



Digital  
Cooperation  
Organization



# DIGITAL PROSPERITY REPORT

Issue 1 / H1 2022

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# Opening remarks



**Børge Brende**

*President of the World Economic Forum*



At the recent World Economic Forum 2022 Annual Meeting held in Davos, Switzerland, the Digital Cooperation Organization (DCO) and World Economic Forum co-launched the Digital FDI Initiative – a pioneering initiative for foreign direct investment (FDI) in the digital economy. Alongside the DCO Secretary-General Deemah AlYahya, it was a pleasure to unveil this initiative which aims to help countries identify and implement regulations to make their digital economies more investment friendly.

As global FDI rebounds following COVID-19 – up 77% from pre-pandemic levels to \$1.65 trillion in 2022 – investment in the digital economy is an immense opportunity. Likewise, internet usage is up 70% since the start of the pandemic, the use of communication apps has doubled, and some video-streaming services have seen daily usage expand 20-fold. Indeed, World Economic Forum research predicts that an estimated 70% of new value created in the economy over the next decade will be based on digitally enabled platforms.

Digitalization is gradually permeating all economic sectors and is key to economic development. Some of the fastest-growing firms in the world are in the digital sector, creating a huge pool of capital and opportunities for investment to benefit recipient economies. With FDI not only bringing capital, but also knowledge and technology, digital FDI is a definite way to boost long-term growth, competitiveness, and sustainable development.

Founded In 2020, the DCO's task to unlock digital prosperity for all is closely aligned to the World Economic Forum's own mission of creating prosperity through partnerships. We see the DCO as a catalyst of growth in its member state economies, representing over 600 million people, and a unifying body through which inclusive growth of the digital economy can be realized. The DCO's potential is evident in how it brings together public and private sector stakeholders from around the world for a shared cause.

The Digital FDI Initiative will be implemented in several countries, with the first project taking place in member state Nigeria. We are excited about this joint effort with the DCO and look forward to seeing the results of this project.

It is a pleasure to write the opening remarks for this first report. I invite readers to learn more about this dynamic multilateral and the opportunities being jointly created in this emerging economic corridor. I am happy that we'll work alongside the DCO to contribute to the development of the digital economy.



# Key insights

## The DCO welcomes three recent joiners:

Morocco, Rwanda, and Djibouti, bringing the number of member states to 10.

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## Gender inequality in funding worldwide.

Only 2% of funding goes to female-led start-ups.

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## Rwanda is driving forward a \$200 million Digital Accelerator Program

that will enable 3.5 million Rwandans to own and use digital devices.

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## The rise of digital banking in Pakistan.

The country saw \$500bn of digital transactions in 2021.

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## 120+ data protection laws are currently in place globally

to protect data flows and end users in the digital age.

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## The key ingredients to Estonia's success as a leading digital society.

How e-government democratizes data, creates a level playing field and a fairer marketplace.

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# DCO in focus

The Digital Cooperation Organization (DCO) is a unique, intergovernmental global agency, founded in 2020, dedicated to advancing digital cooperation and enabling prosperity for all. It aims to advance national and global digital transformation, influence evidence-based policy making, promote the inclusive development of the digital economy, and address the long-term challenges posed by the global pandemic.

The DCO member states and observers complement their local efforts with a collaborative, multi-lateral approach that encourages growth through inclusivity and transparency.

Through open channel discussions with various stakeholders, the DCO has a uniform approach to multilateral collaboration that allows governments, the private sector, and civil society to co-design impact-driven initiatives for the digital economy.

## Overview of DCO Founding Member States



### Bahrain<sup>1</sup>

- Highly connected ICT ecosystem, ICT pioneer in the Gulf Cooperation Council (GCC)
- Ranked 1<sup>st</sup> globally in Network Infrastructure & Internet 1+users in 2021 Inclusive Internet Index
- 19% year-on-year annual growth of cloud data center traffic



### Jordan<sup>2</sup>

- Young, digitally connected population with 70% aged between 0-29
- ICT sector contributes 3.8% to GDP in 2021
- 900 ICT companies employing 22,000 people in 2022



### Kuwait<sup>3</sup>

- Pioneer in 5G, with rollouts since mid-2019 by telecommunications providers
- ICT sector contributed 12% to GDP in 2021
- 157% mobile penetration rate, 2<sup>nd</sup> highest in the GCC



### Saudi Arabia<sup>7</sup>



- 1<sup>st</sup> globally for 5G downloads, 35% of country covered with 5G towers
- \$36 billion in ICT market value in 2022
- Top 10 fastest mobile speeds in the world



### Pakistan<sup>6</sup>

- ICT sector contributes 1% of GDP in 2021
- Has over 300,000 English-speaking ICT professionals
- Mobile market economy set to reach \$24 billion in size by 2023



### Nigeria<sup>4</sup>

- Population of 210 million in 2021, growing to 263 million in 2030
- ICT sector contributed 17.9% to GDP in 2021
- Has 5 tech unicorns (start-ups valued at over \$1 billion)



### Oman<sup>5</sup>

- Muscat selected as Arab Digital Capital for 2022 by Council of Arab Ministers of Communications and Information Technology
- ICT sector contributes 2.1% to GDP in 2021
- Ranked 21<sup>st</sup> globally in the Global Cybersecurity Index in 2020

<sup>1</sup> 'Technology Innovation & ICT Sector' Invest Bahrain

<sup>2</sup> 'About Jordan' Ministry of Digital Economy and Entrepreneurship

<sup>3</sup> 'Digital Transformation in Kuwait's ICT Industry' KFAS

<sup>4</sup> 'Nigeria ICT sector growing in leaps and bounds' Nigeria Communications Commission

<sup>5</sup> 'Digital Indicators' Ministry of Transport, Communications and Information Technology of Oman

<sup>6</sup> 'Invest Pakistan ICT Sector Overview' Invest Pakistan

<sup>7</sup> 'Saudi Arabia Investment Highlights ICT' Invest Saudi

## Welcoming the latest DCO member states

The DCO is constantly growing. In H1 2022, our member state list expanded to include Rwanda, Morocco, and Djibouti.



### MOROCCO<sup>8</sup> / April 2022

Morocco, with its population of 36 million, has a 74.4% internet penetration rate, and 117.1% mobile adoption rate. As a major regional digital hub and one of Africa's leading economies, it boasts some of the continent's best technological infrastructure. Through the Digital Morocco and Horizon 2035 strategies, it has designated the development of the digital economy as key growth areas for the country.

### DJIBOUTI<sup>9</sup> / May 2022



Through its ICT Integrated Strategic Plan, Djibouti's government aims to grow the ICT sector and sees the digital economy as a key opportunity for development in line with its Vision 2035. With plans to privatize parts of the sector, the World Bank committing \$10 million to develop the digital economy, and 59% of people using the internet, the potential for growth in this dynamic East African market is immense.



### RWANDA<sup>10</sup> / December 2021

As one of Africa's fastest growing economies, Rwanda is prioritizing digital economy development through the Smart Rwanda Master Plan and National Information and Communication Infrastructure strategy. Ranked 2<sup>nd</sup> for ease of doing business in Africa and seeing 29% year-on-year growth in ICT in 2021, initiatives like the new Centre for the Fourth Industrial Revolution and Kigali Innovation City are positioning the country as a tech-leader and start-up hub on the continent.

<sup>8</sup> 'Note d'Orientations Générales pour du Digital au Maroc à horizon 2025' Kingdom of Morocco

<sup>9</sup> 'New Project to Support the Emergence of a Digital Economy in Djibouti' World Bank

<sup>10</sup> 'Individuals using the Internet (% of population) in Djibouti' ITU

<sup>10</sup> 'Smart Rwanda Masterplan' Ministry of ICT of Rwanda

## In addition to member states, DCO works with valuable observers and partners

### Observers

Observers ensure the DCO's cooperation with the private sector, providing perspective, capabilities and resources which contribute to the organization's success. Observers can work with the DCO regardless whether their origin or headquarters is in one of the DCO member states or not.



### Partners

Partners offer all kinds of support on specific initiatives and projects. This could include knowledge sharing, expertise, funding, policy advice, educational support and other services. Partners are typically for-profit or not-for-profit organizations covering public-, private- and third sector parties.





