece and Portugal),[xiii] and the availability of ICT skills and specialised labour (Hungary, Italy, and Romania).[xiv]

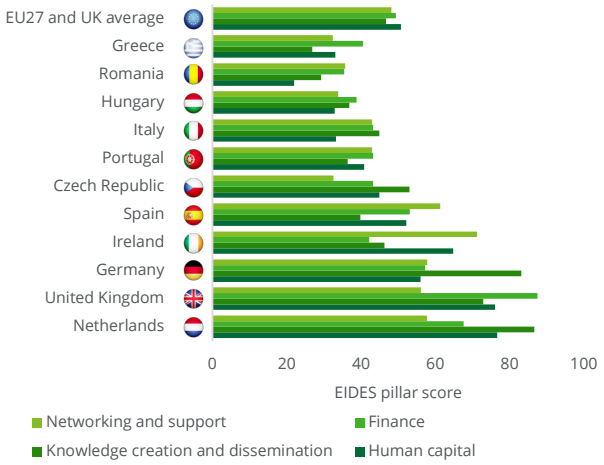
This section will therefore go through each of the above challenge groupings, discussing how they impact SMEs and outlining where SMEs require targeted support to enable their digitalisation.

The environment for SME digitalisation, as measured by the European Index of Digital Entrepreneurship Systems



Source: EU Science Hub, accessed 17 June 2020.

EIDES systemic conditions (digital and non-digital) pillar scores for selected countries and the EU27 and UK average



xii For example, for the former, there may be more support services and consultancies to help with digital transformation planning and implementation, meaning more effective and efficient digital adoptions. Meanwhile for the latter, customers may be more willing to accept digitalised customer experiences in certain countries or regions, such as online/digital ordering, cashless payment, and online delivery of goods and services, meaning higher returns to digital transformations.

xiii As measured by contributions to open-access sources; employment in high- and medium-high technology manufacturing sectors and knowledge-intensive service sectors; the number of software developers; the percentage of enterprises with enterprise resource planning software; and the percentage of enterprises with online-sales capabilities.

xiv As measured by internet access rates; measures of general populace digital skills; ICT specialist employment; and internet usage for finding goods, services and training.

Availability

It is clear from the different potential digital solutions that digitalisation relies most importantly on the availability of sufficient connectivity, i.e. fast and stable enough for uses the business needs, as the basis for all further investments. While basic connectivity is generally ubiquitous in Europe, significant gaps remain in the availability of higher speeds and/or more stable connectivity across both countries and regions. This may mean that SMEs in lagging locations may be at a significant disadvantage in being able to implement digital transformations, and in the pandemic economy, less able to have access to even basic digital solutions for remote working such as high-quality videoconferencing capabilities, not to mention more advanced digital technologies that can improve SME productivity such as effectively migrating data and services to the cloud.

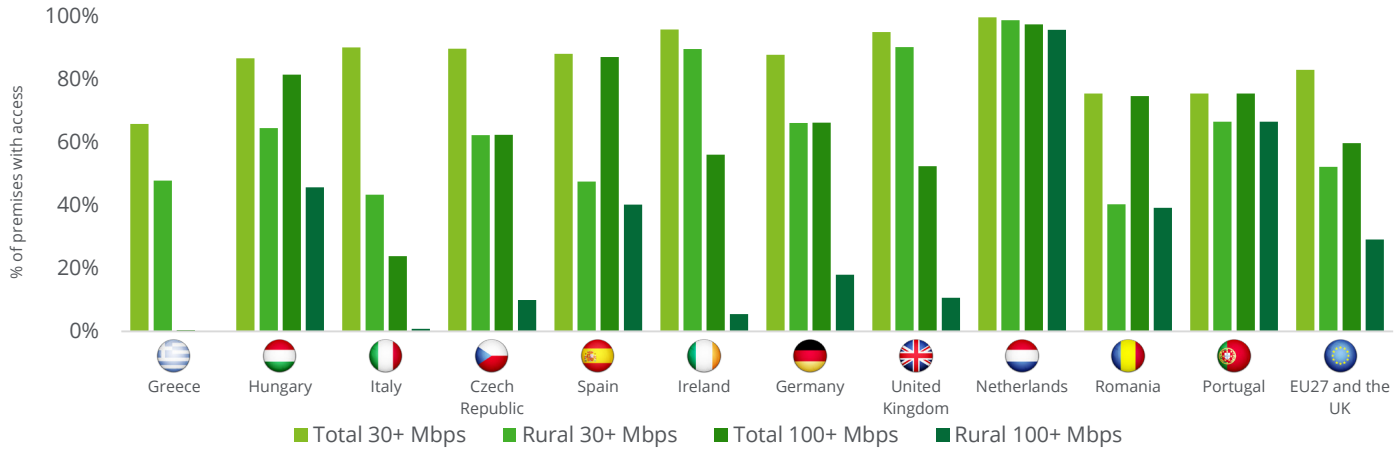
As such, governments may need to first address gaps in connectivity to provide the basic infrastructure for SMEs to be able to initiate digital transformations and therefore invest in their productivity and growth.

Looking first at regions, the key gap is that across urban and rural areas. SMEs in larger urban centres are more likely to have access to faster broadband, meaning that SMEs in rural areas of countries are at a greater disadvantage. In some countries, such as Italy and Spain, this rural-urban gap is particularly high, with rural availability of 30+ Mbps speeds lagging total availability by 47 percentage points and 42 percentage points respectively.[77] However, there is a significant gap even in countries where the rural connectivity access is higher. For example, in Germany, rural access to 30+ Mbps is at 66%, still lagging the wider country's rate of 88%.

This gap is even higher when looking at speeds to enable the use of technologies beyond relatively simple ones. Countries with the most significant rural-urban gaps for 100+ Mbps speeds are the Czech Republic (53 percentage point gap), Ireland (51 percentage point gap), Germany (48 percentage point gap), and Spain (47 percentage point gap).

However, the gap across countries to overall access to higher-speed connectivity is also an issue, with SMEs in some countries better able to digitalise than equivalents in the same sectors in other countries. Those lagging in 30+ Mbps access may face slower development of even relatively simple digital transformations, such as basic remote working including cloud storage and videoconferencing. This includes countries such as Greece, Portugal, and Romania, with only 66% to 67% of premises having access to 30+ Mbps fixed broadband, compared to 95% to 96% of premises in the UK and Ireland, and virtually all in the Netherlands. Looking at access to 100+ Mbps, the gap is even starker, with less than 1% of premises having access in Greece (0.4%) compared to almost all premises in the Netherlands (98%).

Coverage by speed in selected countries and across the EU27 and the UK

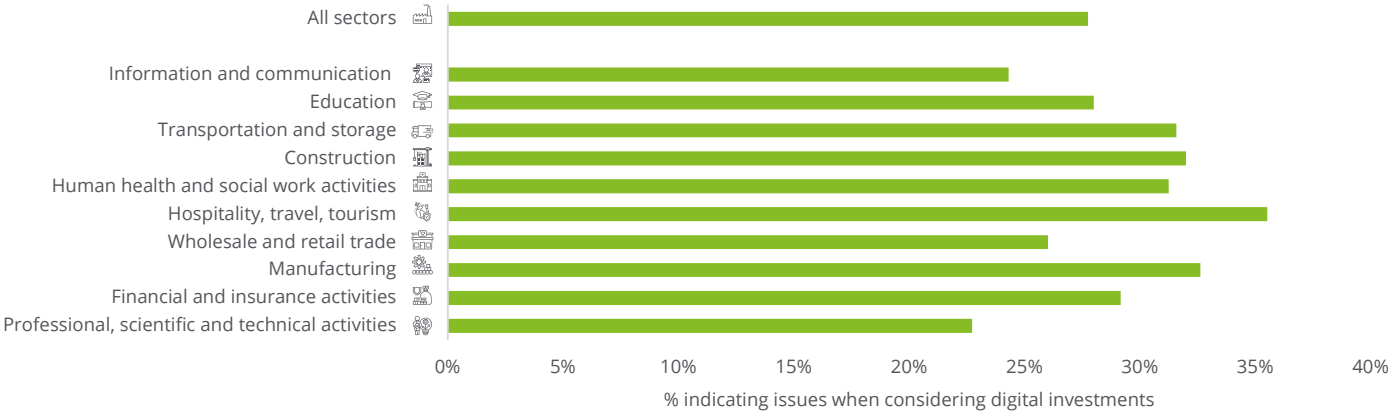


Source: IHS Markit and Point Topic, 2019.[78]

Beyond connectivity, however, SMEs can also face a gap in having digital solutions available that are tailored to their needs. This is because their needs may differ from those of larger businesses and, as such, be harder to identify in the wider digital ecosystem. In many cases, this gap may even be driven more by awareness of the potential for different solutions to be right for their business.

