EU-AFRICA DIGITAL PARTNERSHIP

STRATEGIC PATHWAYS THROUGH THE MATTEI PLAN AND GLOBAL GATEWAY

Darlington Tshuma and Marianna Lunardini
(eds)

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IAI Research Studies 14

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List of abbreviations

ADCA	Africa Data Centres Association
AECID	Agencia Española de Cooperación Internacional para el Desarrollo
AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AI	Artificial intelligence
AI Hub	Artificial intelligence hub
AICS	Italian Agency for Development Cooperation
AU	African Union
AUDA-NEPAD	African Union Development Agency
AVCA	African Private Equity and Venture Capital Association
BF Group	Bonifiche Ferraresi
BRI	Belt Road Initiative
CDP	Cassa Depositi e Prestiti
CIS	Commonwealth of Independent States
CSO	Civil society organisation
D4D Hub	Digital for Development Hub
DE4A	Digital Economy for Africa
DPI	Digital public infrastructure
DSR	Digital Silk Road
DTA	Digital Transformation with Africa Initiative
ECDPM	European Centre for Development Policy Management
EDP	Energy Development Plan
EIB	European Investment Bank
ETTG	European Think Tanks Group
EU	European Union
EV	Electric vehicle
GDP	Gross domestic product
GERD	Grand Ethiopian Renaissance Dam
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GLOBEC	Center for Global Strategic Engagement
GSMA	GSM Association
ICT	Information and communication technology
IDOS	German Institute of Development and Sustainability

IFC	International Finance Corporation
IFF	Illicit financial flow
IGW	Ibrahim Governance Weekend
IIAG	Ibrahim Index of African Governance
IMF	International Monetary Fund
ITU	International Telecommunication Union
KRA	Kenyan Revenue Authority
LDC	Least developed country
LIC	Low-income country
LMIC	Low- and middle-income country
MFF	Multi-Financing Framework
NBC	National Broadcasting Code
OECD	Organisation for Economic Co-operation and Development
PGII	Partnership for Global Infrastructure and Investment
PHL	Post-harvest losses
PSTN	Public-Switched Telephone Network
RECS	Regional economic communities
SDG	Sustainable Development Goal
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNESCO	United Nations Educational Scientific and Cultural Organisation
US	United States
VAT	Value-added tax
WB	World Bank
WTO	World Trade Organization

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Foreword

Few documents carry the high level of ambition contained in the African Union's Agenda 2063, an agenda setting out a half-century long development path and priorities for the second-largest continent on this planet and its 54 states. By the year 2063, marking the centenary of the founding of the Organisation of African Unity, the continent is projected to become the most populous continent, spurred by rapid population growth and characterised by a large youth workforce.

When the strategy was adopted in 2013, its second aspiration expressed the desire to ensure world-class infrastructure criss-crossing the continent. At that time, the abbreviation "ICT" was still commonly used to refer to the information and communication technology that would be brought in to realise this. Under the transformational outcomes that the strategy envisages, the expectation is raised that by the year 2063, "ICT penetration and contribution to real GDP in absolute terms would be double of 2013 levels". As a good proxy of this, the GSM Association (GSMA) assessed that the mobile technology sector contributed 6.7 per cent of Africa's collective GDP in the year 2015, which it subsequently saw increased to 7.7 per cent in the year 2024.

It is safe to say that the world – and the technology we use today – is unrecognisably different from what those drafting the Agenda 2063 over a decade ago had in mind. A global pandemic propelled innovation and normalised the use of online videoconferencing software, while constant artificial intelligence innovations leave us guessing as to its future role in and contribution to transforming the very fabric of our societies. African states have gone on all extremes of the spectrum from driving these innovations – hosting data centres, or spearheading innovations – to manipulating and blocking the use thereof, for instance during general elections.

While cognisant of our inability to imagine our futures confidently in today's turbulent time, one "known known" if African states wish to realise the continent's transformational outcome in ICT is the importance of ensuring an enabling environment for allowing digital technology to thrive and drive. This enabling environment should be broadly understood to cover everything from the hard basics – notably sufficient and

affordable energy access as well as reliable and fast bandwidth – to the soft essentials and policy frameworks: ensuring that no one and no region, no matter how remote, is left behind in benefiting from and co-creating Africa's digital technology market.

It may be argued that the strong differences between and within African states complicates realising this continental ambition. Although this is a reality to be aware of, an important driver for convergence between the states concerns the African Continental Free Trade Area (AfCFTA). At this point in time, 48 out of 54 African states had signed and ratified the agreement establishing the AfCFTA. Linked to the agreement, a Digital Trade Protocol was developed and adopted in February 2024 to drive and enable digital trade across Africa. While still under further preparation, once adopted and ratified this protocol will seek to promote cross-border data flows, harmonise regulations of the states, and improve cybersecurity.

As a world-renowned producer of legislation and representing the largest internal market, the European Union is a natural partner to supporting the AfCFTA secretariat and ratifying states of the agreement and its protocols. The support it provides potentially covers the full width of the enabling environment for realising Africa's digital ambitions, from advisory support to ongoing protocol deepening and transposing into national legislation to the real-life investments that ensure adequate energy and associated resources and technology to match the policy ambitions.

This book presents an excellent collection on the potential for digital technology on the African continent, and Europe's international cooperation in support thereof. Preceded by a concise introduction by the book editors, the volume in front of you brings together five chapters that further probe into Africa's needs, chances and priorities and put the spotlight onto two European initiatives. The first concerns Italy's Mattei Plan, an initiative launched in January 2024 during its G7 Presidency that focuses on reforming the country's engagement in Africa with a focus on development, energy, and migration management. The second concerns the EU's Global Gateway Initiative, an initiative first announced in September 2021 that seeks to mobilise 300 billion euros in external investment – with the 2022 AU-EU summit agreeing that half of this target should be achieved on the African continent. The programmes are both driven by Europe's own lessons from decades of cooperation with Africa,

but also represent a response to the increased global competition that Europe experiences in shaping its relations with its neighbouring continent.

The five chapters offer a wide range of perspectives on Africa's digital transformation and will leave the reader informed on today's international cooperation possibilities and the remaining challenges. Besides being a valid and in itself, cooperation between Europe and Africa may also contribute to regulatory harmonisation which may help to deal with avoiding technological or software dependence on either China or the United States. While the historical irony of Africa and Europe engaging on such an endeavour should not be denied, there is today an enhanced acceptance of the need for technological integration and independence to go hand in hand while Africa seeks to ensure that digital technology contributes sustainably and equitably to its development.

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Introduction

Darlington Tshuma and Marianna Lunardini

From the thriving tech ecosystems of Nairobi, Lagos and Kigali to the sprawling innovation hubs emerging on university campuses across the continent, one of the most consequential and inspirational stories of the last decade is Africa's technological and digital boom. The steady expansion of digital connectivity, though uneven across groups and geographies (see Chapter 1), represents a transformative shift with profound socioeconomic implications. For many, it is both a source of inspiration and a tangible expression of "Afro-optimism", signalling Africa's potential to sustain economic growth, drive innovation and entrepreneurship in the face of insurmountable global challenges. Technology and more broadly, digitalisation as a key enabler of this progress, stands out as an important feature of Africa's development.

As this volume shows, Africa's digital and technological landscape is undergoing rapid transformation driven by a surge in venture capital financing, widespread adoption of digital tools and technologies, enabling policy regimes and the resilient entrepreneurial spirit of Africans themselves. Recognising the transformative potential of digitalisation and the digital sector, African countries and regional bodies have accelerated efforts to establish comprehensive digital policy frameworks to guide national and sub-regional strategies. The African Union's Digital Transformation Strategy for Africa (2020-2030) and the Continental Artificial Intelligence (AI) Strategy underscore the continent's determination to harness digital technologies and emerging innovations as catalysts for inclusive growth, sustainable development and socioeconomic transformation (African Union 2020, 2024). To date, more than 40 African countries have either adopted or are in the process of formulating national digital strategies and frameworks. These frameworks are intended to harmonise and streamline regulatory environments, attract private sector investment

and ensure that Africa's digital transformation contributes directly to inclusive growth, job creation and regional and continental integration.

From innovations in AI, health, education, climate action and agriculture and fintech, this volume provides detailed illustrations of this important feature of African development. In addition to case studies, the chapters contained in this volume provide nuanced and targeted recommendations that can help guide African and European policy and decision makers and investors on how to leverage Africa's digital transformation and recentre it as an engine for sustainable growth and a force for shared trans-continental prosperity. As highlighted in this volume, Africa's population is set to reach 2.5 billion people from the current 1.2 billion by mid-point of the 21st century (McNair 2024). To develop sustainably and absorb a rapidly growing labour force, estimated at 800 million by 2050, African economies must collectively sustain double-digit growth rates over the next two decades (McNair 2024). As Chapters 2, 3 and 4 in this volume demonstrate, technological innovation, digital transformation and the digital sector holds immense promise to unlock Africa's untapped potential and to bridge development and financing gaps. However, to realise this promise, African countries need to overcome complex structural challenges ranging from financing and infrastructure gaps to digital governance loopholes and digital skills shortages. African countries, on their own, may find it difficult to meet the scale of investment required to close persistent infrastructure and financing gaps. Addressing such complex challenges whether in the short or medium term demands forward-looking, innovative partnerships capable of unlocking real value. Strategic collaboration between governments, private investors, development finance institutions and research is essential to mobilise the level of resources, technical know-how and risk-sharing mechanisms needed to support Africa's development efforts. For instance, the European Union through the Global Gateway is targeting five key infrastructure areas in Africa, namely: green transition, digital transition, sustainable growth, health and pharmaceutical systems, and education and training programmes. Similarly, Italy's Mattei Plan outlines five strategic pillars for engagement with African countries, namely: education and training, agriculture, health, energy and water – with digitalisation serving as the cross-cutting enabler.

Mobilising capital from both public and private sectors, while harnessing frontier innovations emerging from African and global research institutions is fundamental to bridging Africa's digital and technological

divide, and closing infrastructure (energy, water and cable networks) and skills gaps. The EU, through the European Investment Bank (EIB), the World Bank and other international financing institutions is scaling up investments and intensifying support for Africa's digital transformation. A notable example is the submarine cable project in Mauritania, designed to complement the African Coast to Europe cable. These investments are expected to enhance regional connectivity by providing additional data capacity not only for Mauritania but also for its landlocked neighbours, thereby strengthening cross-border digital integration.

Equally, sustained advocacy by civil society is critical to shaping governance frameworks that help secure Africa's long-term digital and technological sovereignty. Digital transformation initiatives like the EU's Digital Economy Packages, the Global Gateway's Digital4Development Hub (D4D Hub), the AI Hub and the Digital Flagship Initiative under Italy's Mattei Plan are some notable examples of the transformative power of value-aligned partnerships. The Digital Flagship Initiative under Italy's Mattei Plan for instance is supporting the development and deployment of digital public infrastructure in several African countries including Senegal, Mozambique, Côte d'Ivoire and Ghana. The EU's Digital Economy Package on the other hand is helping to strengthen digital governance frameworks and support digital upskilling and retraining programmes in Kenya and Nigeria. Harmonisation and creating synergies between these two important instruments can be a gamechanger with profound impact for African countries.

Organisation of the book

The book is made up of five distinct but interrelating chapters. The first chapter by Crumpton et al., demonstrates the importance of bridging Africa's digital gaps to unleash socioeconomic transformation and progress in areas like education, financial inclusion, governance, civil registration and connectivity. The chapter highlights improvements in key digital indicators, including mobile connectivity, internet access and computer use. Yet major structural barriers persist. Infrastructure deficits, particularly unequal electricity access – still affecting roughly 600 million people continue to constrain digital inclusion. Moreover, deep subnational inequalities linked to gender, income, geography and social status shape who benefits from the digital revolution and who is left behind. Closing these

persistent gaps requires coordinated, multi-level approaches that align national policies with supportive international partnerships. The authors argue that sustained cooperation with actors such as the EU will be critical to expanding broadband access, strengthening energy systems, enhancing cybersecurity and ensuring that Africa's digital future is both inclusive, sustainable and transformative.

The second chapter by Tshuma notes that Africa's digital landscape is undergoing rapid transformation driven by a surge in entrepreneurial activity, enabling policy regimes and widespread adoption of digital technologies. The author demonstrates how Italy's Digital Flagship Initiative – a strategic partnership between the government, UNDP and four African countries under the Mattei Plan is leveraging digital transformation to build climate-neutral, cyber-resilient digital infrastructure, strengthen digital public platforms and accelerate technology adoption to improve accessibility and delivery of public services in pilot countries. The author notes that long-term success and sustainability of Africa's digital transformation depend on overcoming key structural barriers including Africa's widening digital infrastructure gaps, digital skills shortages, underdeveloped financing mechanisms and fragmentation caused by overlapping and uncoordinated digital initiatives.

The third chapter by Tshuma and Lunardini emphasises Africa's demographic shifts as presenting both opportunities and challenges for Italy-Africa cooperation under the Mattei Plan. The authors note that Africa's digital sector has the potential to drive innovation, spur economic growth, empower rural communities, foster continental integration and accelerate progress towards achieving Sustainable Development Goals (SDGs). At the same time, Africa's digital transformation has sparked concern over asymmetric power structures that risk perpetuating concerns about "digital colonialism". By enhancing digital governance frameworks and investing in targeted capacity-building initiatives, the Italy-Africa digital partnership under Mattei Plan can serve as a catalyst for strengthening African digital sovereignty.

The fourth chapter by Lunardini situates Africa's digital transformation within broader international cooperation, highlighting how Mattei Plan and international actors can help address structural bottlenecks impacting digital transformation in Africa. These include digital infrastructure gaps, skills deficits, financing constraints and regulatory loopholes. Through an analysis of the digital infrastructure pillar of the

Mattei Plan, the author highlights the need for a comprehensive digital cooperation strategy, that includes a multi-stakeholder inclusive approach, addressing digitalisation through its economic, social and political impact.

The fifth chapter by Lunardini and Tshuma delves into the EU-Africa digital partnership through the lens of two key European policy instruments: the EU's Global Gateway and Italy's Mattei Plan. The authors note that while the EU's Global Gateway has and continues to invest in hard digital infrastructure to support digital transformation initiatives in Africa, the EU has invested less in strengthening governance and fostering local digital innovation. The authors argue that for sustained impact, both the Global Gateway and the Mattei Plan must align with African-led frameworks to complement national and sub-regional development priorities.

Conclusions

This volume offers a comprehensive and multidimensional account of Africa's digital transformation, highlighting both opportunities and challenges and their underlying drivers. The evidence presented on connectivity gaps, accessibility and affordability, infrastructure deficits, consumption patterns and skills shortages illustrates the complexity of the continent's digital landscape and the challenges it poses for decision and policymakers. For Africa's digital transformation to become a catalyst for long-term development, policies must prioritise sustained growth, shared prosperity, human capital development and strong governance frameworks, while ensuring the private sector's active contribution. Equally important is the establishment of robust regulatory environments that safeguard vulnerable populations and promote equitable access to digital opportunities.

As contributors to this volume note, the task ahead for African governments and policy makers lies in designing enabling policy regimes to attract public and private sector investment, scaling up infrastructure for widespread technology adoption and embedding digitalisation within broader development strategies. Complementary social policies such as targeted reskilling and education reforms can accelerate progress, equipping the workforce for the demands of the digital economy. Looking ahead, the next decade will be decisive. With forward-looking strategies

and value-aligned partnerships centred on human capital development, job creation and innovation-driven investment, Africa has the potential not only to redefine its development trajectory but build a strong foundation for inclusive, sustainable and resilient growth.

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1. Digital Transformation in Africa: From Gaps to Goals

Ben Crumpton, Melis Baydag, Niels Keijzer, Camilla Rocca and Benedikt Erforth

1.1 Unpacking the digital divide in Africa

Humanity's future is increasingly digital, as technology has transformed and continues to transform all aspects of our lives. Digital infrastructure is deemed crucial for all sectors of the economy, employment and broader socio-economic development, with far-reaching impacts on African development from education to environmental sustainability. The wide digital inequality manifested during the Covid-19 pandemic has negatively affected educational attainment in many African states (Kelly and Rutazihana 2024).[1] Beyond ensuring adequate infrastructure and required inputs such as energy access, the full potential of strengthening digital access to reduce inequality will only be realised if paired with effective governance. Research has shown that increased ICT access may decrease inequality when supported by strong governance and democratic institutions (Sarwar et al. 2023).