# 1 PEOPLE

The digital economy:  
Enabling prosperity for all



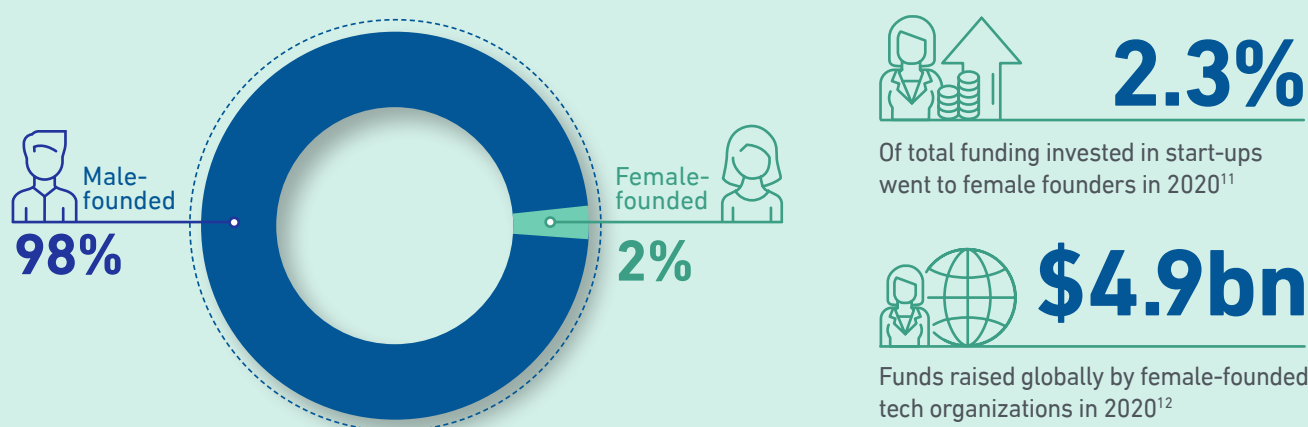


# Addressing gender inequality and the funding gap for vulnerable categories

In pursuit of achieving the objectives of the UN's Sustainable Development Goals (SDGs) and the 2030 Agenda for Sustainable Development, the right economic conditions must be created for the digital economy to be truly inclusive.

Worldwide, reporting shows that female founders and female-only founding teams received merely 2.8% of start-up funding in 2019, while 2020 saw only 2.3% of all funding go to female founders.

## Total funding by gender in start-ups worldwide (2020)



The funding gap remains a global issue. The largest tech market, the USA, saw an 84% year-on-year funding increase for female-founded organizations. However, the absolute value remains minute compared to funding channeled to male-founded organizations.<sup>13</sup>

In Africa, female tech founders represented only 1% of all funds raised by tech entrepreneurs. African start-ups, meanwhile, have seen up to six times the global average funding growth in recent years. Africa is a continent of entrepreneurs – with 22% of working-age people starting their own businesses – and, as the adoption of digital finance mechanisms and mobile devices increase, entrepreneurs will increasingly incorporate such digital tools in their operations.<sup>14</sup>

Across the Middle East and North Africa, start-ups founded by women raised a total of \$34 million in 2021 – this is just 1.2% of the region's total tech venture capital expenditure.

Teams with at least one female co-founder raised \$244 million across 113 funding rounds, with start-ups like Kitopi, from the UAE, and Unifonic, from Saudi Arabia, raising \$415 million and \$125 million, respectively. With females accounting for up to 60% of Science, Technology, Engineering, and Mathematics (STEM) in many Middle Eastern markets, the growth opportunity for female-led enterprises is immense. Many female entrepreneurs are already paving the way forward for the future of their economies – a trend that may increase with better funding environments.<sup>15</sup>

<sup>11</sup> 'Global VC Funding To Female Founders Dropped Dramatically This Year' Crunchbase

<sup>12</sup> 'AllRaise annual report' AllRaise

<sup>13</sup> 'Venture Funding Hit A Record In 2020. For Women Founders, It Dried Up.' Forbes

<sup>14</sup> 'The rise of African tech startups in 3 charts' World Economic Forum

'Closing the Funding Gap for Africa Tech Startups' Tony Blair Institute for Global Change

'FinTech Leads in African Startup Investment But Huge Funding Gap Remains' All Africa

<sup>15</sup> 'Investment in women-led startups' Wamda

'Women-led startups in MENA raised \$34.6m in 2021' Zawya

## Ensuring diversity by increasing digital inclusion

The inclusion of female entrepreneurs is a crucial component of DCO's digital transformation manifesto goals. The gender gap in internet usage in different DCO member states ranges from 14% in Jordan to 40% in Pakistan, while the gender gap in mobile phone use continues to be an issue across many countries.<sup>16</sup>

In STEM education, women are also underrepresented. While, globally, 35% of men pursue STEM studies, only 18% of women do. The digital gender gap in STEM exceeds 50% in Oman, leading to a low-

er readiness of women for the demands of the digital economy.<sup>17</sup>

According to the International Labor Organization (ILO), the median share of women in ICT across 116 countries is under one-third. Women hold only 24% of leadership and executive positions in the ICT sector globally.<sup>18</sup> In Nigeria, women hold 20% of senior management roles and just under 20% of board roles in ICT companies.<sup>19</sup> In Saudi Arabia, the percentage of women working in the ICT sector has risen four times in five years, from 7% in 2017 to 29% in 2022.<sup>20</sup>



## The DCO Observatory for Digital Empowerment

As one of the DCO's key initiatives, the DCO Observatory for Digital Empowerment is a recognition by the member states that current cultural, societal, economic, and regulatory factors are limiting the empowerment of all underserved groups and individuals in the digital economy. Member states recognize that,

in many parts of the world, certain groups have unequal access to digital technologies and lag behind others in access and use of the internet and mobile phones. Finding efficient solutions to these ongoing issues will be a main priority of the DCO and the Observatory going forward.

<sup>16</sup> DCO data provided

<sup>17</sup> DCO data provided

<sup>18</sup> Tech's persistent gender gap' International Labour Organization

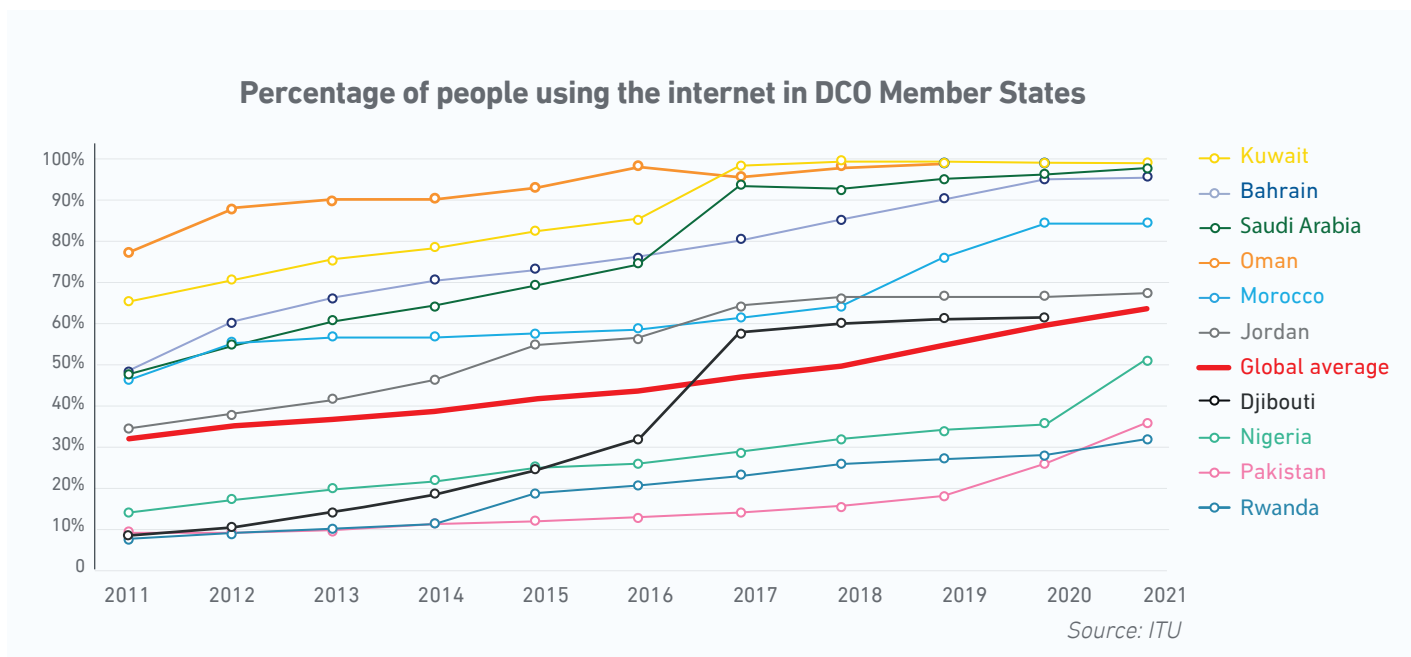
<sup>19</sup> DCO data provided

<sup>20</sup> Saudi Ministry of Communication and Information Technology

# How the digital economy can bridge financial gaps and promote inclusive economies

While global poverty has been declining over the last few decades, the economic impact of COVID-19 could push over 250 million people back into extreme poverty.<sup>20</sup> Almost half the world's population still lives on less than \$2 per day, and in many parts of the world, inclusive economic growth is still lacking. With unemployment rates also increasing amid COVID-19, the digital economy presents an opportunity to create opportunities that would result in innovative new jobs and stimulate entrepreneurialism in new subsectors of the economy like e-commerce and FinTech.

