



European Bank
for Reconstruction and Development

The EBRD's approach to accelerating the digital transition, 2021-25



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Acronyms

AI	Artificial Intelligence
ASB	Advice for Small Businesses
CEB	Central Europe and the Baltic states
EBRD, the Bank	European Bank for Reconstruction and Development
EFSD+	European Fund for Sustainable Development Plus
EGA	Estonia E-Governance Academy
ESD	Environment and Sustainability Department
ESP	Environmental and Social Policy
ETC	Early transition country
FDI	Foreign direct investment
FI	Financial institutions
GCAP	Green City Action Plan
GET	Green Economy Transition
GDP	Gross domestic product
ICA	Industry, commerce and agribusiness
ICT	Information and communications technology
IFI	International financial institution
MDB	Multilateral development bank
MRV	Monitoring, reporting and verification
MYIP	Multi-Year Investment Plan
RRF	Recovery and Resilience Facility
SCF	Strategic and Capital Framework
SDGs	Sustainable Development Goals
SEMED	Southern and eastern Mediterranean
SIG	Sustainable Infrastructure Group
SME	Small and medium-sized enterprise
SSF	Shareholder Special Fund
STEM	Science, technology, engineering and mathematics
T2T	Transition to transition
TEI	Team Europe Initiative
TMT	Telecommunications, media and technology
TVET	Technical and vocational education and training
VCIP	Venture Capital Investment Programme
WTO	World Trade Organisation

Executive summary

In its five-year Strategic and Capital Framework (SCF 2021-25), the European Bank for Reconstruction and Development (EBRD) committed for the first time to using the digital transition as an enabler of transition in all of the economies and sectors in which it invests.¹ In this paper, the Bank sets out a framework for delivering on this commitment.

The approach sets out how the EBRD will use all of the instruments at its disposal – policy, investment and advisory services – to unleash the transformational power of digital technologies in all sectors of the economies in which it operates. These instruments will be tailored and adapted to the circumstances of each client, in line with Bank’s demand-driven business model.

Recognising the pace at which technologies are advancing, the EBRD will take an evolutionary approach to building capacity within the Bank. This will ensure that technology is deployed and capabilities are built in a responsible and sustainable way that supports the Bank’s core objective of achieving a measurable transition impact. The principles of sound banking and additionality will continue to be respected.

There is significant synergy with the EBRD’s other strategic priorities of transitioning to a low-carbon economy and promoting equality of opportunity. The Bank will draw on these synergies while mapping in detail the impact on all six of the Bank’s transition qualities. Equally, any risks to transition that arise in pursuit of this work, such as increased carbon emissions, a wider digital divide or cyber vulnerabilities, will need to be carefully managed and mitigated to avoid transition reversals.

The cross-cutting nature of digital transformation requires a comprehensive response from the EBRD. The Bank will focus on establishing the *foundations* of digital transformation in the economies where it invests, promoting *adaptation* among clients and governments, and supporting *innovation* by new market entrants.

Partnerships with other multilateral development banks (MDBs), policymakers and technology specialists will be critical as the EBRD scales up its work in this new area, where the rules and standards are evolving apace. Significant donor resources will be required to fund policy and advisory work. Internally, the Bank will seek to systematically build up digital skills and know-how through appropriate training, secondments, mentoring and selective recruitment.

The EBRD will track progress on the approach, including the number of digital engagements undertaken, and report to the Board at the mid-point of the SCF. By the end of the SCF period in 2025, the Bank aims to have delivered specific outcomes, as summarised in Box 1.

¹ See EBRD (2020c).

Box 1. Accelerating the digital transition

By 2025, the EBRD will have:

Policy engagement

- developed an enabling legal and regulatory framework approach (and government capacity to implement it) that promotes innovation, healthy competition in digital markets, and cybersecurity, while safeguarding financial stability and inclusion and ensuring diversity, the ethical use of artificial intelligence (AI) and appropriate data protection
- bolstered policy engagement and technical assistance activities to support governments in accelerating the roll-out of affordable, high-capacity digital infrastructure to underserved areas
- scaled up development of and knowledge sharing on regulatory sandboxes, accelerator activities for digital start-ups and digital government services for firms to improve the ease and transparency of doing business
- integrated digital skills into relevant sector skills councils, sectoral and national skills development strategies and other institutions and strategic documents supported by the EBRD

Investments

- scaled up the roll-out of key information and communication technology (ICT) infrastructure and services that deliver more connectivity for underserved regions and people in the economies where the EBRD invests
- mainstreamed digitalisation across critical energy and infrastructural sectors in an inclusive manner, using smart solutions adapted to the needs of the sector and community they serve
- systematically incorporated smart elements into the EBRD Green Cities approach

- supported the digitalisation of financial institutions, companies and small and medium-sized enterprises (SMEs), including through the promotion of digitalised supply chains
- piloted an SME digitalisation programme across the EBRD regions that combines both credit lines to banks and associated advisory services for sub-borrowers, including digital skills
- expanded the Venture Capital Investment Programme (VCIP) and operations in the Western Balkans, Southern and eastern Mediterranean (SEMED) and early transition countries for demonstration effect
- enhanced its approach to indirect equity through its venture capital and tech funds work
- expanded direct investment in and lending to technology-based companies, both incumbents looking to digitally transform their businesses and challengers/disruptors looking to transform their sectors with digital business models, such as fintech

Advisory activities

- trebled the number of investee countries hosting an EBRD Star Venture programme to ensure broad geographical coverage across the Bank's regions
- scaled up Advice for Small Businesses (ASB), including e-learning/digital platforms and promoting digital champions through the combined advice and finance programme for SMEs (Blue Ribbon)
- established and rolled out a comprehensive methodology for digital audits/digital maturity assessments for corporate and municipal clients (modelled on the early energy-efficiency audits)
- rolled out appropriate cybersecurity capacity-building for digital projects in each sector

(Continued overleaf)

² See EBRD (2021c).

(Continued from previous page)

- mainstreamed digital technologies into relevant technical and vocational training and education (TVET) and higher education programmes supported by the EBRD, including skills development advisory projects
- promoted digital accessibility standards for inclusive digital user interfaces
- reviewed environmental, social and governance standards and client adherence to codes of conduct to ensure the ethical and responsible application and use of technologies

Knowledge products, skills and partnerships

- launched a series of analytical publications to enhance understanding of the digital transition and its operational implications following the findings of the *Transition Report 2021-22*²
- undertaken a digital skills audit and launched a learning and development programme (EBRD Academy)
- entered into strategic partnerships with key digital actors to enhance operational delivery

Transition impact and environmental and social policy

- incorporated digital elements into each of the transition qualities, as well as country diagnostics, country and sector strategies on a rolling basis, as they fall due, to increase incentives
- systematically tracked the roll-out of digital investments by the EBRD in the economies where it invests and made digital a key part of policy objectives and reporting
- updated the Bank's due diligence as part of its compliance with relevant Environmental and Social Policy (ESP) Performance Requirements.

1. Introduction

This is the EBRD's first step on a new digital journey.

When it began its work 30 years ago, after the fall of the Iron Curtain, the Bank's mission was to help countries transition to a sustainable, open market economy. The challenge now is no less critical: economies that fail to embrace the opportunities – or manage the risks – of the digital transition face being stuck behind a new “Silicon Curtain” dividing the online world from the offline one.

The Covid-19 pandemic and ensuing economic crisis have provided added urgency.

The EBRD's shareholders unanimously agreed that digital transition needed to be one of the three cross-cutting themes of the Bank's SCF 2021-25. Covid-19-induced lockdowns have only underscored this necessity, dramatically accelerating the online shift that was already underway for people, businesses and organisations globally. The post-pandemic economic recovery and efforts to build back better will also depend on the successful deployment of new technologies to drive innovation and growth.

We are not starting from zero. This is the first time the Bank has set out a comprehensive digital approach. Many of its private-sector clients and the economies in which it invests, however, have already adopted technological solutions – often with EBRD support and financing. As far back as 2013, the Bank's Knowledge Economy Initiative highlighted the potential for ICT and the need to foster a broader innovation ecosystem. Informal mapping shows the Bank to have delivered around 200 projects with a digital dimension in recent years.

Digital solutions feature strongly in the EBRD's cross-cutting work to lower carbon emissions and foster equality of opportunity.

The Bank will continue to maximise these synergies and build on the experience and capabilities it has gained, in line with its Green Economy Transition approach (GET 2.1), adopted in 2020,³ and its 2021-25 strategies for the promotion of gender equality⁴ and equality of opportunity,⁵ both of which will be adopted this year.

The EBRD's own digital overhaul is underway. As part of its Multi-Year Investment Plan (MYIP), the Bank is increasing its internal technological capabilities and its capacity to interact digitally with clients and stakeholders. This will not only make the Bank more effective, but also a more credible partner. The digital approach seeks to raise and capitalise on skills across the Bank to maximise opportunities and minimise risks.

Meanwhile, technological change is gathering pace. All economies, especially emerging and developing ones, are struggling to keep up with the rapid rate of technological change. While the Bank's benchmarking work shows significant variations between the economies in which it invests, the differences broadly mirror other transition gaps. Some have made great advances; others are on the wrong side of growing divides.

The EBRD needs to prepare for this future. Section 2 of this paper explores the global context of technological shifts and considers how these trends might affect the key sectors and economies in which the Bank invests, as well as its transition-focused business model.

The Bank should set ambitious objectives and a clear direction of travel. Section 3 sets out an overarching vision that takes into account the EBRD's journey through this SCF period and beyond. Achieving these objectives will take time and resources, particularly given the immediate focus on recovering from the Covid-19 crisis and the need to strike a balance with other priorities as the Bank builds up its digital know-how.

To bring about systemic change, there needs to be a comprehensive but flexible approach to the digital transition. Section 4 of this paper sets out the broad objectives and specific delivery methods of the digital transition, from the *foundations* of digital transformation to the specific need for *adaptation* by public and private organisations and the scope for promoting *innovation*. Some of these activities are already well underway, while others will need to be designed and brought up to scale.

³ See EBRD (2020a).

⁴ See EBRD (2021a).

⁵ See EBRD (2021b).

Effective partnerships will be crucial to success.

Section 5 reviews the role of donors and partners in the digital transition, while section 6 sets out how the Bank, as a learning organisation, will measure its performance and continue fine-tuning its implementation. The EBRD will seek to incorporate this approach into its sector and country strategies, tracking progress through key indicators, then adapting as needed to deliver maximum impact over the SCF period.