[1] According to AUDA-NEPAD (2022), an estimated 32 million children in Eastern and Southern Africa were out of school during the peak of the pandemic. Available radio, television and internet based tools did not manage to provide adequate distance education to many children at that time.

Box 1. Defining the digital divide

The *digital divide* refers to "the gap separating those individuals who have access to new forms of information technology from those who do not" (Gunkel 2003). Although it is commonly associated with unequal *access* to digital infrastructure or devices, it also involves differences in the *ability* of people to use digital resources and to do so *effectively* (Vassilakopoulou and Hustad 2023).

The literature distinguishes between first- and second-order digital divides: a *coverage gap*, where people live outside the reach of digital networks (e.g., mobile internet), and a *usage gap*, where individuals are 'covered' yet don't use digital technology due to other obstacles and constraints. *Key categorical parameters* such as age, gender, culture, ethnicity, social capital and health, as well as *positional inequalities* linked to employment, education and urban-rural gaps further help to understand the inequality patterns (Elena-Bucea et al. 2021, Van Dijk 2012).

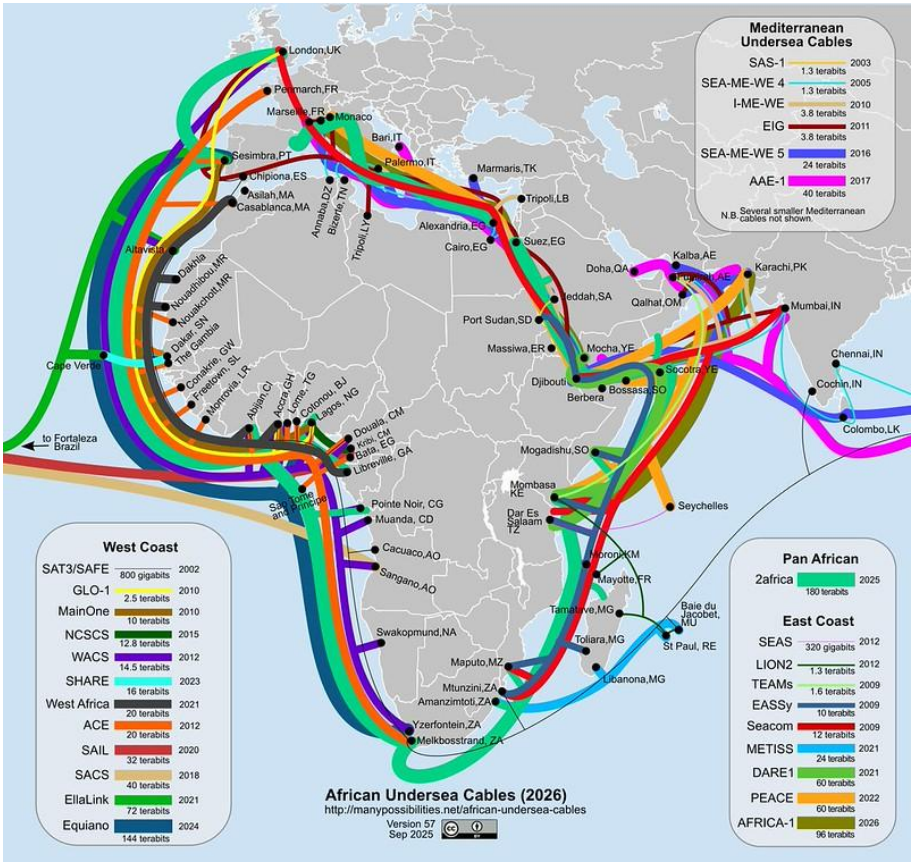
Bridging the digital divide is a key Pan-African development objective, with many African states articulating their ambitions and preferences. In 2023, the African Union's Agenda 2063 already placed digital inclusion at the heart of its vision, emphasising that by 2063 "the necessary infrastructure will be in place to support Africa's accelerated integration and growth, technological transformation, trade and development" (African Union 2015: 5).

The Second Ten-Year Implementation Plan of Agenda 2063 (2024-2033) aims to speed up Africa's development, focusing on seven 'Moonshots' aligned with the continent's aspirations, including achieving middle-income status for all member states, enhancing integration and connectivity, and strengthening Africa's global influence. The plan emphasises the potential of Africa's expanding digital sector to drive economic growth by enabling digital transformation in key areas such as transport, healthcare and education, as well as spurring innovation, creating jobs, promoting financial inclusion and enhancing service delivery. However, the second ten-year plan to implement Agenda 2063 acknowledges that most digital success stories remain exceptions rather than the norm (African Union 2024).

Building on Agenda 2063, African countries have developed or endorsed national frameworks that align with and support the continent's broader digital transformation agenda. The Digital Transformation Strategy for Africa 2020-2030 aims to leverage digital technologies to drive inclusive growth, job creation, poverty reduction, and deepen continental integration, while ensuring Africa's ownership of digital tools. This strategy also aims to coordinate digital efforts across governments, businesses and citizens (African Union 2020). In parallel, efforts are also being made to

tackle more fundamental issues, such as the infrastructure and energy needs that are required to bridge the digital divide, which in turn requires economic growth and broader development, exemplified by initiatives like the World Bank Group's Mission 300 Africa Energy Summit.[2] Key progress has been made, such as through the expanding submarine cable infrastructure now servicing the African continent, but investments are needed to reduce the vulnerabilities shown in the series of severe outages that occurred both in West Africa and in East Africa in 2024 (Munga 2025).

Figure 1 | African undersea cables



Source: Many Possibilities website: *African Undersea Cables*, updated in September 2025, https://manypossibilities.net/?p=243.

[2] World Bank website: *Mission 300 is Powering Africa*, https://www.worldbank.org/en/programs/energizing-africa.

This chapter analyses the digital divide in Africa by offering both a global perspective and a comparative examination of its various dimensions across and within African states.[3] The main objective is to give an overview of the overall situation and trends in terms of moving African digital access from gaps to goals. In view of this objective, it describes overall trends to provide a continental perspective and does not provide a detailed description as to why individual countries perform differently from others. The chapter was prepared jointly with chapter 5 that analyses key policy dimensions and international cooperation initiatives focused on digital access, with a key focus on the European Union's Global Gateway and the Italian government's Mattei Plan.

The analysis presented primarily draws from three recent reports: the International Telecommunication Union's 2024 *Measuring Digital Development: Facts and Figures* (ITU 2024), the GSMA's 2024 *State of Mobile Internet Connectivity* (GSMA 2024), and the data from the 2024 Ibrahim Index of African Governance (Mo Ibrahim Foundation 2024b). In addition to the review of literature and quantitative data, the analysis also incorporates insights from discussions held during a side event organised by IDOS, the Mo Ibrahim Foundation and the European Think Tanks Group at the Ibrahim Governance Weekend on 3 June 2025, in Marrakesh.[4]

1.2 Digital connectivity: Despite improvements, Africa still lags behind globally

Internet connectivity in Africa has grown significantly in recent years, with notable gains in usage across the continent. Between 2019 and 2024, the rate of increase was slightly below the global average, and despite steady annual improvements, Africa continues to lag behind other regions in overall connectivity. On average, only 38 per cent of individuals

[3] This chapter was prepared as ETTG Policy Brief No. 7/2025, in close coordination with a second ETTG Policy Brief that analyses European cooperation initiatives in relation to Africa's digital transformation (see Chapter 5). Supplementary data and information to the analysis presented in this chapter are available on the ETTG website. Prior paper published by ETTG, supported by the Mercator Stiftung, can be accessed on ETTG website at this link: https://ettg.eu/digital-transformation-africa-gaps-to-goals.

[4] The observations regarding the availability and quality of relevant data on this subject matter should be acknowledged.

in Africa used the internet in 2024, up from 25 per cent in 2019. This remains well below the global average of 68 per cent and far behind the average of Europe (91 per cent), the Americas (87 per cent) and Asia-Pacific (66 per cent). When looking beyond the aggregated numbers, it becomes visible that internet penetration in Africa varies widely too, from just 11 per cent in Burundi to 87 per cent in Seychelles.

Driven by the expansion of connectivity and artificial intelligence (AI), global energy consumption growth accelerated by 2.2 per cent in 2023, significantly faster than the 1.5 per cent average annual growth recorded between 2010 and 2019. China and India saw consumption growth well above the global average, while energy consumption in the OECD group only grew by 1 per cent on average, with some countries recording declining consumption amidst slow growth (Enerdata 2025). Energy use and generation are key enablers of digital development, also given that new approaches and AI solutions in particular are energy-intensive. In comparison, Africa's energy demand still remains comparatively low and in 2023 represented below 5 per cent of the world's energy demand, while at the same time the continent remains a significant exporter of fossil fuels to satisfy the energy demands of other world regions (Cilliers and Le Roux 2025) At the same time, Africa's electrification does not sustain the continent's population and economic growth. Persistent energy challenges – particularly unreliable electricity access in many countries – remain a critical barrier to expanding and sustaining digital connectivity.

When viewed by income group, low-income countries (LICs) continue to lag behind in overall internet use – just 27 per cent of the population was online in 2024, compared to 93 per cent in high-income countries. However, LICs are experiencing a much faster growth – exceeding the rate of high income countries. Similarly, among development categories, least developed countries (LDCs) saw internet use grow from 22 to 35 per cent, signalling that while the gap remains wide, the pace of improvement is encouraging.

The digital divide can also be observed when internet use is broken down by *age group*, which is particularly relevant as Africa is the world's youngest continent. In 2024, internet use among African youth (ages 15-24) reached 53 per cent, compared to only 34 per cent among the rest of the population – those younger than 15 or older than 24. While this pattern, where younger individuals are more connected than older generations, is observed globally, Africa's usage figures are still lower than in

other world regions, and its youth use digital technology less than on other continents. Although African youth surpass the region's general population in internet usage by 19 percentage points, they still lag 26 percentage points behind their global peers and 16 percentage points behind the global general population's average.

Furthermore, the *rural-urban digital divide* in terms of internet use remains a major challenge in Africa. In 2024, only 23 per cent of individuals in rural areas across the continent used the internet, compared to 57 per cent in urban areas – one of the largest regional gaps globally, with roughly four out of five rural residents remaining disconnected. While a rural-urban gap exists everywhere, Africa's 34-percentage-point divide stands out, especially when compared to more digitally advanced regions like Europe (93 per cent urban vs. 86 per cent rural) and the Commonwealth of Independent States (CIS) (95 vs. 85 per cent). The disparity is similarly stark when viewed by income level: in African LICs, just 16 per cent of rural populations are online, compared to 46 per cent in urban areas.

The data also highlights a persistent global *gender divide* in internet usage: 65 per cent of women use the internet, compared to 70 per cent of men. This gap is particularly evident in Africa, where only 31 per cent of women are online compared to 43 per cent of men, indicating a disparity of 12 percentage points. The disparity is even greater in African LICs and LDCs, where just 21 and 29 per cent of internet users are female compared to 32 and 41 per cent of male users, respectively. By contrast, gender parity in internet usage has been, or is close to being, achieved in higher-income regions such as Europe and the CIS. In these regions, 90 and 91 per cent of women use the internet, compared to 92 and 93 per cent of men.

1.3 In Africa, access to electricity and infrastructure remain key foundational challenges

Using data from the 2024 Ibrahim Index of African Governance (IIAG) (Mo Ibrahim Foundation IIAG 2024b), this section shows the status of access to electricity and infrastructure on the continent.[5]

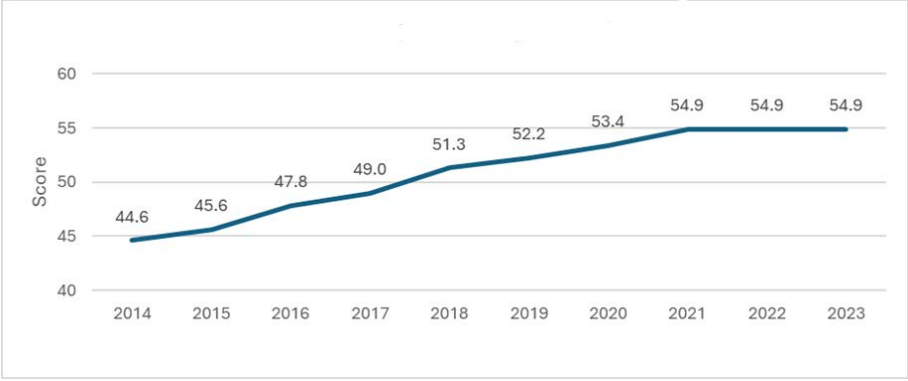
[5] For more information on the index itself, including its methodology, sources and indicator definitions, please refer to this supplementary document: Mo Ibrahim Foundation (2024a).

Electricity access is foundational when analysing the digital divide, as without it, countries are unable to make any progress in this sphere. The issue remains critical for the continent, with both the Mo Ibrahim Foundation and the World Bank showing that over 600 million people in Africa still lack access to electricity (Ramstein and Hallegatte 2025, Mo Ibrahim Foundation 2022).

Ignoring electricity access may in fact lead to policy mismatches – investments in broadband or digital tools without power supply remain underutilised or worse yield negative economic effects. As African countries push for both digital and green transitions, off-grid and renewable energy solutions (like solar mini-grids) can act in certain circumstances as key enablers of sustainable digital ecosystems.

Despite starting from a relatively low African average score of 44.6 in 2014, the 2024 IIAG 'access to electricity' sub-indicator, which incorporates World Bank data and measures the percentage of a country's population that has access to electricity, has improved considerably by +10.3 points over the decade to a score of 54.9 in 2023. Despite this improvement, access to electricity has stagnated at a score of 54.9 since 2021 (see Figure 2).

Figure 2 | Access to electricity (IIAG sub-indicator) in Africa, 2014-2023



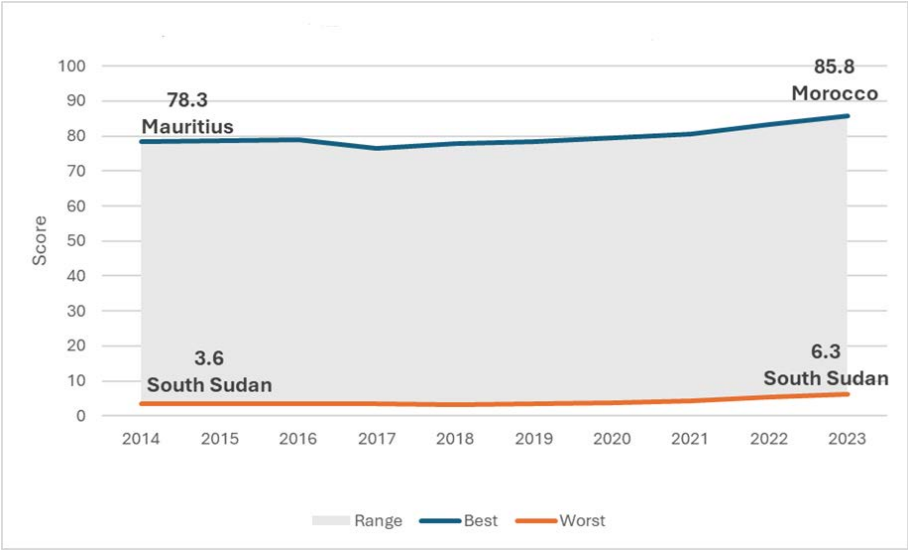
Source: Mo Ibrahim Foundation (2024b).

At the top of the 2024 IIAG table for 'access to electricity', 22 countries reported double-digit improvements in their scores. Although 40 countries are classified as 'slowing improvement', meaning the pace has been slower since 2019, mirrored in the stagnation at the African average level.

Over the whole decade, only three countries (Burkina Faso, Somalia and Libya) reported actual declines in their scores and only relatively minor ones at that. This underscores the significant progress made in access to power across Africa.