A survey in Germany, for example, found that 54% of SMEs indicated a lack of available information about possible applications.[79] In the Vodafone survey, 28% of responding SMEs across all sample countries and sectors indicated issues in the availability of the right digital solutions for their needs when considering IT investments. This was as high as over a third (36%) for SMEs in the hospitality, travel, and tourism sector, suggesting a particular unsuitability of available digital solutions and/or a lack of awareness of the availability of the right solutions for their business.

Proportion of SMEs needing support with identifying suitable digital solutions, by sector



Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented but included in aggregate totals.

Capacity

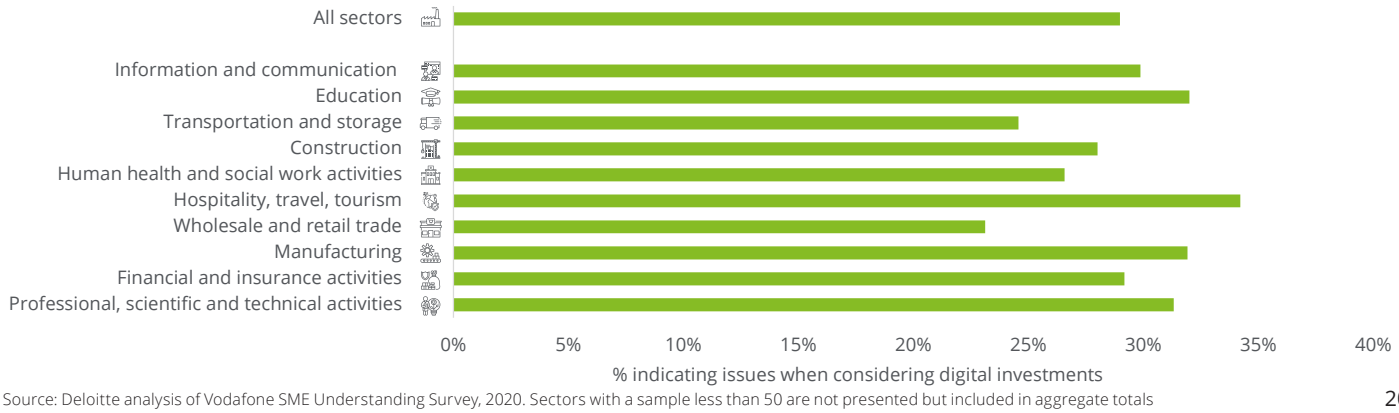
Given the constraints on financial and time resources in normal times, SMEs are often focused on maintaining business-as-usual operations and so cannot focus or dedicate resources to adopting big changes. This is because digital transformation projects require time to plan, and then generally significant amounts of upfront investments.

As SMEs are generally faced with competing priorities and, particularly in sectors with a large SME representation such as accommodation and food services and retail, low margins, this means that limited time and financial resources are dedicated to other areas and investments. In the survey from Germany, 32% of SMEs indicated that lack of adequate financing sources was an obstacle to digital technology adoption, while 59% pointed to high investment and operating costs.[80]

This is even more-so in times of economic crises and poor business conditions, where financial and time constraints are more intense. During the COVID-19 crisis, this means that businesses devote whatever resources they have to fighting fires rather than investing in changes that set them up to be more resilient and increase performance. In the Vodafone survey, 29% of responding SMEs indicated that getting a suitable price for digital solutions was an area they needed further support with when considering digital transformations. This may indicate a lack of capability in negotiating the right price, but it also points to potential cost considerations. Again, the hospitality, travel, and tourism sector had the highest rate of SMEs indicating that this was an issue, in line with challenges these types of businesses generally with regards to margins available for reinvestment in the business.

It should also be noted that a key area that may contribute to these challenges is the availability of finance for digital investment, which even in normal economic conditions is limited in some countries. The EIDES highlights that certain countries, such as the Czech Republic, Greece, Hungary, Italy, Portugal, and Romania all lag the EU27 and UK average in access to finance to support digitalisation.

Proportion of SMEs needing support with getting a suitable price for digital solutions, by sector



Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented but included in aggregate totals

Capability

In addition to having tools available and the capacity in terms of time and resources to initiate a digital transformation, a key challenge for many SMEs is the capability to plan, initiate, and implement a digital transformation for their business that is optimised and improves business performance. This is because the digital transformation can be complex and not one-size-fits-all, with nuances specific to the business that, if not considered correctly or if not capably planned for, can result in deteriorations rather than improvements in the business's operations.

The biggest driving factor behind this is a **lack of knowledge or skills** to plan, manage, and optimise the digital transformation. This is particularly the case as smaller businesses may need to depend on the skills and knowledge of owner-managers, who may not have the specialised ICT capabilities, or on a smaller group of employees that does not include any ICT specialists. Additionally, in order to achieve the benefits of digital transformations, businesses need to have the employee skills to optimally use tools and increase performance and productivity.

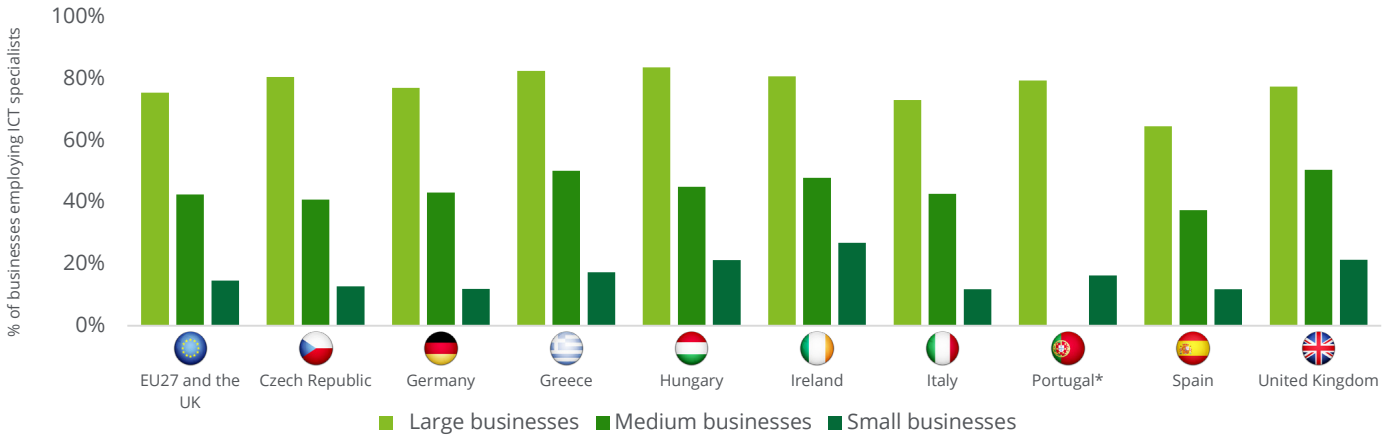
In countries where the available pool of specialist ICT labour is limited, this may be especially hard as smaller businesses have to compete with larger ones. As indicated by the EIDES, the Czech Republic, Greece, Hungary, Italy, Portugal, and Romania all lag the EU27 and UK average, but even generally more digitalised countries such as Germany have a significant gap in skilled human capital compared to Ireland, the Netherlands, and the UK.

- In the survey of German businesses, 67% of SMEs indicated a shortage of IT skills among employees was a key obstacle to digital technology adoption, making it the biggest barrier covered in the survey, while 55% indicated a shortage of IT specialists more widely.[81]

- Across the EU27 and the UK, only 43% of medium-sized businesses and 15% of small businesses employed any ICT specialists, compared to 75% of large businesses. The gap was largest in the Czech Republic, Germany and Greece, with a 65 to 68 percentage points difference between larger businesses and smaller businesses, and smallest in Spain, Ireland, and the UK, with a 53 to 56 percentage point difference.