Implementation is key. Section 7 outlines the shorter- and longer-term challenges of the approach, recognising that the Bank will need to remain agile in response to those challenges and work with the resources that are available.

Box 2. Key definitions

We define an **EBRD digital project** as one that delivers a measurable outcome against the EBRD's transition qualities by helping to deliver one or more of:

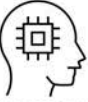
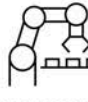

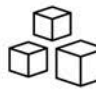






- the **foundations** of a sustainable and inclusive digital economy by promoting appropriate policies and regulation, access to connectivity through infrastructure and a skilled workforce
- **adaptation** of organisations by providing access to finance, technical cooperation and advisory services that support the digitalisation of services, assets, business processes and value chains
- **innovation** and sustainable growth among digital-first clients through an ecosystem of policy and advisory services, as well as debt financing and direct and indirect equity investments.

For the purposes of this report, **digitisation** is defined as the process of converting information from an analogue format to a digital one. When this process is used to improve performance within an organisation, it is called **digitalisation**. The impact of digitalisation on the broader economy and society, including through the creation of new goods and services, is **digital transformation**. In line with the mandate of the SCF 2021-25, the EBRD's proposed digital approach focuses on **digital transition**: using digital technologies and promoting well-managed digital transformation as an enabler to advance transition in the economies where it invests.

2. Digital transition: the opportunities and challenges

2.1 Global trends

Box 3. Technological disruptions are driving digital transformation globally

 Artificial intelligence Systems able to perform tasks that normally require human intelligence	 Advanced robotics Tech-enabled model helping to augment recurring activity with a robot, including autonomous vehicles
 Big data and analytics Examination of datasets, the size of which are beyond the ability of typical database tools	 3D printing Techniques to create objects by printing layers of material based on digital models
 Internet of Things (IoT) Interconnection of devices, enabling them to send and receive data	 Cloud technology Hardware-based services offering computer, network and storage capacity
 Augmented and virtual reality Live view of a physical world augmented by computer-generated perceptual information	 Quantum technology Computational power to solve complex problems, simulating subatomic dynamics and enabling encryption
 Blockchain Model that contains a continuously growing list of records, linked and secured by cryptography	 Sensors Real-time data on a dynamic environment combined with miniaturization – a key enabler for the IoT and robotics

Source: McKinsey.

The accelerating pace of technological change is upending established social and economic models (see Box 3). Much of the pressure to change comes from individuals who value the immediacy, processing power and choice that digital platforms and applications provide. This is forcing companies, governments and individual users to adapt, and the Covid-19 pandemic has turbo-charged this process.

In the private sector, competitive pressure from online rivals is forcing businesses to rethink their operating models from first principles. The retail market is the most obvious example, especially during the pandemic. However, many services, from transport to accommodation, now operate on digital platforms. Sectors such as telecommunications have been transformed by new entrants using the internet, while advanced manufacturing is using digital design, 3D printing and advanced robotics to re-engineer supply chains and entire business models.

New companies and, indeed, new sectors that did not exist a few years ago have gained great prominence and market power by reshaping the competition in many economies. The largest tech companies (Google, Amazon, Facebook, Apple and Microsoft) had a combined market capitalisation (market cap) larger than the combined gross domestic product (GDP) of the economies in which the EBRD invests. The market cap of any one of those companies is bigger than the GDP of any economy in which the Bank currently invests.

Governments and companies are under pressure to improve their digital offering. A new generation of connected 'netizens' and agile multinational corporations expect more responsiveness from the organisations with which they engage via their smartphones. Failure to respond or engage in short order can lead to a loss of economic opportunity, community cohesion or a backlash on social media.

In almost all cases, doing nothing is not an option.

Technological laggards will forfeit major productivity gains. Over time, they will see their market share shrink to the benefit of digitally advanced rivals. Countries that stand on the fringes of the digital transition are missing out on opportunities to build new domestic markets and boost their global competitiveness.

Digital divides in access to and use of technologies risk becoming development divides, by precluding access to economic opportunities and essential services for some groups, such as women, people with disabilities, older workers, individuals in rural or remote areas, or those with lower levels of education and skill. Recent research by the EBRD's Office of the Chief Economist highlights the impact of adverse shocks, such as the Covid-19 pandemic: people in areas that have better mobile internet are more likely to be able to respond by shifting to online/mobile transactions.⁶

The upside potential for digital is very significant.

The World Trade Organisation (WTO) estimates that developing countries stand to benefit from digital transformation more than their developed counterparts. The faster developing countries are able to catch up technologically, the more pronounced the increase in their share of global trade will be.⁷ Indeed, findings from the EBRD *Transition Report 2021-22* suggest that the roll-out of high-speed fibre has led to an increase in export-related activities for small manufacturing firms, both in terms of volume and product diversity.⁸

Digital transition starts with hard and soft infrastructure. The connectivity that enables data flow requires broadband capabilities through fibre and mobile. Equally important are the rules, norms and skills that facilitate the appropriate collection and use of data. Digital highways, like their analogue counterparts, are only as valuable as the traffic that flows on them and the rules that govern their use.

The creation of infrastructure and its effective use for sustainable development requires both public and private involvement. The appropriate division of labour may vary across countries, sectors and, indeed, stages of development. Growing cyber challenges require a response from public policymakers at both national and international level, as well as investment by private actors to build more resilience into the system.

Governments should enable a trustworthy and fair digital economy through robust regulatory and competition frameworks. In the absence of clear standards and liability rules, businesses may avoid digital tools, such as AI-powered applications, that could leave them accountable for accidents. Without credible privacy safeguards, users will withhold valuable data. Unless explicitly prohibited, tech incumbents may use their market power to block new entrants or take over rivals. Over time, the entrenched dominance of a few market leaders could hurt innovation and consumer welfare.

Governments can also lower the costs of doing business, notably through digital identification and payment systems. Digital identity verification can validate and smooth transactions, allowing online operators to grow and scale. Digital payments can, similarly, speed up transactions and provide a gateway for the financial inclusion of underserved groups. For digital services to gain a foothold, though, it is fundamental that policymakers keep pace with the rate of technological innovation and create an enabling and transparent ecosystem that fosters trust among consumers and businesses.

A digitally skilled and connected workforce will create more opportunities for business and a more inclusive society. The EBRD's *Transition Report 2021-22*, however, finds that people in the Bank's regions tend to have fairly poor ICT skills. Women, in particular, are severely under-represented among ICT (and science, technology, engineering and mathematics, or STEM) students and professionals. Many regions remain cut off from the internet. Much software remains inaccessible in its design, excluding people with visual or hearing impairments or other medical conditions. Such divides perpetuate inequalities of access to services and employment opportunities. Some workers are also vulnerable to technological disruption and "stranded skills" as digital technologies and tools pervade yet more occupations and an increasing range of services move online.⁹

The private sector needs to focus on developing new products and services that respond to market demand. While bigger companies are better able to invest in new technology, the SME sector, which forms the backbone of the EBRD regions, often lacks the know-how, financial resources and, in some cases, awareness or competitive

⁶ See Saka, Eichengreen and Aksoy (2021).

⁷ See WTO (2021), chapter 1.

⁸ See EBRD (2021c).

⁹ Ibid.

imperative to digitalise. This puts them at risk of being left behind, disconnected from value chains that increasingly operate on global platforms.

The 2030 Agenda for Sustainable Development also highlights the importance of digitalisation as a powerful enabler of growth. ICT is cited explicitly as a target of Sustainable Development Goal (SDG) 9, as well as in targets related to climate change (SDGs 13, 14 and 15), gender equality and women empowerment (SDG 5), private-sector development (SDG 8), education (SDG 4) and health (SDG 3).¹⁰ The 2020 Task Force on Digital Financing of the SDGs also recognises the important contribution the shift to digital finance could make to meeting the costs of achieving the 2030 Agenda. This builds on the findings and recommendations of the 2020 Roadmap for Digital Cooperation championed by the United Nations Secretary General.¹¹

2.2 Digital transformation in the sectors where the EBRD invests

Significant changes are underway in the three main sectors in which the EBRD invests:

- sustainable infrastructure (SI)
- financial institutions (FI)
- industry, commerce and agribusiness (ICA).

Digitalising sustainable infrastructure enables smarter, greener, more inclusive and more tailored solutions that improve people's lives and protect the environment. Operators can experiment with design improvements by creating 'digital twins' that allow for real-time simulations. These can reduce the operational costs of service delivery using data analytics and preventative maintenance and manage demand in real time to reduce consumption and emissions, while improving the reliability and safety of services and potentially extending asset life.

Integrated smart cities are estimated to see a 10-15 per cent reduction in their overall carbon emissions profiles.¹² The digital management of vehicle fleets and charging infrastructure can save 20 per cent on operational costs. Smart electricity grids are essential for the continued integration of renewables and peak demand management, and also offer operational cost

savings for grid operators. Smart water grids can track and trace leaks in real time, conserving vital supplies for users, especially in stressed regions.

The private sector generally has a strong commercial incentive to integrate digital solutions into infrastructure and energy projects due to the competitive advantages they bring. However, as documented in the EBRD *Transition Report 2020-21- The State Strikes Back*,¹³ majority state-owned enterprises are less likely to innovate and less likely to increase their use of digital technologies than similar private firms. Public-sector clients with low digital awareness and constrained resources will, therefore, need dedicated support to develop a business case, including robust policy frameworks and project preparation.

The digitalisation of sustainable infrastructure has the potential to benefit a large number of EBRD projects.

The Bank's objective is to progressively mainstream and optimise digital elements into all projects in the energy, transport and municipal sectors, to deliver better outcomes for users and greater efficiency for suppliers. Indeed, an EBRD review of more than 250 infrastructure project recommendations within Green City Action Plans (GCAPs) found that 95 per cent contained or could benefit from digital components or applications.

Among financial institutions, the digital transition has steadily gained momentum and is set to accelerate in the coming decade. As set out in the EBRD's forthcoming strategy for the financial institutions sector for 2021-25, new technologies are enabling banks and other established financial services companies to overhaul their operations and find different ways of reaching their clients. There are also opportunities for challenger businesses in many areas, from payments to capital markets, retail banking and broader financial inclusion, but these also require greater attention to security, trust and transparency from regulators, customers and other stakeholders.

The digitalisation trend in finance is underpinned by three powerful drivers:

- **A fundamental change in customer preferences:** Attracted by the speed, transparency, lower costs, the ability to tailor the service using a wide variety of ancillary tools (such as budget planning, account pooling and financial ecosystem) and immediate access to information, the rise of internet banks and

¹⁰ See EU Capacity4Dev (n.d.).

