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Advancing EU–Africa Digital Partnerships amid Growing Geopolitical Competition

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DIGITAL COOPERATION WITH GLOBAL PARTNERS POLICY STUDY

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About the Digital Transformation Lab (DigiTraL)

GIGA's Digital Transformation Lab (DigiTraL) is funded by the Federal Foreign Office and analyses the political drivers and real-world consequences of the digital transformation taking place around the world. The Global South in particular is an important actor in and shaper of this transformation. In the first phase (2021-2023) of the project, the focus was on digital diplomacy and on analysing the question of what new opportunities, challenges and instruments the digital transformation offers for German foreign policy. The second phase (2024-2025) concentrates on analysing the opportunities that digitalisation offers for Germany's cooperation with global partners. Central questions include: Where do individual countries and regions in the Global South stand with regards to digitalisation? Where are the points of contact for (tech) partnerships with Germany? Where are new developments arising (e.g. emerging threats from digital disinformation, related reactions, and interventions in the Global South)? What cooperative relationships exist in the field of digitalisation in the Global South, and how can the German government and other actors in Germany best respond to this? The current phase of DigiTraL is headed by Dr. Iris Wieczorek, Senior Research Fellow at the GIGA Institute for Asian Studies. For more information, please have a look here.

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Abstract

Africa's digital transformation is reshaping its economies and societies, offering immense opportunities for connectivity, innovation, and growth. This rapid evolution is taking place against a backdrop of intensifying geopolitical competition, with global powers – notably China, the European Union, and the United States – vying to shape Africa's digital future. Through its Global Gateway initiative, the EU seeks to position itself as a key partner, offering a values-based approach rooted in openness, fairness, and sustainability, clearly differentiating itself from other powers such as China's state-led and the US's private sector-driven strategies in Africa. This study analyses Africa's digital landscape in three key areas: infrastructure, innovation ecosystems, and governance. It highlights the different approaches and activities of China, the EU, and the US, identifying opportunities for deeper EU–Africa digital partnerships in each of these areas. Finally, it also offers actionable recommendations on how to enhance mutually beneficial cooperation in line with the EU's comparative strengths vis-à-vis other global powers.

Policy Recommendations

Amid Africa's rapid digital transformation and growing geopolitical competition, the EU's Global Gateway (GG) initiative is timely. However, in order to build effective and mutually beneficial digital partnerships and achieve tangible impact at scale, some adjustments are needed.

- While connectivity has improved in Africa through investment in submarine communications cables (hereafter subsea cables) and telecommunication networks, significant digital divides remain. Without tech giants comparable to those in the US and China, the EU can increase its impact by partnering with allies, focusing on underserved regions, and investing in "middle-mile" digital infrastructure such as carrier-neutral data centres. These efforts would reduce costs, improve data exchange, and promote net neutrality.
- Increased connectivity has enabled a vibrant tech startup ecosystem across Africa. Building on decades of cooperation, the EU can strengthen African digital-innovation ecosystems by consolidating previously fragmented initiatives, engaging Member States' development-finance institutions (DFIs), promoting innovation-friendly policies, and empowering local entrepreneurs – particularly women.
- African policymakers are advancing digital-governance policies, but challenges such as overlapping frameworks and inconsistent implementation are hampering progress towards a single marketplace here. Drawing on its experience with building a digital single market, the EU can offer valuable support to African policymakers in developing open, secure, and interoperable digital ecosystems. This approach offers a compelling alternative to China's "cyber sovereignty" model, which prioritises centralised state control over digital spaces.

To maximise the impact of digital partnerships in Africa across all areas, the EU needs to consolidate hitherto fragmented efforts through mechanisms such as the existing Team Europe Initiatives (TEIs), which should be further reinforced to enhance coordination and effectiveness. Accelerating project implementation under the GG, improving transparency and monitoring, and deepening partnerships with allies such as the US – although recent policy shifts under the second Trump administration have created uncertainties – will be essential. Taken together, these steps will provide a coordinated and values-driven alternative to competing models, reinforcing openness and sustainability.

Outline

1 Introduction

In recent years, African economies have experienced a digital boom, marked by the rapid expansion of sectors leveraging related technologies.[1] Increased investment in Africa's digital infrastructure, particularly mobile-broadband networks, has led to the growing adoption of digital technologies in various sectors, including finance, transport, retail, and agriculture, with potentially significant development benefits. In addition, increased connectivity has ignited Africa's startup ecosystem and given rise to a new generation of IT-savvy entrepreneurs who are developing homegrown innovative digital products and services that are carefully adapted to the local context in which they are created (Lay and Tafese 2025). In some cases, such as mobile money, they have spread to the rest of the continent or even elsewhere in the world.

The rise of Africa's digital ecosystems is unfolding in an increasingly competitive global landscape where digital affairs have emerged as a crucial dimension of geopolitics and geoeconomics. As foreign powers recognise the strategic and commercial potential of Africa's fast-growing digital economy, they are intensifying their engagement with the continent. Rivalries for technological leadership – encompassing digital infrastructure, data governance, cybersecurity, and emerging fields such as artificial intelligence and quantum computing – are increasingly shaping foreign policy agendas.[2] As a result, digital affairs now intersect with traditional areas of international relations such as security, economics, and development (Teleanu and Kurbalija 2022). For African countries, this presents both opportunities to attract investment, expertise, and innovation from a range of global actors – from multinational tech giants to foreign governments – as well as challenges in needing to balance external engagement with digital independence.

In response to this increasingly competitive environment and global powers vying for influence on the African continent, the EU is seeking to establish itself as a geopolitical actor in the digital domain and to become a partner of choice in Africa's digital transformation (European Council 2023). Launched in December 2021, the GG initiative is central to the EU's digital diplomacy, aiming to serve as the EU's "positive" or "values-based" offer to partner countries based on principles of openness, fairness, and respect for human rights and environmental standards (European Commission 2021). Through the GG, the EU seeks to transition from fragmented, short-term Member State engagement towards a more coordinated, holistic, and long-term partnership with Africa. The main objectives of this new partnership are to promote connectivity at scale and foster innovation and resilience on the African continent, by leveraging large-scale investment, private sector knowhow, and EU regulatory experience, while taking into account the priorities and needs of African partners themselves.

Concurrently, China and the US have significantly increased their digital engagement in Africa. China's Digital Silk Road (DSR), a cornerstone of its Belt and Road Initiative (BRI), seeks to enhance connectivity, lay down digital infrastructure such as fibre-optic cables and data centres, and shape technology standards across the continent. Meanwhile, the US, through its Digital Transformation with Africa (DTA) initiative, has pledged to support secure,

1 A 2021 report by GSMA, the biggest industry organisation of mobile-network operators, estimates that mobile technologies and services generated 8 per cent of gross domestic product in sub-Saharan Africa (SSA) in that year, with indirect productivity benefits in non-ICT sectors accounting for 5 per cent (GSMA 2021).

2 While foreign policy – which spans all of a state's policies towards the external environment – is conducted by a country's Ministry of Foreign Affairs (or similar), digital foreign policy is usually conducted jointly by dedicated teams from both the latter and other ministries and agencies (Teleanu and Kurbalija 2022).

open, and inclusive digital ecosystems by expanding access to broadband, fostering digital entrepreneurship, and promoting digital skills development. Taken together, these efforts both competing and complementary in nature underscore a multipolar digital landscape in which African countries are increasingly presented with diverse partnership options, each promising pathways to technological advancement yet differing in terms of governance models, financing approaches, and underlying principles.

Active debates continue about how the EU can strategically position itself in the digital domain amid a changing global order (Erforth 2024; Foretia et al. 2024; Meehan and Wang 2024; Teevan and Domingo 2022). However, discussions of partnerships with the African continent often neglect the actual realities on the ground, including as regards varying levels of digitisation, digital priorities, as well as emerging trends in African digital ecosystems. Moreover, any discussion of partnerships needs to take into account the EU's comparative strengths – focusing on areas where it has a real advantage over other global powers, in particular China and the US, such as its regulatory expertise – to ensure that the Bloc's establishment as a credible geopolitical actor in the digital domain and its promoting of a values-based approach are effective.

This study identifies avenues for deeper digital partnerships between the EU and Africa based on the latter's digital realities, developments, and priorities, as well as the former's comparative strengths compared to other global powers. Digital infrastructure, digital innovation ecosystems, and digital governance are considered the three priority areas for forming digital partnerships, as featuring prominently in both the EU's GG and in major African digital initiatives, such as the Smart Africa Initiative and the Digital Transformation Strategy for Africa (DTSA).[3]

Following this introduction, section 2 outlines the major digital initiatives that global powers have recently launched in Africa, contrasting the EU's GG with their US and Chinese counterparts. Sections 3 to 5 provide a detailed analysis of digital infrastructure, innovation ecosystems, and digital governance – the GG's three priority areas – in Africa, and discuss the main activities of China, the EU, and the US in each of these domains. Based on this, section 6 makes concrete recommendations for deepening EU–Africa digital partnerships. Section 7 concludes.

2 Global Powers' Digital Initiatives in Africa

With geopolitical and geoeconomic tensions rising in recent years, global powers have come to recognise the strategic importance of Africa and its growing digital economy. As a result, China, the EU, and the US have each recently launched flagship digital initiatives in Africa.