Within the 2024 IIAG, 'satisfaction with electricity supply' improved by +3.6 points over the 2014-2023 decade. The indicator measures the extent to which citizens feel the government is doing well (measuring on a scale from 0 to 100) at providing a reliable supply of electricity, and Afrobarometer provides this data. At the country level, Senegal (+40.7), Benin (+34.3) and Ghana (+30.8), all West African countries, were the most improved countries. This can be compared with South Africa (-36.7), Gambia (-36.6) and Sao Tome and Principe (-34.1) which were the most deteriorated countries within this indicator. The highest-scoring countries were Mauritius (92.2), Morocco (84.8) and Cote d'Ivoire (68.7) compared to South Africa (6.3), Nigeria (12.9) and Cameroon (13.8), which were the lowest-scoring countries. When looking at 2023 scores, there is no clear regional trend.

Figure 3 | Infrastructure (IIAG sub-category): best and worst performing countries in Africa, 2014-2023



Source: Mo Ibrahim Foundation (2024b).

At the wider level, an additional layer of analysis that should be added to the picture is the overall infrastructure capacity of the continent. This is

the most improved sub-category of the whole 2024 IIAG, but it remains one of the lowest-scoring, highlighting persisting challenges. At the continental level, performance is moreover quite varied, presenting a stark score range between top- and bottom-scoring countries.

In 2014, the sub-category of 'infrastructure' reported a score range of 74.7 between the highest-scoring country of Mauritius (78.3) and the lowest-scoring country of South Sudan (3.6). This increased to a range of 79.5 between the top-scoring country of Morocco (85.8) and the lowest-scoring country of South Sudan (6.3) in 2023, despite South Sudan almost doubling its score since 2014 (see Figure 3).

1.4 Steady digital gains across the continent, but access remains uneven

Using data from the 2024 IIAG (Mo Ibrahim Foundation 2024b), which reports on the decade 2014-2023, this section describes differences between African states, based on key measures such as household-based access and the use of digital technologies.

The 2024 IIAG includes several measures that constitute proxies to assess in more detail the various components of the digital divide and provide an accurate picture of the state of progress and specific challenges of each African country.

During the past decade, progress on digital indicators has driven *governance improvements* in many African states. These concern mobile internet coverage and costs, computer access and broadband quality.

- *Mobile internet coverage and cost*: At the continental level, the 'access to mobile Internet'[6] improved by a considerable +41.1 points over the decade, doubling from its score of 40.6 in 2014 to 81.7 in 2023. At the same time, the 'cost of mobile Internet'[7] improved by +7.6 points, which started from a higher base of 63.5 points in 2014 and scored 71.1 points in 2023. Substantial improvements have been reported by Libya (+93.6), Djibouti (+90.1) and Malawi (+83.8) in the 'access to mobile

[6] This indicator measures the percentage of inhabitants who are within range of at least a 3G mobile-cellular signal, irrespective of whether or not they are subscribers.

[7] This indicator measures the cost (US dollar purchasing power parity) of the cheapest mobile broadband plan providing at least 2 GB of monthly data using at least 3G technology.

Internet' sub-indicator as well as in Libya (+54.9), Zambia (+32.2) and Angola (+29.6) in the 'cost of mobile Internet' sub-indicator.

- *Computer access*: At the continental level, the 'households with computers' sub-indicator improved by +6.1 points over the decade. While this is still an increase, the indicator started from a relatively low score base of 16.4 in 2014 and reached a score of 22.5 in 2023, indicating there is still major work to be done. On the other hand, the 'households with Internet access' sub-indicator improved by +28.9, also starting from a low base of 16.9 points in 2014 but reaching 45.8 points in 2023. Strong improvements have been registered in the 'households with computers' sub-indicator by Egypt (+33.2), Angola (+31.4) and Tunisia (+27.3), along with improvements in the 'households with Internet access' sub-indicator where Algeria (+70.4), Gabon (+68.6) and Côte d'Ivoire (+65.1) saw substantial progress.
- *Broadband quality*: At the continental level, the 'Internet bandwidth usage' improved by +21.4 points over the decade, jumping significantly from its 2014 start of 5.7 points to 27.1 points in 2023. While the 'cost of broadband Internet' improved by +11.6 points, this was from a score of 67.3 points in 2014 to a score of 78.9 points in 2023. The largest improvements in the 'Internet bandwidth usage' sub-indicator were reported by Botswana (+94.9), Djibouti (+92.2) and Uganda (+90.7). Similar growth was seen in the 'cost of broadband Internet' sub-indicator with Burkina Faso (+84.8), Sierra Leone (+76.7) and Namibia (+76.2) improving the most over the decade.

While performance has been promising at the continental level, with all four indicators within the 'infrastructure' sub-category improving, at the country level, notable declines across these measures were also reported. For example, in the 'cost of mobile Internet', Chad registered a decline of -33.9 points over the decade, the largest within this measure. Further, in 'mobile phone subscribers', a measure that tracks the number of public mobile-telephone subscriptions that provide access to the public-switched telephone network (PSTN), the IIAG saw large declines in Liberia (-21.3) and Lesotho (-18.4). The IIAG also shows that Lesotho registered a decline of -17.4 points over the decade in 'households with Internet access', highlighting another important area of the digital divide across Africa.

Against this backdrop, there are four key areas covered by the IIAG that provide further relevant descriptive information about the largest gaps in capabilities for Africa's digital divide.

- *Households with computers* (2023 African average score: 22.5):[8] In 2023, the share of 'households with computers' was the 13th lowest scoring sub-indicator across the IIAG although it did improve by +6.1 points from a low base of 16.4 in 2014. While this is concerning, there is potential that the impact of this could be offset by the very high scores reported in 'access to mobile Internet' (81.7) in 2023 – which measures the percentage of citizens/people who are within range of at least a 3G mobile-cellular signal, irrespective of whether or not they are subscribers. This score is much higher and could suggest that the majority of citizens are using mobile phones and cellular data rather than a household computer to access the internet.
- *Internet bandwidth usage* (2023 African average score: 27.1):[9] In 2014, 'Internet bandwidth usage' was the fourth-lowest scoring sub-indicator with a score of 5.7, then by 2023 it achieved a score of 27.1 and was the 27th lowest ranked sub-indicator. Again, poor bandwidth usage is another problem for both foreign and domestic businesses that rely on an interconnected workforce to begin and develop businesses, in terms of both clients and networking.
- *Access to financial products* (2023 African average score: 8.3):[10] This is the lowest-scoring sub-indicator within the entire 2024 IIAG at the African average level. In 2014, this sub-indicator reported a score of 6.8 and then improved by +1.5 to achieve a score of 8.3 in 2023. This, together with the low 2023 African average score of 'access to banks' (16.7), combine to highlight the weak rollout of access to digital financial services as a whole across Africa.
- *Internet security* (2023 African average score: 16.7*)*:[11] This is the fifth-lowest-scoring sub-indicator in 2023 across the entire IIAG. At the

[8] This sub-indicator measures the proportion of households that have a computer. A computer refers to a desktop computer, a laptop (portable) computer or a tablet (or similar handheld computer).

[9] This sub-indicator measures the total used capacity of international internet bandwidth per internet user.

[10] This sub-indicator measures the percentage of market capitalisation outside of the top ten largest companies to proxy access to stock markets and the number of financial and non-financial corporate issuers on the domestic and external debt market per 100,000 adults.

[11] This sub-indicator measures the number of distinct, publicly trusted TLS/SSL certificates found in the Netcraft Secure Server Survey per one million people.

> African average level, it began from an incredibly low start of 3.7 in 2014, where it was the second-lowest scoring sub-indicator, and in 2023 it remains very low, scoring at 16.7. Low scores within 'Internet security' across the continent can have a detrimental impact on Africa's attractiveness as an investment location as this is a notable deterrent for incoming foreign businesses.

The IIAG analysis shows that access to and usage of digital technologies across African countries varies significantly, with digital skills being a key factor in this disparity. However, the continent's digital sector is highly dynamic, exhibiting increasing intra-regional competition. Mauritius, long recognised for its leadership in internet readiness, e-commerce, e-infrastructure and e-government indicators, remains a top performer in the region. In contrast, countries such as Kenya, Ghana, Egypt, Nigeria and South Africa have emerged as regional digital hubs in their own right. Kenya and Nigeria, in particular, have become prominent centres for fintech and digital services, while South Africa maintains a leading position in terms of ICT infrastructure. Ghana and Egypt show strong growth in both e-commerce adoption and innovation ecosystems, signalling their growing importance in the regional digital landscape.

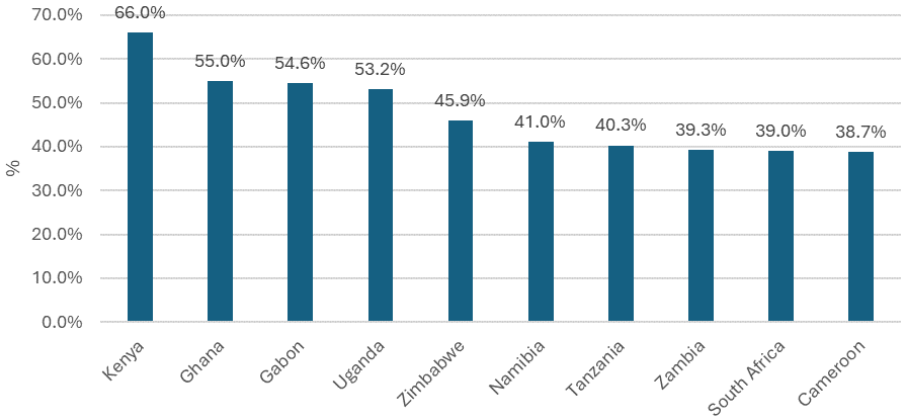
1.5 Gender and educational disparities between and within African states

Afrobarometer data over 2019/2021 on the question 'How often do you use the internet?' (ranging from a few times per week to every day) shows the demographics at play within the digital divide across Africa. It shows that the difference in internet use between rural and urban is almost 40 per cent, that the difference between the youngest demographic and the oldest is more than 30 per cent and the difference in use between those in poverty and those not is around 40 per cent as well. Education level provides another perspective on the digital divide, particularly when looking at mobile phone access to the internet. Available data shows that having no formal education means you are far more likely not to have mobile internet access.

As noted above, finding reliable data that has been disaggregated by gender is challenging across Africa, with many sources having poor coverage or none at all. One area where disaggregated data is available is in financial account access, which speaks to how well citizens are able to

access financial services online and thus to how digitally connected they are in their countries. The World Bank's Global Findex Database does provide data on gender-based access to mobile money accounts, which can be used as a proxy to measure how well countries are doing in terms of promoting gender equality and in connecting their citizens to financial technology. It should be emphasised that gender equality in the area of having access to mobile money linked to bank accounts is not just linked to economic development and availability of technology but is also a matter of equality of economic rights.

Figure 4 | Top 10 African countries: Women with access to a mobile money account (2021)



Note: only covers 28 African countries. *Source:* World Bank (2021).

Although the incomplete data landscape is challenging for assessing access to mobile money accounts, there is some coverage. Kenya has the highest share of women with access to mobile money accounts at 66 per cent, whereas South Sudan is at the bottom of the countries with available data, with only 0.4 per cent. Of the 28 countries with data, only four (Kenya, Ghana, Gabon and Uganda) have more than 50 per cent of their female population with access to mobile money accounts. This is a crucial measure when assessing how well countries are doing in improving both digital financial infrastructure and improving gender access to technology. For those countries that develop and invest in such mobile money initiatives, international cooperation can play a useful role in supporting and expanding these.[12]

[12] One example is the EU's support to such an initiative in Kenya: see EEAS (2015).

Another area where disaggregated data can be analysed is in electricity access from the mains, and frequency of such access. Available data shows vast differences between countries, where some countries like Seychelles have both men and women responding that they have access to electricity from the mains more than 90 per cent of the time, compared with Nigeria and Malawi which have this access less than 5 per cent of the time. The relevance of such access to sustainable development could be better understood if there was data on whether access to and use of electricity strongly differs between men and women.

Notwithstanding the above insights, the reader should be cognisant that the available data does not necessarily capture the extent to which individuals from different groups, defined based on categorical and positional inequalities, are impacted by the digital divide. In this sense, to a large extent, the distribution of this inequality across societal groups remains largely unknown. Considerable evidence and data gaps on the digital divide remain, which African states should address, and which international partners such as the EU can support them with.

The underreporting of sex-disaggregated data on access to and use of digital technologies presents significant challenges for recognising disparities, designing effective policies and tracking progress. For instance, a more specific study conducted by EQUALS (2021) on sex-disaggregated ICT data in Africa reveals that among 14 countries reporting general ICT skill data, only six do so disaggregated by gender. Other data quality issues regarding data on digital access in Africa concern outdated records, incomplete data and missing information on critical topics like gender-based pay gaps and online violence (Noe et al. 2022).

1.6 Recommendations towards Africa's digital transformation

Based on the analysis presented here, seven recommendations are put forward as to how digital access and use in Africa should move from gaps to goals. While primarily targeting what African states should themselves address – nationally, regionally as well as continentally – these areas of focus offer considerable entry points for international support, including for the European Union as a key development partner and investment provider to Africa. In addition to the 'hardware' to address the digital

divide, including in the area of energy access in rural areas,[13] the EU also offers cooperation on key 'software' aspects of the digital divide, such as Estonia's cooperation on cyber security in Africa.[14]

For more explicit and operational recommendations as to the role of the EU and its member states in this regard, please refer to chapter 5 developed in this project context – and also discussed at the Ibrahim Governance Weekend in Marrakesh.

1. *Improving digital access in Africa is not possible without ensuring reliable electricity and connectivity infrastructure*. Therefore, governments, development partners and the private sector should jointly *prioritise expanding energy access through an integrated infrastructure and energy investment in Africa* – particularly in rural areas. For the EU and its member states, working together as 'Team Europe' in support of such integrated investments would offer additional potential for scale and coordinated action.
2. To ensure the effectiveness of future policy initiatives and investments to promote digital access and use, there is a need to – as applicable – *improve and add disaggregated data on categorical and positional inequalities, specifically sex-disaggregated data*. While primarily a national responsibility, there is ample opportunity for strengthening international cooperation in support of this. For international partners, including the EU, such improved disaggregated data would enable learning from ongoing cooperation programmes and would also inform future policy directions of African states and international cooperation in support thereof.
3. *African countries should pursue dual-track policies that both expand digital coverage and improve usage capacity*. Priority in efforts to strengthen usage capacity should be given to marginalised groups, especially women and rural populations, through targeted digital skills programmes, affordable access schemes and support for locally relevant content and services. Accompanying research (see recommen-

[13] For instance, this project by the French development agency: see Agence Française de Développement (AFD) website: *Last Mile Connectivity Project (LMCP)*, https://www.afd.fr/en/projects/last-mile-connectivity-project-lmcp-financing-electricity-connections-across-rural-areas.

[14] A recent overview of Estonia's activities can be found in Estonia Ministry of Economic Affairs and Communications (2024).

dation 2) should both target these measures and be used to monitor their contributions to overall digital access and use.

4. *Regional coordination and the African Union's engagement as a continental anchor for digital policy should be reinforced*. This requires predictable technical and financial support to operationalise the AU's existing strategies, such as Agenda 2063 and the Digital Transformation Strategy. Regional regulatory harmonisation should be accelerated to facilitate cross-border connectivity, data governance and AI readiness. Here, AU member states' buy-in and engagement are essential.
5. *Leveraging partnerships with external actors such as the EU should be based on shared ownership, transparency and respect for African digital sovereignty*. International initiatives like the EU's Global Gateway should better align with African priorities, support capacity development and promote African participation in the design, implementation and governance of digital projects.
6. *Policies should also ensure inclusive and ethical ai development*. In collaboration with development partners and the private sector, African governments should establish clear policies to guide AI deployment. This includes developing African-owned AI datasets, better safeguarding against bias and ensuring AI applications address local development needs rather than exacerbating inequalities. The backbone of these efforts will be the capacity of African-owned data centres, for which it could also seek external investment – including from European partners.
7. To avoid dependency on foreign tech investment, *African governments should create enabling environments for local startups, SMEs and innovators that foster local innovation and inclusive private sector growth*. This includes improving access to affordable finance, promoting open markets, fostering regional economic integration, enforcing fair competition and ensuring that infrastructure development serves both public value and commercial interests.