Key to these solutions will be the thorough development of digital infrastructure, and empowering populations with the tools to participate in the digital economy. Access to the internet is regarded as one of these metrics. In 2020, however, only 53% of people, and 16% of the world's poorest, had access to the internet.<sup>21</sup> Government and private sector investment in the necessary infrastructure, hardware, and software to boost this interconnectivity is therefore crucial to targeting growth in new sectors in pursuit of the SDG goals.



The Smart Africa Alliance is evidence of how countries can collaborate to connect the digital economy to sustainable development.<sup>22</sup> Launched in 2014 as an initiative of seven countries (Rwanda, Kenya, Uganda, South Sudan, Mali, Gabon, Burkina Faso), Smart Africa now includes 30 African coun-

tries representing over 700 million people. Integrating tech investment across all sectors, Smart Africa sees investment in broadband and digital infrastructure, digital skills and access to internet as vital to socio-economic development and the evolution of all economic sectors.

<sup>20</sup> Oxfam 2022

<sup>21</sup> ITU 2021

<sup>22</sup> Smart Africa website



## Room for tech start-up accelerators

Tech accelerators have also emerged as key enablers to harness the potential of a country's human capital and position small organizations to grow in line with wider socio-economic goals. These accelerators offer support structures to empower entrepreneurs and vulnerable groups to bridge the gaps that exist within economies.

### Tech Accelerators active across Africa

Start-up networks such as Johannesburg-based VC4A and 22onSloane create ecosystems that connect early-stage companies with financiers and each other. VC4A connects over 8,500 companies across the continent and has helped 42% of these receive external funding. 22onSloane, meanwhile, provides start-up support, including tech-support and mentoring, while putting entrepreneurs on equal footing to connect to global networks of investors.<sup>23</sup>

These accelerators are active across the continent and are leveraging the attractive setups of countries like Nigeria, Morocco, and South Africa to build cross-continental networks. Likewise, Rwanda's first accelerator, the Rwanda Creative Hub, is providing start-up support and investment grants to promising innovators in the country.



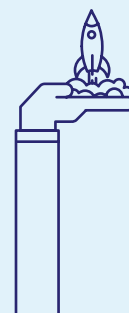
### Accelerators active in Pakistan

In Pakistan, at least 44 start-up accelerators create more equal footing in the investor environment for women-led organizations. Women-led organizations in Pakistan receive only two thirds of the amount of investment compared to their male peers and often fall out of venture funding pipelines.<sup>24</sup> Networks like We-Fi, however, are addressing this by focusing on making venture capital ecosystems more diverse and inclusive. We-Fi offers early-stage support and tailored mentoring for female entrepreneurs to thrive in the digital economy.



### Accelerators active in Saudi Arabia

Saudi Arabia's booming start-up ecosystem is empowered by an attractive regulatory environment and strong support from regulatory bodies. The Kingdom's young, tech-savvy consumer base, known for its appetite for e-commerce and on-line services, has created a market environment that empowers creative female entrepreneurs within enablers like Blossom Accelerator. Blossom is Saudi Arabia's first tech-inclusive female-focused accelerator, which provides founders access to a broad network, educational resources, and investment opportunities. The diversification of Saudi Arabia's economy, in line with Vision 2030, is leading to the emergence of a new set of visionary female founders.<sup>25</sup>



<sup>23</sup> VC4A website / 22onSloane website

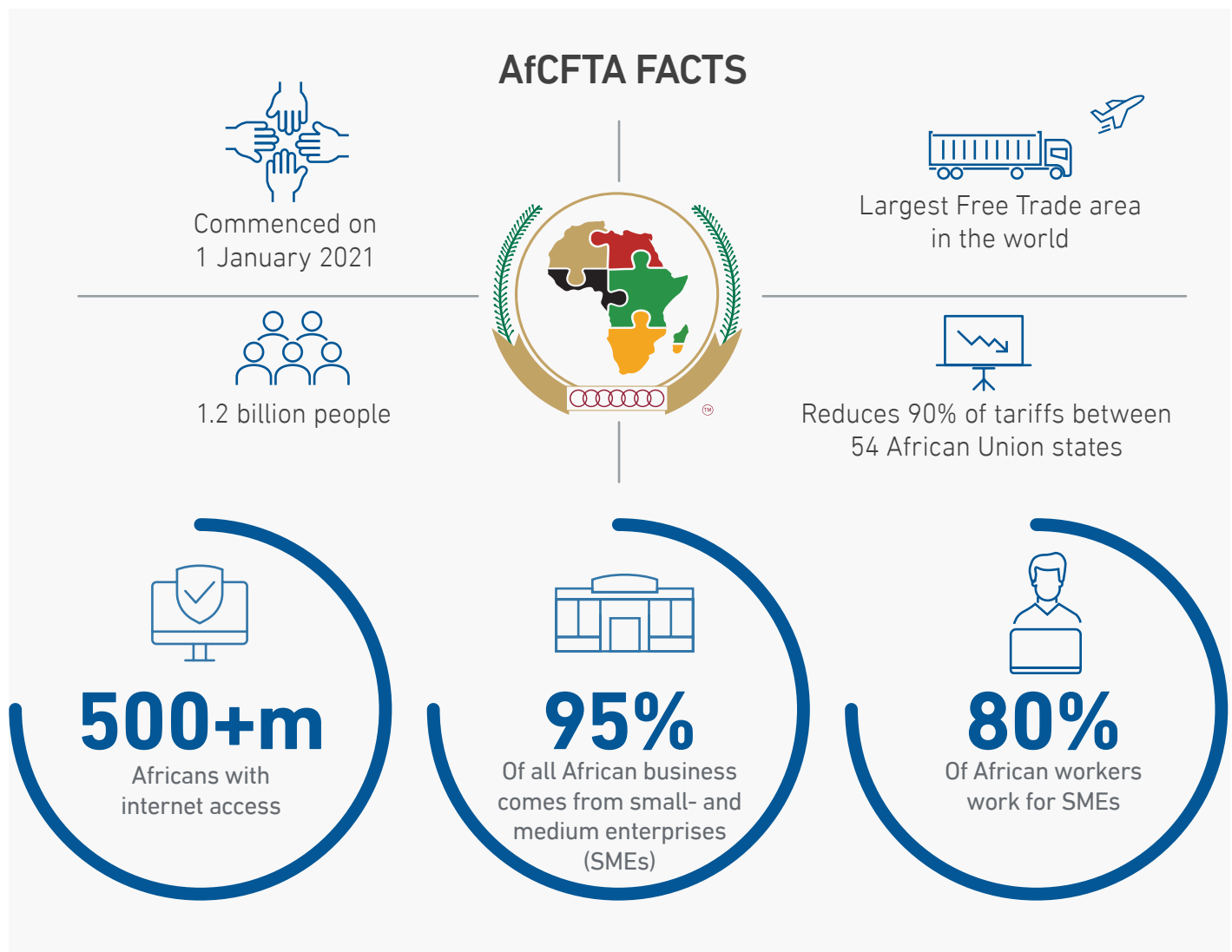
<sup>24</sup> WeFi (Women Entrepreneurs Finance Initiative) - 'Helping Scale Pakistani High-Growth Women Entrepreneurs'

<sup>25</sup> Saudi Incubators & Accelerators website

# Creating robust and stable investment and funding environments for tech organizations in the African Continental Free Trade Agreement

The African Continental Free Trade Area (AfCFTA) was founded in 2018, with trade commencing on 1 January 2021. With 54 of 55 participating African Union (AU) nations, it is the largest free trade agreement in the world. The agreement requires members to remove tariffs from 90% of goods, allowing free access to commodities, goods, and

services across the continent. AfCFTA will lead to deeper economic integration, easier facilitation of investments and freer movement of capital and business flows. AfCFTA is an opportunity for cross-continental business integration, which can unlock the immense potential of Africa's digital economy.<sup>26</sup>



<sup>26</sup> 'The African Continental Free Trade Area' The World Bank



# 2.5bn

Africa's population in 2050



# \$3tn

Potential economic output that AfCFTA can unlock



# \$155bn

Mobile-tech opportunities across Africa by 2025



# \$490bn

Potential digital transactions across Africa by 2025



# 75%

Smartphone adoption rate in North Africa by 2025



# 50%

Of all trade will be Intra-African by 2025

27

Digital technologies can act as a catalyst for growth. FinTech solutions, for example, can be deployed to the benefit of investors, start-ups, exporters, and traders across the continent. Foreign and local investors who find an integrated, welcoming environment can better engage with potential investees. This creates an environment for entrepreneurs to easily source funds, implement deals, and ensure smooth communication between

intermediaries and new partners.