¹¹ See IISD (2020).

¹² See McKinsey Global Institute (2018).

¹³ See EBRD (2020b).

other online lenders makes it possible for consumers and businesses to access finance without the need for physical bank branches.

- **Increasing pressures on the underlying business model:** Changes in regulation and low interest rates since the global financial crisis have squeezed the cost and revenue base of incumbent financial institutions. At the same time, new fintech entrants without expensive legacy systems and the constraints of regulatory requirements have increased competitive pressure, forcing incumbents to enhance their digital capabilities, optimise business processes and cut costs.
- **A growing knowledge base of digital expertise:** There is now a wide pool of skills and solutions available, albeit unevenly spread between countries. The growth of big data and AI has further created opportunities to automate some financial services, for example, through algorithmic lending. AI-enhanced credit scoring, however, if unchecked, also risks applying discriminatory lending terms to typically underserved segments.

In general, emerging and developing markets will continue to lag more advanced markets. The gap may increase in the medium term because of the latter's access to greater resources (human and financial), greater scale (of data availability) and better infrastructure and policy environment.

At the same time, emerging and developing markets have other advantages that may help them narrow the gap longer term. For example, their relative simplicity and lack of legacy systems presents an opportunity to leapfrog more advanced peers. Significant shares of their populations and businesses are still not using formal financial services,¹⁴ which means financial institutions in less developed markets can compete for new customers rather than fight for existing ones. Many of these potential customers were considered unbankable, as the cost of customer acquisition would outweigh potential revenue. However, digital technologies may change this perception, as mobile payments have done in sub-Saharan Africa.

In industry, commerce and agribusiness, the process of digitalisation is moving at different speeds in different

sectors. While technology, media and telecoms (TMT) is at the forefront, advanced manufacturing is also embracing innovations such as the internet of things to promote connectivity and digitally enabled services, using big data analytics and AI to increase competitiveness – a transformation dubbed Industry 4.0. By the same token, Agriculture 4.0 describes the technical developments associated with digitally networked and data-driven agriculture. The mining sector, meanwhile, is exploring how to sustainably source the rare earths and minerals needed to power the digital economy.

Entire value chains are being upended as global supply networks are rethought. The challenge – and opportunity – for emerging markets such as those in the EBRD regions is to stay connected to global markets that are increasingly operating on digital platforms.

Digital technologies also offer opportunities for local SMEs to grow and develop their business, providing them access to the necessary finance, expertise, infrastructure and data. Small companies often take their digital lead from the bigger firms they supply, typically in their own local market or industry. But small firms from small countries can also reach global markets thanks to digital marketplaces and there have been a number of examples in the EBRD regions, including Bank clients. Conversely, another transitional challenge can be to keep footloose mobile companies rooted in the local economy once they achieve significant scale, as they may be attracted to larger, richer markets, especially if the business environment is more conducive. This, again, puts the emphasis on the wider ecosystem and policy engagement.

¹⁴ The latest World Bank Findex survey (World Bank, 2017) shows that in the economies in which the EBRD invests, the average share of the population owning an account in a financial institution or using a mobile money service is 63 per cent (up from 48 per cent in 2011), leaving more than a third of the adult population unbanked

Box 4. An EBRD digital client becomes a supplier and goes global

In April 2021, UiPath Inc. floated on the New York Stock Exchange at a price of US\$ 56 per share, corresponding to a market capitalisation of around US\$ 29 billion. This was a huge success for the company, its home country of Romania and the EBRD, which invested in the company via equity funds. UiPath is today the global leader in enterprise robotic process automation software and the Bank is one of its many clients worldwide. In terms of growth, valuation and potential, UiPath is the single most successful technology company in central and south-eastern Europe since the EBRD began operating in the region 30 years ago. It is a step change in the development of the Bank's technology and financing ecosystem, both as UiPath owners and as staff re-invest their experience, know-how and capital back into the Romanian market. With 714 employees engaged in research and development and 727 full-time jobs created in Bucharest, UiPath's success has demonstrated the importance of such investment for employment, growth and economic development.

At local level, digital companies can be more agile and inclusive and provide opportunities for marginalised groups, such as refugees. However, access to finance can be a challenge, especially where companies and their owners lack a track record or physical assets to offer as collateral for conventional credit. Looking ahead, big data, combined with machine-learning algorithms, has the potential to increase access to finance for such companies, by providing better credit scoring and more efficient risk management for lenders. Again, the Bank has a number of clients that have been able to overcome these barriers with an appropriate package of support.

Box 5. An EBRD digital SME client that is promoting inclusion

Bilforon is a Jordanian start-up that enables users to buy home-cooked meals through its web-based platform. Since 2019, the EBRD's Star Venture programme has provided business diagnostics, technical advice and mentorship and supported the firm in prioritising business strategies, developing

algorithms and data-analysis tools to help firms increase sales by identifying customer needs and expanding to other countries, including Saudi Arabia and the United Arab Emirates. Through the EBRD, Bilforon has successfully trained Syrian women refugees to create new jobs and provide a livelihood by cooking and selling through the platform. The company has created 152 new jobs – 93 per cent of them for women – and raised US\$ 125,000 in new funding since the start of the Star Venture programme.

Cybersecurity is emerging as a key issue in all sectors and economies, with ever-growing threats from criminal, geopolitical and 'hactivist' actors with the potential to significantly disrupt both client and the EBRD's own business. As it puts in place the digital ambitions of the SCF, the EBRD will ensure that (1) the Bank's external policy and investment promotional activities take into account cyber issues, to establish itself as a credible and trusted partner on the digitalisation agenda; (2) the Bank's own risk assessment of the MYIP takes into account cybersecurity; and (3) the Bank undertakes an appropriate level of cyber due diligence to ensure the compliance of investee companies and third-party suppliers of EBRD-procured services, where necessary.

2.3 Digital transformation in the EBRD regions

The pace and pattern of digital transformation across the EBRD regions broadly reflects other transitional trends. In preparing this approach, Bank staff undertook a preliminary benchmarking exercise, looking at both digital enablers and digital outcomes in the economies where the EBRD invests, as well as more advanced comparators.¹⁵ It suggests the leaders are typically to be found in central Europe and the Baltic states, while the economies of Central Asia and SEMED largely lag.

The EBRD *Transition Report 2021-22* explores the implications of this in greater depth,¹⁶ but some of the key insights on the use of digital technologies by individuals, businesses and governments in the EBRD regions are summarised below:

¹⁵ Advanced comparators include Canada, France, Germany, Japan, Sweden, the United Kingdom and the United States of America.

¹⁶ See EBRD (2021c).

- **Internet usage has grown consistently over the last decade, reaching 73 per cent of individuals in the EBRD regions in 2020.** This compares with 90 per cent in advanced comparators. Lagging regions have shown the fastest growth, however. Gaps in mobile broadband access tend to be smaller than for fixed and fibre access.
- **Households and small businesses have gained greater access to finance following the roll-out of 3G and 4G technologies over the past decade.** Both the availability of mobile data infrastructure and its quality are crucial to democratising finance. The 3G roll-out played an important role in closing the gap between urban and rural communities, with women and younger people more likely to be the primary beneficiaries.
- **Digital infrastructure has improved significantly, but large gaps remain in the SEMED region and Central Asia.** 4G coverage had reached 89 per cent of the region's population in 2019, up from 36 per cent in 2015. International bandwidth availability in the EBRD regions increased five-fold between 2011 and 2019, but access on a per-user basis varied significantly from country to country. Central Europe and the Baltic states (CEB) and south-eastern Europe have average mobile and fixed broadband speeds, comparable to those in advanced economies. The deployment of 5G is still in the early stages, with networks launched in some major urban areas of several CEB cities.
- **Affordability of fixed and mobile internet is still a barrier, especially in Central Asia and SEMED.** The cost of digital services influences the extent to which digital technologies are adopted by individuals and businesses. The average price of a standard mobile data package (a 1.5 GB data allowance) in EBRD economies is 1.43 per cent of monthly gross national income per capita, twice the average of advanced comparator countries. Russia and Turkey post the lowest costs for fixed broadband, whereas SEMED and Central Asia have the highest costs relative to household income.
- **The use of digital payment services and e-commerce is still underdeveloped.** Only 56 per cent of consumers in the EBRD regions report using digital payment methods, compared with 96 per cent in advanced comparator countries. Only 19 per cent of consumers in the EBRD regions have used the internet to make online purchases in the past year, compared with 65 per cent in comparator economies.
- **There are significant inclusion challenges, too. Across the EBRD regions, there is a divide in internet access between rural and urban areas (a 12 per cent gap in urban areas' favour).** There is also a divide, albeit a lesser one, by gender (a 4 per cent gap in favour of men). Unsurprisingly, young people are consistently the most active internet users, so a generational shift may be underway.
- **Corporate use of digital technology is lagging, though it accelerated during the Covid-19 pandemic.** In 2019, total corporate spending on computer software as a share of GDP was around 0.2 per cent in the EBRD regions, but three times higher (0.7 per cent) in the comparator economies. On average, only 15 per cent of firms in EBRD investee economies reported receiving orders over the internet, compared with 24 per cent in the comparator countries. Around 80 per cent of firms in Greece and Slovenia report having a website, compared with just 30 per cent in Uzbekistan, for instance. There are also differences across the region when it comes to using specialised ICT solutions for improved customer relationship management and e-business integration.
- **The scope and quality of government services across the EBRD regions is also lower.** There are a few exceptions, led by Estonia, which perform consistently well on several e-government fronts, on a par with or ahead of the comparator group. Some of these countries provide public digital access to information on state budgets, increasing transparency and accountability and creating opportunities for transition-to-transition (T2T) sharing of best practices.
- **Digital skills vary across the regions and lag advanced economies.** Mathematics and science capabilities and the availability of ICT-specific skills and knowledge are consistently lower across the EBRD regions than in advanced comparator countries. There is considerable variation between EBRD investee economies, with Central Asia lagging once again and CEB the best performer. On average, fewer than 50 per cent of people in EBRD regions can perform basic ICT tasks (such as sending an email with an attachment) and fewer than one in four can complete standard office tasks (such as preparing a presentation or using basic formulas in a spreadsheet). Those most likely to possess advanced digital skills include young people, those in large economic centres and, broadly speaking, men.