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DOI: 10.4458/8643-04

2. Digital Transformation: Aligning Italy's Piano Mattei with African Development Priorities

Darlington Tshuma

The world's digital landscape is marked by profound disparities – both within and across societies shaped by geography, gender, income, race, ethnicity, education and age. While global connectivity has expanded from one billion people with access to the internet in 2002 to over 5.3 billion in 2024, the digital divide remains stark (United Nations 2023: 2). In Europe, 89 per cent of the population is online, compared to just 44 per cent in sub-Saharan Africa (GSMA 202: 11, Eurostat 2024). In many low-income countries, limited connectivity and unreliable energy supply, inadequate data centres and poor infrastructure have led to over 1 trillion dollars in economic losses (World Bank 2021: 27). Affordability remains a critical barrier to universal internet access. For example, in sub-Saharan Africa, where internet penetration is the lowest globally, the cost of a smartphone exceeds 40 per cent of the average monthly income and data prices remain nearly three times the global average. Recognising the transformative potential of digitalisation, African countries and regional economic communities (RECs) have established or are in the process of establishing national and sub-regional digital policy frameworks to inform Africa's digital transformation. For instance, both the Digital Transformation Strategy for Africa (2020-2030) of the African Union (AU) and the AU's Continental AI Strategy (African Union 2020, 2024) underscore the continent's demographic dividend as a growth frontier. Both policy documents aim to harness the transformative power of digital technologies to stimulate innovation and job creation, address skills shortage, reduce inequalities, improve public service delivery and promote economic

integration. With an estimated three-hundred million Africans expected to come online by 2025 (African Union 2020: 3), urgent, coordinated action from governments, development partners, academia, civil society and the private sector is needed to ensure that Africa's digital transformation is both inclusive and equitable, and that it compliments national, sub-regional and continental efforts to drive sustainable socio-economic development.

This chapter examines key trends, emerging opportunities and structural challenges shaping digital transformation and digital infrastructure ecosystems in Côte d'Ivoire, Ghana, Mozambique and Senegal – the four African partner countries participating in Italy's Digital Flagship initiative. It explores how the Digital Flagship initiative can be leveraged to build climate-neutral and cyber-resilient digital ecosystems, advance Africa's digital public infrastructure and accelerate technological adoption to improve access to and delivery of public goods and services. The concluding section offers policy recommendations and identifies action areas to further strengthen Italy-Europe-Africa digital partnership.[1]

2.1 The spirit driving Africa's technological revolution

From the bustling streets of Nairobi to the vibrant tech hubs of Lagos and Kigali, and the towering skylines of Cape Town and Johannesburg, African innovators and techprenuers are harnessing the power of AI and digital technologies to drive innovation and develop transformative solutions to pressing challenges. Digital fintech start-ups in Rwanda and Nigeria, mobile money innovations in Kenya, Lesotho and Zimbabwe, and pay-as-you-go solar innovations in Kenya and Ghana attest to ingenuity of

[1] The author gratefully acknowledges the valuable comments provided by Benedikt Erforth and Chloe Teevan on an earlier draft of this chapter, as well as the insights offered by participants during an expert workshop held in Rome on 9 May 2025. All errors and omissions remain the sole responsibility of the author. In writing the chapter, the author employed a rigorous mixed method: in-depth desk research, expert interviews, academic and grey literature. His work was further complemented by the high-level expert workshop "Development and Digitalisation in Africa: Italy's Cooperation Policy and Synergy with EU Plans" convened by IAI in Rome on 9 May 2025. The workshop, which served as the initial forum for presenting the first draft of this chapter, brought together international experts, investors and key stakeholders who offered critical insights and feedback that enriched the final analysis.

Africa's techprenuers and its dynamic digital and technology landscape (Bruton 2022). An example is CF Grower, a tech start up in Ghana which uses AI technology to help reduce barriers to entry for new and aspiring farmers.[2] The platform enables new and aspiring farmers to hire highly experienced farm managers to oversee day-to-day farm operations. AgroCenta – a platform that enables rural based smallholder farmers in Ghana to directly access markets and finance by bypassing middlemen, is another.[3] A further example is Danaya in Côte d'Ivoire – an information security management systems firm that enables clients to verify the identity of individuals and businesses by examining authenticity of documents. The firm specialises in mitigating financial losses and managing risks related to fraud and identity theft which are estimated to cost businesses and individuals millions of dollars annually.[4] These innovations demonstrate Africa's commitment to leverage digital technologies to drive socioeconomic development and build a digitally inclusive future for all. Currently, there are more than 440 technology hubs in 93 cities across 42 African countries (Bayen 2024). The AI Hub for Sustainable Development Start-Up Accelerator Pilot[5] – an initiative between the Italian government and the United Nations Development Programme (UNDP) – aims to support Africa's entrepreneurs to harness the potential of AI to drive human progress and accelerate achievement of Sustainable Development Goals (SDGs) (UNDP 2024). Between 2018 and 2020, more than 130 new technology hubs opened in Africa representing a four-fold yearly increase in total funding received for start-ups (African Union 2020).

In 2023, African start-ups secured over 3.5 billion dollars in total funding (both equity and debt), with the number of funding deals almost doubling. Total transactions and funding breached the twenty-billion-dollar mark in just ten years – 68 per cent of it in the last three years alone (Partech 2024). Across the continent, many African governments continue to demonstrate strong ambition to leverage digital technologies for sustainable development. This is reflected in continental policy documents and

[2] CF Grower website: *Farm with Confidence as a First-Time Farmer*, https://www.completefarmer.com/products/grower/new-farmer.

[3] AgroCenta website: https://agrocenta.com.

[4] Danaya website: https://docs.danaya.africa/documentation.

[5] AI Hub for Sustainable Development website: *About*, https://www.aihubfordevelopment.org/about; UNDP website: *AI Hub for Sustainable Development Co-Design*, https://www.undp.org/node/479016.

attempts at country and sub-regional levels to develop digital policy frameworks. For instance, the four pilot countries under Italy's Digital Flagship project (UNDP 2024) – Côte d'Ivoire, Ghana, Mozambique and Senegal – have each established national digital strategies and policies to inform implementation and guide roll-out of digital infrastructure ecosystems. However, despite these efforts, several constraints including infrastructure and financing gaps hinder sustainable investment in the digital sector, limiting the sector's long-term impact and scalability.

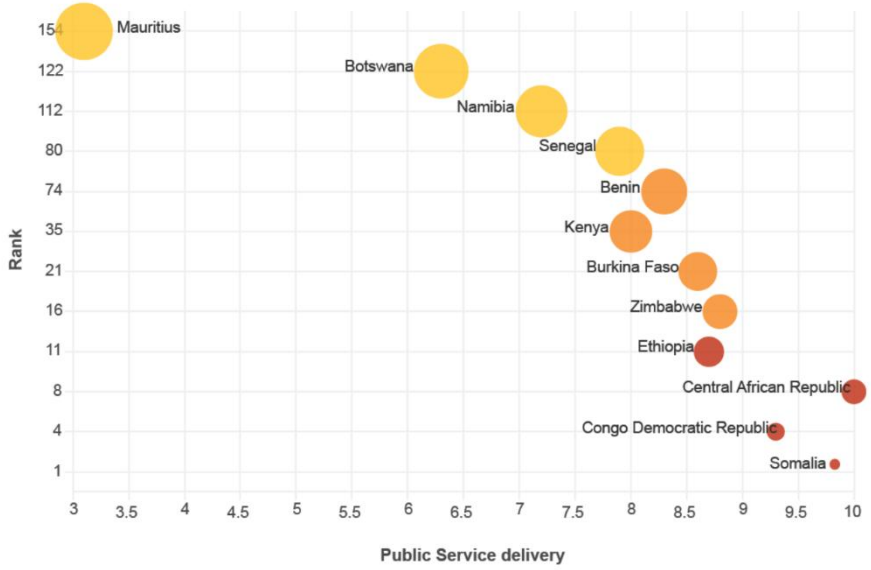
2.2 Africa's digital infrastructure for inclusive growth and service delivery

As African countries work towards a digitally secure and inclusive future, the need for robust regulatory and institutional mechanisms and policy frameworks to address cybersecurity threats, safeguard data protection and privacy, ensure affordable connectivity and foster strategic partnerships has never been greater. From pioneering digital and AI innovations in healthcare to breakthrough treatments for deadly diseases and innovative solutions for tackling climate change or improving educational outcomes for millions of people on the continent, Africa's digital future holds great promise. The World Bank estimates that digital technologies and AI have the potential to contribute up to 15.7 trillion dollars to the global economy, with Africa expected to generate approximately 1.2 trillion dollars – equivalent to a 5.6 per cent increase in the continent's GDP (Okunogbe and Santoro 2023).

In countries with fragile and weak governance systems, digitalisation of public services and goods can enhance stability and security by improving transparency and accountability, enhancing responsiveness and accessibility in the delivery of public goods and services. This is particularly true in contexts where causal linkages can be drawn between deficiencies and chronic incapacity in service provision and conflict, instability and insecurity or where the social contract is weak (UNDP 2023). Research shows that absence of life-enhancing opportunities (such as access to health, education, employment) and sustainable livelihoods remain significant drivers of fragility and growing insecurity in Africa (UNDP 2017). Poor service delivery (a manifestation of weak state presence) exacerbates horizontal inequalities which, when paired with perceptions of marginalisation, reinforce concerns about state neglect that erode trust in public institutions.

For instance, lack of justice, pervasive impunity and perceived bias within judicial systems – often exacerbated by corruption and nepotism can serve as drivers of instability and insecurity (UN Secretary-General 2023). One of the primary functions of a state is its ability to deliver public goods and services. It is one of the fundamental ways by which citizens and ordinary people interact with the state – and these interactions shape overall perceptions of the state and the legitimacy of its institutions. In countries with weak governance systems, skewed coverage and uneven distribution of public services can undermine long-term stability by elevating risks of instability and insecurity.

Figure 1 | Public service delivery in African countries with varying levels of fragility



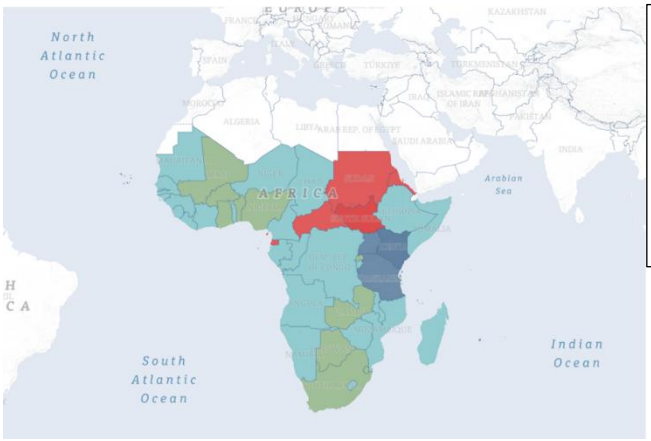
Source: UN Office of the Special Advisor on Africa (2024: 8).

Dissatisfaction and discontent with poor service delivery is linked to a rise in violent protests and riots (see Figure 1). Countries with weak and fragile governance systems face significantly heightened risks of insecurity and instability. Digital technology solutions and AI powered innovations that bridge digital divides and improve delivery of public goods and services can help build stable and more secure communities.

In Ghana, recent technological advancements have substantially lowered the cost of integrating identity data across government functions. The

introduction of the national identification system, the "Ghana Card" in 2021 marked a shift in public sector efficiency. As a result, the number of registered tax filers rose from fewer than four million to nearly 6.6 million. Importantly, the Ghana Revenue Authority reported that it could now identify and trace approximately 85 per cent of the population, compared to just 4 per cent under the previous system – significantly enhancing the country's capacity for tax compliance and domestic resource mobilisation.

Figure 2 | GovTech Maturity Index (GTMI)[6] in 2022



Source: World Bank (2022).

Similarly, the adoption of digital technologies has significantly enhanced the capacity of tax authorities to identify and rectify inconsistencies in taxpayer data in Kenya. This has contributed to stronger domestic resource mobilisation efforts. Improving tax compliance can positively impact the tax-to-GDP ratio. Between 2016 and 2017, the Kenyan Revenue Authority increased VAT collection by more than one billion dollars – thanks to M-PESA.[7] Digitalisation of public sector services affords users the flexibility to conduct transactions on the go and settle trade payments with ease. For

[6] GTMI measures key aspects of 4 GovTech focus areas – supporting core government systems, enhancing service delivery, mainstreaming citizen engagement, and fostering GovTech enablers. Countries with lower scores (A=highest, D=lowest) have lower adoption for digitalisation for public service delivery.

[7] M-PESA is Africa's largest mobile money platform that does not require a traditional bank account and is credited with facilitating financial inclusion among previously unbanked populations in Kenya.

those with internet connectivity and access, digitalised and automated systems are more efficient and are easier to track and monitor.

2.3 Ghana's e-justice project

Ghana's e-justice project is underpinned by the country's Digital Transformation Agenda (2018).[8] It is integral to global governance efforts and for sustainable development and Ghana's own efforts to achieve SDG 16: peace, justice and strong institutions. With a history dating back decades, Ghana's e-justice project is intended to ensure that justice delivery is effective, transparent and efficient by replacing old manual systems characterised by inefficiency, delays and allegations of corruption (Addadzi-Koom 2022). According to an Afrobarometer survey, the judiciary in Ghana is viewed in largely negative terms. Public trust is dented with a 32 per cent distrust and 30 per cent minimal trust (Afrobarometer and Ghana Center for Democratic Development 2022: 50). Allegations of corruption, missing documents, delays in court proceedings and duplication continues to dent public trust in judiciary processes. Established in 2017 by the Ministry of Trade and Industry with technical assistance from the ACP-Friendly Programme, Ghana's Business Regulatory Reform (BRR) Unit leverages digital platforms to enhance citizen engagement and participation in public policy processes (Arlet and Wager 2024). A key component of this project is the roll-out of Ghana's "virtual court rooms" (e-justice project) to facilitate speedy resolution of legal disputes. Ghana's e-justice project is expected to expedite justice delivery by eliminating the need for in-person court appearances, thereby reducing costs and time associated with traditional court hearings, particularly for people residing in remote areas and low-income households where physical court appearances can lead to additional financial burdens.

Globally, an estimated four billion people live outside the protection of the rule of law because of their marginal positions in society. In Africa, this was most visible during the Covid-19 pandemic when "lockdowns" created additional bureaucratic layers by restricting non-essential physical mobility and by extension access to justice and the efficient resolution

[8] According to the UNDP's E-Government Development Index, Ghana advanced 15 places globally, rising from 123rd position in 2014 to 108th in 2024 – a reflection of the country's sustained investment in digital governance and public sector innovation.

of legal matters. A survey conducted by Afrobarometer across 36 African countries found that 54 per cent of citizens reported difficulties in accessing justice (Logan 2017: 3). For example, the Kenyan court system had backlogs of up to one million cases in 2012 while Zimbabwe's High Court processes less than half of all cases brought before it per year (Finucan et al. 2019). Ghana's e-justice project that integrates modern technology illustrates how digital innovation can enhance inclusive governance and accelerate the delivery of justice. By improving user experience, increasing transparency and strengthening responsiveness, accountability and accessibility, Ghana's e-justice project has reduced case backlogs and alleviated pressure on judicial systems.