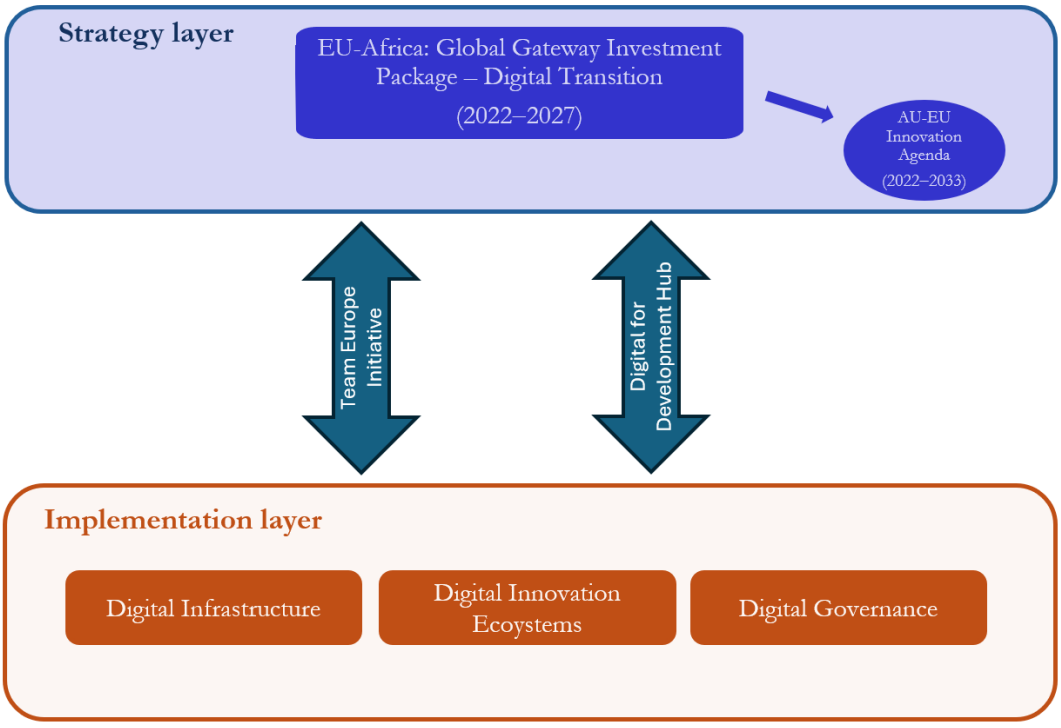
2.1 The Global Gateway: The EU's "Values-Based" Offer for (Digital) Partnerships

The GG marks a turning point in EU–Africa relations. While the Bloc and its individual Member States have long had strong ties with Africa in the field of (digital) cooperation, three key factors set the GG apart as a defining moment. First, it is the EU's flagship geopolitical and geoecono-

3 For more information hereon, see respectively: https://smartafrica.org/who-we-are/ and 38507-doc-dts-english.pdf.

mic initiative as well as its central (foreign policy) response to rising geopolitical and geoeconomic competition on the African continent. At its core are six key principles: democratic values and high standards; good governance and transparency; equal partnerships; green and clean; a security focus; and, catalysing private sector investment (European Commission 2021). These should each be upheld in all GG-related partnerships, in aiming to promote an alternative vision of sustainable development rather than replicating the geopolitical strategies of other global powers. Second, the investments that the EU is seeking to mobilise through the "EU-Africa: GG Investment Package" are huge. Between 2021 and 2027, EUR 150 billion of investment[4] is to be mobilised for Africa (European Commission 2022), using a variety of innovative financing instruments, notably the European Fund for Sustainable Development Plus (EFSD+), and a mix of guarantees, (blended) loans, and grants.[5] Third, the GG is closely aligned with recent major African digital initiatives, such as the Smart Africa Alliance, with which a partnership agreement was recently signed (European Commission 2024).

Figure 1. Key Elements of the Global Gateway for the African Digital Transition



Source: Author's own illustration, based on official documents from the European Commission.

The digital economy has been identified as one of the GG's five priority areas[6] wherein investment can bring the greatest benefit to people in the medium- and long-term (European Commission 2021). The main objective of the GG's digital-economy package is to expand a secure and sustainable digital infrastructure and promote strong data-protection standards,

4 This amounts to an average annual investment to be mobilised between 2021 and 2027 of around EUR 21 billion. By comparison, the total budget of the German Federal Ministry for Economic Cooperation and Development (BMZ) was around EUR 12 billion and the total official development assistance to SSA was EUR 30 billion in 2023.

5 For more information on the EFSD+, see: https://international-partnerships.ec.europa.eu/funding-and-technical-assistance/funding-instruments/european-fund-sustainable-development-plus_en.

6 The other four priority areas are: climate and energy; transport; health; and, education and research.

cybersecurity, and open digital markets, while minimising the environmental impact and bridging the digital divide. To achieve this, the GG follows a twin approach, as shown for Africa in Figure 1 above. The strategy layer consists of the main digital strategies between the EU and Africa. These encompass the EU-Africa: GG Investment Package – Digital Transition (European Commission 2023) and the AU-EU Innovation Agenda, which is supported by the GG and aims to deepen the cooperation between the two continents in the fields of science, technology, and innovation. The TEIs and the Digital for Development Hub (D4D) link strategy and implementation, selecting and coordinating specific projects and programmes and ensuring their alignment with the overall GG strategy.[7] The implementation layer, meanwhile, includes concrete digital projects and programmes in three priority areas: digital infrastructure, digital innovation ecosystems, and digital governance.[8]

2.2 The US's Digital Transformation with Africa initiative

The DTA initiative, launched at the US-Africa Leaders' Summit hosted by former president Biden in December 2022 – coming exactly one year after the GG's inauguration – reflects the US's commitment to a long-term partnership for digital transformation in Africa.[9] Like the GG, the DTA aims to promote African digital transformation by leveraging large-scale investments through diverse funding mechanisms – investing over USD 350 million and mobilising over USD 450 million in public and private capital – in three similar key areas: digital economy and infrastructure; human-capital development (including entrepreneurship); and digital-enabling environment (US Department of State 2023). The DTA is implemented as a "whole-of-government initiative", involving multiple domestic agencies such as the Department of State, the International Development Finance Corporation, the Department of Commerce, the Agency for International Development, and the Trade and Development Agency. In addition, the private sector plays a key role in many DTA endeavours. While the DTA, unlike the GG, is not explicitly framed as a "values-based" offer, it does emphasise good governance, transparency and openness, security, sustainability, and (digital) inclusivity in its various projects with African partners (Boa-Guehe 2023).

2.3 China's Digital Silk Road

Introduced in 2015 as part of the broader BRI, the DSR builds on China's long-standing digital engagement in Africa – predating many of the EU's and US's flagship programmes.[10] To date,

7 The TEIs and D4D had already been in existence prior to the GG's launch, but were (partly) repurposed for coordination of the latter's various activities. In addition to these two coordinating entities, the EU-AU Digital Economy Task Force had been critical in identifying digital priority areas and drafting some of the key African digital strategies, such as the DTSA.

8 In addition to area-specific projects, the GG also includes "Digital Economy Packages" (so far for Nigeria and Kenya specifically) that cut across the different priority areas.

9 It remains unclear how the DTA will evolve under the second Trump administration, which has already signalled a dramatic shift in development policy through executive orders, including significant cuts to international-aid commitments and the restructuring of agencies such as USAID. Since the DTA is officially part of the Department of State, now led by Marco Rubio, it may be less affected by these immediate changes.

10 The DSR is based on a 2015 white paper co-authored by China's National Development and Reform Commission, the Ministry of Foreign Affairs, and the Ministry of Commerce, which states the need to "jointly advance the construction of cross-border optical cables and other communications trunk line networks, improve international communications connectivity, and create an Information Silk Road" (Ministry of Foreign Affairs of the People's Republic of China 2015).

formal cooperation agreements under the BRI and memoranda of understanding under the DSR have been signed with dozens of African governments (Tugendhat and Voo 2021). As its name suggests, the DSR's main objective is to expand digital infrastructure, ranging from the deployment of telecommunications equipment – such as fibre-optic cables and 4G and 5G mobile networks – to the provision of "smart city" infrastructure. The main financing vehicle for such projects is technology-related loans from Chinese state-owned banks, such as the Export-Import Bank of China and the China Development Bank (Kumar 2024), to partly state-owned Chinese corporations, most notably Huawei and ZTE Corporation. According to estimates, more than USD 8 billion have been invested in Africa under the DSR (Kumar 2024). Unlike the GG, the DSR is not officially framed as "values-driven," as Chinese funding to Africa is officially presented as being free of conditionalities (Foretia et al. 2024). Recently, however, projects under the DSR have increasingly focused on influencing digital regulation and data governance in Africa (more in section 5.2).

3 Digital Infrastructure

Digital infrastructure is essential for advancing the development and application of digital technologies. It encompasses the physical and virtual systems required for connectivity, including subsea and terrestrial cables, broadband networks, and data centres, as well as the technologies and platforms that enable digital communication and services. This section provides an overview of Africa's connectivity landscape and examines how global powers like China, the EU, and the US are competing to shape the continent's digital infrastructure.