Digital platforms that facilitate investments, like Orbitt, use analytics, transaction automation, and smart deal matching to increase deal flow and success rates. Platforms such as these allow for easier access to capital, scalability, and access to new markets. Such platforms will be instrumental to Africa's digitization and realizing AfCFTA's potential.<sup>28</sup>



<sup>27</sup> 'AfCFTA: A Three Trillion Dollar Opportunity' Oxford Economics

<sup>28</sup> 'The digital transformation strategy for Africa' African Union



## Empowering SMEs through e-commerce and AfCFTA

SME digital empowerment will be critical to economic development. Digitalization allows SMEs access to investors, new suppliers, and customers, while streamlining operations, production, sales and revenue.<sup>29</sup> E-commerce and social media platforms also allow nearly unrestricted access to interface with customers across the continent (and the world).

African product amplification through social media and market migration to e-commerce is a clear opportunity for African start-ups and their financial backers. While momentum is on the side of the growing number of successful tech start-ups across the continent, this investor empowerment needs to occur equitably.

According to the African Development Bank, over 80% of venture capital flowing into African tech organizations land in the pockets of start-ups located in just four countries: South Africa, Nigeria, Kenya, and Egypt.<sup>30</sup> With capital entering the market, and digital start-ups taking off, the continent must move at the same speed.

### 80% of venture capital in Africa goes to four countries

Egypt



Nigeria



Kenya



South Africa



## AfCFTA is an opportunity for shared digital economy objectives

The economic success of single market areas like the EU will motivate African countries to continue integration efforts to ensure easier, faster, and cheaper cross-border trade and capital movements. AfCFTA is an opportunity to stimulate investment, scale start-ups, and empower entrepreneurs through a free-moving ecosystem of people, capital, goods, and services.

AfCFTA is a welcome prospect for investors looking to see the continent realize the potential of its digital economy. However, African countries need to have a shared vision for data flow and trust. Without robust data protection regulations, investors could be suspicious of investing in African start-ups, leading to potential economic losses and missed opportunities

for job creation. Investors may choose markets with clearer data protection regulations, exacting a considerable cost on African economies. Identifying policy gaps and addressing these policies will ensure the development of a continental digital economy with equal opportunity.<sup>31</sup>

This should be complemented with the promotion of technology-enabled interventions that facilitate the development of the necessary physical infrastructure and easier access to software and other ICT equipment. Similarly, the public and private sector alike should understand the huge opportunities that lie in boosting internet access for all Africans and how a better-connected continent will lead to valuable economic gains.

<sup>29</sup> 'SME's in the online platform economy' OECD

<sup>30</sup> 'Entrepreneurship and Free Trade: Volume II' Africa Development Bank

<sup>31</sup> 'Lawyers across Africa comment on need for data privacy laws' Baker McKenzie

# Interview

**H.E. Paula Ingabire**, *Minister of ICT and Innovation in Rwanda*



► **What are your growth expectations and ambitions for the development of Rwanda's digital economy?**



Rwanda's digital economy strategy of "leaving no one behind" is premised on four pillars: Inclusive and affordable digital infrastructure; Digital skills for all; Citizen-centric digital services; and Digital platforms, digital entrepreneurship, and innovation.

Rwanda's vision to be a knowledge-based economy is supported by quantifiable targets, including 60% adult digital literacy rate and 100% youth digital literacy by 2024. Other goals include digitized government services; the digitalization of micro, small, and medium enterprises; digital financial inclusion and cashless services for all; and positioning Rwanda as a Proof-of-Concept (POC) Hub for digital innovation.

► **What are some of the major digital economy development projects underway in Rwanda?**

Rwanda has put ICT at the center of our socio-economic development through a 20-year vision. Anchored to this 20-year vision, multiple investments in ICT infrastructure have been made, including over 2,500km of fiber backbone network in every district and border point in the country. Building on government investments, telecommunications operators have deployed infrastructure too. Today, we have over 95% 3G and 4G LTE coverage in Rwanda.

Infrastructure alone is not enough to deliver on our ambitions of transforming into a digital economy, so we invested in providing access to the digital economy and putting devices in the hands of citizens through projects like the One Laptop Per Child, Smart Classrooms Initiative, and #ConnectRwanda.

Over 416 public service access points that serve as spaces where citizens can access the internet and digital services were deployed across the country to com-

plement private cyber cafes. In addition, we launched a Digital Ambassador's program to identify and recruit community leaders, help them train communities on digital literacy skills, and serve as digital service agents bringing services closer to the citizens.

► **How is your Ministry working to drive digital inclusion in the country?**

Rwanda's digital transformation agenda is driven by digital inclusion, aiming to ensure equal access and use of digital technologies. To achieve this requires a multi-dimensional approach that bridges gaps in digital literacy, provides better infrastructure, and supports relevant content creation in local languages.

We must pay attention to vulnerable groups where the digital divide is still evident. Targeted groups include people with disabilities, low-income households, people living in rural areas, women, and girls. The government continues to champion efforts encouraging women in ICT and STEM.

With the support of the World Bank and Asian Infrastructure Investment Bank we are driving forward a \$200 million Digital Accelerator Program. This program will enable 3.5 million Rwandans to own and use smart devices through digital literacy and device financing initiatives. We want to equip 75% of Rwanda's citizens with digital IDs by 2024 as one way of improving financial inclusion.

► **How do you see collaboration among DCO countries steering the growth of the digital economy?**

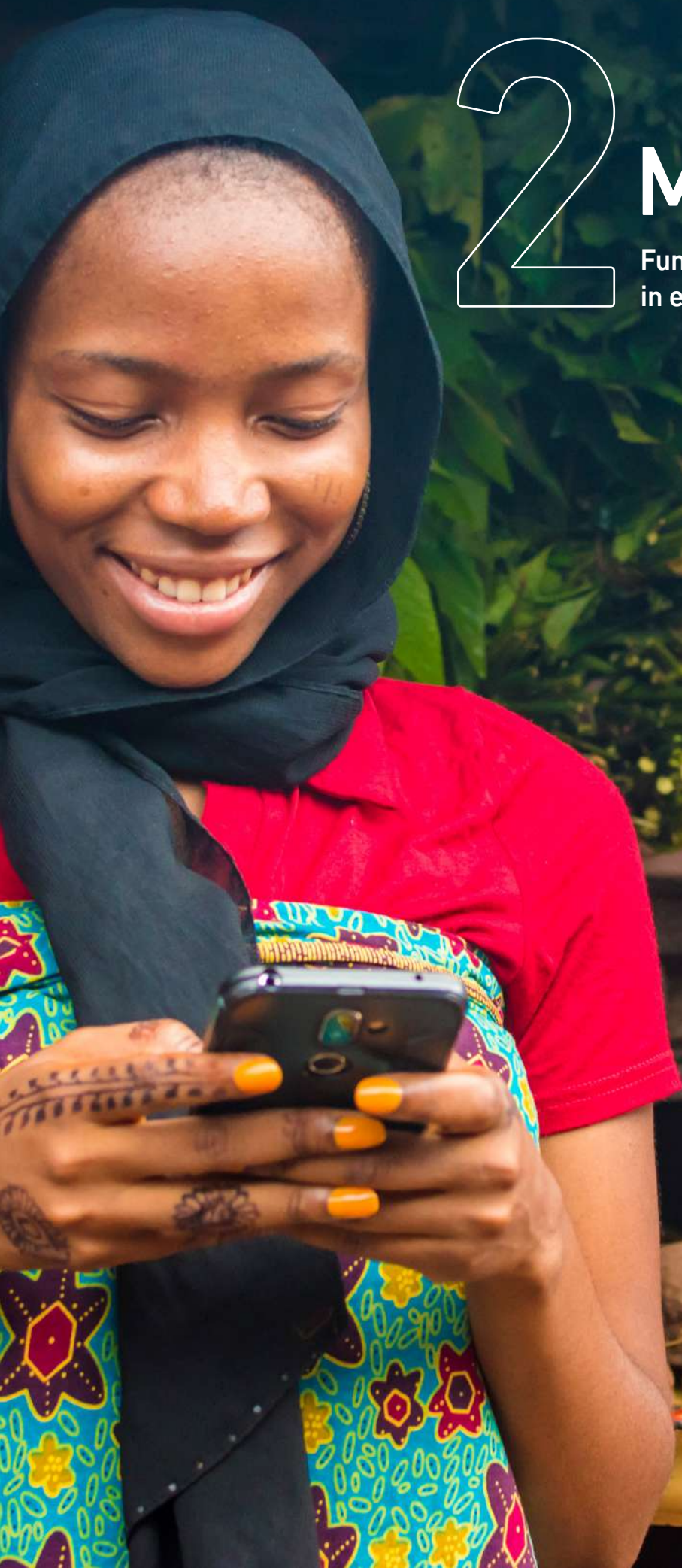
Country-specific laws are not truly effective if adopted in isolation. A unified approach to data protection legislation and other laws that unlock cross-border data flows is important. Tech-driven start-ups and companies need legal certainty and recourse, and would greatly benefit from streamlined and harmonized regulatory policies to scale sustainably.

Secondly, aggregating our markets as DCO member states is crucial. The digital inclusion gaps we are all working to bridge are similar. They are just different in scale. We could greatly benefit from the economies of scale that come with aggregating our needs and demands as member states.