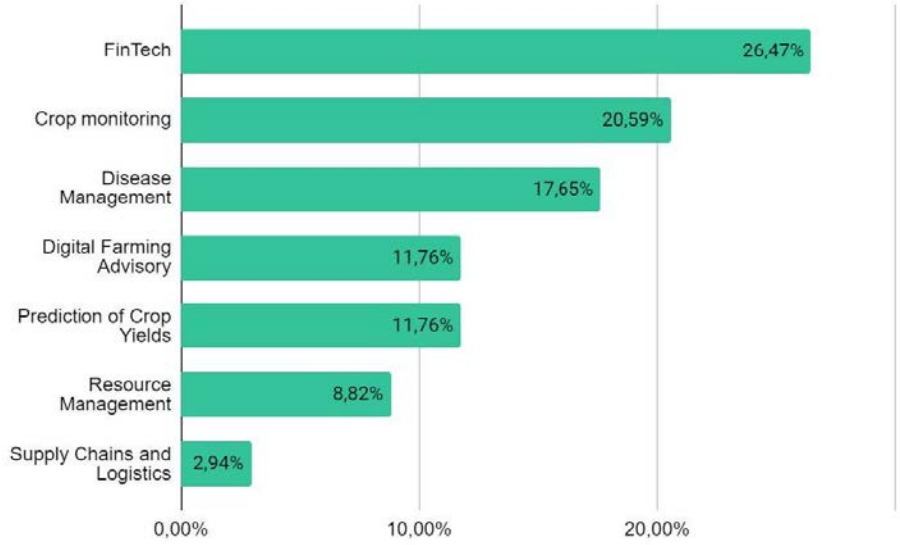
2.4 Unlocking Africa's agricultural potential: Harnessing AI for a climate-resilient future

African techprenuers and innovators are leveraging AI and digital technological solutions to build climate resilience, revolutionise and transform agriculture. According to a report published by the African Development Bank, Africa holds 65 per cent of the world's uncultivated arable land. The agriculture sector contributes approximately 30 per cent of the continent's GDP and employs more than 50 per cent of its current workforce (ADB 2019). Despite its vast potential, Africa's agricultural sector grapples with significant challenges, including water scarcity, food insecurity, environmental degradation and unpredictable weather patterns.

In response, African agritech entrepreneurs are harnessing AI-driven solutions to enhance resource efficiency, optimise yields and build resilience against climate-related shocks, driving a more sustainable and technology-enabled agricultural transformation. In Ghana, Senegal, Côte d'Ivoire and Mozambique, AI-powered precision agriculture is transforming resource management by optimising the use of scarce inputs such as water while enhancing crop quality and yields. In Ghana, where technological infrastructure is relatively advanced, cutting-edge tools, including satellite imagery, high-resolution drone sensors and geographic information systems enable real-time monitoring of crop and soil health, and nutrient levels. These innovations are empowering smallholder farmers to carry out their activities more efficiently and effectively – from applying fertilizers, water and pesticides to significantly lowering production costs and minimising post-harvest losses (PHLs) and reducing

environmental impact. A notable example is TechShelta, a tech start-up in Ghana that provides specialised greenhouse services to smallholder farmers.[9] The company integrates technology with agriculture, allowing for automation for efficient remote operational monitoring and control. Another is Senegal's e-Tolbi, an AI-powered tool that provides farmers with yield forecasting information and field management platform to monitor plant health, fertilisation and water requirements.[10]

Figure 3 | Deployment of AI across the agriculture value-chain in Africa

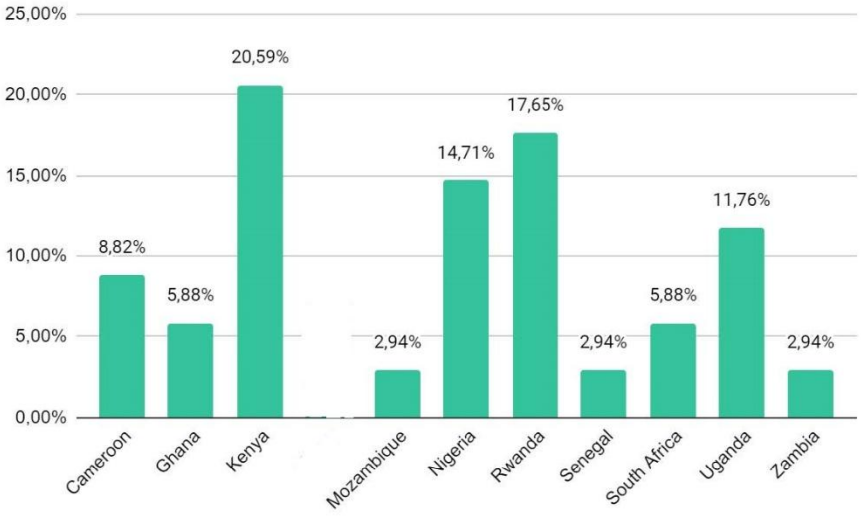


Source: Mboa Nkoudou (2024: 37).

Conservative projections estimate that the use of AI in agriculture will grow at an annual growth rate of 23 per cent between 2023 and 2028, rising from 1.7 billion to 4.7 billion dollars in investments (Jenane 2025). In sub-Saharan Africa, the agri-food tech sector has experienced remarkable expansion, with private investments surging from under 10 million dollars in 2014 to nearly 600 million dollars by 2022 (Jenane 2025). The highest adoption of AI is in fintech followed by crop monitoring (see Figure 3).

[9] Ghana Techshelta: https://ghanacic.ashesi.edu.gh/ventures/techshelta-limited.
[10] Tolbi website: https://tolbi.ai/fr.

Figure 4 | Most active countries in developing AI solutions in agriculture



Source: Mboa Nkoudou (2024: 38).

2.5 Plugging Africa's digital infrastructure and skills gaps

Innovation and digitalisation are key to transforming African societies and economies and promote regional and continental integration, generate inclusive economic growth and stimulate job creation to absorb the ever-growing number of Africans joining the labour force every year. It is estimated that by 2050, Africa will have added nearly eight hundred million people to its labour force (McNair 2024). Partnerships and investments that help build the necessary digital skills, regulatory environment and infrastructure base can help unleash the continent's true economic potential. For instance, global digital trade (largely dominated by US and Chinese technology firms) represents a multi-billion-dollar industry. The US Department of International Trade and Administration estimates that the value of e-commerce globally will reach six trillion dollars in 2025 (US ITA 2024). In 2017 alone, e-commerce accounted for 12 per cent of global trade in goods – with Africa accounting for a small slice of global e-commerce revenues.

Supporting existing initiatives like the African Continental Free Trade Area (AfCFTA) that aim to create a single digital market has the potential to create economies of scale with a combined GDP of 2.5 trillion dollars –

large enough to jump-start African economies and unlock economic opportunities for millions of young people. In countries with advanced digital infrastructure, e-commerce channels are increasingly being used by governments for the delivery of public services through for example visa processing and issuance, civil registration, tax payments and tendering (African Union 2020). Between 2012 and 2020, Africa's digital economy grew by 3.4 per cent of GDP and is expected to reach 5.2 per cent in 2025 and 8.5 per cent by the middle of the century (African Union 2020). With the appropriate infrastructure in place and an enabling regulatory framework, Africa's contribution to the global economy is expected to reach 720 billion dollars of GDP, far exceeding current contribution of 180 billion dollars (African Union 2020).

Building a secured digital market characterised by free movement of persons, goods, capital and services is critical to ensure that people and businesses can seamlessly access and engage in online activities in line with AfCFTA. To achieve this, African countries need to build necessary digital skills, cross border and transnational data infrastructure and capabilities to unleash this potential. At the moment, limited and unreliable energy and connectivity, inadequate data centres and poor infrastructure remain significant challenges to the creation of an African digital market. It is estimated that nearly three hundred million Africans live more than fifty kilometres from a cable or fibre broadband connection (AU-EU Digital Economy Task Force 2019), hence the lack of widespread availability of high-speed and reliable broadband and connectivity remains a significant hurdle to connectivity and infrastructure roll outs. According to a report published by the International Finance Corporation (IFC), Africa needs about half a million kilometres of fibre-optic cable construction to provide continent-wide coverage (IFC 2019).

Despite these gaps, significant gains have been achieved in recent years. For instance, between 2019 and 2022, over 160 million Africans gained broadband access (World Bank 2024) – thanks to initiatives such as the "All Africa Digital Economy Moonshot" – a World Bank backed facility that aims to improve digital connectivity in Africa by 2030. As data costs drop and infrastructure gaps narrow, digital trade in Africa will continue to rapidly grow and is expected to constitute a growing share of intra-continental trade by the middle of the century. To support the roll out of digital services and skills, tech innovators and entrepreneurs are forming communities of practice to share experiences, learn from each other's

successes and brainstorm new innovations to meet the needs of the industries and sectors they work with. Unlocking Africa's digital economy potential will involve closing infrastructure gaps, promoting data sovereignty, expanding internet connectivity, reducing connectivity costs and building a cohort of trained professionals with high-level digital skills. To achieve this, collaboration between governments, development partners and the private sector is crucial.

Access to affordable and reliable energy is a cornerstone of sustainable socioeconomic development, and a stable energy supply is essential to underpin the large-scale deployment of digitalisation initiatives across sectors. While the continent has abundant energy sources including 7.2 per cent and 13 per cent of global oil and natural gas reserves respectively, over half of the population lacked access to electricity in 2023 (IEA 2022). Furthermore, Africa's energy consumption is disproportionately low, accounting for less than 4 per cent of global energy use, with just 1.1 per cent of electricity generation and 3 per cent of industrial energy consumption worldwide (IEA 2022). Specifically, sub-Saharan Africa has the lowest electricity consumption per capita globally, averaging around 600 kWh annually. In some countries, such as Niger, this figure drops to just 54 kWh per year, starkly contrasting with the global average of 3,000 kWh per year (IEA 2022).

Similarly, investments in Africa's Renewable Energy sector are low, potentially stalling the expansion of decentralised energy infrastructures and limiting the adoption of energy intense technologies like AI, cloud computing, e-commerce and others. According to Data Center Map, Africa, home to over 1 billion people, hosts just 183 data centres across 33 countries.[11] In contrast, Canada has 264, Japan 182 and the United States boasts more than 3,600 data centres. These disparities highlight the continent's significant infrastructure gaps. As African countries scale up investments in AI-driven technologies amid rapid population growth – projected to exceed 2.5 billion by 2050 closing energy access gaps and building resilient, future-ready energy systems will demand bold, forward-looking policy interventions. Innovations in energy infrastructure, backed by smart regulation and strategic planning, is essential to meet the rising demand while enabling inclusive, low-carbon energy development.

[11] Data Center Map website: https://www.datacentermap.com/datacenters.

2.6 Navigating geopolitical competition: Strengthening Italy's digital partnerships with Africa

Unless urgently addressed, geopolitical competition over Africa's digital future will likely lead to fragmented digital initiatives, disjointed regulatory frameworks and overlapping projects that may further entrench structural disparities and exacerbate the digital divide (Domingo et al. 2024). For instance, by 2020 (US Congress 2020), China had concluded cooperation agreements with at least sixteen African countries under the Digital Silk Road Initiative (DSR). DSR is China's global digital infrastructure undertaking involving Chinese technology companies building telecommunications networks, AI capabilities, cloud computing, e-commerce, surveillance technologies and other high-tech innovations around the world.

Similarly, the United States, EU and other powers are deploying a combination of financial investments, strategic policy frameworks and geopolitical engagement aimed at securing technological, economic and normative leadership on the continent. With financial backing of 150 billion dollars for Africa alone,[12] the EU's Global Gateway in combination with initiatives like the AU-EU Digital4Development (D4D) Hub and #TeamEurope Initiatives like Digital Health) are aligning development assistance, private capital, technological aid and research cooperation to shape Africa's digital transformation agenda. In 2022, the US Administration of President Joe Biden (2021-25) launched its Digital Transformation with Africa Initiative (DTA) backed by an 800-million-dollar financial package. International financial institutions like the World Bank, European Investment Bank, International Monetary Fund and African Development Bank are involved in joint or leading parallel initiatives across the digital spectrum. To harness global digital competition for their own development, African countries need to institutionalise policy and regulatory frameworks and harmonise strategies – ensuring that initiatives are demand-driven and that investments align with and complement national development efforts and continental priority needs.

Individual EU member states are also developing their own digital partnerships with Africa – and a notable example is Italy's Digital Flag-

[12] European Commission DG for International Partnerships website: *EU-Africa: Global Gateway Investment Package*, https://international-partnerships.ec.europa.eu/node/2530_en.

ship with Africa – part of its Piano Mattei (Italian Chamber of Deputies Research Department 2024). Italy is pursuing a hybrid approach that blends traditional development cooperation with external policy objectives, leveraging a mix of financing instruments including loans, grants and private capital to shape Africa's digital policy landscape (Italian Chamber of Deputies Research Department 2024). This strategy is operationalised through centring digital transformation in the "six thematic pillars" of the Mattei Plan. As African countries navigate geopolitical competition and craft their own digital strategies and identify priority areas to secure long-term technological, economic and data sovereignty, the end goal must be to achieve maximum impact with technology as an enabler of sustainable development and human progress. Initiatives like the AI Hub for Sustainable Development Start-Up Accelerator Pilot, a project between the Italian government and UNDP, has attracted over three hundred applications from cutting edge start-ups from the 14 priority countries of the Italy-Africa Mattei Plan. The programme is designed to assess effective, ethical and necessary partnerships to accelerate the development and adoption of Language AI technologies. It prioritises support for sustainable, locally driven innovations that incorporate enhanced safeguards such as advanced content moderation mechanisms, prompt filtering and improved reinforcement learning protocols to ensure responsible and trustworthy AI development.

The successful roll out of such initiatives largely depends on development of several elements that are critical to building reliable data infrastructure ecosystems. Africa's energy access gaps, skills shortage and poor energy infrastructure needs to be bridged through tailored trainings and innovative financing models for scalable infrastructure development in the energy, fibre connectivity and water sectors. Projections estimate that data centre energy consumption needed to power AI driven technologies could reach 1,580 terawatt hours by 2034 – roughly equivalent to India's total energy consumption. Data centres alone are projected to be the world's third-largest consumer of energy, consuming more energy than the whole of EU put together. Due to their high energy intensity, data centres require substantial cooling systems, often consuming thousands of litres of water per hour to maintain optimal operating temperatures and ensure uninterrupted performance. These are critical sectors that require urgent interventions and investments. Italian firms aiming to deepen partnerships with African countries should prioritise invest-

ments in decentralised renewable energy systems to enhance energy access in areas underserved by national grids and physical infrastructure. In parallel, investments in rehabilitating wastewater infrastructure for agricultural and industrial use can improve resource efficiency in water stressed regions where resource scarcity could ignite new conflict dynamics. These interventions are critical enablers for the deployment of digital infrastructure ecosystems that support Africa's growth efforts.

2.7 Policy recommendations

Action in several areas would have a beneficial impact to strengthen Itay-Europe-Africa digital partnership across infrastructure development, skills training and policy frameworks:

- Align public and private sector investments and contributions with regional and sub-regional development strategies and priorities. A harmonised demand-driven-approach as opposed to a supply-driven-approach will mitigate the risk of disjointed digital development initiatives led by competing external actors.
- Prioritise targeted investments in strategic sectors that enhance fiscal capacity including scaling up investment in regional and transnational digital infrastructure such as interoperable payment systems, digital identity frameworks and cross-border e-governance platforms that facilitate economic integration, integrate informal economy and enhance domestic resource mobilisation.
- Private lending for Africa's digital infrastructure sector faces volatility and uncertainty, particularly during periods of economic or political crisis. This unpredictability drives up borrowing costs and delay or derail project implementation. Italian and European private lenders should explore risk-mitigation measures such as local currency lending to reduce exposure to risks and exchange-rate volatility. This will lower borrowing costs, stabilise project implementation and enhance the long-term viability of digital infrastructure investments in Africa.
- Scale up digital skills training aligning with labour market demands and the digital economy by investing in digital infrastructure that supports e-learning and remote education delivery, particularly in rural and underserved communities.
- Invest in large scale transformative development projects that impact socioeconomic outcomes and lead to improved quality of life. For

example, investments in decentralised energy and water systems to support both sustainable growth while bridging digital divides.