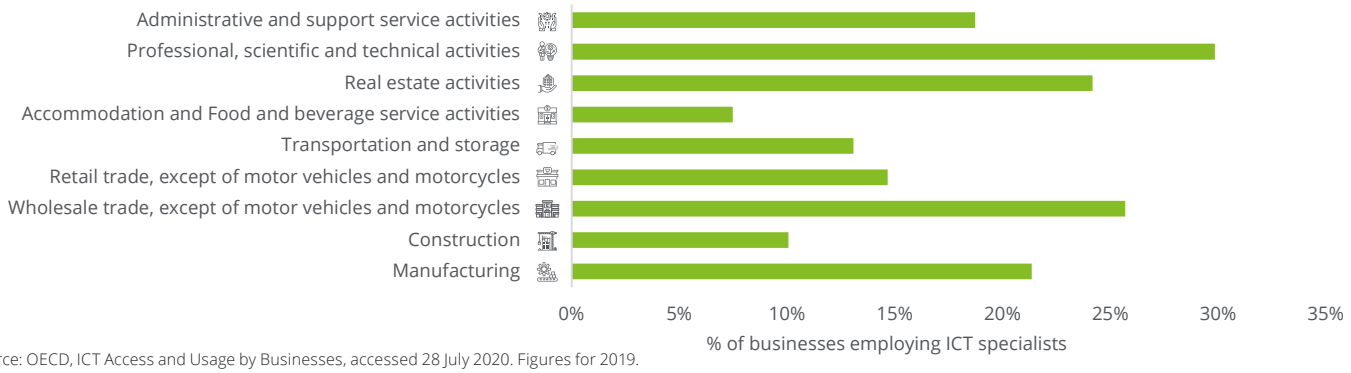
- Across sectors in the EU27 and the UK accommodation and food services has the lowest rate with only 7% of businesses employing ICT specialists, while the professional, scientific, and technical services sector had the most at 30% of businesses employing ICT specialists.

Share of businesses employing ICT specialists, for selected countries and across the EU27 and the UK



Source: OECD, ICT Access and Usage by Businesses, accessed 28 July 2020. Figures for 2019. Data unavailable for Romania. *Data for medium-sized businesses in Portugal unavailable for 2019.

Share of businesses employing ICT specialists, by sector across the EU27 and the UK



Source: OECD, ICT Access and Usage by Businesses, accessed 28 July 2020. Figures for 2019.

Overall, this lack of knowledge and skills means that SMEs need to rely on external specialists to plan and implement a digital transformation, a particular challenge when also faced with financial capacity constraints. This can result in businesses not even considering a digital transformation at all, particularly as they are unable to:

Assess the returns to their business from digitalisation. With a lack of knowledge of digital tools, SMEs may be unable to assess whether the returns from digitalisation will make the investment worthwhile. This means that businesses may be put off from attempting to initiate a digital transformation, and contribute to cultural barriers and a sense of inertia amongst SMEs when faced with the prospect of redeveloping business models and working habits.

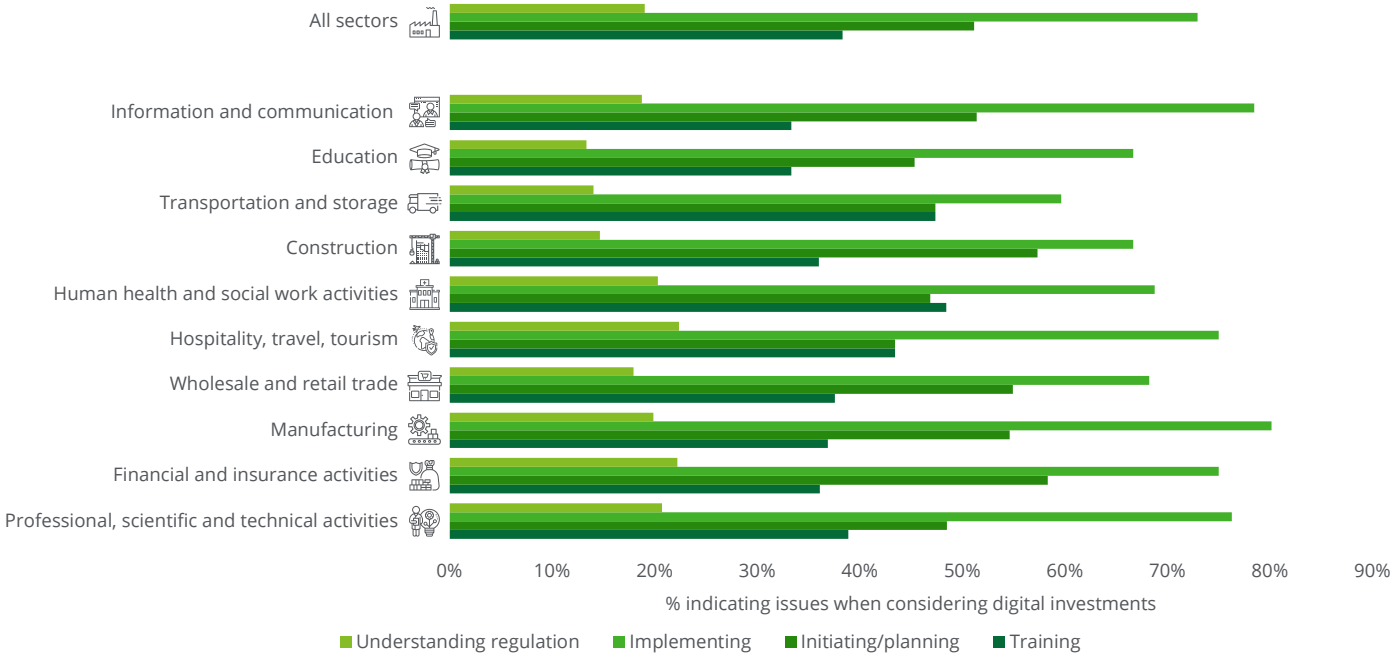
Overcome lower levels of societal digital literacy. Almost as important as internal digital capability for many businesses, particularly customer-facing ones, is digital literacy and willingness to adopt digital interfaces for customers. For example, a retail business in an area where customers are generally not eager to order goods online or use digital interfaces for ordering goods in store may not be keen to invest given low customer demand. This may also be related to customer fears regarding data protection and control, and how businesses, particularly some smaller businesses, are able to manage customer data. Given a general reliance on a smaller customer base, SME customers' reluctance to adopt digital customer experiences due to cultural or data security reasons may limit the SMEs' digitalisation. It should be noted however that this may be less so given the potential for digitalisation to reduce the need for human interactions due to health concerns in the pandemic economy.

Ensure adherence to technology-related regulation. In particular, a potential limitation for many small businesses is the time and financial cost associated with complying with data protection regulations, including GDPR in the EU as well as national variants, and implementing the necessary digital security. For example, most recent data from Eurostat on obstacles to selling online suggest that across the EU27 and the UK in 2016, 14% of SMEs that did not sell online noted that ICT security and/or data protection was an obstacle to selling online.[82]

Overall, these capability gaps contribute to a mix of constraints on the digital transformation process, from training, planning and initiation, implementation, and regulation, particularly across sectors. When considering the areas of the digital transformation process where businesses had issues, data from the Vodafone survey found that:

- 38% of responding SMEs indicated that they needed support with either end-user and operator training or administrator and/or manager training, with this highest for the hospitality, travel, and tourism sector (43%), transportation and storage sector (47%), and the human health and social work sector (48%).
- About half (51%) of responding SMEs indicated at least one issue relating to planning or initiating their digital transformation, such as defining their requirements, selecting the right products or technologies, or choosing suppliers. This suggests challenges for many SMEs in understanding the potential of digital technologies for their business and with developing their digital transformation plans, in particular in the construction (57%) and financial services sectors (58%).
- Almost three quarters (73%) of all responding SMEs indicated at least one issue relating to implementation, including set-up and implementation of new technologies, integration with existing technologies and business processes, and migration from previous systems. This was highest for manufacturing (80%) and ICT firms (78%), likely given the complexity of the technology implementations necessary in those sectors, but also high for firms such as hospitality, tourism, and travel (75%) and professional and financial services (75% and 76% respectively).
- Finally, about a fifth (19%) of responding SMEs noted the need for support with understanding regulation. This was roughly consistent for SMEs across all sectors, with hospitality, travel, and tourism and financial services marginally higher (22% for both).

Proportion of SMEs needing support with business capabilities relating to digital transformation, by sector



Source: Deloitte analysis of Vodafone SME Understanding Survey, 2020. Sectors with a sample less than 50 are not presented but included in aggregate totals.

A policy framework for supporting digitalisation

Governments in Europe and elsewhere have recognised that key to mitigating the impacts of the COVID-19 pandemic on their economies is making sure their SMEs are able to remain resilient through the pandemic and to recover and grow in the pandemic economy.