# 2 MARKETS

Funding boom for tech start-ups  
in emerging markets





## How are financiers investing in emerging tech markets?

The COVID-19 pandemic dramatically increased reliance on tech-solutions with a digital focus, creating new opportunities for start-ups. This is coupled with the immense efforts by governments to scale up digital infrastructure and create environments conducive to further digital economic growth.

Tech start-ups in food delivery, digital banking,

ride-hailing, telehealth, and remote working software, among others, thrived amid the pandemic and investor interest to be plentiful.

With much tech-investor movement beyond Silicon Valley, funders are looking to new markets for investments. The result has been the emergence of a well-funded ecosystem of start-ups transforming economic realities worldwide.

### Africa tech funding<sup>32</sup>



**\$5.2bn**

VC funding in African tech in 2021



**681**

tech-start-up funding deals in 2021



**92%**

y-o-y increase from 2020



**640**

start-ups raised equity in 2021



**7**

unicorns, 5 in FinTech

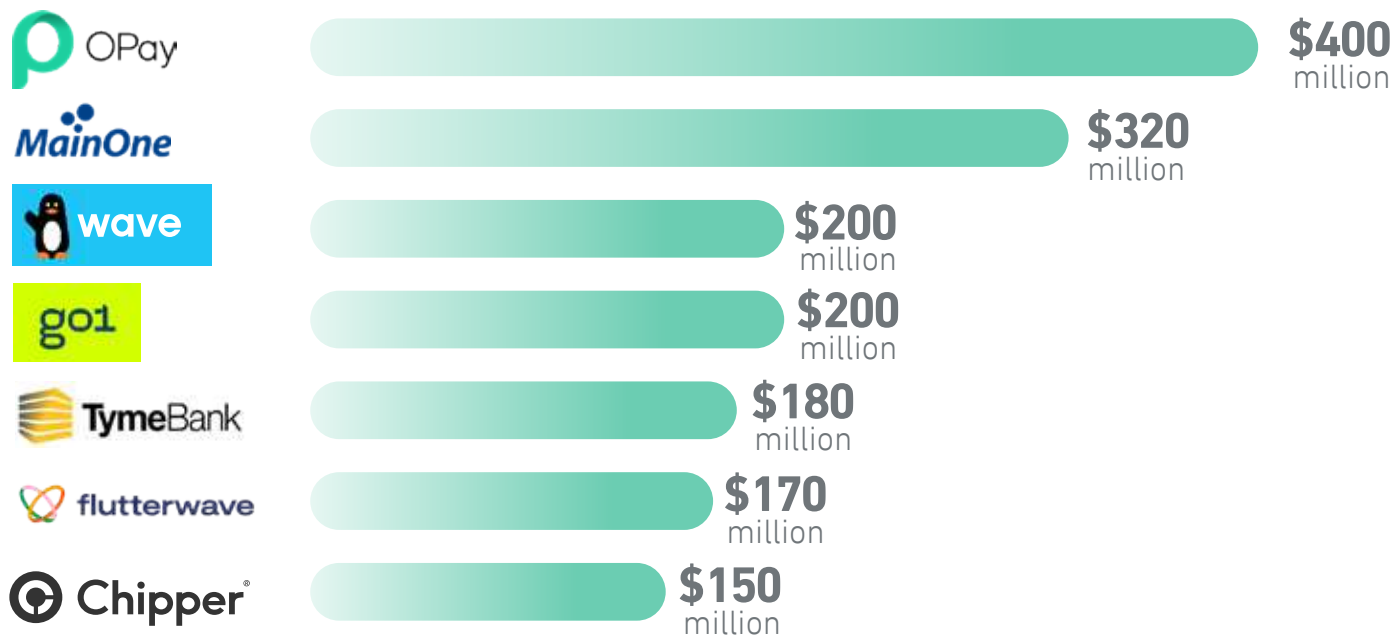


**5**

new unicorns in 2021

<sup>32</sup> 'Venture Capital in Africa' Africa Private Equity and Venture Capital Association  
'2021 Africa Tech Venture Capital' Partech  
'Tech in 2022: Building on the unicorn boom' African Business

## Top recent tech deals in Africa<sup>33</sup>



## 500 Global's investments in DCO member states<sup>34</sup>

Venture capital funds like 500 Global, which started in Santa Clara in the United States, are backing homegrown talent in emerging markets through funding and support. 500 Global has funded 2,600 start-ups in 75 countries.



<sup>33</sup> African tech took center stage in 2021" TechCrunch

'Venture Capital in Africa' Africa Private Equity and Venture Capital Association

'2021 Africa Tech Venture Capital' Partech

'African tech sector is sprouting unicorns and raking in billions' Bloomberg

<sup>34</sup> 500 Global Companies

## Start-up funding boom in Saudi Arabia and Pakistan

  
**\$6.4bn**

In Saudi Arabia, Saudi Aramco, NEOM Tech & Digital, and Prosperity7 have announced that they, too, are getting in on the funding boom by committing \$6.4 billion in future technologies and entrepreneurship investment.<sup>35</sup>

  
Prosperity7

 NEOM نيوم



  
**\$85m**

Pakistani start-ups received over \$300 million in seed funding in 2021,<sup>36</sup> with much backing coming from international investors optimistic about the market potential. Airlift, an e-commerce platform, is at the forefront of both innovation and investor interest in this market, raising \$85 million in the past year.<sup>37</sup>

  
AIRLIFT



Over the last few years, venture capitalists have spearheaded an investment boom in the digital economy and, today, many flourishing start-ups are transforming their local economies. As these start-ups grow and continue to attract capital, they will attract more funding to themselves and smaller organizations in the same ecosystem. Capital support is crucial to create enabling environments where start-ups can grow and can have a powerful knock-on effect on other parts of the economy.

<sup>35</sup> 'Aramco announces Prosperity7 Ventures' Aramco

<sup>36</sup> 'Funding of Pakistani Startups Crosses \$300 Million This Year' Bloomberg

<sup>37</sup> 'A new dawn for Pakistan: \$85 million in Series B funding' Airlift



# Stimulating start-up growth through a pro-investment climate and cross-border solutions

The economic digital transformation may see up to 24% of total global economic output being digital by 2025. This \$23 trillion economy will be largely driven by public and private investment in digitally transformed traditional industries and emerging industries.



Digitalization increases the scale, scope, and speed of trade. It allows organizations to bring new products and services to a larger number of digitally connected customers across the globe. It also enables organizations, notably smaller ones, to use new and innovative digital tools to overcome barriers to growth, helping facilitate payments, fostering collaboration, avoiding investment in fixed assets through cloud-based services, and using alternative funding mechanisms such as crowdfunding.

## Tectonic shifts for investment attraction

Projections suggest that venture capitalists will maintain their appetite for tech start-ups. As the business world becomes increasingly borderless, these funds will be allocated to new and exciting markets. Investors require transparency, stability, and certainty, and it is proving increasingly important for investment options to adopt uniform reporting standards. With most investors demanding that environmental, social and governance (ESG) best practices are followed, it is not long before no organization will be able to avoid meeting the necessary standards.

This global integration drive requires tech start-ups seeking investments to adopt more uniform and streamlined business models and operations, which are widely considered to be winning recipes for success in the digital economy. Investors and start-ups have greater access to each other through enabling technologies and connectivity platforms. With this new global reach, complex cross-border payments are easier and quicker for investors.

New global settlement mechanisms offer payment options without these bureaucratic burdens. FinTech organizations and banks are opting for technologies like SWIFT GPI, virtual account management, and API connectivity to ensure smooth cross-border transactions. API connectivity provides greater visibility and transparency, while predictability is enhanced through more straightforward transaction methods. Virtual account management solutions, too, mean businesses can quickly spread money across different jurisdictions, accounts, and currencies.<sup>40</sup>

<sup>38</sup> 'Leveraging the opportunities of the digital economy' ITU 2020

<sup>39</sup> 'Leveraging the opportunities of the digital economy' ITU 2020

<sup>40</sup> 'The future of payments: Instant, accessible, ubiquitous' SWIFT

<sup>41</sup> '4 ways digital innovation is transforming the payment landscape' JPMorgan