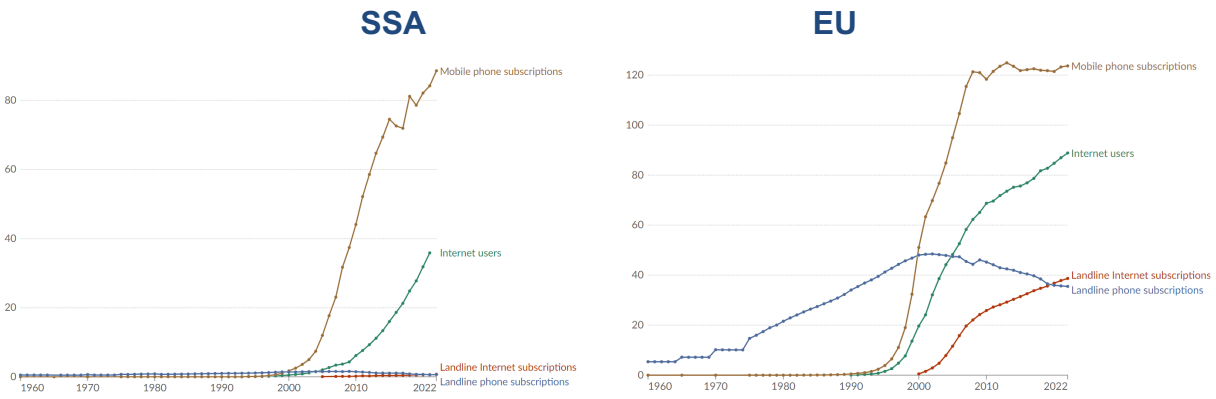
3.1 Rising Connectivity but Persistent Digital Divides

Africa has made significant progress in expanding connectivity over the past two decades, as more and more Africans have gained access to the Internet and mobile phones. This expansion has been driven by massive investments in mobile-broadband networks and subsea cables by major telecoms companies, notably MTN, Orange, Vodacom/Vodafone, and Airtel. For example, the number of African countries connected to subsea-cable systems increased from 16 in 2008 to 37 by 2019, with 74 such systems active or under construction in 2024 (TeleGeography 2024), reflecting major strides in connectivity expansion.

As a result of these large-scale investments, the proportion of SSA citizens using the Internet and the number of mobile-phone subscriptions per 100 people has risen from virtually zero 25 years ago to 36 per cent and 86 per cent respectively in 2021 (left panel, Figure 2 below Figure 2). While Africa still lags behind other regions such as the EU, where 87 per cent of people used the Internet and 123 per 100 people had a mobile-phone subscription in 2021, a growing literature has already documented considerable positive employment and income effects from the expansion of digital infrastructure in Africa (Deichmann et al. 2016; Hjort and Poulsen 2019; ITU 2019; Ndubuisi et al. 2021).[11]

11 While some of the results from the above studies need to be taken with a pinch of salt, as the causal direction between Africa's digital infrastructure and (socio-economic) development is not always entirely clear, overall there is fairly strong evidence of the positive impact that these improvements have had on its economies and people. For an excellent review, see Fietz and Lay (2023).

Figure 2. Adoption of ICT per 100 people



Source: Author's own illustration, based on Our World in Data information taken from the World Bank's World Development Indicators.

Despite these gains, digital divides persist within and between African countries. In Ghana, for example, 68 per cent of people used the Internet and 123 per 100 people had a mobile-phone subscription in 2021, compared with just 23 and 49 per cent respectively in the Democratic Republic of Congo (DRC).[12] The lack of terrestrial (or inland) cables to provide "last-mile" connectivity to businesses and households has also led to digital divides within countries, as metropolitan areas often have much better access to the Internet than secondary cities and rural areas do. The digital divide between the continent and the rest of the world, as well as within Africa, requires massive digital investment, especially given the latter's rapidly growing population, which is expected to double to about 2.5 billion by 2050 and more than 3.8 billion by 2100 (see Appendix Figure 1), putting Africa just behind Asia's 4.8 billion people, and accounting for about 37 per cent of the world's population by the end of this century.[13]

The digital divide between the continent and other world regions, as well as within Africa, extends to data-centre infrastructure, where a significant gap still exists despite recent growth. Data centres are the backbone of cloud and data infrastructure, accounting for 20 per cent (USD 41 billion) of total ICT sector investment in the US, for example (World Bank 2023). While key African countries such as Kenya, Nigeria, and South Africa are emerging as regional hubs with modern facilities and improving connectivity, Africa's overall data-centre capacity remains limited (World Bank Group 2024). For example, South Africa, the leader in SSA, has 55 data centres with a combined capacity of 408 megawatts, comparable to Madrid alone, followed by Nigeria and Kenya with 140 MW and 79 MW respectively. Closing this gap will require an annual investment of USD 4–7 billion (World Bank 2023), a significant challenge given that private investment tends to favour wealthier, digitally mature countries home to more reliable power supplies and favourable regulatory environments.

12 Most of the differences between countries are due to the varying cost of accessing the Internet: in Ghana, the cost of 1 gigabyte of data is about 2 per cent of the average monthly salary, while in the DRC it is 30 per cent thereof (ITU 2020). In turn, costs are largely determined by geographical location, as coastal countries are often directly connected to submarine cables, which reduces latency and increases redundancy.

13 Africa will also be home to the majority of the world's working-age population between 15 and 64 years old, who will be concentrated in the continent's urban centres and will be heavily reliant on digital connectivity.

3.2 The Race to Connect Africa

The EU's Bid to Shape Africa's Digital Infrastructure through the GG

After being largely absent from the development of Africa's digital infrastructure over the past two decades, the EU has now made that goal its main GG priority to bridge remaining connectivity gaps and digital divides in cooperation with partners.[14] Notable efforts include the Medusa Cable project (2022–2026), financed by a EUR 40 million grant from the European Investment Bank (EIB), which will establish a 7,100-kilometre subsea-cable system under the Mediterranean, connecting the European and North African coasts to improve broadband speed, reliability, and affordability. In the DRC, a USD 10 million quasi-equity investment and warrants agreement from the EIB for a high-speed fibre-optic network aims to bring reliable connectivity to over 2.5 million people. Similarly, in Mauritania support for a new data centre and subsea-cable system is set to boost local digital ecosystems and enable the country to play a more active role in the global digital economy.

Beyond subsea cables and data centres, the EU supports initiatives that nurture an enabling environment for digital growth and innovation. Through programmes like AfricaConnect3 supported to the tune of EUR 30 million, the Bloc strengthens research and education networks by improving international bandwidth, fostering collaboration, and advancing scientific development.[15] Furthermore, Africa Connected leverages blended finance solutions including direct investments and guarantees up to EUR 100 million, as a way to mobilise investment in digital infrastructure and -platform businesses in SSA.

US Big Tech's Push into African Subsea-Cable Systems and Last-Mile Infrastructure

Even before the DTA's launch, multinational US tech giants had already identified Africa's rising digital economy and remaining connectivity gaps as a huge business opportunity to tap into (Tafese 2022). As a result, most of the digital-infrastructure projects led by US tech firms were planned and implemented independently of the DTA. Two prominent examples are Google's and Meta's respective investments in the Equiano and 2Africa subsea cables. The Equiano subsea cable became operational in 2023 and the 2Africa cable is expected to do so in early 2025. With a combined capacity of 324 terabits per second (144 Tbps and 180 Tbps for Equiano and 2Africa, respectively), they will deliver more than twice the capacity of the most capable existing subsea cables, significantly increasing bandwidth and reducing latency to enable faster connectivity and support for data-intensive applications at scale (see Appendix Figure 2). These new subsea cables are also expected to increase redundancy and resilience, reducing the likelihood of disruptions to Internet traffic such as those recently experienced due to damage to subsea cables off the coast of West Africa (*The Economist* 2024a).

While these investments have the potential to massively improve connectivity in many Africa countries, it remains to be seen whether landlocked regions will benefit to the same extent. The challenge of bringing cost-effective last-mile connectivity to remote rural areas is illustrated by the failed "Project Loon" by Alphabet – Google's parent company; it had attempted to do so

14 For a complete list of GG digital projects, see: https://international-partnerships.ec.europa.eu/policies/global-gateway/initiatives-sub-saharan-africa_en?f%5B0%5D=global_gateway_areas_of_partnership_vocabulary_global_gateway_areas_of_partnership%3A136&page=0.

15 While a successor, AfricaConnect4, has been announced by the EU, no information could be found on it.

using high-altitude balloons.[16] More recently, another US tech firm, Starlink, has entered the African digital market with a different approach, deploying a constellation of thousands of small satellites. After receiving approval to provide Internet services in Mozambique and Nigeria in 2022 (Adeyemi 2022a), Starlink opened its first office in Kenya in 2024 (Eleanya 2024). Although still in its early stages, it has already expanded to 14 African countries to date and plans to launch in many more in 2025 (Labuschagne 2024). The company could play a particularly important role in providing last-mile access to communities in remote areas with weak terrestrial infrastructure, as evidenced by very high demand especially in ones currently underserved by traditional Internet providers (Abuya 2024).

Frictionless connectivity via subsea and terrestrial cables, or even satellite-based solutions, is also essential for the data flows that underpin cloud computing and the localisation of data storage (World Bank Group 2024). This in turn reduces latency and increases resilience by minimising the physical distance that data must travel (*The Economist* 2024b). Improved connectivity is already driving private investment in African cloud data centres by Big Tech, including Microsoft (Azure 2019), Amazon (Adeyemi 2022b; Paul 2020), and Google (Modise 2022), although these are mostly concentrated in South Africa. Under the DTA, similarly, the US International Development Finance Corporation has provided a USD 300 million loan to Liquid Telecom to support the development and expansion of carrier-neutral data centres[17] in Ghana, Kenya, and South Africa (U.S. Department of State 2023; US International Finance Corporation 2022).