- **Fast-moving technology creates challenges for policy.** Regulators today face a variety of issues with regard to entrenched market dominance, evolving digital taxation frameworks, infrastructure sharing strategies, consumer trust and data privacy issues, among other things. The majority of the EBRD investee economies (24 of the 38) have integrated ICT regulation. However, there is room for improvement in all regions when it comes to the adaptability of legal frameworks to digital business models and enforcement issues.
- **Most of the economies in which the EBRD operates are committed to accelerating the digital transition.** The number of economies with national broadband plans has increased significantly since 2009-10, when broadband infrastructure investments were a priority component in many countries' economic stimulus plans. As of 2019, only four economies in the EBRD regions did not have a broadband plan, strategy or policy in place, mostly in Central Asia.

Box 6. ICT sector FDI in the EBRD regions

Foreign direct investment in the ICT sector in the EBRD regions grew between 2015 and 2020, broadly in line with global trends. This investment appears to be both a cause and a consequence of digital transformation. Analysis by FDI Markets for the EBRD shows cumulative investment of more than US\$ 31 billion as of January 2021 in the economies where the EBRD invests, in more than 1,200 projects, focused on software and IT services. The average project size was US\$ 24.2 million and created just over 100 jobs. The top five destination countries were Poland, Romania, Lithuania, Bulgaria and Turkey.

2.4 Digital transformation as an enabler of transition qualities

As digital transformation is already underway in the main sectors and economies where the EBRD invests, the focus should be on how it can be leveraged to achieve the Bank's transition mandate. As noted in the SCF, the goal is to harness the potential of digital transition to support delivery of the Bank's transition qualities. There is a particularly strong interrelationship between the digital transition and the other SCF cross-

cutting themes of supporting the low-carbon transition and addressing inequality of opportunity.

Digital transformation creates both opportunities and risks with regard to achieving transition impact in the context of the Bank's transition qualities. For example, activities that foster the digital transformation of the financial and energy sectors can, on the one hand, help markets to resist shocks, but, on the other, create cybersecurity, data-protection and privacy concerns. These all fall within the "resilient" transition quality.

Digital transformation can accelerate or hamper transition impact between transition qualities. For example, the digital transformation of traditional industries can unlock efficiency gains and cost savings (boosting the "competitive" transition quality), but may also generate pockets of "stranded skills", leaving workers marginalised and unemployed, or reinforce existing biases, reducing access to key services for some groups (undermining the "inclusive" transition quality).

This underlines the importance of the link between digital and the other SCF priorities, the low-carbon transition and equality of opportunity. In addition, as many economies are facing multiple constraints (for example, on digital infrastructure, skills or regulation), a broader set of interventions may be required for digitalisation to contribute to the broad-based achievement of transition impact. These issues have been explored in the Bank's *GET 2.1 Approach paper*¹⁷ and in its strategies for the promotion of gender equality¹⁸ and equality of opportunity.¹⁹

When it comes to "green" transition impact, digital technologies can potentially help shift the economy to a low-carbon pathway. While digitalisation can increase energy demand, estimates of the potential reduction in emissions are seven times greater.²⁰ Digital technology has already allowed significant parts of the global economy to continue functioning during the Covid-19 pandemic, by replacing travel and commutes with virtual meetings. Technology is also key to decarbonisation efforts through, for example, smart grids, smart cities, industry 4.0 and earth observation satellites. Digital solutions offer the potential to reduce global GHG emissions by 16.5 per cent and yield US\$ 1.9 trillion in savings per year.²¹

Despite high and growing demand, digital technology can help reduce its own energy footprint. The energy efficiency of digital technology continues to improve.

¹⁷ See EBRD (2020a).

¹⁸ See EBRD (2021a).

¹⁹ See EBRD (2021b).

²⁰ See GeSI and The Boston Consulting Group (2020).

²¹ Ibid.

Box 7. How digitalisation can help the EBRD deliver on its Paris alignment commitments

In light of the recent decision by EBRD Governors to align the Bank's activities with the objectives of the Paris Agreement by the start of 2023, it is important to understand how the Bank can use digitalisation as green enabler, to support the economies in which it invests in achieving their international climate commitments and making their economies more sustainable.

First, digital retrofitting is critical for existing infrastructure. Examples can be found in green and smart cities, in the use of the internet of things for improving energy efficiency in buildings and in the integration of transport systems. In the case of urban infrastructure, smart solutions range from the installation of digital sensors for more efficient water distribution systems and smart electricity and gas meters for energy savings to smart urban traffic management systems for optimised vehicle use and the reduction of air pollution. What is more, smart manufacturing (Industry 4.0) and the introduction of digital platforms can promote circular business models.

Second, digital technologies can accelerate the greening of the financial systems in the economies where the Bank operates. Promoting the use of digital technologies, from digital finance platforms to blockchain and AI, in the financial sector has the potential to innovate and unlock green finance at scale (for example, to automatically report and improve the traceability of green assets).

Third, enhanced data processing and analytics capacity can significantly assist with the development and implementation of effective climate strategies and related plans, as it promotes evidence-based policy planning and execution through systems thinking. It can also improve transparency through robust monitoring, reporting and verification (MRV) systems and processes. Advanced MRV systems using digital technologies for automated data acquisition, processing and verification will help to significantly improve the Bank's quality, consistency and value of climate outcome reporting, as well as the development of carbon markets.

Fibre is better than copper for transmitting a unit of data with as little energy as possible. 5G is better than 4G, which is better than 3G. Big tech companies are now among the largest consumers of renewable energy in the world, investing in facilities that also drive down the cost for other users.

Technology can connect millions more people to new possibilities, creating equality of opportunity.

Digitalisation offers the potential to build human capital and equip people with the skills and resources they need to rebound from economic or other shocks, especially women, young individuals, older workers, those in remote regions, migrants and refugees, and people with disabilities. As mentioned, the growth of mobile internet, for instance, has greatly enhanced access to credit and payment services.

The challenge of a new digital divide is real, however, and needs to be addressed.

Women, older people and rural populations are less likely to use the internet or mobile phones, or have ICT skills. The unequal distribution of digital skills, in particular, can adversely affect the ability of some groups to share in the benefits of the digital transition. The acceleration of branch closures by some banks, for instance, may be a concern in terms of access to financial services for those who are not online.

Digitalisation has the potential to be a great equalising platform, but it can also create new inequalities, even beyond the digital divide.

Digital technologies can broaden people's access to employment opportunities through the platform economy, crowdworking and remote working. At the same time, however, they may offer precarious, de-skilled employment, while remote working may benefit only certain segments of the population. Similarly, AI and machine learning can replace human discretion and judgement in many decisions, such as recruitment, for example, but bias may still affect the final outcome if the algorithm is not trained to recognise it, or relies on biased historical data.

Table 1 summarises the digital transition framework in terms of the opportunities and risks associated with the impact of digitalisation on each of the EBRD's transition qualities.

Table 1. Digital transformation – opportunities for and risks to the EBRD's transition qualities

TRANSITION QUALITY	OPPORTUNITIES	RISKS
Competitive	<ul style="list-style-type: none"> • Renewed business dynamism in mature industries • Increased productivity across the economy • Emergence of new products and services markets and accelerated innovation • Consumer benefits in the form of greater transparency, lower prices, more choice and instant availability of products and services • Enhanced global competitiveness 	<ul style="list-style-type: none"> • Entrenched dominance of market leaders due to winner-takes-all dynamics, with long-run negative impacts on innovation, price and productivity • Abusive behaviour by dominant firms • Policy frameworks struggle to keep up with rapid technological change
Green	<ul style="list-style-type: none"> • Smarter energy use • Resource efficiency gains and waste reduction • Improvements in environmental and climate monitoring and resilience • Digital solutions for climate mitigation and adaptation, and diffusion of business models that support behavioural changes 	<ul style="list-style-type: none"> • Increased energy consumption • Environmental degradation linked to extraction and processing of raw materials • Electronic waste generated by hardware and products
Inclusive	<ul style="list-style-type: none"> • Wider access to learning and employment opportunities and reduced labour-market bias • Strengthened financial inclusion, including through digital literacy • Improved access for underserved groups, including through digital accessibility and the better use of data 	<ul style="list-style-type: none"> • Discriminatory practices reinforced • Skewed benefits to different segments of the population widen gaps • “Stranded skills” and jobs in sectors undergoing digital transformation heighten concerns related to just transition
Integrated	<ul style="list-style-type: none"> • Reduced transaction costs and increased transparency and traceability across value chains • Emergence of wider and deeper digital markets benefitting businesses and customers • Adoption of big data collection technologies • Cross-border digital payments 	<ul style="list-style-type: none"> • Data flow regulation and restrictions on digital trade • Restrictiveness of services affects digital trade in services • Lack of definition of goods and services across borders • Regulatory fragmentation
Resilient	<p>Financial services:</p> <ul style="list-style-type: none"> • Attraction of unbanked customers, also through better risk assessment • Improved financial services and more efficient banking operations • Improved quality of supervision and regulatory compliance <p>Energy:</p> <ul style="list-style-type: none"> • Lower cost of delivery and extended lifetime of power generation and network infrastructure assets • Improved safety, sustainability and reliability of energy systems • Energy savings through smart applications 	<p>Financial services:</p> <ul style="list-style-type: none"> • Exposure to illegal activities and increase in operational risk • Cybersecurity, data-protection and privacy concerns • Potentially lag in effective supervision of new fintech firms <p>Energy:</p> <ul style="list-style-type: none"> • Increased vulnerability to cyberattacks and data protection issues • Increased direct energy use by consumers and data centres/network services
Well-governed	<ul style="list-style-type: none"> • Improved national and local governance and reduced corruption through e-governance • Better decision-making and more efficiency due to better data availability • Greater trust in governments where legal principles support transparency and e-participation 	<ul style="list-style-type: none"> • Data privacy and cybersecurity concerns leading to mistrust in institutions • Governments struggle to anticipate regulatory needs • Mismatch between digital readiness of public services, businesses and individuals

3. The EBRD's commitment to the digital transition

Section 2 described the backdrop to the decision by EBRD shareholders to make the digital transition a key theme of the new SCF period. The Bank was asked to launch “comprehensive and coherent activities” that would help countries use digital technologies to support transition objectives. An informal mapping exercise identified around 200 projects with a digital dimension that have been undertaken in recent years. Looking ahead, it is important to provide an overall framework for the scaling up of this activity in a strategic way. By sharing best practices, where available, and providing mutually reinforcing and complementary activities, the Bank is more likely to have systemic impact.

Box 8. Extract from the EBRD's SCF 2021-25²²

“Based on the strategic directions of the SCF, by 2025, the Bank will have...launched comprehensive and coherent activities to help countries of operations leverage the digital transition as an enabler of transition across all sectors.”