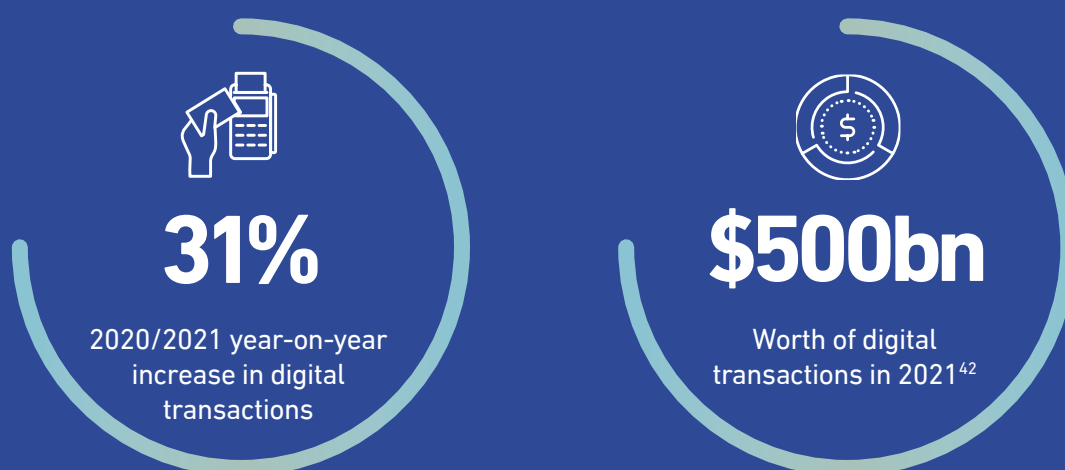
## Borderless and barrier-free

Globally integrated portfolios mean funds can be disbursed to start-ups with greater speed and flexibility. Centralized account structures ensure better payment sequencing and management of detailed reporting on investments. The easier transfer between currencies is also enabling businesses to reduce risk exposure and operate in currencies that make the most sense to their businesses. With a growing demand for real-time payment settling, block-chain and distributed ledger technology also allow for easier cross-border transfers, increasing payment visibility.<sup>41</sup>

These changes are taking place at unprecedented speed. With growing interconnectedness and greater demand for just-in-time delivery, transactions must be fast and reliable. The value of multilateral digital trade agreements and collaboration among diverse stakeholders cannot be underemphasized. The DCO serves as a forum to initiate discussions and work on multilateral digital trade agreements. These discussions can lead to plurilateral agreements among DCO member states and between the DCO and non-DCO countries, empowering investors and start-ups to easily disburse and receive capital.

## The rise of digital banking in Pakistan

In one of the world's most dynamic digital transformation case studies, Pakistan has seen tremendous growth in digital transactions amid the COVID-19 pandemic. According to the State Bank of Pakistan, this upward trend has seen a year-on-year increase of 31% between 2020 and 2021. With at least \$500 billion worth of digital transactions conducted in 2021, Pakistan's governmental efforts to shift the economy to more digitized modes of transactions have been effective.



Newly enacted regulations in Pakistan's Tax Law Ordinance mean companies who make payments of more than \$1300 must do so via digital payment methods. The goal is to curb the distribution of illicit money and unlock the growth potential of the digital economy. As part of this effort, the government introduced the RAAST P2P payment system. The country's first instant payment system, RAAST P2P allows for such end-to-end digital payments among individuals, businesses, and government entities.<sup>43</sup>

With only two out of three Pakistani adults fully banked, digital banking solutions offer an opportunity to further banking inclusion and bring the unbanked into the formal economy. Digital banking solutions are also powerful incentives to ease transactions for SMEs and MSMEs, whereby mobile banking tools can be deployed between suppliers, businesses, and consumers. Similarly, it is a welcome additive to e-commerce solutions, enabling contactless transactions to pass through transparent digital systems. Easy-to-use digital wallets also enable easier savings systems for Pakistanis, deepening the liquidity of households and small businesses alike.<sup>44</sup>

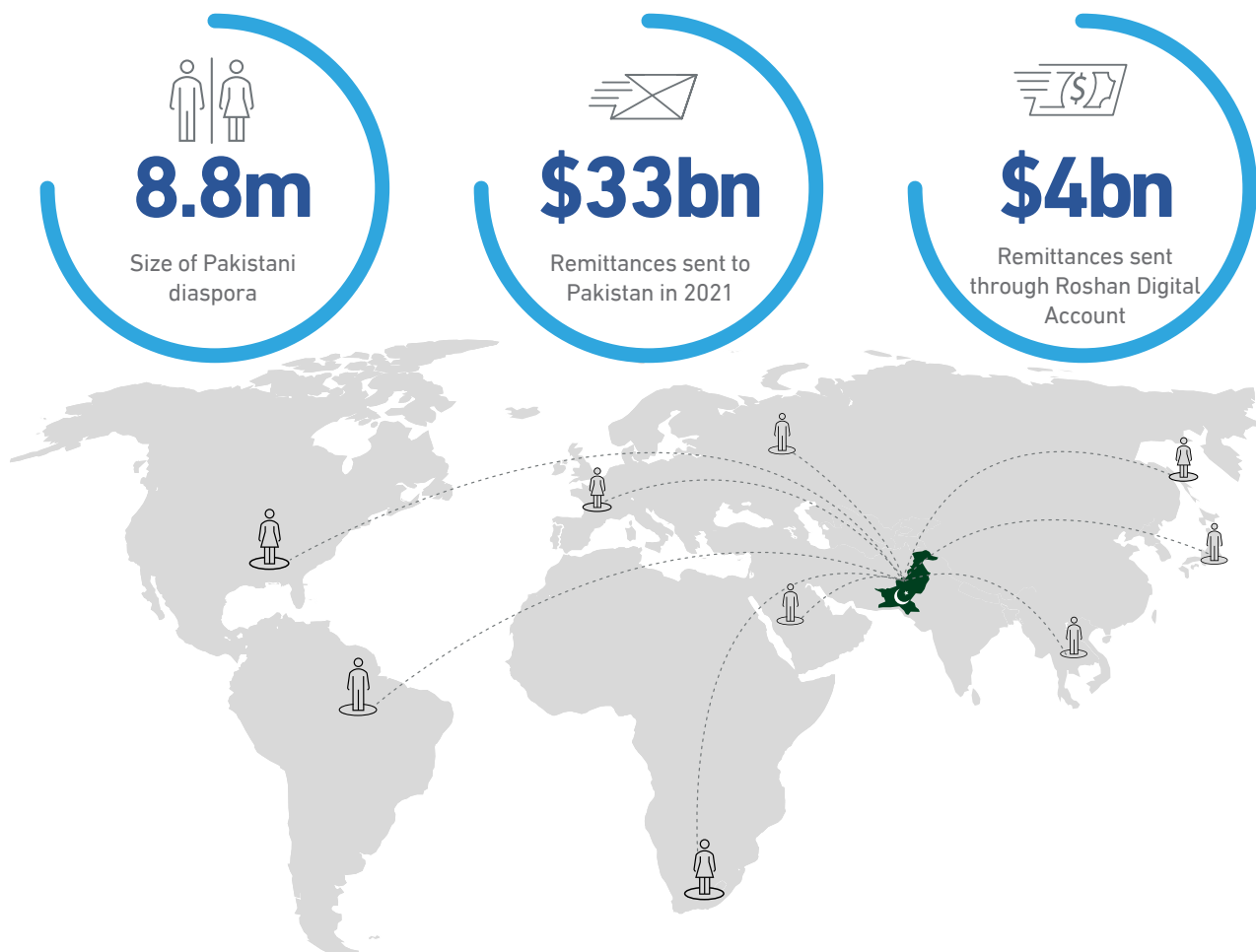
<sup>42</sup> 'Annual Report 2021' State Bank of Pakistan

<sup>43</sup> 'What's behind the rise of digital transactions in Pakistan' Global Village Space

<sup>44</sup> 'Central bank unveils new digital account' Arab News

## Bringing remittances closer to home

With over 8.8 million Pakistanis living abroad, more than \$33 billion in remittances were sent back to Pakistan in 2021 alone. This figure was a 7.3% increase from the year before. As globalization leads to a continued free flow of labor and finance, it is predicted to continue its upward growth in years to come.<sup>45</sup>



Disclaimer: The designations employed and the presentation of the material on any map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the Digital Cooperation Organization concerning the legal status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The government-developed Roshan Digital Account – a digital banking facility available to non-resident Pakistanis – has seen a strong uptake from the country's influential diaspora. Over 350,000 overseas Pakistanis opened Roshan accounts since its deployment at the end of 2020 by the government, sending over \$4 billion back to Pakistan.<sup>46</sup> The key to Roshan's success has been its seamless treatment of overseas account holders – asking for minimal documents and ensuring smooth and swift transaction flows.



The State Bank is not slowing down its digital drive either: it continues to advocate for digital transactions through campaigns and further incentivizes digital account adoption among Pakistanis. Expanded programs allow for more accessible lending and saving mechanisms through digital means, and simpler internet banking platforms. The close connection between digital transaction platforms and the rapidly growing e-commerce industry in the country is also a sign that the best is yet to come for Pakistan's digital banking space.<sup>47</sup>



<sup>45</sup> 'Migration and Development Brief 33' Global Knowledge Partnership on Migration and Development

<sup>46</sup> 'Roshan Digital Account' State Bank of Pakistan website

<sup>47</sup> 'National Payment Systems Strategy' State Bank of Pakistan website

# Interview

**Abdullah Al Tuwaijri** *CEO Consumer & Digital Banking, Boubyan Bank*



► **How has your strategic vision and focus on innovation enabled Boubyan Bank to have double digit growth for over a decade, even in the aftermath of the 2008 financial crisis and a global pandemic?**

Our leadership team has built a strong foundation that ensures sustainable growth through strategic management. We've maintained a resilient balance sheet and high asset quality. Our clear and focused strategy includes maintaining an adequate capital base to sustain future plans, and innovative offerings to target customers and markets.