China's Dominance in Telecoms-Infrastructure deployment

Similar to the GG and the DTA, the DSR has a strong focus on digital infrastructure. While Chinese companies have played a sizeable role in the laying of subsea cables,[18] the country's influence on Africa's digital infrastructure has been most evident at another layer of the connectivity stack: terrestrial telecoms network infrastructure and related hardware and software ecosystems. Chinese companies, supported by the broader DSR initiative, have played a pivotal role in building out Africa's mobile networks. In particular Huawei and ZTE Corporation have been instrumental in providing telecoms equipment for the continent's 4G network infrastructure (Langa 2024; Wright 2020). While official, verifiable statistics on the share of Chinese companies in Africa's 4G telecoms network infrastructure market are hard to come by, media reports suggest that around 70 per cent of the 4G network infrastructure has been built by said companies (Deutsche Welle 2022; Langa 2024). Data suggest that 24 African countries have taken out a total of 57 loans worth USD 4.7 billion from Chinese financial institutions to fund the Huawei-implemented telecoms infrastructure (Kumar 2024).[19] Huawei is reportedly also dominating 5G rollout across Africa. According to a recent GSMA analysis, 27 telecom opera-

16 Alphabet is already working on its next "moonshot," Project Taara, that uses beams of light to transmit data between small terminals (Stokel-Walker 2024).

17 Carrier-neutral data centres provide access to multiple network providers, unlike carrier-specific data centres tied to a single carrier, offering businesses greater flexibility, cost efficiency, and redundancy.

18 For example, China Mobile International is part of the consortium building the 2Africa cable while the East Asian country has also supported the construction of landing stations in Djibouti to connect to subsea-cable systems (Eguegu 2022).

19 Ethiopia alone received USD 3.5 billion in telecoms-related loans between 2000 and 2018 from Chinese banks (Tugendhat and Voo 2021).

tors in 16 African markets have launched commercial 5G services, and Huawei has been instrumental in this expansion. Huawei has partnered with MTN in South Africa (Manci 2024; Reuters 2024) and Ethio telecom in Ethiopia (Huawei 2024a) to build out the two countries' respective 5G networks and advance these telecom operators' offerings in related cloud and AI solutions.

Beyond telecoms networks, Huawei, like its US counterparts, has its eye on the African cloud market, opening its first data centre in 2019 and planning to expand its cloud services to other parts of the continent in the near future (Macharia 2024). Moreover, China's influence extends to Africa's smartphone market. Transsion Holdings, a Shenzhen-based company, has overtaken Samsung to become the leading smartphone provider on the continent, with over 40 per cent market share across its brands Tecno, Infinix, and itel (Misteli 2024; West 2024).

4 Digital-Innovation Ecosystems

Digital innovation ecosystems are crucial for fostering technological advancement and enabling the widespread adoption of digital solutions. These ecosystems comprise a network of interconnected players, including startups, investors, research institutions, and governments, working together to drive innovation and create value through digital technologies. This section explores the rise of tech startups and homegrown digital technologies in Africa and then discusses how activities by China, the EU, and the US contribute to and integrate with these ecosystems.

4.1 The rise of tech startups and homegrown digital technologies

Enabled by the enhanced connectivity achieved through significant investment in digital infrastructure, digital-innovation ecosystems have emerged in many African countries in recent years, driven by growth-oriented tech startups that use digital technologies to bring their innovative products or services to the market at scale (Lay and Tafese 2023). Unlike the small and mostly informal businesses[20] otherwise typical of Africa, this new wave of startups have significant investment needs even in their early stages. Local and international investors – primarily venture capital firms, but also big tech as well as DFIs – have recognised the potential of African startups and have significantly scaled up their early-stage investments in them, making it one of the fastest-growing startup ecosystems in the world. At the time of writing, nine African tech startups have already achieved "unicorn" status, meaning a valuation of more than USD 1 billion, and tech and tech-enabled startups are among the fastest-growing companies in Africa (*Financial Times* 2022), increasingly reaching market sizes and valuations similar to incumbents in the sectors in which they operate.

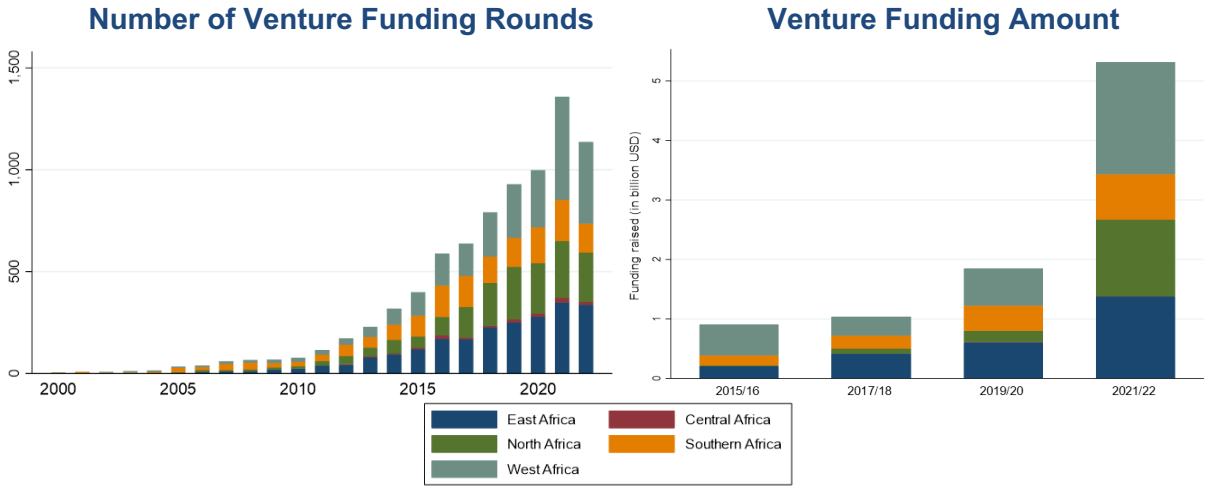
The increasing dynamism of the African tech ecosystem is reflected in the rising number of venture-funding[21] rounds and related capital raised by African startups over the last decade,

20 I focus on tech startups rather than traditional firms in Africa, because among the latter group, despite an increase in the adoption of digital enablers (phones, computers, Internet) over the past decade, only a minority of firms use digital technologies intensively for productive purposes, as recent nationally representative data from some larger SSA countries show (IFC 2024).

21 Venture funding includes angel, pre-seed, seed, and Series A to Series E investments, from the very early to the later stages of a startup's life.

as shown in Figure 3 below.[22] As venture funding primarily targets tech startups, it serves as strong indicator of the dynamism of a tech ecosystem. In the first decade of the century, the number of venture-funding rounds was negligible, but this changed dramatically in the second decade, when the number of rounds increased rapidly and exceeded 1,000 for the first time in 2021 (left panel, Figure 3). Among Africa's five regions, West Africa has experienced the strongest growth in venture-funding rounds, especially in recent years, followed closely by East and North Africa. Southern Africa, on the other hand, saw a larger increase in earlier years but has recently stagnated, while the numbers in Central Africa have remained negligible.

Figure 3. Funding for African Startups across Regions



Source: Illustration is taken from Lay and Tafese (2025).

Notes: Only tech startups founded in 2010 or later that have received venture funding are included. The Crunchbase database on which we rely also includes non-equity assistance, convertible notes, corporate rounds, and secondary markets, which are often provided to venture capital-backed startups as forms of venture funding. Venture-funding rounds account for more than 75 per cent of all funding rounds featured in the Crunchbase database.

Consistent with the overall increase in the number of venture-funding rounds over the past decade, the amount of funding raised by tech startups – here companies founded in 2010 or later[23] that received venture funding – has also increased significantly, especially very recently after the outbreak of the COVID-19 pandemic in 2020 (right panel, Figure 3).[24] In West, North, and East Africa, the funding volumes raised over a two-years period are well above USD 1

22 Crunchbase is commercial database on innovative, often venture-backed, companies from around the world. Company information in the database is compiled and curated by a large investor network, community contributors, AI and machine-learning algorithms, and an internal team of data analysts. It has become a widely used databases in the venture capital industry and among researchers and academics analysing the tech/startup world. See Lay and Tafese (2023) for details.

23 The year 2010 was chosen as the cut-off date because that is when venture funding really started to pick up. Another commonly used definition of startups is that they are less than ten years old. The descriptive results are very similar when using this alternative definition.

24 There is some early evidence that startup funding fell sharply in 2023, and that part of the post-COVID-19 funding boom in Africa was a symptom of the formation of a tech bubble, which has also been observed in major tech hubs such as Silicon Valley. While it is difficult to assess how much of the momentum in Africa's tech sector was driven by this development, there was already an accelerating increase in startup formation and funding in Africa even before the pandemic.

billion.[25] Tech startups from West Africa are clearly in the lead, having attracted the lion's share of funding, followed by East African peers who are roughly on a par with their West African counterparts. Similarly, North Africa's tech startups increased their funding by several orders of magnitude in 2021/22, while funding for Southern Africa's increased more moderately; it remained negligible for Central Africa's tech startups.

In terms of their sectoral distribution, most of Africa's tech firms can be found in sectors remaining underdeveloped and that have often been identified as obstacles to economic development, notably finance, trade and commerce, as well as transport and logistics. With more than USD 4 billion in funding attracted between 2015 and 2022, financial-services startups have clearly outpaced startups in all other sectors, followed by those in trade and commerce and in transport and logistics, raising USD 2 billion and USD 1.4 billion in funding respectively over the same period (Appendix Figure 3).