Capitalising on the digital transition requires an update of the Bank's conceptual framework while respecting its core mandate and values. As the previous chapter showed, digital transformation is profoundly reshaping the economies in which the Bank invests and the sectors in which it works. The purpose of this paper is to set out a roadmap to 2025 that will guide the Bank's work over the SCF period.

The Bank should incorporate digital elements into its delivery mechanisms to more effectively support transition. The EBRD will continue to adhere to the operating principles of transition impact, sound banking and additionality in its unique role as a private sector-focused MDB. Across the region, many companies have already embraced digital technology, due to its potential for significant competitive advantage. The Bank's role is to support those who have found this process more challenging (especially SMEs, innovative

start-ups and public-sector organisations) and to ensure wider benefits to the economy and society through well-functioning markets.

In light of the swift pace of technological advancement and the rapidly changing opportunities and risks, the Bank should harness the transformative power of technology in a way that is both effective and sustainable. This means the business case for digital investments should:

- a) start with a clear understanding of the challenges faced by clients
- b) consider operational aspects such as resilience, ability to support and cybersecurity
- c) seek relevant and tested real-life precedents as evidence of effectiveness and efficiency
- d) take into account the environmental and social impact of digital technology and favour a transition to low carbon and equality of opportunity, reflecting the SCF priorities
- e) ensure the potential to scale up and interoperate with the other systems.

The Bank will continue to deepen its understanding of fast-moving technological trends and the implications for the economies in which it invests, its operations and organisation. The EBRD has built up expertise and remains committed to upskilling further by investing in staff training, targeted recruitment and the selective use of external experts. The Bank is embarking on a learning journey analogous to those of the green transition 15 years ago and the inclusion agenda 7 years ago.

By growing its internal capabilities, the EBRD can better serve its clients. The Bank is transforming itself through the MYIP, which will make it a more resilient, efficient, agile, knowledge-based and client-focused institution. To become a credible partner that offers digital solutions for its clients, this internal transformation must

²² See EBRD (2020c), Box 1.

be effectively managed and sustained in the long term.

With its combination of private-sector investment and advisory activities and public-sector policy engagement, the EBRD can play a pivotal role in leveraging the power of digital technology to support the transition in a wide range of areas. The Bank can leverage its relationships with partners that have access to technological expertise, financial or other resources and help shape global standards that promote the transition and sustainable development.

Supporting this effort will require cross-Bank mobilisation. The digitalisation of infrastructure (the real-time, data-driven and digital solutions that improve the design, reliability, operations and safety of projects) by the Sustainable Infrastructure Group (SIG), for instance, has to be complemented by investments in digital infrastructure (the upgrading of the ICT backbone to 4G/5G) by the TMT and ICA groups, supported by policy engagement from the Bank's Legal Transition Team. Another example would be FI policy and investment in fintech, which can improve access to finance for SMEs.

Just as some of the opportunities of digital transformation need to be dealt with holistically, so do the threats. The Bank also needs to develop a cross-cutting approach to cyber resilience to protect itself, its clients and the economies in which it operates. While there have been increasing numbers of attacks on the financial sector, there have also been many documented challenges for critical infrastructure, potentially with devastating consequences. Many companies have also been hit by ransomware attacks, which quadrupled in 2020.²³ Remote working also exacerbates cyber vulnerabilities, and the *Transition Report 2021-22* shows that, even at current levels of digitalisation, remote working in the EBRD regions has considerable room to grow.²⁴ Global trends also suggest that remote working will increase. Cyber security and the protection of data privacy are, therefore, essential parts of the digital transition. The Bank's approach will incorporate appropriate protections, regulation, training and security to help mitigate these risks for clients.

As a multilateral institution, the Bank will maintain the highest international standards. The new global digital "rulebook" is still being written in a space increasingly contested by powerful oligopolistic

companies and geopolitical actors. In new areas, such as AI, best practice – including with regard to diversity, ethics and fairness – still needs to be established and promoted, as well as adherence to codes of conduct to ensure the ethical and responsible use of technologies. This will require close cooperation with governments, other international organisations and technology companies, as appropriate.

The Bank's goal, therefore, should be commensurate with its unique status, skills and networks. The EBRD is a trusted partner for many clients and policy-makers, so should aim to play a leading role in shaping the impact of digitalisation in its regions over the next five years.

What is clear is that, although many products and services are being developed in individual sectors, the digital transformation of the EBRD regions can only take place through comprehensive engagement, something the Bank is – perhaps uniquely – best placed to deliver.

By 2025, the EBRD should be the partner of choice for stakeholders in the economies where it operates when it comes to promoting digital transformation as a means of achieving transition.

²³ See Murphy at al. (2021).

²⁴ See EBRD (2021c).

4. Means of delivery

To fulfil its aspirations, the EBRD will need to mobilise the full suite of instruments at its disposal to shape the three key components of digital transformation – establishing the *foundations* of digital transformation, promoting *adaptation* among existing clients and governments, and supporting *innovation* and new market entrants. This section sets out the activities the EBRD could undertake in each area to 2025.

In line with its mandate, the EBRD will focus on the private sector, but investments in and through the public sector can also promote transition to a sustainable market economy. Alongside targeted policy dialogue with governments to help unlock avenues for investment and foster a competitive environment, investments in the public sector will be undertaken on a case-by-case basis.

4.1 Foundations – the bedrock of a digital ecosystem

There are a number of foundational elements, including government rules and regulations, physical infrastructure and skills.

4.1.1 Policy and regulatory mix to promote digitalisation

To facilitate digital transformation, governments need to create an environment in which transactions that take place offline can move safely and effectively online. This can also create entirely new markets and delivery structures that drive innovation. Political commitment and clear policy vision are required to make changes in the regulatory framework that promote trust and legal certainty, while reducing informality and providing public services through digital channels (e-government). These can include the use of electronic signatures, for example, as well as digital alternatives to paper documents and contracts, appropriate protection and governance of data flows and an updated competition framework that catches new forms of abusive and exclusionary behaviour.

- The EBRD will develop enabling legal, regulatory and institutional frameworks, as well as the capacity of governments to implement them. Among other things, this will involve promoting innovation, supporting healthy competition in digital markets, promoting

cybersecurity, safeguarding energy and financial stability, and ensuring appropriate data protection. Such frameworks will focus on supporting private-sector development and draw on recent experience, as described in Box 9.

- The EBRD will work with governments with a view to improving the efficiency and transparency of the wider digital business environment in the economies where it invests. The Bank will undertake a maturity assessment, advise on appropriate regulatory frameworks and underlying platforms to support private-sector development.

Box 9. Examples of recent policy engagement on digital

The EBRD has played a key role in introducing e-business registration and other digital government services in the Kyrgyz Republic; strengthening the e-delivery of actions and requests between businesses, individuals and government in Serbia; and introducing an e-inspection function and app to support the virtual business community in Moldova. In addition, the Bank has supported the implementation of an energy-specific transparency platform and the adoption of electronic signatures and e-documents in investigatory and regulatory proceedings in Bulgaria; the development of new regulations for e-commerce, digital and mobile banking in Kazakhstan; the implementation of a crowdfunding regulation in Kazakhstan and Morocco; the development of a regulatory framework for cloud computing and distributed ledger technology in Poland; and the implementation of e-procurement policies and legal frameworks in Belarus, Jordan, Moldova, the Kyrgyz Republic, Tunisia and Ukraine.

i. Investing in the roll-out of essential digital infrastructure

Connectivity and the transmission of data are at the heart of digitalisation. As the currency of the new digital economy, data need to flow globally, quickly and reliably. This requires high-quality physical infrastructure to transport, store, process and distribute data flows in a secure, resilient and efficient manner. The economics, regulation and governance of digital infrastructure roll-out

projects require careful balancing to ensure sufficient investment to deliver affordable, high-capacity broadband connectivity. According to the *Transition Report 2021-22*, the share of households with home internet access in the EBRD regions is substantially higher in capital cities than elsewhere, with the divide as big as 10 percentage points in some economies.²⁵ The EBRD will focus on where it can add most value by maximising private investment, while also providing a robust basis for public-sector participation as a means of extending cost-effective connectivity to underserved areas.

- The EBRD will scale up investments in the roll-out of key broadband infrastructure and services to deliver faster and more reliable connectivity in the economies where it operates, including in more remote regions and underserved communities. This will require bringing together the Bank’s financing, technical, policy and regulatory expertise.

ii. Supporting the development of digital skills

The EBRD’s *Equality of Opportunity Strategy 2021-25*²⁶ tackles the intersection of digital transformation and skills development by focusing on demand-led approaches (enabling educational providers to deliver learning outcomes aligned with employers’ real needs), while embracing life-long learning and work-based skills development opportunities. The fast pace of technological disruption in some economic sectors will require more workers, especially women, to engage in training on a continuous basis. Enabling women to benefit from the opportunities brought about by digital transformation, including access to skills and employment, is covered specifically in the EBRD’s *Strategy for the Promotion of Gender Equality 2021-25*.²⁷

- The EBRD will integrate digital skills into all relevant business-led sector skills councils, sectoral and national skills development strategies and other institutional and strategic documents supported by the Bank.
- The EBRD will mainstream digital skills into all relevant TVET and higher education programmes supported by the Bank and undertake advisory projects on skills development issues, including by enhancing clients’ capacity to forecast needs.
- The EBRD will create pathways to access STEM education and careers for women and other

under-represented groups, including through mentoring and training.

4.2 Adaptation – helping organisations to embrace their full digital potential

This is likely to include direct investment and advisory support for companies, municipalities and other organisations seeking to use technology to support transition.

i. Investing in the digitalisation of the private sector

In many sectors, the fast pace of technological change creates an ‘adapt or die’ evolutionary imperative. In advanced economies, companies and financial institutions are already being overtaken by rivals or new entrants. Companies in the EBRD regions that lag on digital development risk dropping out of global value chains, with ripple effects throughout their own supplier networks. As evidenced in the *Transition Report 2020-21*, small firms are less likely to use digital technologies than larger, similar firms. Moreover, firms with links abroad (through trade or foreign ownership) were more likely to be digital and/or have increased their use of digital technologies during the Covid-19 pandemic.²⁸ The Bank will, therefore, look to support companies across the spectrum in terms of size, where digital investment is likely to lead to better economic outcomes. Interventions will take into account the competitive effects in certain market segments and explore policy options that support digitalisation. While some creative destruction can invigorate markets, too much can lead to a permanent loss of jobs and oligopolistic outcomes that damage consumer welfare.