As such, many governments have introduced blanket measures to help mitigate the challenges faced by SMEs, focusing on financial relief through absorbing labour costs and sustaining short-term liquidity.

In Europe, this includes measures such as:

- **Short-term work or wage subsidies,** for example, in the Netherlands and France.[83] [84]
- **Tax deferrals,** for example, in Spain and the UK.[85] [86]
- **Postponement of debt repayments,** for example, in Hungary and Ireland.[87] [88]
- **Guaranteed loans,** for example, in Denmark and Czech Republic.[89] [90]
- **Grants,** for example, in Belgium and the UK.[91] [92]

However, governments are now looking to pare back many of these blanket measures, to prepare the economy to move to a new phase of the pandemic economy. A key element of this should be providing support for and enabling SMEs to adapt to the new business conditions, with investments and changes to ensure they are able to continue operating and contributing to the economic recovery.

Some governments, as well as the European Commission as part of its EU recovery plan,[93] have already recognised supporting SMEs with digitalisation-focused measures may support their resilience and longer-term prospects, allowing them to develop and support the economy in the long term. Using policy measures to support SMEs in migrating to online activity and continuing business, governments are recognising that digitalisation by SMEs may be able to limit the economic repercussions of the crisis while progressing long-term policy objectives, such as increasing SME productivity. As such, this could contribute to reducing the productivity gap between SMEs and large companies, which varies by sector but can amount to almost 40%.[94]

The aim of these policy interventions is therefore to address the key challenges SMEs face in adopting digital tools and initiating and optimising digital transformations. While evidence on the effectiveness of different measures that have been implemented is not yet available, current measures can be grouped into the following categories:

- Short-term access to digital services
- Online informational resources and repositories
- Grants and voucher schemes
- Training schemes and direct support

Short-term access to digital services

One of the ways governments have looked to support SMEs is through appealing to technology businesses to provide short-term relief in the form of free or lower-cost access to broadband connectivity and software tools such as security and communication software. By making access to digital tools and services cheaper or free and pushing them to businesses, these governments are looking to temporarily address SMEs' capacity issues and increase availability.

In some cases, this has involved the government taking an active coordinating role with digital providers to identify and offer tools and services to SMEs. For example, the Digital Team Austria[95] initiative was founded as an association of companies coordinated by the federal government to offer digital services to SMEs across a number of areas, including internet broadband access, videoconferencing software, communication and collaboration software, cybersecurity software, and access to online training courses in digital skills.

In other cases, the measures have involved the government acting more as a forum for businesses to opt-in to provide free or lower-cost access to services. This includes schemes such as Italy's Solidarietà Digitale[96] and Greece's Psifiakí Allilengýi[97] schemes, which offer a website for SMEs to find and download software directly from providers that have opted in.

These types of measures can have potential benefits. For example:

- Short-term access to broadband can **allow SMEs to overcome the first step of digitalisation by getting online.** This means that the investment required for SMEs to experiment with adopting different software, digitising certain processes, or even implementing certain digital hardware requires less financial investment and, for software especially, commitment, given that this may in many cases already be free. However, it should be noted that, in practice, this is a relatively limited offering, with the Greek and Italian schemes for example not offering this.
- Where governments additionally provide free or lower-cost access to software, this can have additional benefits. By collating tools and services and reducing their financial costs, these measures can make **digitalisation more easily accessible to SMEs.** This is particularly important where capacity and capability to engage is limited, and therefore SMEs may need information and services provided to them in a straightforward way when seeking options for support.

  This can be particularly helpful when paired with resources or information on choosing the right tools and implementing them, which the Italian and Greek schemes do to some extent. For example, the Greek government's scheme segments offerings by type ('distance work'; 'information/entertainment'; 'e-learning'; and 'connectivity and data'), with some individual listings also highlighting the relevance to particular sectors, although it does not segment the finding tool by sector. These types of schemes therefore address the availability challenges for SMEs by reducing search costs, as well as helping them in terms of capability to understand relevance to their business.

However, when developing policies that provide free or lower-cost goods and services, governments need to consider particular drawbacks to these types of measures:

- Depending on the setup of the system, partnerships may mean that the providers featured are curated to a certain extent, meaning that governments need to identify the best digital solutions to provide wider access to. This may be inefficient in some cases, with **no one-size-fits-all across different sectors and SMEs.** In contrast, if services featured are not curated at all, and instead operated purely through opt-in, SMEs can face 'cognitive overload' if they have less pre-existing ICT capabilities and perceive there to be an **overwhelming number of similar-sounding solutions.** This can potentially lead to inefficient adoptions, which can even set back some SMEs.

- Inevitably, these types of measures are **time-limited** (e.g. for the duration of the crisis), potentially creating distortions in behaviour with demand for services brought forward and then dropping off after the end of the measure. In practice, this can mean that SMEs might acquire digital tools and services but **drop them once they are no longer free or lower-cost,** particularly if returns are slower to materialise, as they may be in an economic recovery, or are hard to disentangle from the general economic recovery.

In **Italy,** the Ministry for Technological Innovation and Digitisation, in collaboration with the Agency for Digital Italy, has invited companies that offer digital tools and services to offer these for free as part of the Solidarietà Digitale scheme. These are listed on a searchable website hosted by the government, and include access to a variety of software to enable digitalisation of processes and remote working during the COVID-19 pandemic.

In **Greece,** as part of an initiative by the Ministry of Digital Government, the Greek government has set up a website where SMEs can access software provided for free or at lower cost. Similar to the Italian scheme, these are provided by businesses that have volunteered to do so for the duration of the COVID-19 pandemic.

In **Austria,** the government is taking an active role in coordinating the Digital Team Austria. This includes a collaboration between the government and the private sector to provide free access to digital tools and services to SMEs for a minimum of three months. The services include fixed and mobile broadband access, videoconferencing software, communication and collaboration software, cybersecurity software, and access to online training courses in digital skills.

Grants and voucher schemes

As an alternative to initiatives providing free or lower-cost access directly, governments have also offered grants and voucher schemes for software and ICT equipment, giving SMEs more flexibility as well as responsibility to choose the most suitable digital tools and services. This allows governments to expand access and address financial capacity constraints through direct financial support via grants or vouchers provided to SMEs, similar to wider financial support that is being provided to businesses currently but earmarked for financial investment.

In some cases, these types of schemes are pre-existing schemes in place to promote digitalisation by SMEs. For example, the Italian government introduced a voucher scheme in 2017 to cover part of the costs of digital investments. These have been expanded by some governments as a direct response to the COVID-19 pandemic.[98] In Ireland, the government extended its Trading Online Voucher Scheme to offer more financial assistance to small businesses looking to trade online and reach new markets.[99] Finally, some new schemes and funding have been introduced directly as a result of the COVID-19 pandemic. As part of the Acelera Pyme initiative, a one-stop shop set up by the Spanish government to support SMEs and the self-employed, it has introduced a financing programme to cover the costs of purchasing and leasing of digitalisation equipment, services, and software.[100] [101]

In comparison to directly pushing free or lower-cost access to tools and services, grants and voucher schemes can have certain advantages. For example:

- These policies are more equivalent to conditional cash transfers, and allow SMEs **greater choice in digital tools and services to adopt.** This means that they can choose technologies based on best-fit for their needs, and they allow governments to very directly address SMEs' financial capacity challenges while benefiting from simplicity of the system and not taking a direct role in choosing the digital tools and services to provide.
- In comparison to subsidisation or free access, and depending on the conditions associated with the grants and vouchers, SMEs are therefore allowed more flexibility to choose the best potential digital solutions for their business. This can be **particularly important where these schemes are meant to cover a mix of sectors,** due to the different potential needs across businesses. For example, while for some businesses the key need may be in online communication and collaboration software and high speed connectivity to enable it, for others it may be in more digitalising hardware and M2M devices that allow for automation of operations

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These types of schemes can still have drawbacks, however, particularly if not paired with other schemes and measures. For example:

- **When not paired with training or advice,** this measure may not be as effective for some SMEs. This is due to the potential for limited guidance and therefore ineffectiveness of the grant or voucher scheme. If SMEs are unable to identify the right solutions, this may result in potential inefficiencies, e.g. vouchers or grants being used to access digital tools and services that turn out to be unsuitable and are left unused.

- In addition, given the context of the pandemic, it is important that these schemes are designed to be accessible. This is because SMEs are likely to have limited capability and capacity to engage given the economic pressures faced as a result of the pandemic. Therefore, grants and voucher schemes may be less effective if the schemes **have complex eligibility criteria** that are hard to disentangle for SMEs.