4.2 Diverse approaches to Africa's digital-innovation ecosystems

Building on Established EU–Africa Partnerships

GG-related activities on digital-innovation ecosystems are building on the decades of extensive bilateral and multilateral cooperation experience of individual Member States. Existing partnerships range from training in digital skills, to the delivery of digitally enabled public services, to joint research initiatives on digital technologies. Germany, in particular, has taken the lead through its bilateral development-cooperation efforts, with continent-wide initiatives such as the Digital Skills Accelerator Africa, Make-IT in Africa, and the Digital Transformation Centres implemented by the German development agency, GIZ, together with partner countries. Similarly, France supports tech entrepreneurship through the Digital Africa programme under Agence Française de Développement, while Belgium's development agency, Enabel, promotes digital solutions for education, health, and other sectors through its Wehubit programme. Additionally, individual Member States' DFIs, such as the United Kingdom's BII, the Netherlands' FMO and Germany's KfW, have recently become major investors in African startups and funds (KfW 2022; Njanja 2023). These and other efforts by Member States, often already partially funded by the Bloc, underline the EU's collective expertise and provide a solid foundation for its GG-based strategic engagement in Africa's digital-innovation ecosystems.

Under the GG, two flagship initiatives aim to strengthen Africa's digital innovation ecosystems. First, the Africa Europe Digital Innovation Bridge (AEDIB), a pilot project equipped with EUR 5 million of funding, aims to create a single market for digital innovation by bringing together stakeholders from both continents. AEDIB's activities focus on building a pan-African network of digital-innovation hubs, supporting digital entrepreneurship and skills development, improving access to finance for startups, and fostering resilience. Second, the Investing in Young Businesses in Africa (IYBA) initiative aims to mobilise EUR 4.6 billion – from both the EU and its Member States – to support over 180 programmes targeting young African businesses and entrepreneurs, especially women. IYBA addresses the evolving needs of high-potential enterprises by providing early-stage financing, regulatory support, and ecosystem-

25 To put these figures into perspective, the net foreign direct investment inflows into Nigeria were USD 3.3 billion in 2021 and about USD 500 million in Kenya, compared to the around USD 980 million and USD 200 million in funding respectively raised by Nigerian and Kenyan startups in the same year.

strengthening measures – and, more generally, promoting a thriving culture of entrepreneurship. Germany, in particular, plays a key role in both projects, with the GIZ coordinating the activities of both projects and the BMZ providing funding for key initiatives under the IYBA.

US Big Tech's Growing Footprint in African Digital Services and Innovation

As with digital infrastructure, US multinational tech firms have been playing a growing role in shaping digital-innovation ecosystems in Africa, predating the launch of the DTA. This has manifested in two key areas related to digital services. First, over the past two decades US-based enterprise software companies such as IBM, Oracle, and Hewlett-Packard have increasingly been serving African markets with a wide range of software solutions (Appendix, right panel, Appendix Figure 4), while Big Tech companies including Amazon, Facebook, Google, and Microsoft have recently opened tech- and startup hubs in key African markets, notably Egypt, Kenya, Nigeria, and South Africa (Appendix, left panel, Appendix Figure 4). In particular, the recent announcements by Google (2021) and Microsoft (2024) of their plans to invest USD 1 billion in the African and Kenyan digital-innovation ecosystems respectively have attracted a lot of attention.[26] Second, US investors have been key players in the emergence of Africa's startup ecosystem. This is reflected, for example, in the fact that, according to Crunchbase data, one-third of all investors in African companies between 2000 and 2022 came from the US, followed by less than 10 per cent from South Africa, around 8 per cent from the UK, and only around 2 per cent from China. In addition, tech hubs – including startup incubators and accelerators – led by US-based venture capital firms such as Y Combinator or Big Tech companies such as Google have produced to some of the continents' most successful startups, such as Paystack, Wave, and Moneypoint.

China's Smart City Initiatives: Shaping Urban Development in Africa

China's approach to Africa's digital-innovation ecosystems is state-led and public sector-focused, contrasting with the EU's partnership-driven model and the US's private sector-led initiatives. Supported by subsidised loans from Chinese state-owned banks (e.g. the China Development Bank and the Export-Import Bank of China) and under the DSR, this strategy has enabled Chinese tech companies to spearhead the deployment of smart cities in Africa, which integrate digital technology into urban planning and infrastructure to improve urban governance and address the challenges of rapid urbanisation. Low-cost financing often makes smart city initiatives attractive to African governments; so far, nine of the continent's countries have been equipped by Chinese tech companies with related infrastructure such as command and control centres, predictive policing tools, and advanced traffic-management systems (Bartlett 2023; Munene 2024). For instance, Huawei's Safe City project in Nairobi, Kenya, integrates surveillance networks with real-time analytics to enhance public safety (Wangari 2023), while the company's smart city initiative in Addis Ababa, Ethiopia, aims to make government services available online as part of the country's broader 2025 strategy on digitalisation (Huawei 2024b).

26 Besides investments into digital infrastructure like subsea cables and data centres mentioned above, investment will go into local technology and innovation lab that develop, new technologies, such as local-language AI models, support for local startups, as well as the expansion of digital skills trainings.

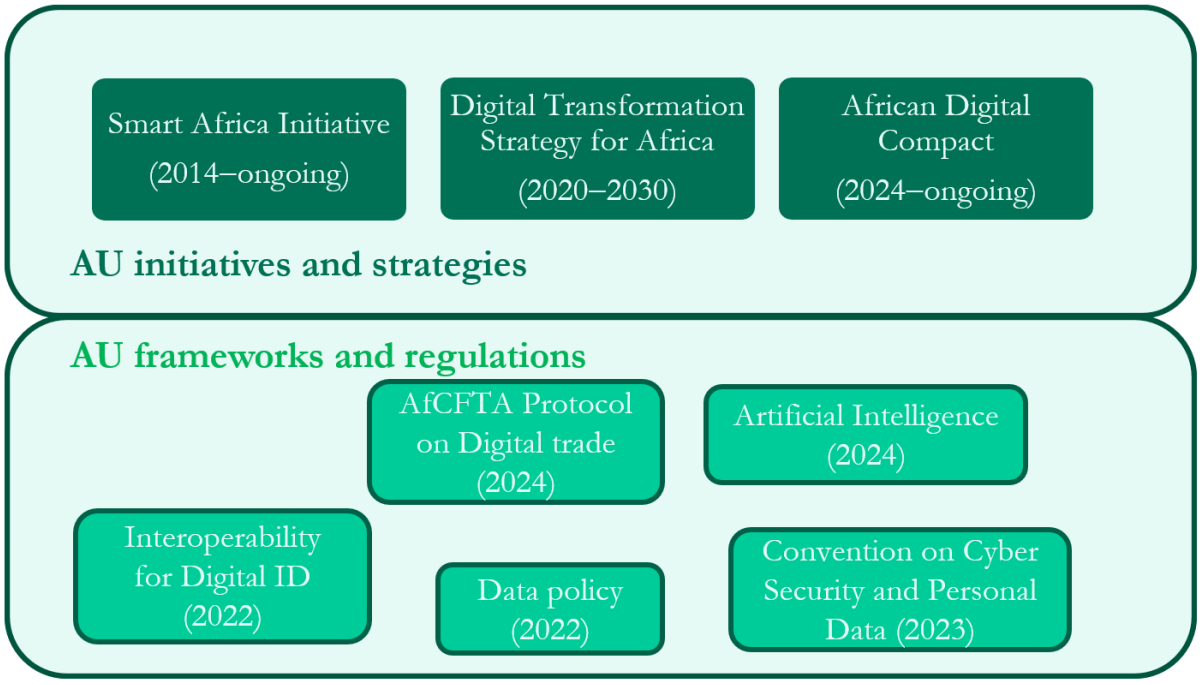
5 Digital Governance

Digital governance refers to the strategies, frameworks, and regulations that guide the development, deployment, regulation of digital technologies in societies. Effective digital governance establishes a shared set of principles and standards – covering everything from data protection and cybersecurity to innovation and digital trade – and is critical to ensuring that technological advancements protect individual rights and foster inclusive economic development. This section first takes stock of the digital policy landscape in Africa and then discusses how China, the EU, and the US are shaping it through their respective activities.

5.1 Growing but Fragmented Digital Governance across Africa

As digitalisation has come to permeate most facets of Africa's various economies and societies over the past decade, policymakers have launched a number of policies to ensure the inclusive benefits of digital technologies on the continent. Figure 4 below highlights key continent-wide initiatives and strategies defining high-level goals for digital transformation (upper part) and the frameworks and regulations that operationalise and standardise these goals (lower part).

Figure 4. AU Digital Policies



Source: Author's own illustration, based on official AU documents.

Established in 2014, the earliest significant digital initiative in Africa is the Smart Africa Alliance, endorsed by all African Union Member States, to promote projects and investments that drive broadband development and the use of information and communication technologies on the continent. To date, it includes 40 African countries as well as private, multilateral, and academic partner organisations. Launched in 2020, the DTSA for 2020–2030 builds on the Smart Africa Alliance as the first AU-led strategic vision for harnessing digital technologies for socio-econo-

mic development. The African Digital Compact, launched in 2024, serves as a unifying framework to accelerate Africa's digital transformation, aligning with the goals outlined in the DTSA and providing a more detailed implementation plan.