Boubyan's approach is counter-cyclical in that it goes against the direction of the market environment. This was successfully tested back in 2009/2010 and during the COVID-19 pandemic. For example, amid the pandemic, the bank not only reformed the acceleration of its core businesses, it elevated its business through international expansion. We successfully launched NOMO, the first global Islamic digital bank, which offers Sharia-compliant wealth management and banking services in the United Kingdom. By leveraging our strengths in an opportunistic manner, and accelerating the rate of digital adoption, we continue to grow in spite of any external challenges.

► **How do you see innovative, forward-thinking banks playing a role in facilitating the growth of the digital economy and empowering digital start-ups?**

Banks have always played a pivotal role in enabling economic growth. One of their main success factors

has always been the trust and security they provide to clients. This role is now even more important as the economy becomes digital. Banks carry a large responsibility to ensure trust and security within the digital world. So too, they must be well prepared for new challenges within compliance, transparency, speed, and customer experience. This evolution may be difficult, especially for organizations that have operated the same way for decades.

The unprecedented pace at which the digital transformation is occurring makes it difficult for banks to keep up. The banks that will be market leaders in the future will be the ones who accept and embrace the pace of change. This is done by being open to wider ecosystems and marrying digital solutions with traditional strengths. It requires key infrastructure investments, and a progressive corporate culture which knows how to deal with start-ups and digital solutions.

► **With Boubyan's international footprint, how do you navigate the different regulatory requirements in terms of data protection of clients, and what is the bank's ethical consideration in this regard?**

In Kuwait, the data of financial institutions are highly protected by the Central Bank of Kuwait (CBK). CBK has, however, recently announced that an Open Banking Initiative will form part of its wider digital strategy. We have been working closely with CBK to support this initiative and, through different working groups, we are creating the frameworks for the necessary regulations and policies that will ensure adequate data protection. We believe that Open Banking principles will align closely to the goals of developing the digital economy, and we believe many opportunities for financial service providers in Kuwait will be unlocked through these efforts. We see the immense potential of FinTech solutions, and look forward to playing a leading role on the global stage to ensure digital banking creates an inclusive economy.





# ENABLERS

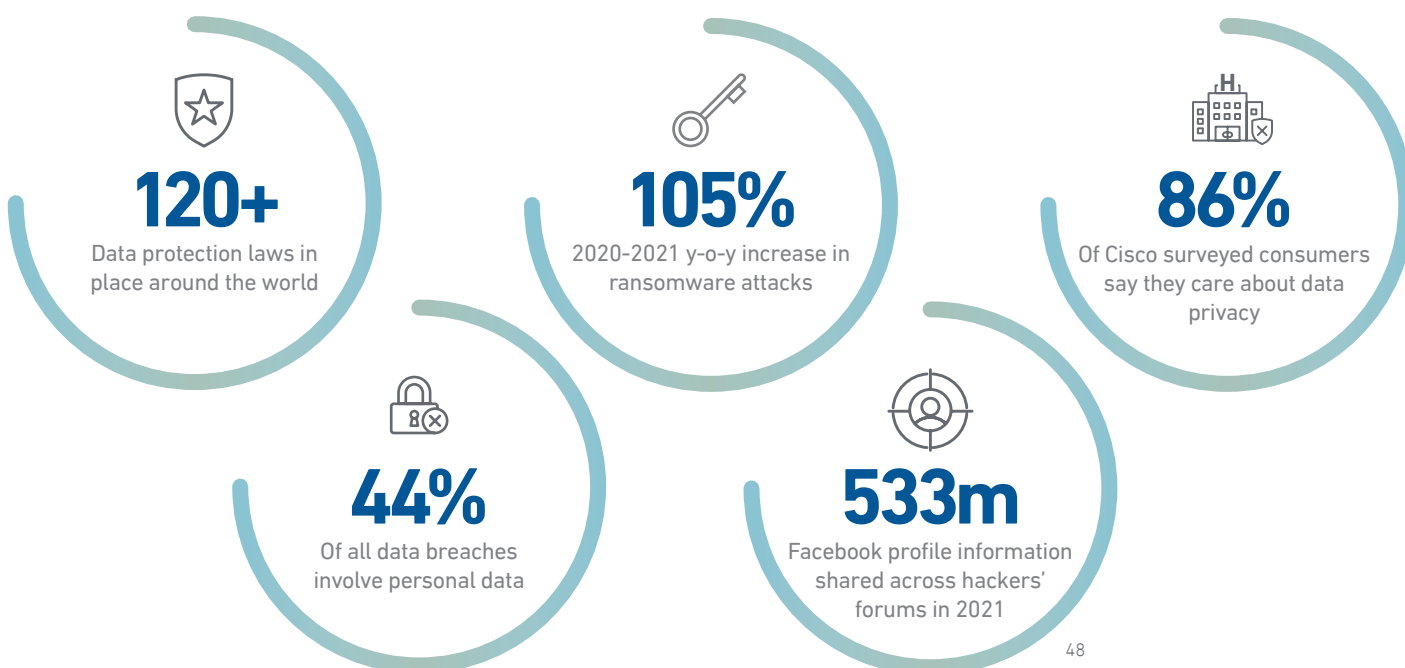
End-user data protection:  
Putting people first



# The challenges facing end-user data protection around the world

As the global economy continues to digitalize, having satisfactory data protection safeguards in place ensures that the information of governments, organizations, and individuals is used in a way that is truly necessary or beneficial and does not infringe privacy rights. If such safeguards are not put in place – or can easily be circumvented – personal data can be exploited for pernicious ends.

In 2022, global data measures are only slightly mitigating cyber threats, which in turn harms governments, organizations, and individuals. The need for unified action to protect data rights has never been greater. If action is not taken, the stark reality of cyber exploitation will only get worse.



## In pursuit of effective data protection regimes

Weaknesses in data protection infrastructure are exacerbated by uncertainty over which measures should be taken to adequately protect the data privacy rights of end-users.<sup>49</sup> Clearer strategies and uniform standards to adequately protect these and safeguard them against data exploitation are increasingly critical for governments.<sup>50</sup>

Cyber exploiters – often organized groups equipped with sophisticated digital tools to harm cyber infrastructure – care little for end-user data rights and actively try to circumvent data protection standards.<sup>51</sup> Weak cyber regimes can dramatically impact individuals and organizations, with crippled ICT systems leading to immense financial and operational losses.<sup>52</sup> Unfair data exploitation can cause immense economic loss, with organizations like JBS USA, the world's largest meat supplier, willing to pay a hacking group \$11 million in ransom fees to stop a cyberattack.

<sup>48</sup> '2022 SonicWall Cyber Threat Report' SonicWall

'The facts on news reports about Facebook data' Meta

'Building Consumer Confidence through Transparency and Control' CISCO

<sup>49</sup> 2022 SonicWall Cyber Report

<sup>50</sup> From Silicon Valley to Silicon Savannah? Tech Hubs in the Global South' Development Implications of Digital Economies (DIODE) Strategic Research Network

<sup>51</sup> '2022 SonicWall Cyber Threat Report' SonicWall

<sup>52</sup> Allianz Ransomware Report 2021

## Social shifts and privacy at risk

Amid COVID-19, government-enforced lockdowns, the rise of remote working, and a greater integration of digital tools into daily our lives, people are exposed to a wider range of cyber threats. Altogether, the digital extortion of individuals is on the rise, while the Cambridge Analytica scandal – where data from 87 million Facebook profiles was harvested and misused – continues to haunt authorities concerned with the misuse of data for questionable gains.<sup>54</sup>

Digitally and financially vulnerable people are also being targeted by hackers, blackmailers, and scammers, who use social media, emails, and digital platforms to defraud and exploit.<sup>55</sup> With lives increasingly lived online, privacy is increasingly in jeopardy, often without the end-user realizing how much of their private life is captured in data on the internet.<sup>56</sup> Values of discretion and privacy rights in the offline world should also apply online.

On social media channels, women and children in particular, have been the targets of cyber abusers who hold victims' data for ransom and threaten distribution unless demands are met. Worryingly, payoffs do not mean compromised data is returned to victims and secured once more. Stolen data is often trafficked and becomes a raw input whereby hackers use personal information to impersonate victims to commit other crimes.

Users may see paying these extortioners as the only option to free up their cyber capabilities again, but this could have negative, economy-wide consequences. Paying these ransoms could empower hackers to seek out further resources, develop new ransomware, and train new cyber-criminals. Data forms the backbone of many organizations, and having access to it restricted, or even seeing it lost entirely at the hands of these criminals, is an existential threat for many.