- The EBRD will support digital technology investments by multinational or regional firms, enabling technology and knowledge transfer in the Bank’s regions, through technology supply, the acquisition of local companies or technology partnerships with local firms.
- The EBRD will support the digitalisation of products and processes in local companies, including through backward and forward links in value chains and distribution channels.
- The Bank will work with clients to design digital platforms that their suppliers can tap into, driving

²⁵ See EBRD (2021c).

²⁶ See EBRD (2021b).

²⁷ See EBRD (2021a).

²⁸ See EBRD (2020b).

efficiency and transparency in the procurement process and connecting more SMEs to more business customers.

- The EBRD will pilot an SME digitalisation programme across the EBRD regions that combines both credit lines to public financial institutions and associated advisory services for sub-borrowers, including digital skills and relevant policy components.
- The EBRD will support the digitalisation of financial institutions through technical assistance and financing, in line with the Bank's forthcoming strategy for the financial institutions sector for the period 2021-25.
- The Bank will support client companies looking to digitally transform their businesses with direct equity investments.

ii. Supporting the digitalisation of municipal services

As individuals use digital technologies more and more in their private and business lives, so they increasingly expect government and public bodies to be accessible and responsive online. As seen in some of the economies where the EBRD operates, digital public services can be made more accessible, transparent, personalised and accountable to the end user, while also improving the governance of the provider, by giving them real-time information on their networks and infrastructural operations. The choice of technology is critical to ensuring smart and green objectives align in a cost-effective and inclusive manner.

- The EBRD will incorporate smart and inclusive elements into GCAPs and recommend appropriate digital technologies using its own Digital Maturity Assessment scale. The Bank can provide training and capacity building to ensure the effective utilisation of each new technology used to ensure value for money.
- More broadly, the EBRD will mainstream digitalisation across its energy and infrastructure investments. The Bank is developing sector-specific "digital maturity pathways" that draw on a wide range of technologies, with proven benefits, backed up by case studies. This will ensure that any project preparational support and future investments in digital and smart technologies are both appropriate and beneficial.

Box 10. Helsinki as a smart green city

How do you embark on the road to net zero when you do not know where to target decarbonisation investment? Helsinki has the answer in its Energy and Climate Atlas.²⁹ This is an exact virtual 3D replica of the city's building stock, also known as a city digital twin. By combining data from thermal cameras and smart meters, this powerful digital solution provides real-time information on the energy use of around 77,000 buildings across the city. It can also calculate potential savings from building renovation. This allows the city to more accurately identify the investments needed to achieve net-zero carbon by its target date of 2035. Companies can prepare offers and plan interventions faster and cheaper than before. Through this open-data digital tool, users can also visualise the potential solar irradiation of roofs according to their location and inclination. It is also possible to map opportunities for heating through geothermal wells, improving the range of sustainable sources of energy available to the city. This platform demonstrates how city digital twins not only support accurate investment decision-making, but also generate opportunities for the private sector and green growth, while raising citizen awareness.

iii. Digitalisation advisory services, such as addressing cyber security and aligning with standards appropriate for EBRD investments

Many companies in the EBRD regions lack the expertise to engage in the digital agenda and need robust independent advice on how to start their journey and build the case for investment. As companies digitalise their activities, there are risks as well as opportunities. The growth of cybercrime is one example, but companies also need help to manage data flows in a responsible manner and to uphold social, environmental and governance standards.

- The EBRD will prepare a pilot methodology for assessing the digital maturity of corporate and municipal clients, modelled on early energy-efficiency audits. Undertaken by external consultants on a draw-down basis, this will identify key gaps in and provide a tailored business case for investment, which the EBRD could potentially finance.

²⁹ See Helsinki (n.d.).

- The EBRD will roll out bespoke sector-specific cybersecurity capacity building for clients implementing a digital project. The Bank will undertake its own due diligence in applying the ESP to ensure that the potential impacts of digitalisation and cybersecurity on workers, project-affected people and broader stakeholders are taken into account. This will complement and reinforce the EBRD's own MYIP upgrades, covering data protection and aligning the digital transformation with the Bank's green and equality-of-opportunity ambitions.

4.3 Innovation – creating the space for transformational change

This could involve improving the overall business environment for digital business, as well as meeting specific financing needs, where appropriate.

i. Supporting a start-up-friendly ecosystem

New digital businesses typically develop in an environment that brings together highly educated and entrepreneurial individuals with risk capital and a supportive regulatory environment that can help nurture interesting concepts into viable businesses. Innovation hubs and accelerators can help grow start-ups that need time, space and patient investors with a high risk appetite. Regulations can be applied in a manner that is proportionate to the risk. This is the philosophy behind “sandboxes”, which have flourished for fintech in many jurisdictions in recent years. They allow companies to grow in a safe space without jeopardising financial stability or risking the money of retail investors. As discussed in the EBRD's *Transition Report 2021-22*, there is growing evidence that this not only benefits start-ups by giving them more freedom to innovate, but is attractive to investors who want to take stakes in these companies.

- Building on previous accelerator activities in the fintech and digital areas, the EBRD will scale up and broaden its engagement in facilitating innovation. This could include supporting regulatory sandboxes for start-up companies and accompanying digital government services.
- The Bank will aim to treble the number of Star Venture programmes in the EBRD regions – offering

bespoke advisory services to high-potential start-ups, accelerators and incubators – and seek wider geographical coverage

- The EBRD will enhance its advisory services promoting the digitalisation of SMEs, as well as e-learning and digital platforms connecting small businesses to expert consultants.
- The EBRD will strengthen engagement with other international financial institutions (IFIs) on the development of digital standards, operational guidelines, best practices and model documentation for start-up companies.
- The Bank will scale up its engagement in the development of ad hoc legislative and regulatory interventions to support digital start-ups in targeted jurisdictions.

ii. Investing in digital-first companies

Investing in smaller companies, especially early-stage firms with a limited track record, is inherently risky. A portfolio-based approach balances the inevitable failures with the possibility of very substantial returns from a successful company that can return multiples of the original investment. Building on its well-regarded VCIP,³⁰ the Bank recently launched a new Venture Debt framework. Developing debt financing capacity is a logical extension of the EBRD's activity in this field. Digital-first companies, typically at a more mature stage of their evolution, often seek leverage to broaden their geographical reach or expand their service range. At this point in their development, they may still be outside the scope of mainstream financial service providers and find it difficult to secure term funding on a sustainable basis. The EBRD will enhance its capabilities in technology equity investment across the growth cycle. By using a range of instruments at different points in the cycle, the Bank can play an important role in supporting the development of digital-first companies with the potential for global reach across its regions.

- The EBRD will extend its VCIP work and expand its operations in the Western Balkans, SEMED and the early transition countries. Specifically, it will launch VCIP III in 2022 with an expected total framework of €250 million, which will enable the Bank to invest in up to €25 million in equity per company.

³⁰ See EBRD (n.d.b).

- The EBRD will enhance its approach to indirect equity by expanding its portfolio of venture capital and technology funds. This will be delivered by renewing and expanding the Early-Stage Innovation Facility³¹ and standalone investments in later-stage and growth-oriented venture capital and private equity funds seeking to support digital-first companies.
- The EBRD will expand direct investment in and lending to fintech companies, including neo-banks and non-bank financial institutions.
- The EBRD will support challengers/disruptors looking to transform their sectors through digital business models with direct equity investments.
- The EBRD will explore how to ensure the inclusive design of products or services, including by promoting universal digital accessibility standards, such as [ISO 30071-1](#).

³¹ See EBRD (n.d.c).

5. Partnerships for delivery and impact

5.1 Collaboration with other partners

The challenge of digital transformation requires a system-wide response. Technological change is rippling around the world at different speeds and in different ways. This creates enormously complex political economy issues – even for more advanced countries. The EBRD is much more likely to have an impact when it can align its approaches with those of international partners.

MDBs and IFIs are natural partners in the delivery of a sustainable and inclusive digital transition. There is significant scope to share expertise to build know-how and many potential co-financing opportunities to maximise impact of the Bank's investments for the economies in which it operates. Fellow MDBs have recently prioritised digital investments and regular dialogue confirms broad alignment and substantial space for synergies and complementarity. One example of MDB-wide collaboration is the Digital Infrastructure Regulatory Risk Forum, established in 2020 by the Heads of MDBs Group to specifically share experience of the roll-out of digital infrastructure.

Some of the economies in which the EBRD invests and some of its non-recipient shareholders have valuable expertise and some are close to – or at – best practice globally. The EBRD will continue to seek to capitalise on their knowledge and resources to support its mandate. For recipients, the T2T model is a valuable platform for collaborating on digital matters, as shown in Box 11.

Box 11. Example of T2T collaboration

Governments looking to advance digital transformation can learn from the experience of those further ahead. From an EBRD regional – and, indeed, a global – perspective, Estonia stands out as a country that has transformed its public-sector operations through digitalisation, thereby creating a valuable national asset. Georgia, having benefitted from Estonia's experience early on, is

another example of how to make digital technology an everyday reality.

Over the years, the EBRD has built a strong partnership with the Estonia E-Governance Academy (EGA), a non-profit think-tank with a mission to systematise and share e-governance practices based on the Estonian experience. The partnership was formalised in a memorandum of understanding in July 2020. As a supplier of high-quality e-governance services originating in the EBRD region, the EGA's expertise contributes to the Bank's T2T initiative. As of June 2021, the EBRD had nine projects completed, ongoing or in the pipeline with EGA.

While the global digital rulebook is still being developed, the EU is becoming a norm-setter in many areas, such as data protection.³² These rules are being applied not only in the EU, but also in many candidate and neighbourhood countries in the EBRD regions, while some aspects are being taken up in other jurisdictions. The EU and the United States of America recently stepped up cooperation in this regard by way of a joint trade and technology council, with a view to narrowing transatlantic differences.

In early March 2021 the European Commission presented its new vision for a digital transformation in *2030 Digital Compass: the European Way for the Digital Decade*.³³ This provides concrete objectives on four cardinal points: skills, capacity and infrastructure, digitalisation of businesses and digitalisation of public services. It also establishes a framework on digital principles – universal access to high-quality connectivity, sufficient digital skills, access to fair and non-discriminatory online services, ensuring that the same rights that apply offline apply online – that is consistent with the Bank's approach.