In **Spain,** the government is providing financial assistance of up to €250m through grants and loans as part of the Acelera Pyme programme, which is looking to support investment and innovation in equipment and software to support remote working during the COVID-19 crisis as well as signposting advice and private providers of SME financing.

In **Italy,** although not directly related to its COVID-19 response, the government introduced a voucher scheme in 2017 targeted at SMEs and focusing on the digitalisation of processes and modernisation of technologies. Each company can benefit from a single voucher of no more than €10,000, up to a maximum of 50% of the total eligible expenses.

In **Ireland,** the Trading Online Voucher Scheme has been extended by an additional €3.3m in response to the COVID-19 crisis. This scheme is designed to assist small businesses to trade online, boost sales and reach new markets. The scheme offers financial assistance of up to €2,500 with co-funding of 10% from the business along with training and advice to help the business trade online.

Online informational resources and repositories

As part of COVID-19 responses to support SME digitalisation, some governments have developed centralised, curated educational information on digitalisation and the different types of technologies, implementations, and transformation that businesses can take. These focus on providing educational resources that address SMEs' capability challenges, including awareness of the potential of digital technologies and training to support upskilling, to support their ability to digitalise.

These may not necessarily be mutually exclusive from other, financial-focused measures. For example, Spain's Acelera Pyme programme includes an 'advice' section that provides SMEs with a searchable advice posts from different contributors, mainly digital solution providers and other businesses. This includes advice on the suitability of ERP programmes, how to account for data protection regulations, and webinars and e-learning on cloud tools.[102] However, while this is similar to the online repositories of digital tools and services developed as part of free or lower-cost software schemes (e.g. in Italy; Greece), these centralised informational repositories include more SME-focused digital tools and services, providing one-stop shop in terms of both information to aid digital transformation and access to digital tools and services.

In some cases, although not in Europe, governments have also gone further with regards to the solutions provided through these curated resources. For example, in China, the government has partnered with technology companies to develop brand new, or adapt existing, digital tools and services specifically for SMEs.[103]

Considering the benefits of these types of measures, this allows governments to more directly target other aspects of the challenges blocking SME digitalisation. For example:

- This measure can target different aspects of the capability challenges SMEs face with regards to digital transformation. By providing online informational resources and case studies, governments can support SMEs in **gaining the internal knowledge and skills needed** to initiate digital transformations. These online how-to guides can also help SMEs in planning a digital transformation and choosing the right tools, addressing challenges around initiation and supporting them in optimising the benefits from adoption through **informed solution choices.**
- Where these resources are more carefully curated, e.g. to take into account different sector needs, or where measures include partnerships to develop new or tailored software focused on SMEs, e.g. e-commerce platforms directly targeted to smaller businesses, they can also **address an availability gap in SME-focused digital tools and services** and issues regarding the capability of using these solutions.

These types of measures are therefore beneficial to addressing some of the challenges that SMEs might face, although in some cases may potentially result in sub-optimal digital transformations:

- For example, this type of measure **requires that SMEs are more proactive and self-guided**, albeit with direction from online guides or case studies, in planning and, more importantly, implementing their digital transformation. Where SMEs already face capacity constraints in engaging or investing, for example during a pandemic where SMEs are more focused on navigating economic pressures than changing their business to adapt, this can mean that **opportunities are missed for helpful transformations.**
- Online resources may in some cases **not be able to support all SMEs in all aspects of the digital transformation process,** in particular in addressing any nuances or complications during the implementation process. Particularly where 'central resources' are not curated or present one-size-fits-all information, they may present options that are less suited or relevant to some SMEs, leading to potential disassociation with the process or insufficient information for SMEs to plan and implement their digital transformation optimally.

In **Spain**, as part of the Acelera Pyme programme to provide a one-stop shop for the support, digital solutions and information available for SMEs, an 'advice' section includes a searchable advice posts from digital solution providers and other businesses providing services related to the digital ecosystem, such as data protection legal specialists and e-learning providers.

In **China,** the National Development and Reform Commission is cooperating with enterprises, financial institutions and research institutes to provide online services for SMEs in an effort to tide them over the COVID-19 pandemic. This involves working with large, domestic technology companies to develop more tailored services for SMEs.

Training schemes and direct support

An alternative, although not necessarily mutually exclusive, measure that governments have looked at to address capability gaps is through provision or funding of training. This allows governments to provide the direct support and training to help SMEs increase general and specialised ICT skills.

COVID-19-specific responses of this type include Spain[104] and Armenia's[105] schemes to provide online digital skills training and e-learning to build ICT capabilities. For the former, this is part of the Acelera Pyme programme and aims to support talent development in both digital and non-digital skills, e.g. language skills, with resources from different contributors. It does not however include direct funding of training schemes. Alternatively, pre-existing schemes such as that in Germany established by the 2018 Qualifications and Opportunities Act[106] provide funding to cover fully or partially the cost of professional development for employees of SMEs that may be at a competitive disadvantage due to lower levels of digitalisation.

Relatedly, some schemes aim to address SMEs' skills gap by directly funding or incentivising external specialist support to help plan and implement optimised digital transformations. This can be through partnerships and/or subsidisation of support from ICT consultancies for SMEs. An example of this is the pre-pandemic German 'go-digital' initiative and the European Commission's 'DigitaliseSME' initiative,[107] connecting SMEs to experts to support them in their digital transformations.

In contrast to providing information online, these types of measures address SMEs' capability gaps in a more proactive manner, with additional benefits relating to the directed targeting of support:

- Where SMEs are facing capacity constraints (both in terms of time and finances) in economic crises, direct training schemes may **be better suited to the conditions of the pandemic in directly addressing SMEs' capability gaps,** for example taking advantage of furloughed employees' time through training. This means that training can be fulfilled with a lower opportunity cost both for employees and businesses. It can also have the added benefit of **longer term impacts by increasing employee productivity** and helping to close the pre-existing SME productivity gaps, with wider benefits to overall economic productivity.

- The use of direct support from ICT specialist consultancies and other external support can be more effective in ensuring optimised digital transformations in comparison to online resources that allow for more self-guided, informed digital transformation. This is because they are able to **support more directly with developing tailored digital transformation plans**, and with supporting (or outsourcing) implementation to address any nuances or complications and taking into account variations in the existing digital adoptions across businesses.

While these types of measures offer benefits in terms of direct targeting of key gaps and proactivity, however, they do come at a higher cost and time investment that may present other drawbacks:

In **Spain,** as part of the Acelera Pyme programme, the government provides a section where businesses can access digital skills training provided by third-party contributors, as well as funding digital skills training for the unemployed and younger workers.


In **Germany**, unrelated to COVID-19, the government's Qualifications and Opportunities Act in 2018 provides funding to retrain workers impacted by digitalisation in their sectors. The cost of professional development is covered in full for companies with fewer than 10 employees, and subsidised at 50% of cost for companies with 10 to 250 employees. An alternative training scheme is also operated in **Italy,** which provides a tax credit for 'education 4.0' allowing SMEs to claim back training costs incurred for improving the skills of permanent employees


Both **Italy** and **Germany** also operate sector-specific ICT specialist support unrelated to COVID-19. In Italy the government runs 'Certified Technology Transfer Centres 4.0' to provide training, technology consultancy and technology transfer services to firms in Industry 4.0 technology areas, while in Germany the government runs 25 centres of excellence to support manufacturing firms with workshops, information events and demonstrations on how to implement digitalisation projects as part of its 'Mittelstand 4.0'.


Germany also funds ICT specialist support for SMEs more widely. The 'go-digital' programme supports SMEs by funding specialist consultancy support from initial funding application to analysis and implementation of projects on online sales, process digitalisation, and IT security, and during the COVID-19 pandemic is supporting SMEs in setting up remote working solutions. This is similar to the **EU's** 'DigitaliseSME' initiative, which since 2018 has supported the digital transformation of SMEs in Europe by connecting SMEs to digital 'Digital Enablers'. This support aims to help SMEs set up and initiate digital transformation projects.