- Consider the creation of coordination platforms (private sector, civil society, academia, governments) where public and private sector investments and contributions are reviewed and aligned with regional and sub-regional digital and development strategies. This will ensure that investments are aligned with the Digital Flagship Project goals and are effectively contributing to the development of regional and sub-regional frameworks in pilot countries.
- Support local value creation mandates by ensuring that private digital investments contribute to skills development, local content creation and infrastructure sharing. This will enhance digital adoption and relevance.
- Digital transformation is only impactful when paired with human capital development. Integrating digitalisation with education and training implies continuous monitoring and reporting to minimise harm, eliminate algorithmic bias and surveillance risks.
- Italy's bilateral and fiscal reach in Africa is limited; therefore, an EU-coordinated approach addresses Italy's limited fiscal capacity and reach. Through #TeamEurope and existing programmes, including EU-AU digital partnerships, Italy can offer a harmonised package of investment, regulation and capacity support. A unified EU voice helps avoid fragmented offers and strengthens Africa's digital sovereignty goals.

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3.
Italy-Africa Digital Partnership under the Mattei Plan

Darlington Tshuma and Marianna Lunardini

Africa's digital landscape is undergoing rapid transformation driven by a surge in venture capital financing, entrepreneurial activity and widespread adoption of digital tools and technologies. According to a 2020 report by the International Finance Corporation, Africa's digital economy could grow to 712 billion dollars by 2050 from 180 billion dollars today (Google and IFC 2020: 17). To date, over forty African countries have established digital policy frameworks and strategies, demonstrating continental commitment to leverage digital innovation for sustainable development and socioeconomic transformation (see Chapter 2). However, regulatory and governance frameworks remain weak and under resourced. Additional challenges include Africa's growing infrastructure gaps, limited digital skills, financing and a fragmented digital landscape increasingly driven by geopolitics and geoeconomic competition.

Italian businesses, technology firms, academic and research institutions and civil society are well-positioned to forge strategic partnerships with the European Union and African countries to address structural constraints, close critical infrastructure gaps and mobilise additional investment finance. Through coordinated efforts that leverage both public and private capital, such collaborations can help drive inclusive growth and foster shared prosperity, a key objective of Prime Minister Giorgia Meloni's flagship initiative for Africa, the Mattei Plan.[1] Italy's Digital Flagship Initiative

[1] The Mattei Plan is an Italian national initiative to support Africa's development and reshape the country's relationship with Africa. Presented in 2023, it

developed in partnership with the United Nations Development Programme (UNDP) and four African countries – Ghana, Mozambique, Ivory Coast and Senegal – exemplifies the kind of strategic and forward-looking partnerships needed to transform Africa's digital sector (UNDP 2024).

Through its Mattei Plan – named after Enrico Mattei, the founder of Italy's energy giant Eni, which in the 1950s and 1960s pursued a policy of more equal cooperation and revenue-sharing with the countries in which it operated – Rome can support African countries to meet their energy access and climate goals by investing in both hard infrastructure, know-how and best practices, fostering diplomatic engagement (Italian Chamber of Deputies-Research Department 2024). By leveraging its leadership in international fora and mobilising EU member states through instruments like the Global Gateway (European Commission 2021),[2] Italy can play a catalytic role in accelerating Africa's renewable energy transition. At the same time, targeted investments in digital infrastructure, particularly in sustainable data centres can foster a new growth industry, enhance digital resilience and create cross-cutting benefits for climate-smart innovation and economic transformation.

3.1 Building Africa's next frontier: Unlocking infrastructure investment through digital public infrastructure

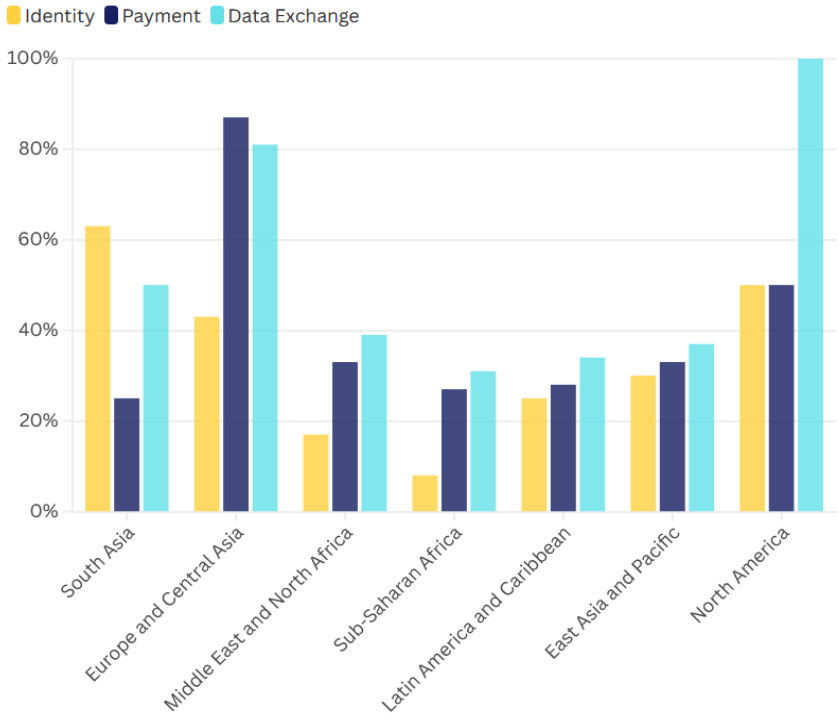
A landmark report by the United Nations Trade and Development Agency (UNCTAD 2020) estimates that African countries lose more than 89 billion dollars annually to illicit financial flows (IFFs). These losses undermine domestic development financing and by extension continental developmental aspirations that find expression through Agenda 2030 and Agenda 2063, the flagship development initiatives by the United Nations and African Union (AU), respectively. UNCTAD estimates that countries with high IIFs spend

has counted on an initial endowment of more than 5.5 billion euros between credits, grants operations and guarantees. See Italian Chamber of Deputies-Research Department (2024).

[2] The Global Gateway is an EU strategy launched in 2021 with the aim to mobilise up to 300 billion euros in investments to develop sustainable infrastructure projects in Asia, Africa, Latin America and the Caribbean regions.

less on social protection, including health and education, than those with low IFFs (UNCTAD and UN Economic Commission for Africa 2022: 18). In the current context characterised by declining traditional donor funding, mounting fiscal pressures and escalating debt burdens, digital innovation can help African countries generate, mobilise and allocate resources more efficiently and effectively. Strengthening Africa's digital public infrastructure is critical to curbing IFFs and mobilising additional resources needed to bridge Africa's financing and development gaps.

Figure 1 | Prevalence of systems meeting DPI criteria[3] across global regions



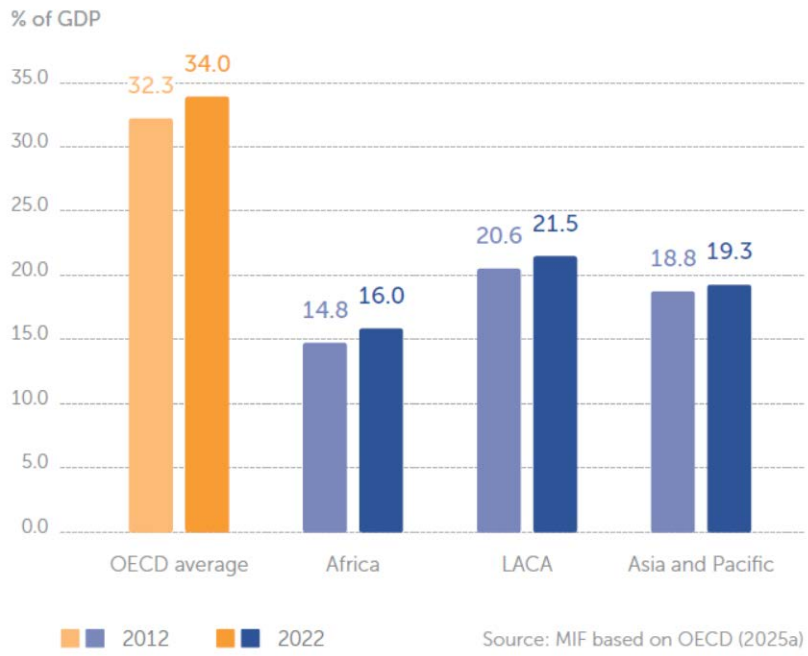
Source: Long and Lacroix (2024).

Several African countries have deployed digital public infrastructure (DPI) systems including digital ID systems, digital payments

[3] To see the criteria for a system to qualify as a DPI, according to the UCL analysis, please refer to Long and Lacroix 2024

solutions and modernised tax systems. In fact, 85 per cent of African countries now have ID systems with digital capabilities, and over 70 per cent collect biometric data for authentication. Countries like Ghana, Kenya and Lesotho report optimal levels of adoption (around 90 per cent), while others such as Togo (40 per cent), Liberia (30 per cent) and South Sudan (13 per cent) lag far behind (Ansar and Clark 2024). These variations present opportunities for Italian businesses, technology firms and companies to support development and deployment of DPI in countries where demand is strong and capacity weak. Half a billion people on the African continent still lack a foundational ID (Sang et al. 2025).

Figure 2 | Global tax-to-GDP ratios for 2012 and 2022



Source: Mo Ibrahim Foundation (2015: 29).

DPI can also support efforts to mobilise additional resources needed to bridge Africa's financing and development gaps, estimated at 194 billion dollars per year until 2030 (Mo Ibrahim Foundation 2025: 17). Currently, on average African countries have the lowest tax-to-GDP ratio in the world at 16 per cent compared to 19.3 per

cent in Asia and the Pacific, 21.5 per cent in Latin America and the Caribbean and 34 per cent in Organisation for Economic Co-operation and Development (OECD) countries (OECD 2024: 10, see Figure 2). By strengthening national systems and deploying digital public infrastructure, African countries can improve revenue collection from the current 16 per cent of GDP to sustainable levels, enabling investment in critical digital infrastructure like energy and water systems, fibre cable networks, data centres, skills training, research and development. Furthermore, robust DPI systems with strong regulatory and monitoring systems can serve as effective de-risking mechanisms to enhance fiscal transparency and accountability. This will mitigate perceived risk by creditors and improve confidence in Africa's governance systems. Currently, approximately 46 billion dollars in potential revenue in Africa remains uncollected due to redundant tax incentives and poor governance (UN Office of the Special Adviser on Africa 2024).

Within the framework of the Italy-Africa Digital Partnership, Italian businesses, financial institutions and technology firms can play a catalysing role in supporting African countries to develop inclusive and efficient digital public infrastructure ecosystems. By deploying cutting-edge digital solutions, development partners can help modernise tax and revenue collection systems, enable real-time tracking of financial flows and significantly reduce inefficiencies in public resource management. For instance, estimates show that countries like Benin and Senegal could achieve universal primary school meal coverage with an investment equivalent to just 0.3-0.5 per cent of GDP (Watkins et al. 2022). For Benin, allocating an additional 0.2 per cent of GDP to school feeding programmes would more than double its current coverage. These examples highlight the transformative potential of digital innovation when combined with resource enhancing reforms that integrate domestic resource mobilisation with digital public infrastructure.

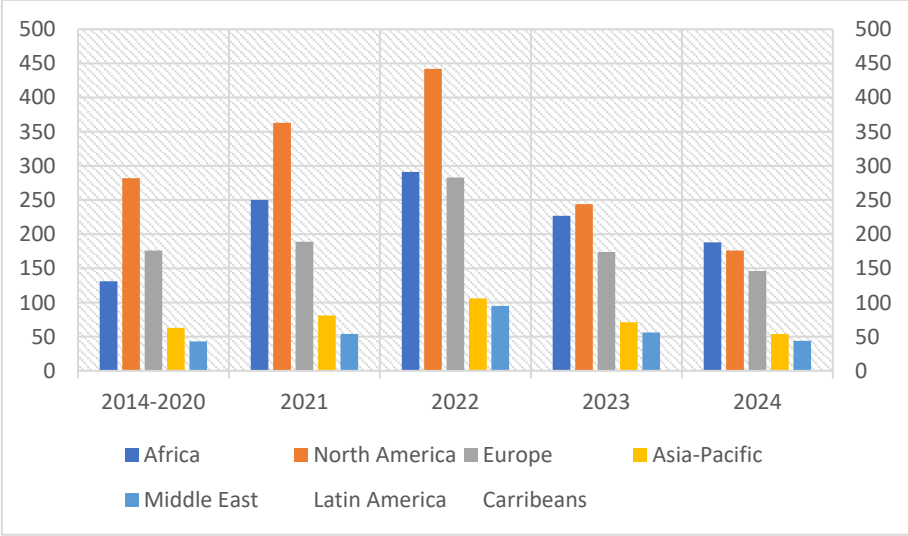
At a high-level Summit in Rome on "The Mattei Plan for Africa and Global Gateway", European Commission President Ursula von der Leyen underscored a strategic link between Africa's digital transformation and global demand for critical raw materials (European Commission 2025). Digitalisation is a key enabler of development and transformation of the continent's extractive sector which

is essential to global green transition, the artificial intelligence (AI) revolution and the production of high-tech commodities including mobile phones, electric vehicles (EVs), semiconductors and military-grade technologies. Projections indicate that by 2029 Africa could account for up to 9 per cent of the global supply for rare earths, with at least twelve African countries holding 5 per cent or more of global critical mineral reserves (Mo Ibrahim Foundation 2025: 54). For instance, South Africa holds the largest palladium reserves globally (77.8 per cent) and currently meets 36 per cent of global supply (Mo Ibrahim Foundation 2025: 54). Strengthening digital governance, infrastructure and innovation capacity is therefore not only central to Africa's economic development, but also to ensuring secure, transparent and sustainable global supply chains.

3.2 Bridging capital market gaps: Strengthening local investment ecosystems for inclusive growth

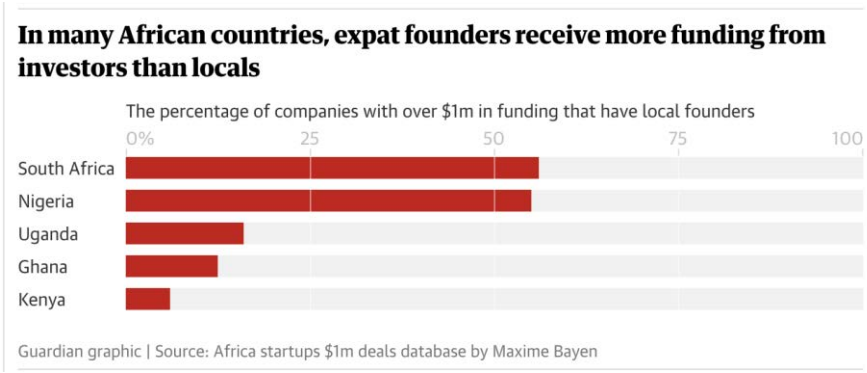
Another frequently overlooked dimension is the structure of financing within Africa's digital ecosystems. Although 2024 marked the first notable uptick in venture capital contributions from African-based investors, the overall landscape remains heavily dominated by foreign capital (see Figure 3). According to the African Private Equity and Venture Capital Association, investors headquartered in North America accounted for over 42 per cent of all venture capital deals in Africa between 2019 and 2024 (AVCA 2025: 43), with African-based investors contributing only 20 per cent of total venture funding (AVCA 2025: 43, see Figure 4). This financing imbalance reinforces disparities in access to capital which compels African tech entrepreneurs in underdeveloped financial markets to rely heavily on external – primarily Western – capital. Notably, in 2024, eight of the ten African-based start-ups that secured the highest levels of venture funding were led by non-Africans (AVCA 2025: 43). According to a 2017 study by Village Capital, in East Africa only 10 per cent of all funding for start-ups went to local founders (Village Capital 2017). These cases underscore enduring challenges to technological sovereignty, limited local ownership and restricted access to financing within Africa's digital and tech ecosystem.

Figure 3 | Investors participating in venture capital in Africa, 2014-2024 (million dollars)



Source: AVCA (2025: 43).

Figure 4 | Expat founders receive more funding than locals



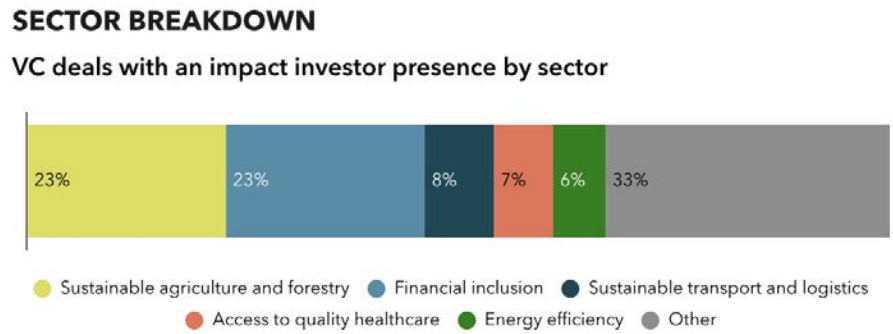
Source: Madowo (2020).