³² The EBRD, as an international organisation established by treaty, is not subject to national or supranational laws. However, the Bank is mindful of the internationally accepted principles of personal data protection, as also set out in the EU's General Data Protection Regulation (GDPR), and these have been reflected in the Bank's Personal Data Protection Framework, available here: <https://www.ebrd.com/strategies-and-policies/personal-data-protection-policy.html>.

³³ See European Commission (2021).

In line with its multilateral character, the EBRD will also work closely with other international bodies and organisations, such as the Organisation for Economic Co-operation and Development, the United Nations Development Programme and the World Economic Forum, which are playing important roles in building consensus on the governance of technology and how to build inclusive and sustainable digital economies and societies in a competitive market environment. As its expertise develops, the Bank has the opportunity to play a key role in narrowing the digital divide in terms of access, affordability and skills across its investee economies and to improve economic opportunities for underserved groups.

5.2 Engagement with donors

Donor funding will be critical to commencing this work. As set out in section 4, policy engagement and technical cooperation are essential in order to scale up the EBRD's digital investing, especially in ETCs. Following a presentation of current digital projects at the 2021 Annual Meeting, outreach to potential donors will begin to support this work. This approach paper will provide a platform for further engagement.

The EU will also remain a key financial and policy partner. The EU has determined that at least 20 per cent of the new Recovery and Resilience Facility (RRF) for Member States should be allocated to the digital transition. For the 12 EU member countries in which the EBRD operates (EU12), from 2021 to 2027, RRF funds for digital transformation will be a very substantial pool of at least €27 billion in grants and concessional loans (the latter mainly for Greece, Poland and Romania). The Bank will continue to explore potential complementarities to projects that align with its mandate and expertise.

The InvestEU unfunded guarantee programme remains the key European financing instrument aimed at private investment in the EU12.³⁴ The EBRD will apply for a proposed guarantee allocation of around €450 million, leading to an estimated transaction volume of as much as €1.4-1.7 billion over the next few years. Around a quarter of this will target the EU digital agenda to accelerate broadband infrastructure, 5G research and development and early deployment,

the expansion of high-speed and energy-efficient fixed and mobile networks to underserved regions and the development, deployment and scaling-up of digital technologies and services.

Externally, the EU is also financing digitalisation through development and cooperation activities in its neighbourhood and beyond. The new Neighbourhood Development and International Cooperation/Global Europe Instrument will provide grant resources, as well as €53 billion in guarantees, including €40 billion under the European Fund for Sustainable Development Plus (EFSD+) for the 2021-27 financial period.³⁵ This aims, among other things, to extend the Digital Single Market to partner countries through regulatory dialogue, capacity building and investment in international cooperation and research partnerships.³⁶ For the EBRD, this follows the approval of the €70 million joint European Investment Bank/EBRD Digital Transformation Guarantee Programme under the EFSD+, which will soon be contracted.

The Commission will also design and propose digital partnerships with developing and emerging economies, to be jointly financed with Member States through Team Europe Initiatives (TEIs), such as the potential digital connectivity TEI in Central Asia (covering Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan), which the Bank will seek to join. This could be further supported by the creation of a digital connectivity fund.

The private sector could also play an important role in supporting the digital transition. The size of the global digital economy has grown enormously in recent years. As noted in section 2, the largest technology firms have significant financial resources at their disposal. Outside the technology sector, too, companies are growing the digital parts of their business and see significant potential in the EBRD regions.

The Bank has begun a mapping exercise to explore potential partnerships with those companies and organisations that could provide significant resources or expertise to support the digital transition. Because of its multilateral nature and strong regional presence, the EBRD could play an important role in facilitating the development of trust-based, mutually beneficial

³⁴ Other potential sources of EU funds for digital projects, either standalone or blended with InvestEU guarantees, include: the €2 billion Connecting Europe Facility (with 80 per cent of its budget dedicated to the interconnection of EU backbones and 5G highways); the €7.6 billion Digital Europe Programme (focusing on super-computing, AI, cybersecurity, advanced digital skills and digital innovation hubs); and the €95.5 billion Horizon Europe (cluster 4: digital, industry and space, focusing on key digital and emerging enabling technologies, AI and robotics, next-generation internet, advanced computing and big data).

³⁵ See European Commission (n.d.).

³⁶ See European Commission (2015).

relationships between the economies in which it invests and technology companies, while recognising the importance of maintaining its own independence and the autonomy of its investee economies.

5.3 Deployment of donor funds

The recently approved Shareholder Special Fund (SSF) Work Plan for 2021-22 aligns activities behind the three SCF cross-cutting themes. Data collated during the preparation of the work plan suggested that some 20 per cent of projects requesting funding had digital as their primary SCF theme. This underlines the strong demand from clients for support for their digital transformation. The new work plan is likely to focus on:

- **e-governance** – enhancing government and public entity capacity to provide vital services to businesses and individuals, including advising on e-government, taxation and e-procurement reforms across the EBRD regions; supporting government objectives to create an enabling policy environment for the digital transformation of businesses.
- **e-commerce** – supporting the digital adaptation of businesses by channelling funds directly to clients or via financial institutions. There are growing requests to support SMEs with their digital transformation. With the support of the EBRD's ASB, many SMEs are looking to introduce digital marketing and online sales and improve their business processes.
- **e-infrastructure** – supporting the roll-out of broadband connectivity to help businesses grow, but also to support municipal utilities in digitalising vital public services. Innovative technologies are a key part of this equation, including the expansion of smart energy grids. The Bank is also looking to step up its investments in e-mobility to promote more electric transport.

Demand for SSF support for digitalisation is expected to remain high and to rise throughout the work-plan period in all geographical areas, with some differentiation between regions. Following the approval of this digital approach, there is likely to be a further increase, suggesting a gradual build-up of SSF-funded projects towards the second half of the work-plan period.

A new €15 million innovation and transformation pool will support pioneering projects that can deliver transition at scale. This will be an excellent platform for testing cutting-edge activities in the digital transformation space for which alternative donor funding may be hard to mobilise.

The Bank will make a concerted effort to mobilise additional donor finance for digital transformation and to deploy a range of vehicles and approaches for this purpose. Existing and well-established funds such as the **Small Business Impact Fund**, which attracts regular donor support, are a natural choice as SMEs increasingly ask for help to digitalise their businesses.

The EBRD's forthcoming multi-donor fund for gender and equality of opportunity may offer another source of funding. The Bank will also seek to integrate elements of digital transformational support into larger programmes, as appropriate, for funding from the Bank's key multilateral donors, such as the EU or the Green Climate Fund, or larger programmes with bilateral donors. Over time, and subject to donor interest, the Bank will also look into establishing a dedicated thematic funding vehicle or multi-donor fund in this area.

6. Measuring success

6.1 Tracking the Bank's corporate delivery

The EBRD's approach to the digital transition sets a high-level goal for 2025, for the Bank to become the partner of choice for stakeholders in the economies where it invests. The Bank will track progress on range of indicators to see if it is meeting its SCF objective of using the digital transition as a means of delivering economic transition.

As the EBRD begins this digital journey, it will be important to strike a balance between establishing meaningful milestones to ensure that the Bank stays on course while allowing enough flexibility to respond in an agile manner to a fast-changing external context, to incorporate new learning, to seize new opportunities and to correct its course when necessary.

The Bank will begin by systematically tracking the number of digital projects implemented,³⁷ based on common definitions – as it did when it started to work on its green and inclusion transition qualities. This will provide an overview of trends, including by sector and country.

Management will review progress on the approach set out in this document and provide an update to the Board no later than the mid-point of the SCF, in the first half 2023. Any necessary adjustments will be made at that time, in line with normal governance.

a. Embedding digital transformation into all of the Bank's activities

The EBRD will ensure that its systems and processes are adapted to take into account the opportunities offered and challenges posed by digital transformation. To encourage digital projects, the Bank will use existing planning and incentive tools and draw on analysis undertaken for this approach, including:

- The EBRD will provide an annual update during the SCF period on benchmarking in the economies where the

Bank invests to build time-series data and to continue improving the methodology.

- The EBRD will develop a dedicated digital diagnostic section as part of its country diagnostics, to help identify digital needs arising at local level.
- The elements identified in the country diagnostics will inform priority setting in country strategies, as appropriate.³⁸ Country strategy priorities and objectives are an important means of ensuring that the Bank's projects are in line with its transition mandate. Because of their potential impact on all six transition qualities, digital elements will be incorporated, as appropriate, into country strategies on a rolling basis when they come up for renewal.
- As part of its annual Country Strategy Delivery Reviews, the EBRD will capture progress and priority areas for work in the digital realm, including investment and policy.
- The EBRD will explore and capture targeted interventions within sector strategies on a rolling basis when they come up for renewal. The approach was first trialled in the forthcoming EBRD strategy for the financial institutions sector for 2021-25.
- The EBRD will operationalise the conceptual findings presented in section 2 of this approach into the Bank's transition qualities by incorporating digital elements into assessments of the transition qualities and project assessment methodology (expected transition impact/ portfolio transition impact).
- The EBRD will incorporate its digital ambitions into its transition results management architecture by reviewing the current list of standardised objectives to best capture various digital transformation angles, as well as a compendium of indicators to better capture outputs (at a project level) and outcomes (at a country level).

³⁷ See definition provided in Box 2; tracking will be implemented from 2022, subject to further technical evaluation.

³⁸ When the identified digital *needs* of the country are combined with a tangible *opportunity* to make progress and the Bank has the *capacity* to take advantage of those opportunities based on areas of expertise, business model and complementarity to other partners in the field.