- Compared to less proactive measures such as online resources, this type of government support for addressing skills gaps is **more costly.** This is paired with the fact that, **in isolation, it leaves significant gaps in digitalisation policy,** not addressing other issues businesses may face such as the availability of connectivity and SME-specific digital solutions, and the financial capacity constraints on investments. This means an effective package of support would require combining with other measures at greater cost, as on its own it does not address some of the biggest challenges (i.e. financial capacity for investment).
- Additionally, while skills training and external specialist support addresses skills capabilities, it **may not address other capability barriers such as organisational culture barriers against change** that limit SMEs' proactivity for change and digital transformation.
- Finally, fast-paced technological change can mean acquired **skills can become outdated** if not continuously refreshed and support for digital upskilling is short-term only, e.g. for the duration the pandemic.

Learnings and a framework for SME digitalisation policy

As European economies seek to enter the recovery stage of the pandemic economy, governments are likely to prioritise the most efficient and effective policies to supporting their economy. As such, as they withdraw many of the initial blanket support measures aimed at maintaining financial resilience, they are likely to consider more targeted measures that allocate resources in a more optimal way and in line with the longer term restructuring of their economies.

In this context, digitalisation can be a core enabler for longer term recovery while mitigating some of the impacts of the pandemic economy in the shorter term. This report has outlined the benefits digitalisation can have for SMEs, both generally in terms of flexibility, efficiency, and productivity, as well as how these benefits may help them through the pandemic economy. However, it has also outlined that there is a diversity of digital needs, tools, and ecosystems, varying across sectors and countries. As such, governments are in need of a framework that helps to identify which SMEs need the most help, what they need most, and what is the best way to meet these needs in a manner that achieves the highest return on investment.

Overall, the analysis in this report points to an emerging policy framework for governments to support SME digitalisation. It is expected the emerging policy framework would be a stepping stone to be further qualified with more granular analysis on a country-basis, for example taking into account regional, sectoral, and cultural factors, and experience from past measures. Nevertheless, the framework can support governments in initial policy outlining prior to further development and refinement of policies by considering the following dimensions:

Ensuring access of high-speed connectivity. Overall, governments need to ensure that, as a necessary prerequisite for all digitalisation policies, there is **sufficient access to high-speed connectivity.** This is because lack of access means that, even if SMEs are able to identify a clear business case for digital investment, they are prevented from adopting and optimally using many of the modern digital solutions to support businesses.

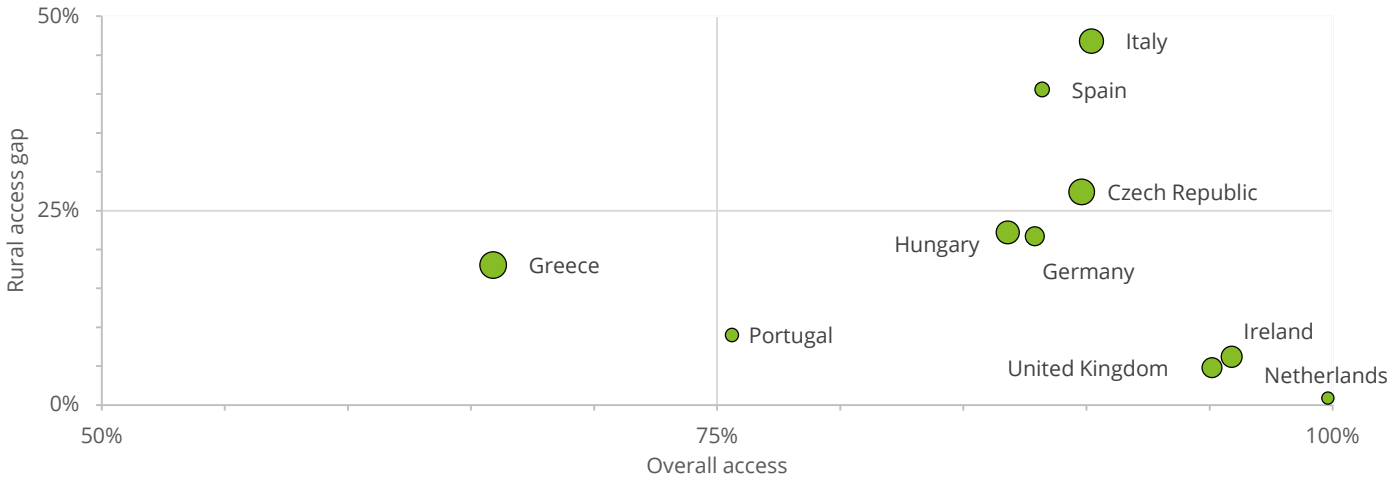
Evidence presented in this report points to **significant gaps, both in terms of overall access and regional dispersion in access to high-speed connectivity.** The illustration below summarises this evidence by identifying the link between overall access to 30+ Mbps connectivity, the gap in total and rural 30+ Mbps connectivity, and the gap in usage of 30+ Mbps connectivity by large and small firms. Countries further to the left, such as Greece and Portugal, have lower overall availability of 30+ Mbps connectivity, suggesting the need for greater investment in overall connectivity. Countries further to the top-right with larger firm size-based gaps, such as Italy and the Czech Republic, have high overall access to 30+ Mbps connectivity but a gap in rural access, suggesting the potential need for closing the urban-rural connectivity gap. Countries with larger bubbles that are in those quadrants, such as Greece, the Czech Republic, and Italy, have larger gaps in SMEs' adoption, suggesting that connectivity access may need to be a core part of any policy to support SME connectivity and digitalisation.

The optimal strategy to increasing access to high-speed connectivity and to closing urban-rural gaps is likely to depend on demographics, geography, the makeup of the telecommunications sector, and a number of other factors.

- A number of studies have looked to consider the pros and cons of different strategies. For example, the UK government's Future Telecoms Infrastructure Review analysed the suitability of different strategies for the UK, such as encouraging competition between operators to drive infrastructure investment; having competition for exclusive infrastructure rights in different geographies or nationally; and mixtures of these approaches.[108]
- In addition, many European governments have considered potential strategies as part of their national broadband plans to expand connectivity.[109]

Given the differences across countries, it is up to governments to therefore consider the strategies most suitable for their particular economies given the extent of their current fixed and mobile infrastructures, the factors outlined above, and the potential for best addressing the SME connectivity access gap.

Overall and rural 30+ Mbps connectivity access gaps, and firm-size usage gaps (in bubbles), in selected countries in Europe[xv]



Source: Deloitte analysis of figures from OECD, ICT Access and Usage by Businesses (accessed 22 Jul. 2020) and IHS Markit and Point Topic (2019). Data unavailable for Romania.

Closing the connectivity divide between large and small firms. Having addressed access issues that may be driving gaps in usage of high-speed connectivity, governments need to ensure **gaps in take-up are closed to help kick off the digitalisation of SMEs.** This is because subscribing to high-speed connection in the first place can act as a barrier to further digitalisation, as this decision is driven by the perceived benefits of the solutions enabled by high-speed connectivity. If, due to lower digital capability, SMEs are unaware or unable to gauge the benefits of high-speed connectivity for their business, they are less likely to subscribe, particularly given their lower financial capacity. This means that, particularly when faced with economic pressures, financial resources are allocated elsewhere.

As illustrated above, with some variation, all countries have business size-based gaps in usage of higher-speed connectivity. Countries toward the bottom-right may especially be in this scenario, with lower levels of SME usage of high-speed connectivity not driven by access issues but rather by the business-specific challenges outlined in this report.

To address this, governments may want to consider **short-term voucher schemes to support high-speed connectivity take-up,** with these, depending on policy priorities, targeted to SMEs in specific sectors that are most impacted financially and least digitalised, or to SMEs more widely. On an aggregate level across the EU27 and the UK, this might include sectors such as accommodation and food service, enabling them to make further digitalisation investments such as IoT in accommodation and digital menus for restaurants that help ease customers' health concerns in the pandemic economy.

A flexible and guided digital investment scheme. Beyond supporting connectivity for SMEs, governments should provide further direct financial support to enable digital investment, but allowing for flexibility for SMEs to choose the most appropriate technologies for themselves and pairing this with guidance to support them in making investment decisions. This is because:

- Given the pressures of the economic shock, **financial capacity constraints are likely to be acute for SMEs broadly,** meaning SMEs are likely to conserve cash rather than invest in digital transformation.
- At the same time, SMEs across sectors, and even within sectors given the diversity of business models, are likely to have **different digital investment needs,** meaning advocating one-size-fits-all solutions is unlikely to be effective for all SMEs and may even lead to inefficient outcomes.
- With the background of the pandemic, SMEs may not have the **capability to engage** with the concept of transformation, or to **choose the right technologies** for their business even if they do engage.

xv The size of the bubbles indicates the gap between large and small firms in adoption of 30+ Mbps connectivity. It is normalised by the size of the smallest gap, i.e. 20 percentage points in the Netherlands.