Beyond these strategies, the AU has introduced several frameworks and regulations aimed at strengthening Africa's digital-governance ecosystem. The AU Data Policy Framework aims to strengthen national data systems, facilitate the continent-wide interoperability of systems and cross-border flows, and realise a digital single market across Africa; meanwhile, the AU Interoperability Framework for Digital ID establishes guidelines to create a harmonised and interoperable system hereon across AU Member States (both frameworks were first adopted in 2022). The 2024 Continental Artificial Intelligence Strategy outlines an Africa-centric, development-oriented, and inclusive approach on the responsible adoption of AI. On the regulatory front, the 2023 AU Convention on Cyber Security and Personal Data Protection, also known as the Malabo Convention, sets legally binding data-protection and cybersecurity norms across AU Member States. Finally, the African Continental Free Trade Area (AfCFTA) Protocol on Digital Trade, a draft of which was published in early 2024, aims to create a harmonised regulatory environment for digital trade across AU Member States.

5.2 Competing Visions for Digital Governance in Africa

Leveraging the EU's Experience to Build an Open, Secure, and Interoperable Digital Single Market in Africa

The EU envisions a secure, open, and pluralistic digital domain – a principle that underpins the GG. Via the latter, the EU links investments in digital infrastructure "with standards and protocols that support network security and resilience, interoperability, and an open, plural and secure internet" (European Commission 2021), making clear its aims to use its regulatory power to shape the global digital order (Erforth 2024). A flagship project to achieve this goal is the Data Governance in Africa project, which will run from 2023–2026 and be backed with EUR 60 million funding from both the EU and its individual Member States, including Germany, to support the AU and its Member States in creating people-centric, development-focused data policies. Building on earlier collaborations like the Policy and Regulation Initiative for Digital Africa, sought here is the harmonisation of regulations, enabling of cross-border data flows, and promotion of investment in secure, sustainable data infrastructure – all with the broader goal of fostering a digital single market across the African continent.

At the heart of the EU's vision for digital governance in Africa is a comprehensive legal and regulatory framework akin to the one that has helped shape Europe's own digital single market. The General Data Protection Regulation, in force since 2016, enshrines individual control over personal data, while the Data Governance Act, Digital Markets Act, and Digital Services Act – all in force since 2022 – respectively address cross-border data-sharing, anti-competitive behaviour by Big Tech platforms, and online harm, misinformation, and consumer protection. Looking ahead, the Artificial Intelligence Act (AI Act), which will come into force in 2026, aims to ensure that AI is developed ethically and respects fundamental rights.

This deep regulatory experience is complemented by the EU's practical knowhow in building digital public infrastructure (DPI) (Teevan 2023). Over time, the EU has developed frameworks such as the European Interoperability Framework for public administration, which defines common standards for seamless data exchange; financial instruments such as the Single Euro Payments Area, which streamlines cross-border transactions; and legal premises such

as the eIDAS Regulation, which enables secure electronic identification across Member States. These regulations and DPI frameworks illustrate the core nature of the EU's approach to building its own digital single market.

China's Push to Spread its Norm of Cyber Sovereignty in Africa

While the EU promotes a vision of an open, secure, and interoperable digital domain in Africa, China's approach to digital governance reflects a fundamentally different philosophy, rooted in the concept of cyber sovereignty. This principle emphasises the right of states to control and regulate digital spaces, including data, hardware, and software, within their borders, aligning with China's governance model (Bagwandeen 2022). Through its DSR, China has sought to export this norm to partner countries, including many in Africa. In practice, this approach is implemented through extensive policy dialogues and multiple official visits, capacity-building programmes, as well as technologies such as the smart city infrastructure discussed above.

Several African governments have embraced China's cyber sovereignty model to gain greater control over their digital ecosystems. For example, Chinese companies have exported digital tools with advanced surveillance capabilities to 13 African countries to monitor and control both physical and online activities (Kumar 2024). In addition, Chinese officials are believed to be influencing policymaking, for example in Egypt, Tanzania, and Uganda, where they have helped to pass restrictive cybercrime and media laws that limit online dissent and freedom of expression (Gravett 2020). In another example, it has been reported that Nigeria banned Twitter in 2021 after consultation with China's Cyberspace Administration (Kumar 2024). Further, Chinese technology has also facilitated government shutdowns in Cameroon, Ethiopia, and Zimbabwe, for example, during elections or periods of civil unrest, in order to stifle dissent (ibid.).

China's efforts to shape digital governance in Africa are further reinforced by the promotion of its own digital standards through DSR projects and the country's dominance in the telecoms market. African countries' increasing reliance on Chinese technologies for Internet services has enabled Beijing to embed its norms and standards into local systems. These are often tied to financial aid and contracts. While this can rapidly expand digital infrastructure and services, the reported transfer of data from AU servers to Shanghai between 2012 and 2017 underscores potential vulnerabilities in terms of data sovereignty (Kadi 2019; Wright 2021). With robust data-protection frameworks only just being adopted across Africa, as discussed above, and with limited to no enforcement, many of its countries may face increased risks associated with reliance on Chinese-built networks and hardware.

Market-Driven Partnerships: The US Approach to Africa's Digital Governance

The US's vision for digital governance in Africa broadly aligns with the EU's emphasis on an open and interconnected world wide web. However, rather than shaping digital markets through comprehensive regulations like the EU, the US approach leverages major technology companies and supports them through mechanisms such as the Development Finance Corporation and public–private partnerships (Erforth 2024). This market-led model contrasts sharply with China's cyber sovereignty paradigm; while the latter promotes state-led infrastructure and governance projects, the US tends to prioritise rapid tech-sector expansion, commercial competition, and cross-border data flows.

Over the last few years, the US has increasingly voiced concerns over what it terms China's "digital authoritarianism," cautioning African partners about potential risks to data sovereignty and democratic governance (Erforth 2024; Kumar 2024). To present an alternative digital-governance model based on secure, open, interoperable, and reliable digital ecosystems, the US has expanded its engagement through initiatives such as the U.S.-Kenya Cyber and Digital Dialogue and a similar initiative with South Africa under its DTA. Despite these efforts, some observers argue that the US should adopt a more vigorous strategy to strengthen its global digital competitiveness and provide a viable counterbalance – such as a "Digital Marshall Plan" based on democratic principles of transparency, openness, and accountability – to China's growing digital influence in Africa (Kumar 2024).

6 Avenues for Deepening EU–Africa Digital Partnerships

Three years after its launch in December 2021, the GG is now at its midpoint. While progress has been made in each of its three digital priority areas, it is the right time to take stock. The EU should critically assess and, where necessary, readjust its digital partnerships with Africa. This section therefore presents four avenues for deepening EU–Africa digital partnerships, each with a set of specific recommendations.

Improve Coherence and Monitoring of Digital Partnerships

In response to intensifying geopolitical competition over Africa's digital sphere, the GG has arrived on the scene at a particularly apt moment. Its emphasis on the digital economy is also pertinent given the sector's growing importanDce for Africa's socio-economic transformation. Yet, to move beyond rebranding and achieve tangible impact, several adjustments are needed:

- **Strengthen consolidation and coordination** of existing digital initiatives. EU Member States already support numerous projects and programmes, yet effectively mapping and aligning them – such as through reinforced TEIs – remains an essential first step.
- **Accelerate the transition from project planning to implementation**. After three years, only 11 projects under the GG's digital component for Africa are currently underway or being implemented according to the official project website. It should be a top priority to quickly bring planned projects to fruition.
- **Improve transparency and monitoring** of GG projects to address gaps in publicly available lists. While some officially listed GG projects do not provide concrete project details such as time frame, status, or funding volume, others are advertised as GG projects even though they do not appear on official lists. Moreover, it is often unclear whether GG projects are genuinely new undertakings or previously existing initiatives that have been rebranded under the GG umbrella. These ambiguities underscore the urgent need for improved transparency, achievable thorough improved documentation and rigorous monitoring.
- **Form strategic alliances** with like-minded partners – most notably the US – to present a credible alternative to China's growing digital presence in Africa. By offering an open, interoperable, and transparent model for digital development, these alliances can reinforce Africa's capacity to shape its own digital future.

Focus on Selected Areas for Investment in Digital Infrastructure

Narrowing connectivity gaps is rightly a top GG priority, as digital infrastructure is the key enabler for a thriving economy in modern times. While the EU has taken initial steps – most notably the Medusa subsea-cable project connecting Europe and North Africa – large tech companies from other regions dominate various layers of Africa's digital-infrastructure stack. US Big Tech is investing heavily in subsea-cable systems and innovative satellite-based connectivity, while Chinese tech giants, backed by state-owned banks, are leading the way in telecoms infrastructure. Tech powerhouses from both countries are actively expanding into Africa's nascent but fast-growing cloud-infrastructure market. By contrast, the EU lacks such tech giants capable of driving its digital ambitions on a similar scale.