# 80

2016 cyber claims at Allianz



# 1,000+

2021 cyber claims at Allianz

53

## Regulatory responses

Fragmented country-specific regulations and the lack of an international regulatory environment that appropriately manages data flows create an environment conducive to cybercriminals. Without global consensus in how data should be protected, managed, and distributed, organizations and individuals are at continued risk. This fragmentation and uncertainty over privacy and data protection calls for a strong response.

In the pursuit of upholding end-user data privacy rights and protection against cyber exploitation, it is crucial to have better aligned digital privacy policies and concerted multilateral action. Such regulatory efforts must enable governments and legitimate organizations to pursue digital transformation and the development of competitive technologies while not risking the cyber safety of stakeholders. To do so requires well-balanced digital security risk management practices and policies based on clear values and objectives.<sup>57</sup>

<sup>53</sup> Allianz Ransomware Report 2021

<sup>54</sup> 'The facts on news reports about Facebook data' Meta  
'Suspending Cambridge Analytica and SCL Group from Facebook' Meta

<sup>55</sup> 'Is crypto really worth \$3 trillion' Bloomberg

<sup>56</sup> 'From Silicon Valley to Silicon Savannah? Tech Hubs in the Global South' Development Implications of Digital Economies (DIODE) Strategic Research Network

<sup>57</sup> DCO Center of Excellence White Paper, DCO DEMI

# The evolution of data protection policies and regulations

In our data-driven age, information drives economic growth and social development. As economies have evolved over the last three decades, so has the need for regulation that adequately responds to the challenges that emerged with it. Since the emergence of internet platforms and the digital economy in the 1990s, policymakers have grappled with finding solutions to best regulate this ever-

changing reality. Here, we set out the highlights of how policymakers around the world and in DCO member states have approached regulating data protection.

As we look to a future where digital solutions form an even more integral part of daily life, it is critical for regulators to adopt policies that will nimbly respond to evolving challenges.

## Data protection policies over the past four decades





## DCO Data Privacy Statement

In February 2022, the DCO member states issued a Joint Statement Regarding the Terms of Service and Privacy Policies of Global Technology Companies. The DCO Data Privacy statement provides a common vision by member states highlighting the importance of cooperation by technology companies with government institutions to respect data privacy rights and interact responsibly with data. The timeliness of this Statement speaks to the necessity of guaranteeing shared values and principles, while allowing for the digital economy to evolve.



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# The DCO and latest regulatory strategies for data

As one of the primary initiatives of the organization, the DCO applies a comprehensive benchmarking framework to test different countries' evolving digital policies, regulatory frameworks, and strategies. On a multilateral and country-specific level, the DCO assesses different opportunities within the digital economy and how continued challenges are being addressed.

Here we highlight some of the key assessment areas focused on.

## Data Governance



Data governance refers to how regulations and supervision change is to be conducted within a particular country. While it zooms in on the regulations that have been set up by policymakers, it also investigates the work of national data protection authorities. How data is governed, how the data ecosystem operates, and how policies are developed and enforced, all form part of the data governance sphere.

## Data Policies



### Data Classification

Well-thought-out taxonomies for personal and government data can build societal trust around privacy and strengthen government capacity for data storage, use, and dissemination. Such all-encompassing classification standards enable data sharing across entities.

### Data Protection

Data protection laws are necessary to advance organizational and individual privacy interests and ensure trust. Transparent data protection regulations are core pillars of well-managed business environments.

### Data Storage

Storage of personal and government data, at different levels of sensitivity, must align with security protocols and regulations on the national level. Some countries may choose to permit data storage beyond their own jurisdictions but shouldn't compromise their data integrity.

## Data Strategies



The development of national data strategies are critical steps for countries looking to accelerate and transform their digital economies. Such strategies focus resources on high potential growth areas and enable stakeholders within these spaces to use data as a source to build wealth and create social prosperity.

## Cross-border Data Transfer Policies and Arrangements



There is clear evidence of the value of multilateral digital trade agreements. Several multilateral organizations have successfully led the establishment of multilateral digital trade agreements through the development of standards and legal templates to facilitate the transfer of data across borders.

### Personal Data Transfer

Here, the DCO examines the international approaches used to regulate the transfer of personal data and to define the types of data and the conditions required for the transfer. These are based on assessments of policies and frameworks that regulate the transfer of personal data from one jurisdiction to another.

### Plurilateral Arrangements

This dimension examines the international arrangements by which each country seeks to create new markets for its businesses, align standards, create the efficiency advantages of broader international market access, and enhance digital economic growth.

The DCO sees achieving excellence within the digital economic space for any country as closely linked to the ambitions of the leadership. To achieve digital economy maturity, a country would have to pay close attention to all the assessment areas identified by the DCO. The DCO will provide member state policymakers with proposed agendas for action at national and multilateral levels and assist these with driving their digital economies toward maturity.<sup>58</sup>

<sup>58</sup> DCO Center of Excellence White Paper

# Interview

**Priit Alamäe**, *Founder & CEO of Nortal*



## ► What key ingredients were central to Estonia's digital society success?

Much of Estonia's success was based on the government acting as an enabler of the digital economy, working alongside private sector players, and not in competition or above commercial entities. In Estonia, we see ICT as a cross-cutting encourager of growth across the entire economic value chain. ICT solutions are not simply deployed as 'nice to haves', but are integrated across the fabric of government, business and society-at-large.

An excellent example of our multi-layered approach to use tech and data are our e-government services, and particularly how these are used to pay taxes. The Estonian Tax and Customs Board (ETCB) has created a dynamic platform – "The Mirror" – where businesses have access to sectoral data and can benchmark themselves against other taxpaying organizations. ETCB's approach to data sharing, in turn, creates a transparent and empowering environment whereby businesses gain invaluable insight into their peers and the market.

## ► In what ways can a digitized government enable a start-up culture?

A large component of e-government is how it democratizes data, creates a level playing field and a fairer marketplace. Estonia's approach is to support local e-service developers, thereby scaling up homegrown digital start-ups. Our use of open access technology has meant that local companies are motivated to build their own core technologies, and not just resell products developed abroad. By giving local firms a leg-up, we are creating a more diverse set of sustainable, adaptable firms with serious growth potential.

Over the past 20 years or so, digitized government has helped to transform the Estonian population into a digitally fluent society. People are not afraid or suspicious about digital services and new service models at large. This creates a perfect test-bed for start-ups to launch and market test their new services.

## ► As an observer, what added value can Nortal offer to DCO member states and emerging players in these economies?

As the Estonian and global economies have digitally transformed, so have Nortal's portfolio of value-added services. Before, we would adopt a very siloed approach to finding tech-driven solutions for business problems.

Progressively, the world has started to realize that ICT solutions are applicable across all spheres of the economy and society. We have been part of Estonia's own transformative journey and see that the same building blocks that enabled the change in our country can be applied in any organization.

## ► What role can tech leadership play in creating an inclusive digital economy?

Today, we see excellent companies operating in each segment of the digital economy. However, there is often little connection across the value chain for the digital economy to function as a globally interconnected network. To drive change, we need leaders who believe in the need for digital transformation. We need strategic enablers who work across the value chain to drive suitable solutions that serve communities.

Raising such leaders, in the public and private sectors, requires the creation of an environment that is open to positive change. Leaders must, methodically and strategically, drive programs that stimulate talent development, lure capital, and ensure the ease of doing business. Estonia has the highest amount of tech unicorns per capita in the world. This was not accomplished by accident – it was a long-term strategy built on the perfect mix of capital, talent, and an open business environment. Today, we are reaping the fruits of such forward-looking government leadership.







# WHAT WE ARE WORKING ON





## DCO Global Roundtable Series

A DCO delegation recently launched the Global Roundtable series at the World Telecommunication Development Conference 2022 in Kigali, Rwanda. This roundtable is an initiative that brings together global digital economy leaders to develop an effective action plan. DCO Secretary-General Deemah AlYahya pledged DCO's commitment to work alongside member states to create digital economy roadmaps to promote prosperity, empower youth, women, and entrepreneurs, and leverage the accelerative power of the digital economy.



## STRIDE

STRIDE is a DCO initiative facilitating the expansion of SMEs and innovation driven enterprises (IDEs) through the DCO common market. As the initiative develops, programs, tools, and services will be launched to address the needs of SMEs and IDEs. This will include training programs, discounted digital perks for SaaS licenses, competitions, mentorship, coaching, and eventually access to finance.



## DCO Center of Excellence for Data Flows

The Center of Excellence for Data Flows is focused on enhancing cross-border data flows through conducting research, knowledge sharing, policy advocacy, facilitation, trainings, and consultations.



## Digital Economy Maturity Index (DEMI)

The Digital Economy Maturity Index (DEMI) is an assessment tool for public sector policymakers to track the effectiveness of policies and regulations on accelerating or stunting the growth of the digital economy and its related impact on the overall economy and society. The index is also a platform by to give voice to a variety of affected stakeholders critical to the growth of the digital economy through fact-based insights generated from quantitative statistical-based observation, and qualitative interviews to gain less obvious insights.



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