This type of support is particularly prescient given that certain sectors face greater challenges in some areas than others. For example, evidence from the Vodafone survey suggests that manufacturing faces more challenges in implementation of digital technologies given the likely relative complexity of these. In contrast, hospitality, travel and tourism, health and social work, and transportation and storage need more support with digital upskilling for employees.

As such, governments may want to consider offering **flexible grants or vouchers earmarked for digital investment, and/or incentives to the financial system to lend to SMEs for digital investment.** These would be the most efficient and effective way to enable SMEs' digitalisation given the large variances in individual needs. Governments may also want to provide a mix of additional support measures to address capability constraints, potentially in the form of a **one-stop shop signposting SMEs to various support digitalisation schemes and offering resources** such as:

- **Sector-specific, curated online resources** that provide information and case studies relevant to targeted sectors rather than as one-size-fits-all resources focusing more on non-sector-specific uses of technologies.
- **Training in sector-relevant digital skills,** potentially through less-expensive online training courses that are used as conditions to unlock further aid, and/or paired with specialist support similar to the EU's 'DigitaliseSME' but focused on sectors with the greatest need.
- **Incentives to encourage take-up and/or other proactive measures** given SMEs' likely lower capacity and capability to engage with digital transformation during an economic shock.

To illustrate the potential of this framework, this reports concludes with high-level recommendations for the following countries:

Czech Republic

Financial capacity constraints: Through the Operational Programme Enterprise and Innovation for Competitiveness, the government provides SMEs with **innovation vouchers** ranging from €3,000 to €200,000 that can be spent on the purchase of advisory, expert and support services to enable innovation and digitalisation.

This is in addition to **general facilitation of access to finance for SMEs** through the state owned Czech-Moravian Guarantee and Development Bank, particularly to ease financial pressures as a result of COVID-19

Access to and take-up of high-speed connectivity: The Czech Republic has made progress on expanding general access to high-speed connectivity. In order to better facilitate digitalisation of SMEs, it should aim to **increase rural access** and potentially pair this with **short-term voucher schemes to support high-speed connectivity take-up** and reduce barriers to further digitalisation

Digital skills and capability: The Czech Republic could build on the success of its online platform learning about digitalisation and new technologies with targeted, pro-active investment to build it out. This could include **sector-specific, curated online resources** to provide information and case studies relevant to targeted sectors, **sector-relevant digital reskilling and upskilling programmes,** and with **incentives to encourage take-up** given limited capacity to engage..

Germany

Digital skills and capability: Germany has put in place various **upskilling schemes and funding for specialist support are therefore well-suited** to addressing SMEs' skills gaps, also evidenced by the human capital EIDES score

In particular, its 'Mittelstand 4.0' and 'go-digital' consultancy support schemes are likely to be beneficial given its focus on **sector-specific and/or tailored support** through digital transformations and implementations.

Financial capacity constraints: In addition to financing for consultancy support for some SMEs and training more widely, Germany could also provide wider, more flexible funding for digital investments, for example through **flexible grants, vouchers, or tax credits earmarked for digital investment,** and/or **incentives for SME lending targeted at digital investment.** This is because many 'quick-win' digital adoptions that are not complex and still effective may be out of reach financially in the current circumstances.

Access to and take-up of high-speed connectivity: Germany appears to be in the middle of the EU in terms of progress for high-speed access. It should aim to **increase both rural and overall access,** helping ensure that SMEs can digitalise if they would like. This could be paired with **short-term voucher schemes to support high-speed connectivity take-up** during the pandemic and enable SMEs to make further investments in digitalisation.

Greece

Financial capacity constraints: The government's Digital Step and Digital Jump programme supports the digital transformation of SMEs through **targeted funding, with direct loans for digital investment** co-financed by the Hellenic Fund for Entrepreneurship and Development Bank. In response to COVID-19, this funding has been expanded through **issuance of guarantees for SMEs that may be used for digital investment.**

Availability and accessibility of digital solutions: To address gaps in SME takeup of digital solutions, Greece could build on its Digital Solidarity resource to create a **one-stop shop for both sector-specific, curated online resources** and **training in sector-relevant digital skills,** providing SMEs in key, lagging sectors with the targeted resources to overcome availability and/or accessibility issues. This could also **signpost SMEs to the various schemes set up to support digitalisation.**

Access to and take-up of high-speed connectivity: A key blocker for digitalisation by SMEs is likely to be low high-speed internet availability compared to EU countries. Greece should therefore explore ways **to expand overall high-speed internet access**, and where this is already available provide **short-term voucher schemes to support high-speed connectivity take-up** and therefore spur initial digitalisation and demand for further internet expansion.

Hungary

Financial capacity constraints: The Hungarian government has allocated funding to finance the digitalisation of SMEs, for example seeking to establish digital hubs through which **funding can be applied for digital equipment, software licences, training, and other investments to support digitalisation.** This is paired with further funding being made available through the EU budget to support economic development through strengthening SMEs.

Access to and take-up of high-speed connectivity: Hungary's progress on high-speed access appears on par with the European average. It should therefore aim to **further improve both rural and overall access,** which, paired with **short-term voucher schemes to support high-speed connectivity take-up,** could allow SMEs to initiate basic digital transformations that lead to further investments.

Availability and accessibility of digital solutions: In response to COVID-19, the Hungarian government launched a €5.7 million scheme to support SMEs in digitising through **online distribution channels**, supporting them to start selling online. It could build on this initiative through more proactive schemes targeted for key sectors, with a **one-stop shop for online resources and digital skills training** to address the pandemic-related capability and capacity constraints particularly of smaller (e.g. family-run) businesses and **signpost them to the various support schemes available.**

Ireland

Digital skills and capability: Ireland provides **e-learning measures, free mentoring, and online training** through the Local Enterprise Office to support SMEs in learning about digital transformation. This is paired with a **general, €200 million retraining programme** to support reskilling and upskilling.

Financial capacity constraints: Ireland provides a number of initiatives to alleviate the financial constraints to digitalisation for SMEs. This includes the **Digital Online Trading Voucher Scheme,** which provides vouchers of up to €2,500 to facilitate transformation to sell online, and the Future Growth Loan Scheme, which has been expanded with €800 million to **provide loans to SMEs and other businesses in strategic long-term investment, particularly for digitalisation.**

Access to high-speed connectivity: Ireland is relatively advanced in terms of access to high-speed connectivity, with high overall access to high-speed internet as well as a relatively small rural-urban gap in connectivity access.

Take-up of high-speed connectivity: Given Ireland's high rates of 30+ Mbps connectivity access, this suggests that other factors may be blocking SME take-up of high-speed connectivity and starting their digital transformations, contributing to the digital divide. The government could therefore provide **short-term voucher schemes to support high-speed connectivity take-up** during the pandemic and enable SMEs to make further investments.

Availability and accessibility of digital solutions: To build on its other initiatives, Ireland could also more proactively target key sectors as well as SMEs with a **one-stop shop for online resources and digital skills training.** This would help to address pandemic-related capability and (time) capacity constraints of many SMEs, signposting them to available resources and guides, and **signpost them to the various support schemes available to support digitalisation.**

Italy

Financial capacity constraints: The voucher scheme for digital investments is straightforward and flexible, **directly addressing SMEs' financial capacity challenges to digitalisation.** In particular, it allows SMEs to choose the most appropriate digital investments, making it suitable to avoiding one-size-fits-all measures.

Availability and accessibility of digital solutions: The Solidarietà Digitale scheme **reduces search costs** for potential digital solutions. Particularly when paired with the SME digitalisation voucher scheme, it also helps SMEs **significantly reduce financial burdens from digital investments.**

Digital skills and capability: To augment the greater accessibility of digital solutions through the Solidarietà Digitale scheme, Italy could consider the provision of more **information and guidance particularly to support SMEs in partnership with a grouping of key local providers,** similar to other countries such as Austria and Spain, with the addition of **sector-specific guidance and training in digital skills.** This could develop it into a **one-stop shop for information, resources, and signposting to various schemes on digitalisation.**

Access to and take-up of high-speed connectivity: Italy faces a large connectivity gap both in terms of rural access (the largest in countries analysed in this report) as well as in adoption by SMEs. For the latter, Italy could provide support to get SMEs connected and jumpstart their digitalisation through **short-term voucher schemes to support high-speed connectivity take-up** (or expansion of the current voucher scheme to cover connectivity).