As shown in Figure 4, countries with relatively well-developed domestic capital markets, advanced financial systems and well-established venture capital networks like South Africa can tap into their domestic markets to support local entrepreneurs before seeking out international capital. Similarly, by virtue of Nigeria's market size (largest population on the continent) combined with a growing digital consumer base that creates strong incentives for local tech-

solutions, Nigerian local entrepreneurs can scale domestically before tapping into external markets. On the other hand, weak and undeveloped domestic capital markets skew funding towards expat-led ventures which are perceived as lower risk by global investors in Kenya, Ghana and Uganda, even though these countries have all vibrant innovation and tech ecosystems.

The challenge for the Italy-Africa digital partnership is to reverse this negative trend in countries with underdeveloped financial markets like Ghana, Kenya and Uganda. This can be achieved by facilitating regulatory reform and capacity building for local financial institutions to encourage venture capital activity and private equity in Africa's technology and digital sector. Additionally, creating dedicated financing facilities to provide equity and concessionary debt to start-ups led by African founders and entrepreneurs in undercapitalised markets could help empower them.

Figure 5 | Venture capital deals by sector



Source: Avery (2025).

As illustrated in Figure 5, nearly 50 per cent of all venture capital deals in Africa are concentrated in two sectors: sustainable agriculture and forestry, and financial inclusion. These are followed by transport and logistics (8 per cent), health (7 per cent) and energy (6 per cent). The sectoral concentration closely mirrors the "six thematic pillars" of the Mattei Plan,[4] presenting a strategic oppor-

[4] The six pillars of the Mattei Plan are: education/training, healthcare, water, agriculture, energy and infrastructure (both physical and digital). See Italian Government (2024).

tunity to forge synergistic partnerships that align with and amplify existing EU and Italian development initiatives.

3.3 Plugging Africa's digital infrastructure and skills gaps

Africa's digital transformation is hindered by significant obstacles, particularly widening infrastructure gaps, regulatory and data governance concerns, limited digital skills and skewed venture capital financing. With Africa's population expected to reach approximately 2.5 billion by 2050 (Mo Ibrahim Foundation 2025), population growth will likely outstrip investment in critical digital infrastructure like grid and fibre optic connections, water systems and data centres.

Currently, according to the Africa Data Centres Association (ADCA), African countries represent 2 per cent of the world's data centres and infrastructure footprint (ADCA 2024). Despite being home to over a billion people, Africa has only 183 data centres spread across 33 countries. By comparison, Canada and Japan each have over 180, while the United States hosts more than 3,600.[5] ADCA estimates that the continent will require an additional 1,200 MW in data centre capacity by 2030 to meet surging demand for digital technologies and services (ADCA 2024). Among the four countries participating in the Digital Flagship Initiative, Ghana stands out with the highest concentration of data centres, positioning it as a potential digital hub in West Africa. Despite this promising scenario, even Ghana faces significant challenges, including risks of downtime and rising electricity and water costs.[6]

Access to secure and broad Internet connection is another problem. More than three hundred million Africans currently live at least fifty kilometres from a cable or fibre broadband connection (AU-EU Digital Economy Task Force 2019, see Figure 6). The International Finance Corporation estimates that Africa needs about half

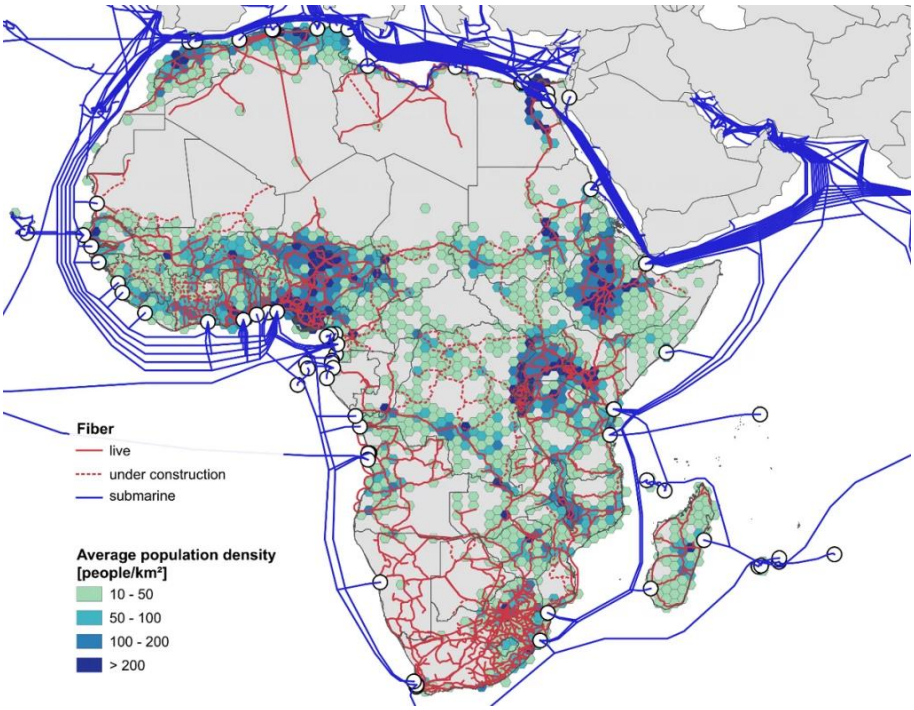
[5] Data Center Map website: *Data Centers*, https://www.datacentermap.com/datacenters.

[6] "Ghana's Digital Infrastructure Companies Groan under Fuel, Power Costs", in *Hyperscalers News*, 4 October 2024, https://africa.hyperscalers.news/?p=6925.

a million kilometres of fibre-optic cable construction to provide continent-wide coverage to its 1.2 billion citizens (IFC 2019).

In some countries, investments in energy and water infrastructure have not kept pace with population growth. Six hundred million Africans, nearly half the continent's population, lacks access to reliable and affordable energy solutions (IEA 2022). These challenges underscore the continent's widening investment and infrastructure gaps. Large scale investments in clean energy solutions including solar, wind, hydro and geothermal power are needed to make data centres a sustainable growth industry. Ethiopia, for example, is capitalising on its green energy mix to become a renewable energy hub in East Africa. The Grand Ethiopian Renaissance Dam (GERD), the Koysha Hydropower Dam and the Aysha Wind Farm constitute flagship energy infrastructure projects initiated by the government to advance the objectives of its Energy Development Plan (EDP) (Tshuma 2024).

Figure 6 | Fibre infrastructure per population density in Africa



Source: Fukui et al. (2019).

Africa's digital skills sector is ripe for private sector investment and participation. By 2100, Africa will account for 40.6 per cent of the global working age population (Mo Ibrahim Foundation 2025). Conservative estimates are that around the same time, Africa will have added eight hundred million young people to its labour market, requiring at least twenty million new jobs annually (McNair 2024).

Africa's nascent digital sector has the potential to drive innovation, spur economic growth, empower rural communities and create new jobs. Through tailored training programmes and capacity building initiatives, Africa's digital sector and its value chains can create economic and livelihood opportunities for millions, particularly in the agriculture, creatives and renewable energy sectors which combined have the largest absorption capacity alongside the potential to create over three million new jobs annually.

However, structural challenges that include high data and mobile device costs, poor infrastructure, limited digital skills as well weak regulatory and outdated policy frameworks hinder the sector's viability and full potential. For instance, in sub-Saharan Africa, where internet penetration is the lowest globally, the cost of a smartphone exceeds 40 per cent of the average monthly income and data prices remain nearly three times the global average (Tshuma 2024). In Nigeria, a 2020 amendment to the National Broadcasting Code introduced several restrictive provisions that disproportionately impacted digital service providers, content creators and platforms. Critics note that these changes continue to impede innovation, deter investment and weaken the country's competitive edge (Obia 2023).

Africa's Millennials and Gen Z represent the continent's most digitally educated and entrepreneurially driven demographic in decades. However, despite this strong foundation, Africa's digital landscape remains deeply fragmented and characterised by access disparities linked to geography, gender, income, ethnicity and education. Similarly, without proper regulatory frameworks and awareness, disruptive and emerging technologies like AI can have negative consequences including on labour participation and workplace rights (O'Neill et al. 2024: 32).

Italian businesses and technology firms have experience in creating secure digital ID systems (see Chapter 4). Rome can leverage this experience to support development of robust regional digital regulatory frameworks and deployment of DPI in support of Africa-led initiatives like intra-African digital trade and integration. In addition, to ensure that Africa's digital transformation is both inclusive and human-centred, targeted interventions are needed to reach historically excluded populations – particularly rural communities, women, minorities and marginalised groups. This includes equipping them with future-work-ready skills in data literacy and analytics, AI ethics, responsible AI deployment and the use of generative AI for learning, innovation and problem-solving. Supporting this process in Africa with digital cooperation will unlock a broader base of talent, foster inclusive growth and attract domestic capital to support a burgeoning cohort of tech innovators and creatives.

Structured programmes between Italian and African tertiary institutions such as joint research initiatives, virtual fellowships and peer-to-peer mentoring between tech entrepreneurs and creatives can serve as powerful vehicles for fostering intercontinental collaboration. These platforms can accelerate the transfer of critical skills in emerging fields such as AI, data science, digital design and ethical innovation, while also strengthening innovation ecosystems across both regions.

3.4 Policy recommendations

Several priority action areas are critical to advancing an inclusive and mutually beneficial Italy-Africa digital partnership:

- Support a #TeamEurope approach in cooperating with African stakeholders, by deepening dialogue and collaboration among EU partners and strengthening the role of platforms such as the EU D4D Hub[7] and strengthening synergetic partnerships

[7] The Digital for Development (D4D) Hub is a strategic platform that aims to strengthen digital cooperation between the European Union and its member states (Team Europe) and partners in Africa, Asia-Pacific, Latin America and the Caribbean and the EU neighbouring countries.

between the Italian Agency for Development Cooperation (AICS) with D4D Hub activities.

- Prioritise the development of regional digital policy frameworks to compliment national-level approaches. Regional frameworks promote market aggregation, creating larger, integrated markets that attract Italian and European private sector investment. This aligns with Africa Continental Free Trade Area goals of continental integration and enables cross-border infrastructure and regulatory harmonisation.
- Reverse disparities in access to capital, consider creation of a dedicated Italy-Africa Innovation Fund within the Italy-Africa Digital Partnership to provide equity and concessionary debt to startups led by African founders in undercapitalised markets like Ghana and Kenya. Structure the fund to co-invest with African-based angel and seed-stage investors, leveraging Italy's capital and de-risking role.
- Strengthen local entrepreneur readiness and bankability by pairing African innovators with Italian and EU-based accelerators and business development services to support product-market fit, scale-up strategies and cross-border expansion.
- Strengthen digital inclusion across Africa by investing in digital governance and capacity-building initiatives that leverage local talent and institutional capacities. Empower institutional actors like the African Union Development Agency (AUDA-NEPAD) to enhance social protection systems through integrating digital technologies and tools.

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4. Digital Transformation in Africa: The Role of International Cooperation and the Mattei Plan

Marianna Lunardini

Digital transformation and digitalisation[1] are playing a growing role in development cooperation and international partnerships and are widely perceived as a "catalyst for change" (Nguyen Hai et al. 2021). At the global level, the last decades have seen an increase in the diffusion of digital technology: products, procedures, services have been progressively permeated with digital tools (Yoo et al. 2012). Digital cooperation needs a shared understanding of common principles and a solid governance to tackle the related risks. This chapter analyses developing digital cooperation in Africa, focusing on the case study of the Mattei Plan – Italy's flagship initiative of cooperation in Africa. It assesses the Mattei Plan's potential contribution to digital transformation in Africa and its synergies with the EU's cooperation efforts. The first section describes the challenges of Africa's digitalisation. The second examines the role of international cooperation in the domain. The third and final addresses the role of Italy's

[1] Digitalisation is "a sociotechnical process of applying digitizing techniques to broader social and institutional contexts that render digital technologies infrastructural." See Tilson et al. (2010: 749). Digitalisation must be kept distinct from digitisation and digital transformation. The former is the process of converting analogue information into a digital format, the latter is a process in which digital technologies play a central role both in creating and strengthening disruptive changes taking place in industry (sector) and in society. See Kozarkiewicz (2020) and Amory et al. (2023).

cooperation policy and the Mattei Plan focusing on four countries: Ghana, Mozambique, Senegal and Ivory Coast.[2]

4.1 Challenges of digitalisation in Africa

Africa is expected to have a population of about 2.5 billion – 25 per cent of the world's population – by 2050 (Sinha and Getachew 2024). As a result of this "youthquake", the continent will have the world's largest workforce (Walsh 2023). Digital transformation and digitalisation could boost innovation and youth entrepreneurship, helping to close structural gaps and enhance job creation (Begazo et al. 2023). A 2020 joint report by International Finance Corporation (IFC) and Google reckoned that Africa's internet economy had the potential to reach 712 billion dollars by 2050 (Google and IFC 2020: 17).

However, the unbalanced power relationship between states and companies providing technologies, mostly from the so-called Global North, and the countries on the receiving end, the so-called Global South (Heeks 2022), remains a daunting challenge. Some authors have denounced the risk of "digital colonialism" (Nothias 2025), emphasising the need to ensure local ownership and transparency in digital transformation processes. These are characterised by a strongly competitive dynamic involving a variety of players: states, multilateral development banks, non-governmental organisations but also private companies such as China's Huawei and Tecno Mobile, Hong Kong-based Infinix, South Korea's Samsung (Schelenz and Schopp 2018) and the United States' Google, Meta and Amazon (Munga 2025).

Digitalisation could provide innovative solutions to complex challenges, including access to healthcare, education and finance. Three elements need to be considered when examining the prospect of digital

[2] The author wants to thank the vital work of Alessandro Brusasca, intern at IAI, who supported the research and the brilliant observations received by Benedikt Erforth (IDOS) and Chloe Teevan (ECDPM) during a workshop held in Rome on 9 May 2025. In drafting this chapter, a mixed methods approach combining in-depth desk research and interviews with Italian stakeholders from academia, civil society, institutions and international organisations was adopted. Moreover, a high-level expert workshop was organised by IAI in Rome on 9 May 2025. It brought together international experts, diplomats, representatives of civil society organisations providing further insightful inputs and feedback.

cooperation in Africa: infrastructure gaps, regulatory fragmentation and use of digital tools and Internet.

Infrastructures

The infrastructure that gives access to Internet depends on three steps, starting from the 'first mile' made up of tools such as submarine cables, satellites, data centres, international gateways.[3]

Submarine cables represent a crucial element for global telecommunications. They are vulnerable to disruptions, as shown by the recent cuts suffered by five African undersea cables in 2024 (Munga 2025), which caused big economic damages. Cables cuts are estimated to have cost Nigeria over 590 million dollars in a couple of days (Ajibade 2024, Okonji 2024). Out of the 38 African countries with a coastline, all except Eritrea have at least one submarine cable landing; 20 of these 37 countries have more than three subsea cables. Private actors have a key role in the development of submarine cables;[4] a major example is the Equiano subsea cable system, a 12,000 km Google-owned system from Portugal to South Africa with branches reaching Nigeria, Togo and Namibia.

Another crucial infrastructure are data centres. Low- and middle-income countries are eager to establish data centres on their territories for such reasons as progressive internet penetration, expanding needs and data sovereignty concerns (UNCTAD 2021). Africa's data centre capacity remains disproportionately low, representing less than 1 per cent of the global total: sub-Saharan Africa owns just 0.1 data centres per million people. South Africa currently dominates the continent's data centre market, accounting for over two-thirds of the total capacity, with Ghana, Kenya and Nigeria as secondary hubs. Industry projections suggest strong growth ahead: the African data centre market is expected to expand by 12 per cent annually to reach 3 billion dollars this year. However, this expansionary trend faces substantial challenges, particularly energy reliability and environmental risks (UNCTAD 2024).