6.2 Tracking the Bank’s activities and progress

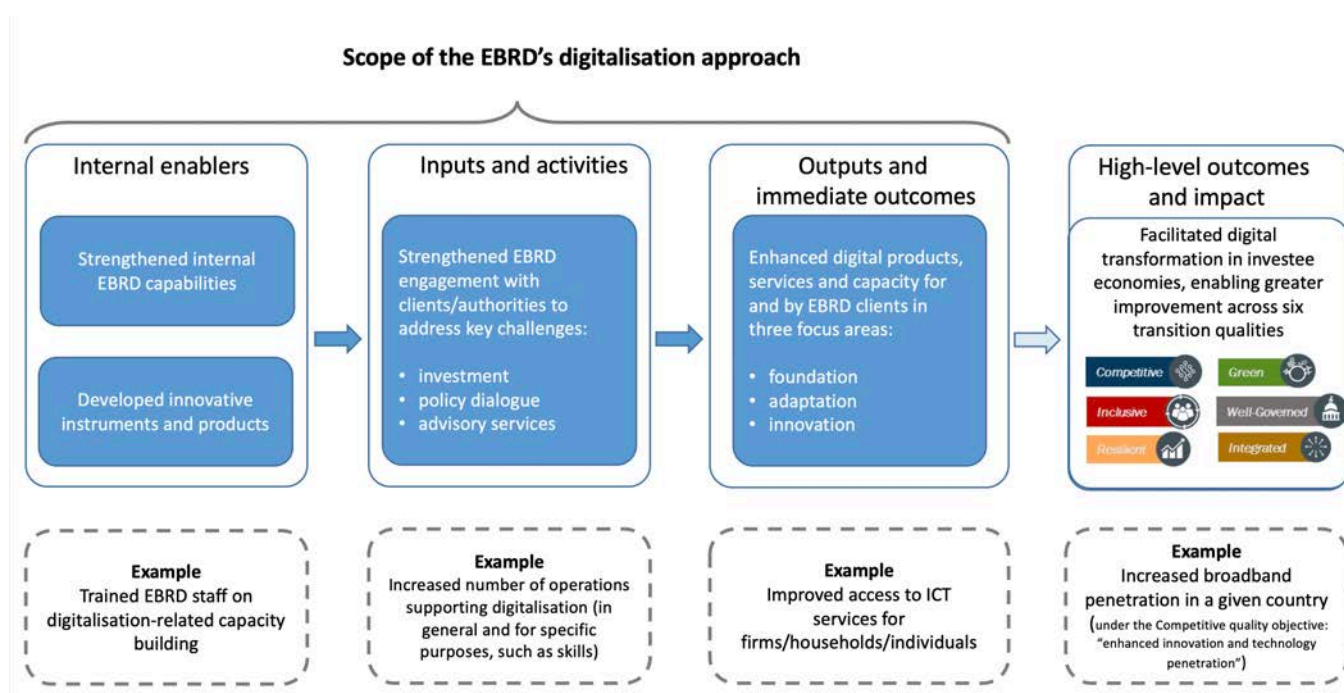
The EBRD will use a range of indicators to track its progress on meeting the SCF goal of using the digital transition to bring about economic transition. One of the EBRD’s core objectives – and the theory of change of this approach paper – is to scale up and enhance all of its instruments (policy, investment and advisory services) to unleash the transformational power of digital technology in all sectors of the economies in which it operates. This will be accompanied by the systematic build-up of digital skills and know-how across the Bank, through appropriate training and other tools.

Digitalisation will be an enabler of greater transition impact across the Bank’s six transition qualities (as reflected in the stylised theory of change in Table 2). It affects the impact pathways of each of the Bank’s six transition qualities, in particular, by introducing new

products and services, including solutions for greening activities and monitoring environmental impact; improving necessary skills and business sophistication (including for underserved groups); increasing outreach to clients to improve their product offerings and efficiency, including for the purposes of public transparency and better governance.

Key digitalisation objectives are already part of the Bank’s transition qualities (for example, enhanced innovation and technology penetration under the “competitive” quality). In the next phase, digitalisation-related components and indicators will be introduced to plug current gaps. They will be better incorporated into the assessment of challenges with regard to the six transition qualities and of project contributions to digitalisation. At the same time, the risks to transition, such as increased carbon emissions, the growing digital divide and cyber vulnerabilities, will need to be carefully managed and mitigated to avoid transition reversals.

Table 2. Stylised theory of change: digitalisation for greater impact on EBRD transition qualities



The key performance-tracking indicators, in the form of a performance dashboard, will reflect the features and focus of this approach. The dashboard will include selected measures on three key components: (i) what will change inside the EBRD as a consequence of the proposed approach; (ii) the enhanced engagement and scaling up of activities and inputs the Bank will deliver to clients, targeting key challenges (such as skills or regulation) and lagging regions; and (iii) key output and selected immediate outcome indicators for

the economies in which the Bank invests, focusing on key challenges.

Transition impact will be delivered through EBRD investment, policy engagement and technical assistance, with a results framework including baseline and targets. The detailed menu of inputs, outputs and outcomes measured by the compendium of indicators that will be used to gauge the Bank's performance and results will require enhanced internal processes and systems.

Table 3. Approach to the digital transition – performance dashboard

PERFORMANCE AND RESULTS	ILLUSTRATIVE TRACKING INDICATORS
Internal enablers Strengthened internal EBRD capabilities to enhance its support for digitalisation	
• Strengthened internal EBRD capabilities	No. of digitalisation-related capacity-building activities delivered to EBRD staff No. of EBRD staff trained on digitalisation-related capacity-building
• Developed innovative instruments and products	No. of new EBRD digitalisation-related instruments and products
INPUTS AND ACTIVITIES Strengthened EBRD engagement with clients and partners to address key challenges	
• Increased investment, policy and advisory services to support digitalisation, specifically: ◦ ICT infrastructure improvements ◦ skills development ◦ legal and regulatory improvements	No. of [investments/policy engagements/advisory services] signed that are tagged as digital, of which: ◦ supporting ICT infrastructure improvements ◦ supporting skills development Supporting legal, regulatory and institutional improvements
• Increased investments, policy and advisory support in countries with the largest gaps	No./share of [investments/policy engagements/advisory services] tagged as digital signed in countries lagging on digital development (SEMED, Central Asia and Western Balkans)
• Increased investments in fintech and other innovative firms	No. of [equity/VCIP/venture capital/tech fund] investments signed with digital-first companies
• Increased partnerships to support digitalisation	Volume of donor financing raised on digitalisation No. of digitalisation-related external partnerships
• Increased digital-related knowledge products for clients	No. of digitalisation-related knowledge products disseminated
OUTPUTS AND CLIENT-LEVEL OUTCOMES Enhanced digital products, services and capacity for and by EBRD clients in three focus areas	
Establishing the foundations of a sustainable and inclusive digital economy	
• Improved capacity and digital skills of firms and end users	No. of [firms/households/individuals] trained in digital skills
• Increased number of end users with access to ICT infrastructure	No. of [firms/households/individuals] with improved access to ICT-related services
• Improved legal and regulatory framework supporting digitalisation	No. of improved legal, institutional or regulatory frameworks enabling digitalisation
Incentivising adaptation by firms and organisations	
• Increased number of firms and public-sector entities using digital services	No. of [firms/governments/public sector organisations] using digital platforms
Targeting innovation and sustainable growth among digital-first firms	
Increased number of firms that use digitalisation to improve processes and product sales	No. of clients introducing digital-related process, organisational or marketing innovations
Increased number of firms with innovative product offerings that capitalise on digitalisation	No. of clients introducing digital-related product innovations

7. The way forward

7.1 Short-term implementation

To prepare itself to deliver on its objectives, the EBRD will need to ensure appropriate resources and accountability mechanisms are in place. To minimise structural changes that would disrupt business and keep requests for additional resources to a minimum in this challenging budgetary environment, the following elements are proposed as a starting point. Management will keep these elements under review and, where necessary, incorporate specific requests into the SIP.

i. Digital transformation hub

A small central hub will be established within the Client Services Group/VP3, given the cross-cutting nature of the digital transformation. This is analogous to the early stages of the Bank's GET approach and the creation of the Energy Efficiency and Climate Change (E2C2) initiative. The hub will coordinate the EBRD digital work, tracking progress and providing support and guidance to the relevant teams, including on managing associated donor funds. This function will also take the lead on external engagement and outreach.

ii. Digital champions across the Bank

Within both the client-facing teams and the support functions, such as the Environment and Sustainability Department (ESD), there will be "spokes" connected to the "hub", which will act as champions for digitalisation, raising awareness, sharing best practices and feeding back information on progress. The main sector teams – SIG, FI and ICA – are likely to need specialist expertise to successfully incorporate digital transformation into project and policy work.

iii. Development of digital skills for the EBRD

The upgrading of digital skills across the Bank will be essential to the successful delivery of the digital transition and will be a strategic priority, in line with the SCF and this approach. The objective should be to ensure a basic understanding among all staff, while developing more specialist expertise in client-facing staff, both at headquarters and in the resident offices. Similar to the approach taken on the GET, the starting point should be a skills audit to identify existing capabilities within the Bank. This would be followed by "build, hire, borrow or buy" decisions. Likely outcomes would be a learning

and development programme (Academy) to bolster in-house skills; selective recruitment for specific roles; and secondments from/partnerships with cutting-edge technology companies and academic institutions to ensure in-house capabilities remain current.

iv. Consultant roster

While some skills can be developed internally or recruited externally, there is also likely to be a need for specialist expertise on an as-needed basis. This is likely to be the case in specialist areas where demand for know-how is intermittent but intense, for example, in project preparation.

7.2 Longer-term goals

While the Bank can build on its existing structures and capabilities, this may not be sufficient to fully meet the expectations of shareholders, as set out in the SCF. There is a complementarity to and synergy with the internal overhaul of the EBRD's technology platforms through the MYIP. The arrival of the new VP Transformation presents an opportunity for the Bank to become a more agile, learning organisation on its digital journey.

A more effective internal IT architecture would also enable better engagement with clients, donors, contractors, partners and, of course, staff. These efficiencies will allow more capacity to be focused on achieving impact for EBRD clients. The know-how acquired could, where appropriate, also be deployed in the countries where the Bank operates, boosting its credibility as a digital actor.

i. Internally: End-to-end platform modernisation and integration to support efficiency and learning and improve the quality of data

Replacing or upgrading fragmented systems and the processes they enable will improve efficiency and quality and make better data available to support learning and decision-making. This, in turn, provides a platform for advanced analytics and automation using AI and other modern techniques. Of critical importance is greater flexibility to change and adapt the platform as the Bank's mission and the markets in which it works evolve in future.

ii. Externally: A coherent and contemporary public digital presence, offering deeper and richer interaction with EBRD clients and partners

The Bank will capitalise on those internal improvements to build faster, easier, more secure ways to share data and knowledge with partners, reducing the manual monitoring and reporting burdens on both EBRD and external staff and providing deeper insights into the progress on and impact of its activities. Services to clients should be improved by increasing the adoption of intelligent and responsive digital processes, freeing up staff time to focus on more value-added activities.

7.3 Conclusion

In conclusion, digital technologies are fundamentally changing economies and societies around the world. While there are risks, the deployment of these technologies offers great opportunities to address many of the transition challenges facing the economies in which the Bank invests, serving as an important enabler of the EBRD's mandate. Thanks to its demand-driven business model, private-sector focus and strong field presence, the EBRD is uniquely placed to support its investee economies on their own digital journey. This approach paper is the first roadmap.

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