- **Invest in connectivity in underserved regions.** The EU should continue its efforts to invest in last-mile solutions. However, it should carefully consider emerging technologies that may be more cost-effective than subsea or terrestrial cables, such as satellite-based services (e.g. Starlink), particularly where private sector returns are limited, and connectivity gaps remain.
- **Leverage partnerships for investment in subsea-cable infrastructure.** Rather than duplicating large-scale subsea-cable efforts, the EU could partner with the US and already-active private investors such as Google (Equiano) and Meta (2Africa) to increase overall subsea-cable capacity. Such partnerships can provide more reliable, cost-effective backbone networks for African markets.
- **Invest in "middle-mile" digital infrastructure**. As additional bandwidth from subsea cables becomes available, investments in (carrier-neutral) data centres – the backbone infrastructure of cloud services – should become a priority. These investments help lower data-transfer costs, improve latency, enable advanced digital services (including AI applications), and create more resilient ecosystems for governments and businesses alike.
- **Uphold net neutrality of digital infrastructure.** As control of digital infrastructure, from subsea cables, to data centres, to the actual telecoms networks, becomes increasingly concentrated in the hands of a few tech giants – whether from the US or China – there is a risk of preferential data-routing or restrictions on user access. Fair competition and transparency should be upheld through anti-trust legislation and enforcement, ensuring an open Internet that benefits all stakeholders, from corporations to individual users.

Leverage Existing Networks and Initiatives to Deepen Digital-Innovation Partnerships

The EU is well placed to support Africa's innovation landscape, thanks to its extensive networks and long-standing cooperation on the continent's digitalisation. Decades of bilateral and multilateral partnerships – ranging from digital-skills programmes, support for entrepreneurs, to joint research on emerging technologies – have already laid strong foundations for more ambitious engagement. By reinforcing these existing efforts and scaling up successful initiatives under the GG, the EU can leverage its collective expertise to make a tangible difference to Africa's digital-innovation ecosystems.

- **Expand and consolidate existing bilateral initiatives**. Programmes of individual EU Member States, such as GIZ's Digital Transformation Centres, which have already proven to be instrumental in promoting Africa's digital-innovation ecosystems, should be further leveraged and scaled up. Similarly, where feasible, existing bilateral initiatives should be

consolidated with those at the EU level. For example, the Digital StAfrica Community connects stakeholders in the German and African startup ecosystems, much like the Africa Europe Digital Innovation Bridge, which aims to do the same at the EU level.

- **Involve individual Member States's DFIs.** These bodies are already playing a growing role in Africa's tech ecosystem by investing in startups and funds. Pooling and scaling up existing DFI programmes where feasible can increase their reach and create a more unified approach to supporting innovation across the African continent.
- **Support innovation-friendly policies.** Encourage the adoption of startup-friendly legislation, such as the Startup Acts implemented in several African countries, to simplify procedures and provide incentives for nascent businesses. The EU can assist governments to draft and implement such policies in countries that have not yet done so.
- **Prioritise support for local entrepreneurs, particularly women.** International and multinational partners can play a key role in promoting entrepreneurship by prioritising support for home-grown innovators – those born and educated in Africa – who remain underrepresented in the tech sector. Particular attention should be paid to empowering women entrepreneurs to address the gender gap that currently still endures in Africa's tech ecosystem.
- **Harness diasporas and cultural ties.** The EU's close cultural and historical ties with Africa, as well as its large African diaspora, provide a unique advantage over geopolitical competitors such as China. These relationships can foster migration and skills-training partnerships that help strengthen Africa's digital-innovation ecosystems and promote mutual growth.

Streamline Digital Governance in Africa by Building on the EU's Experience therewith

Africa and the EU share the challenge of harnessing the benefits of digitalisation across fragmented jurisdictions each at different stages of digital transformation while safeguarding individual data rights. The EU's experience in building a digital single market gives it a unique advantage in working with Africa towards achieving a similar vision itself. However, strategic adaptations are needed to ensure success:

- **Promote coherence and avoiding duplication of digital-governance policies**. The growing number of strategies and frameworks – such as the DTSA, the African Digital Compact, and various AU data initiatives – reflect Africa's ambition for a digital single market. However, overlapping mandates and unclear distinctions risk undermining their effectiveness. Greater coherence is needed to streamline these initiatives and avoid redundancies.
- **Adapt lessons from the EU's digital single market to the African context.** The EU's technical expertise offers valuable support for regulatory development and implementation, but solutions must be tailored to the specific needs of respective African countries. Simply adopting a European blueprint risk undermining the continent's digital sovereignty and reducing the effectiveness of governance frameworks. Instead, collaborative adaptation is key to ensuring locally relevant and effective policies that counter China's model of cyber sovereignty, which emphasises centralised state control over digital spaces.
- **Foster innovation by avoiding rigid rulemaking**. Regulatory frameworks should facilitate, not hinder, business growth and innovation, especially for local startups – which drive job creation and economic growth. Drawing lessons from ongoing EU debates, such as the

recent Draghi (2024) report, efforts should focus on harmonised, streamlined regulations that create an enabling environment for competition and innovation across Africa's currently fragmented markets.

- **Promote DPI.** African countries can adopt key elements of DPI – such as digital-identity systems, payment platforms, and the interoperability of public services – to establish coherent governance standards, support innovation ecosystems, and protect users. These foundational investments will accelerate Africa's journey towards a unified digital market, while ensuring local ownership and long-term sustainability.

7 Conclusion

Africa's digital transformation is advancing rapidly amid intensifying geopolitical competition. Global powers are increasingly recognising the continent as a critical space for influence, with digital infrastructure, innovation ecosystems, and governance emerging as key focus areas. This study has explored the current digital landscape in Africa, examined the different approaches of the respective global powers, and identified actionable recommendations for the EU to deepen its partnerships with Africa under the GG initiative.

Connectivity has increased significantly in recent years through investment in subsea cables and telecoms networks, but significant gaps remain between Africa and the rest of the world as well as on the continent itself. US tech giants have recognised the remaining gaps as a business opportunity and are investing heavily in subsea-cable infrastructure and, increasingly, satellite networks, while Chinese companies, backed by state-owned banks, are leading the way in telecoms infrastructure. By comparison, the EU's recent investments in Africa's digital infrastructure under the GG are much more limited in scale, largely because the Bloc lacks the tech powerhouses capable of driving its digital ambitions on a similar scale to their US and Chinese counterparts. To make a meaningful impact, the EU should partner with allies on large-scale digital infrastructure projects, prioritise investment in underserved regions (where private sector returns are limited), and address Africa's emerging middle-mile infrastructure – in particular, carrier-neutral data centres. This would reduce costs, especially in remote, previously underserved areas, improve data exchange, and promote net neutrality.

Recent connectivity expansion has enabled the emergence of digital-innovation ecosystems in many African countries, driven by growth-oriented tech startups using digital technologies to bring their innovative products or services to market at scale. The EU is well-positioned to promote Africa's innovation landscape in a mutually beneficial manner by leveraging its existing networks and initiatives, based on decades of cooperation in areas such as digital-skills development, entrepreneurship, and research. However, scaling up these efforts and consolidating fragmented initiatives across Member States is crucial. Engaging the latter's DFIs and supporting innovation-friendly policies are critical; particular emphasis should be placed herein on empowering local entrepreneurs, especially women, to foster inclusive innovation ecosystems.

The penetration of digitalisation into most facets of Africa's various economies and societies has not gone unnoticed by the continent's policymakers, who have launched a rapidly growing number of digital governance policies in Africa in recent years. The AU's vision of a digital single market is ambitious, but it is hampered by overlapping frameworks and incon-

sistent implementation. The EU's experience in harmonising its own digital market offers valuable lessons, but any support must respect Africa's digital sovereignty and be tailored to local needs. The EU is also competing with China's cyber sovereignty approach, which emphasises centralised state control over digital spaces. To counter this, the EU must promote its values-based model of openness and interoperability, ensuring flexible yet coherent regulations that empower African stakeholders. Investment in related public infrastructure, such as digital-identity systems and payment platforms, will be crucial to achieving harmonised and streamlined digital governance while fostering trust and cross-border data flows.

In all these areas, greater consolidation and coordination of existing digital initiatives is essential. EU Member States are already supporting numerous digital programmes and projects, but effective consolidation and coordination of these efforts – such as through reinforced TEIs – is needed to maximise their impact. In addition, with only about a dozen projects listed under the GG's digital component underway or being implemented in Africa at present, accelerating the transition from project design to implementation must be a top priority. Improving transparency and monitoring is also essential, as many GG projects lack concrete details on time frames, status, or funding levels. Furthermore, partnerships with like-minded allies are crucial to provide a coordinated alternative to competing models and reinforce shared values of openness, fairness, and sustainability. While the US, with its significant Big Tech presence in Africa, has traditionally been a strong ally, recent policy shifts under the second Trump administration have introduced uncertainties into this partnership's endurance.

The need for action is clear. Africa's digital transformation is unfolding rapidly, and decisions taken now will shape its trajectory. By leveraging its expertise, values, and partnerships with allies, the EU can position itself as a key partner to the continent, fostering a digital ecosystem that supports innovation and growth, protects rights, and builds resilience – to the benefit of both Africa and Europe in an increasingly competitive global landscape.