Netherlands

Digital skills and capability: The Netherlands' Smart Industry strategy provides a **targeted approach to knowledge diffusion on the benefits of industrial digitalisation,** with a particular focus for industrial SMEs. This is also paired with a wider '**knowledge vouchers' (kennisvouchers) scheme,** providing up to €3,750 to support SMEs in upskilling on digital skills needed to digitalise their businesses.

Access to high-speed connectivity: The Netherlands is among the most advanced EU countries in access to high-speed connectivity, with **nearly 100% access overall.** This means that access to high-speed connectivity is unlikely to be a barrier to SMEs' digital transformation.

Take-up of high-speed connectivity: To take advantage of its high-speed connectivity network and close the firm size digital divide, the Netherlands could offer relief in the form of **short-term voucher schemes to support high-speed connectivity take-up** and enable SMEs to jumpstart their digitalisation in response to the pandemic.

Availability and accessibility of digital solutions: Building on its existing five regional smart industry hubs and research centres to boost information sharing and knowledge transfer, the Dutch government could proactively address issues in SMEs ability to identify the right digital solutions with a **more accessible, one-stop shop with information and guidance,** with targeted information for key sectors such as industry.

Financial capacity constraints: A key area where Dutch SMEs could benefit from more support may be in the provision of funding to jumpstart digital investments, activing as a counterpart to the 'knowledge vouchers' scheme. The government could therefore boost investment in digitalisation with **flexible grants, vouchers, or tax credits earmarked for digital investment,** and/or **incentives for SME lending targeted at digital investment.**

Portugal

Digital skills and capability: As part of the CAPACITATE i4.0 measure (under the wider Industry 4.0 programme), Portugal has implemented **sectoral training plans for upskilling management and staff of SMEs** as well as '**learning factories' to provide targeted training** in formats specific to SMEs' needs. This is also paired with other initiatives as part of COMPETE 2020 programme, such as organising **workshops and e-learning on digital markets** to support with upskilling.

Financial capacity constraints: Portugal has also financed initiatives aimed at solving the financial constraints to digitalisation in specific sectors as part of the COMPETE 2020 programme. For example, one initiative offers **vouchers for retail and service businesses to create and maintain web domains and business emails.**

Access to and take-up of high-speed connectivity: While Portugal has a relatively lower rural access gap than most EU countries, it significantly lags others in overall high-speed connectivity access, which can act as a blocker for initial steps into digitalisation by SMEs. Portugal should therefore aim to as well as adoption for SMEs. It should aim to **increase overall access to high-speed connectivity**, pairing this with **short-term voucher schemes to support high-speed connectivity take-up** and further support initial digital transformations that can lead to further investments.

Availability and accessibility of digital solutions: Building on the various initiatives as part of the Industry 4.0 programme, the government may be able to ease search costs and accessibility issues through a **one-stop shop with information and guidance**, consolidating many of the initiatives it is taking.

Romania

Digital skills and capability: To address the gaps in digital skills capabilities, the Romanian government's Start Industry 4.0 provides direct **training sessions to SMEs to support with strategic planning and implementation** of digital transformations.

Access to and take-up of high-speed connectivity: Romania lags other EU countries in overall access to high-speed connectivity as well as in rural-urban gaps, potentially hindering the opportunity for SMEs to initiate their digital transformations. and also in terms of SME digitalisation. Romania should therefore aim to **increase overall access to high-speed connectivity.** This can also be paired with **short-term voucher schemes to support high-speed connectivity take-up,** reducing barriers to initial digital transformations.

Availability and accessibility of digital solutions: A key area where SMEs may require support is in finding and accessing suitable digital solutions, particularly with their current constrained capability to engage. The government could therefore take a more proactive approach, encouraging digitalisation with an **accessible, one-stop shop,** particularly providing **targeted guidance and training for key sectors** and **signposting to other schemes.**

Financial capacity constraints: Romania currently provides generalised financial support to SMEs In the form of loan guarantees to ease COVID-19-related constraints. To augment this, Romania could also provide more direct funding for digital investment, for example through **flexible vouchers, grants, or tax credits,** signposting SMEs towards investing in digitalisation.

Spain

Access to high-speed connectivity: Access to high-speed connectivity is high in Spain, and it is among the most advanced in access to 100+ Mbps connectivity in particular. This means that **access to connectivity is less of an obstacle to SME digitalisation.**

One-stop shop for information, financing, and solutions: The Acelera Pyme scheme provides SMEs with **relatively well-rounded support,** including:

- Financing and lower-cost access to solutions.
- Support with digital training for both themselves and the wider labour force.
- Guides on the suitability and potential of different digital solutions and advisory services to help with developing more tailored digital transformation plans.
- Reducing search costs for SMEs to find potential digital solutions.

Take-up of high-speed connectivity: To optimise the opportunities from its connectivity infrastructure in the pandemic economy, Spain can support SMEs in take-up of connectivity through **short-term voucher schemes to support high-speed connectivity take-up,** enabling them to make best use of its wider support schemes.

Digital skills and capability: Spain could also augment the resources provided through Acelera Pyme with **sector-specific support and guidance, particularly for sectors most impacted by COVID-19,** increasing effectiveness and ensuring solutions adopted are suitable to the business.

United Kingdom

Access to high-speed connectivity: The UK is relatively advanced in terms of access to high-speed connectivity, particularly 30+ Mbps access overall and in rural-urban gaps.

Digital skills and capability: The UK is relatively advanced in the availability of skilled labour to support digitalisation, as indicated by the EIDES score for human capital and knowledge diffusion and innovation. This means that overall the ecosystem **enables SMEs to gain access to ICT specialists, outside experts, and information** needed to facilitate digital transformations.

Financial capacity constraints: The UK has a relatively **well-developed financial system, providing access to finance** to support digital investment. This is augmented with wider, COVID-19-specific support schemes to provide SMEs with general financing through loans, which may be useable for digital investment.

Take-up of high-speed connectivity: Given the wide availability of access to 30+ Mbps connectivity, current adoption gaps are likely driven by non-access issues. The UK government could therefore jumpstart SME digitalisation through **short-term voucher schemes to support high-speed connectivity take-up.**

Financial capacity constraints: COVID-19 loan schemes for SMES could be tailored to **further incentivise digital investments specifically,** driving productivity gains. **Voucher or grant schemes or tax credits for digital investment** could also boost the impact of this even further, enabling more SMEs to adopt quick-win digital transformations.

Digital skills and capability: The UK government, in partnership with the country's knowledge and specialist ICT ecosystem, could play a more proactive role in engaging SMEs and encouraging digitalisation with a **one-stop shop with information and guidance** similar to Spain's Acelera Pyme and other countries. This would reduce search costs and address the capability and capacity constraints of overwhelmed SMEs, and **signpost them to other schemes and support they could access** to boost digitalisation.

Annex

Survey methodology

The survey results of the analysis presented in this report are based on data from the Vodafone SME Understanding survey carried out during the COVID-19 pandemic in May and June 2020. The survey asked a range of question relating to the adoption of Information & Communication Technology (ICT) tools by SMEs, including the impact of COVID-19 on their ICT behaviours. All interviewing was conducted online. The survey targeted a sample of 1,200 SMEs of different sizes in four markets – the UK, Spain, Germany and Italy. The sample size for each country was 300, covering businesses with 10-149 employees in the UK, 10-99 employees in Italy and Spain, and 20-499 employees in Germany. In analysis presented in this report, German SMEs with 250 employees or more are not included in line with the EU definition of SMEs. All respondents were main decision makers or had significant decision making influence on purchasing or policy setting on ICT.

For the purposes of this report, Deloitte made the following simplifications:

- Given the different bandings for different countries, these were normalised so that only businesses with up to 249 employees were included, as per the EU definition of SMEs.
- Digital technologies covered in the survey were grouped into eight categories: mobile devices and contracts, communication/collaboration tools, high-speed connectivity, fixed mobile connectivity, network management solutions, landline, IoT devices and cloud-based services.
- Industries in the sample were grouped in line with the NACE classification codes into 13 broader categories, namely: Professional, scientific and technical activities; Financial and insurance activities; Manufacturing; Wholesale and retail trade; repair of motor vehicles and motorcycles; Hospitality, Travel, Tourism; Human health and social work activities; Construction; Transportation and storage; Public administration and defence; Education; Information and communication; Real estate activities; Other.
- The report suppresses data for sectors with a sample size of less than 50 – public administration and defence, real estate activities and other. These are included in total figures.

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