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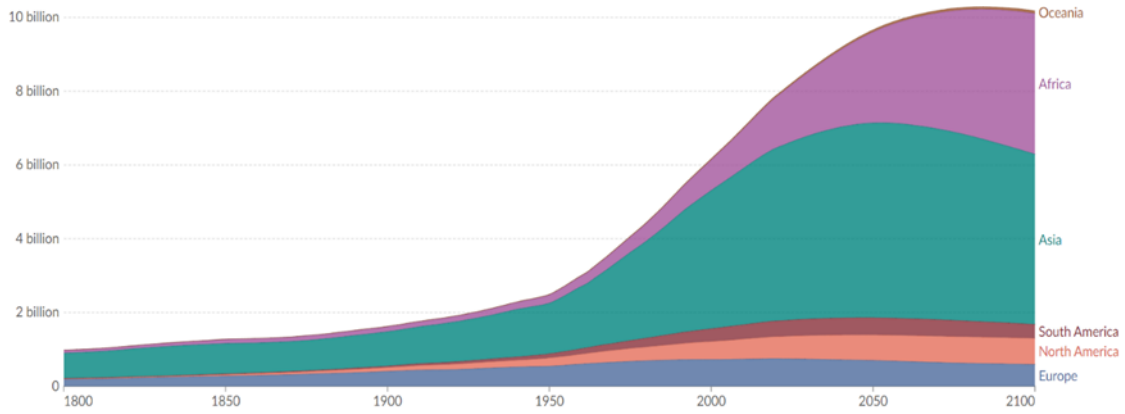
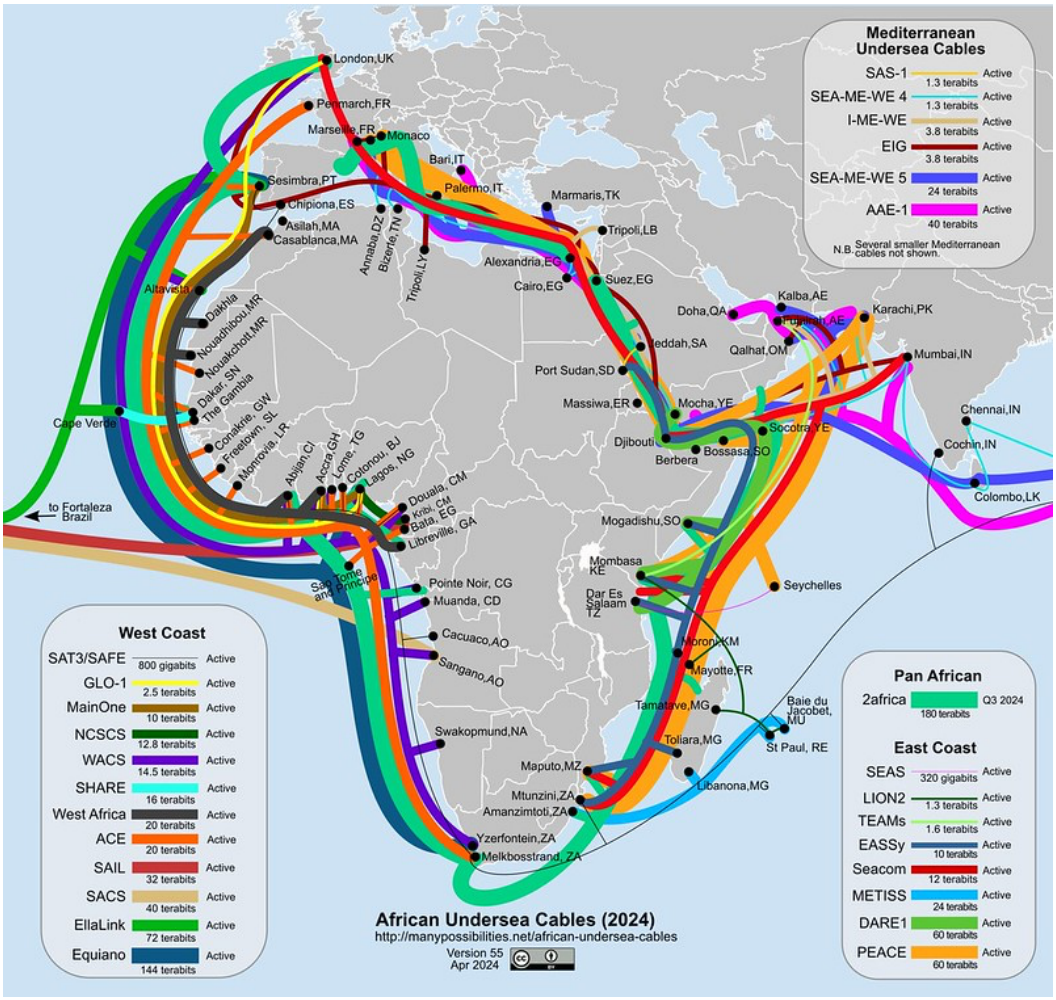
Appendix

Appendix Figure 1. Population growth by region



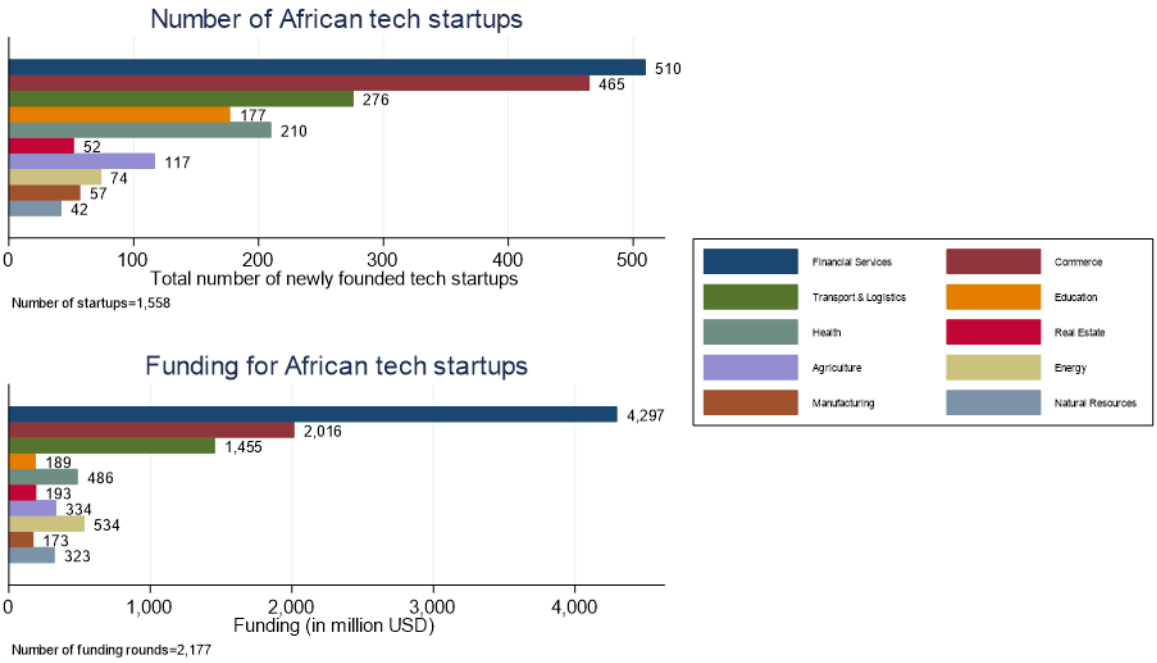
Notes: Visualisation based on Our World in Data compiled from HYDE (2023); Gapminder (2022); UN WPP (2024).

Appendix Figure 2. African Subsea Cables in 2024



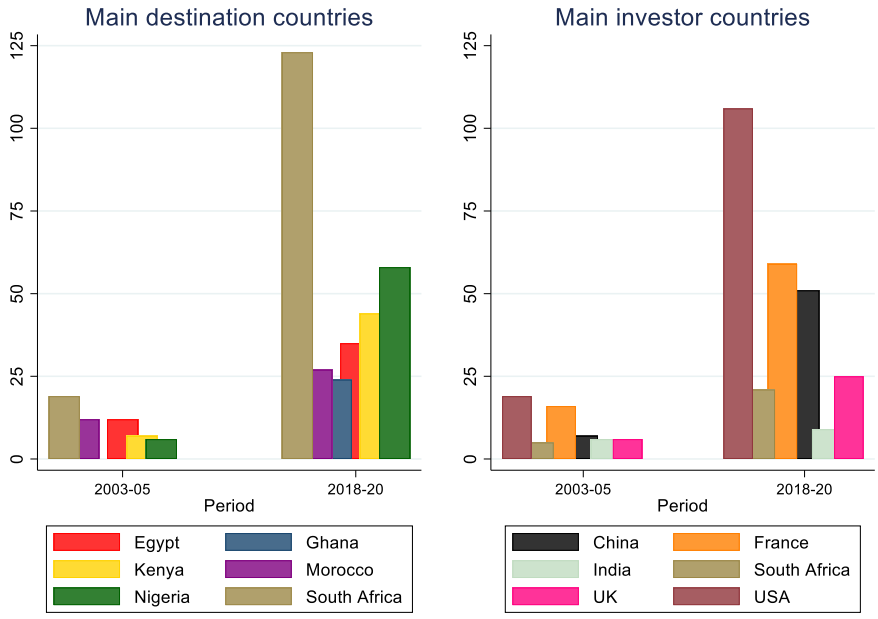
Notes: Illustration is taken from Song (2024).

Appendix Figure 3. Number and Funding of African Tech Startups for Top 10 Sectors, 2015–2022



Notes: Illustration is taken from Lay and Tafese (2025). Only tech startups are included, which we define as companies founded in 2010 or later that have received venture funding. Only the top 10 sectors in terms of number of African startups are included. Sectors are not exclusive, so the same startup/funding round can belong to several sectors.

Appendix Figure 4. Main Destination and Investor Countries of Greenfield ICT Projects in Africa, 2003–2020



Notes: Author's own illustration from data from fDi Markets. Only projects in ISIC rev. 4 ICT sectors are considered.

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