[3] Then, there is a 'middle mile' providing domestic connectivity (landing stations, mobile base stations); and a 'last mile' that connects the final users (individuals and households) to the Internet. See Cariolle (2021).

[4] See Submarine Networks website: *Stations: Africa*, https://www.submarinenetworks.com/en/stations/africa.

Regulatory fragmentation

Many African countries lack essential laws on data protection, cybersecurity and consumer rights for digital transactions, highlighting a critical gap in data governance that hinders cohesive regional integration.[5] The Digital Transformation Strategy for Africa (2020-2030) unveiled by the African Union (AU) in 2018 set the twin objectives to "build a secured Digital Single Market in Africa by 2030" and "harmonize policies, legislations and regulation" for digital economy (African Union 2020). Africa faces significant data governance challenges, despite the landmark adoption of the African Continental Free Trade Area (AfCFTA) Digital Trade Protocol. Implementing this framework remains difficult due to fragmented and inconsistent regulatory environments across the continent (Tigere Pittet 2023). The AfCFTA protocol involves eight annexes covering, amongst others, digital identities, cross-border data transfers, online safety, AI and financial technology.

At the multilateral level, the Joint Statement Initiative on E-Commerce of the World Trade Organisation (WTO) has set the goal of harmonising rules to regulate cross-border data flows, data localisation restrictions, consumer protection and cybersecurity and extending the moratorium on customs duties on electronic transmissions for five years.[6] However, while 91 WTO member countries participated in the discussions, the United States decided in 2023 to abandon the process and only nine African countries have signed off on it so far (Benin, Burkina Faso, Cabo Verde, Cameroon, Gambia, Ivory Coast, Kenya, Mauritius and Nigeria). Two absences stand out: Ghana and South Africa, both leaders in digital transformation.

Internet use

While Africa is experiencing widespread digital transformation, only a limited part of the population uses the Internet: around 40 percent according to a World Bank's (2023) estimate (compared with a global average of 68 per cent). There also remains a large gender divide. Other gaps exist between urban and rural contexts and different areas of the

[5] See UNCTAD website: *Data Protection and Privacy Legislation Worldwide*, https://unctad.org/page/data-protection-and-privacy-legislation-worldwide.

[6] The WTO's 13th Ministerial Conference in 2024 has extended the e-commerce customs duty moratorium for two years until 31 March 2026. The WTO Joint Statement Initiative, if approved, will extend it for another five years. See Kaukab (2024).

continent. Sub-Saharan Africa is the region with the largest coverage and usage gaps (GSMA 2024). The high cost of accessing the Internet is a major obstacle to larger digital consumption but other challenges persist. The high cost of broadband subscriptions and digital devices are an important factor in this regard. A basic two giga byte mobile data plan averages 6.5 per cent of a user's monthly income – triple the global average (Sinopoli 2022), with important differences between countries: in Zimbabwe the cost is 43.75 dollars per giga while in Malawi is 0.38 dollars, for instance. Other critical elements are digital literacy, with many Internet users lacking the skills to mitigate risks (Domingo et al. 2024); and the "negative externality" weighing on those who do not own a mobile phone but live in connected areas, as they will face the rising cost of living while not receiving the possible benefits coming from the digital technology (Cariolle and Carroll 2025).

4.2 International cooperation for Africa's digitalisation

The AU Agenda 2063 – Africa's strategic framework to turn the continent into a leading force on the global stage of the future – identifies digital transformation, well-developed ICT and digital economy as necessary infrastructures to make use of Africa's full potential. International cooperation in sectors such as infrastructure, agriculture and technology is crucial to support Africa's internal strengths, overcoming the so-called "resource curse" (Stocchiero 2024).

Several international organisations have developed strategies and programmes for Africa's digitalisation to avert the risk of exacerbating inequalities and excluding vulnerable and disadvantaged groups. In 2019, the World Bank Group launched the Digital Economy for Africa (DE4A) initiative to support the AU's Digital Transformation Strategy 2020-2030. It aims to ensure that every individual, business and government in Africa is digitally enabled by 2030. The initiative is based on five pillars: digital infrastructure, digital public platforms, digital financial services, digital businesses and digital skills. The World Bank has undertaken seventy digitalisation investment projects since 2019, for a total of 9 billion dollars across 37 African countries.[7] These include 24 projects aimed at expand-

[7] World Bank website: *Country Diagnostics: DE4A Country Diagnostics Status (Version October 2024)*, https://www.worldbank.org/en/programs/all-africa-digital-transformation/country-diagnostics.

ing network infrastructure and bridging the digital connectivity divide in 23 countries. In the four countries on which this research focuses the World Bank is supporting six projects (see Table 1).

Table 1 | World Bank projects in Ghana, Côte d'Ivoire, Mozambique and Senegal

Country	Projects	Objectives
Ghana	Ghana Digital Acceleration Project (2023-2027) - 200 million dollars	Ensure coverage of broadband networks, resilient digital services and institutional capacity; support modernising digital government services.
Côte d'Ivoire	Côte d'Ivoire National Electricity Digitalization and Access operation (2023-2028) - 690 million dollars Côte d'Ivoire Youth Employment and Skills Development Project - Phase 3 (2022-2026) - 150 million dollars	Increase access to electricity and improve the quality of electricity service, to enhance institutional capacity. Enhance labour market outcomes and digital skills.
Mozambique	Mozambique Digital Acceleration Project (2023-2028) - 200 million dollars	Increase digital access and develops a robust digital infrastructure: better utilisation of data, improving trust and security of online transactions, leveraging digital connectivity.
Senegal	Senegal Higher Education Project: Espoir-Jeunes (2023-2028) - 150 million dollars Senegal Digital Economy Acceleration Project (2023-2028) - $150 million dollars	Support digitisation in education. Support digital transformation and inclusion.

Another important initiative that the World Bank has undertaken jointly with the African Development Bank Group, Mission 300, addresses the continent's energy needs. Its declared aim is to "connect 300 million people in Africa to clean, affordable, and reliable electricity by 2030" (Levkov and Suri 2025). Electricity is a prerequisite for digitalisation. Other international organisations – such as the United Nations Educational Scientific and Cultural Organisation (UNESCO), International Telecommunication Union (ITU) and United Nations Development Programme (UNDP) – are supporting digital infrastructure, education and technical assistance to

governments. In some cases, they partner with private actors. as for instance in the case of UNDP and the Danish cBrain (UNDP 2024b). The Denmark-based digital solutions provider collaborates with UNDP to foster digital public infrastructure, digital financial inclusion and capacity-building. While infrastructure development is crucial for the continent's digitalisation, a successful digital transformation requires a holistic approach that integrates all three dimensions: greater emphasis on digital inclusion, capacity-building and the resilience of local communities is key to preventing the exacerbation of inequalities between those who have access to digital services and those who do not (African Union 2020: 7).

The G7, the EU and Italy

Initiatives such as the G7 Partnership for Global Infrastructure and Investment (PGII), EU's Global Gateway initiative and Italy's Mattei Plan are promoting international investments in various digitalisation plans in Africa.

Launched in 2022 (White House 2022), the G7's PGII aims to mobilise up to 600 billion dollars by 2027 through public-private collaboration. By the end of 2024, the US have declared the mobilisation of more than 60 billion dollars from their side (White House 2024). The investments for large physical and digital connectivity infrastructures under PGII include the African Lobito Corridor, which involves Angola, the Democratic Republic of the Congo and Zambia. The corridor is meant to facilitate the transport of critical minerals to global markets, impacting key sectors such as energy, agriculture and digital access. The planned expansion of rail and road networks along the corridor is expected to support the creation of industrial hubs and investments in energy and digital infrastructure (N Economic Commission for Africa 2024). The EU and the United States are partnering in support of this project.[8]

Launched in 2021, Global Gateway is the EU's strategy to promote development and connect the world through smart and sustainable investments in quality infrastructure.[9] In total, the commission expects 300

[8] European Commission DG for International Partnerships website: *Connecting the Democratic Republic of the Congo, Zambia, and Angola to Global Markets through the Lobito Corridor*, https://international-partnerships.ec.europa.eu/node/2801_en.

[9] European Commission DG for International Partnerships website: *Global Gateway*, https://international-partnerships.ec.europa.eu/node/1750_en.

billion euro between 2021 and 2027 in investments to be mobilised based on the "Team Europe" approach, which aims to promote synergies from different sources of financing: EU institutions and member states, financial institutions and private actors. The Global Gateway's focus is on physical infrastructure to reinforce digital networks, transport and energy. With more than 200 projects having received funding by 2024, the efforts seem to have "spread too thinly" in its first years of implementation, according to internal EU briefing documents (Verhelst and Wax 2024).

In parallel with this external strategy, the EU has undertaken several legislative initiatives to boost AI and data governance and digital regulation. They include: regulation of online platforms and search engines through the Digital Services Act, the European Digital Media Observatory, AI regulation through the AI Act, the European Media Freedom Act, the Regulation on Transparency and Targeting of Political Advertising and lastly the European democracy shield initiative (Bentzen 2024). In the international competition to lead digital innovation at the global level the EU has championed a model that supports a value-based regulatory approach to emerging technologies such as AI. EU member states and the EU as a whole can play a prominent role in helping African partners the regulatory aspects of digitalisation, the digital divide and the negative externalities resulting from the digital transformation.

The EU's external action on digital and the Global Gateway strategy, which aim to promote a more sustainable and ethical alternative to the Chinese Belt and Road Initiative (BRI), emphasises respect for human rights and sustainable development. Competition with China has indeed intensified. The Chinese government has invested a lot in emerging technologies at the national and international level, such as high-speed rail, digital and 5G-enabled manufacturing, robotics, smart cities, smart ports, autonomous vehicles, digital payments, health tech, drones and satellites (Atkinson 2024). African countries are using Chinese digital surveillance technologies, mostly provided by the Chinese company Huawei, which has built 70 per cent of the Africa's 4G networks (Jili 2023: 37). Unlike the EU, China has followed a policy of "no political conditions"[10] when offering loans and technical support and assistance to African counterparts in

[10] As stated by Wang (2021), "Every cooperation we carry out has no political conditions attached to it, neither is it imposed on others from the so-called 'status of power', and it will not pose a threat to any country."

several sectors (Wang 2021), such as mobile payment platforms and agricultural technologies.

The EU, Global Gateway and D4D Hub

The EU aims to support the development of governance and regulation of digital technologies that can guarantee individuals' rights and consumers' protection (Daniels et al. 2023: 5), and hopes to inspire other countries to follow its model counting on the so-called 'Brussels effect', whereby external players tend to adopt regulations in line with the EU's ones in order to get greater access to the single market (Bradford 2023). The EU also emphasises the close connection between digital strategies and industrial policies, that is, technology's dual role in strengthening Europe's economic position while addressing global sustainability challenges (Crisan et al. 2025).

The Global Gateway approach to Africa's digitalisation has promoted hard infrastructures in several countries, while at the regional level fewer projects are focused on data governance. There is little beside the Data Governance in Africa initiative[11] supporting the African Union, regional economic communities and states in developing data policy frameworks building on the AU Data Policy Framework (60 million euro under the Global Gateway); and the Africa-Europe Digital Regulators Partnership in Sub-Saharan Africa.[12]

The digital aspects of the Global Gateway are focused on the construction of fibre-optic cables (as for instance in the Democratic Republic of Congo, Zambia, Zimbabwe, Malawi and Mozambique), intercontinental submarine cable systems (the EU-Africa-India digital corridor), Green Data Centres (in Mauritania), or on implementing Digital Economy Packages to foster digitalisation in Kenya, Nigeria and the Democratic Republic of Congo. However, other initiatives of the Global Gateway, such as the D4D Hub, have the potential to develop a more integrated approach to EU-Africa partnership for development. D4D Hub is a platform to foster digital cooperation and promote inclusive and sustainable digital ecosystems

[11] See Digital for Development (D4D) Hub: *Data Governance in Africa*, https://d4dhub.eu/initiatives/data-governance-in-africa.

[12] See European Commission DG for International Partnerships website: *Africa-Europe Digital Regulators Partnership in Sub-Saharan Africa*, https://international-partnerships.ec.europa.eu/node/2786_en.

launched in 2020 (European Commission DG for International Partnerships 2020). The D4D Hub now comprises sixteen EU member states, private sector partners, civil society organisations and academic institutions, in line with the Team Europe approach, to partner with countries in the Global South.

Additional areas where partnerships could be fostered are agriculture and justice. The EU has financially supported the CAADP-XP4 project, an AU's initiative that aims to leverage the potential in African agritech (JRC 2025), but has not done much on justice systems. Digitalisation of judicial procedures could be seen by the EU as an opportunity to "align its digital priorities with its justice and rule of law priorities in Africa" (Okello 2022). Some forms of digitalisation have been experimented after Covid-19. An Electronic Court Case Management Information System has been tested in several African countries, including Ghana. In addition to technical assistance to courts and judges, legal cooperation could include online legal assistance and justice-tech startups.[13]

4.3 Digitalisation in Italy: The state of play

Italy is engaged in its own domestic digitalisation, not an easy task for a country with an aging population and private companies that on average are markedly smaller than those of other countries. Italy's government hopes to be able to leverage best practices and lessons learned in the course of its domestic digital transformation to develop digital cooperation with African countries.

Italy has put a strong emphasis on digital transformation, with the aim to contribute to the EU's Digital Decade objectives; 27 per cent of the funds for its Recovery and Resilience Plan is allocated to digital transformation with a focus on the modernisation of public administration and the development of high-speed internet infrastructure.[14] In the last few years an important effort has been made on e-government, e-health and the diffusion of digital IDs, with two eIDAS digital identity schemes – SPID and CIE e-IDs. The use of digital IDs has reached in a very short time almost 40 million users for both SPID and CIE e-IDs, highlighting a good

[13] See for instance the LEWUTI project in Uganda or the HiiL Justice Accelerator programme: https://www.hiil.org/?p=4416.

[14] See the official website: *Italia Digitale 2026*, https://innovazione.gov.it/italia-digitale-2026.

capacity for Italian authorities to spread a systematic use of digital identity with digital public infrastructures such as digital IDs.[15]

Ensuring digital public services for all citizens nonetheless remains a big challenge. Only 45.8 percent of Italy's population owns basic digital skills and ICT specialists are in short supply. Several programmes are fostering digital literacy education, including the National Coalition for Digital Skills and Jobs ('Digital Republic'), which brings together 180 organisations.

Italy shows a good level of adoption of key digital technologies – including AI, cloud computing and data analytics. The combined adoption rate is of 63.1 per cent, significantly above the EU average (54.6). However, its startup and innovation ecosystem faces big challenges. While Italy is home to seven unicorns and advanced scientific research capabilities, support for innovative startups remains inadequate. This is exacerbated by an economic structure dominated by micro and small enterprises with limited capacity to support high-growth startups (Anitec-Assinform 2025). In addition, implementation of e-justice strategies is marking time (Italian courts have recently suspended the use of the app due to malfunctions) (Cardarello 2025).

The Mattei Plan and synergies with Italy's partners

Adopted on 11 January 2024, the Mattei Plan reflects the effort of the Giorgia Meloni-led government to establish a new model of strategic partnership with Africa to reinforce economic and social development of African countries and, at the same time, address some of Italy's domestic concerns concerning energy and migration. The Mattei Plan draws inspiration from the policy of equal partnership with African partners pursued by Enrico Mattei as head of the national energy company Eni in the 1950s and 1960s. The four-year plan, which focuses on six main areas – education/training; health; water; agriculture; energy; and infrastructures (physical and digital) – has initially mobilised 5.5 billion euros. These

[15] "In Italy, in 2023 about 40% of individuals reported having used their e-IDs to access online public services, and 47% […] for private purposes. Both these figures are above the EU average (36% and 41%, respectively). If coupled with the low level of digital skills in the country, these figures represent a remarkable achievement." European Commission DG for Communications (2024: 27).

public financial resources come from the Italian "revolving fund",[16] the Fondo 394,[17] the Italian climate fund and the revolving fund for venture capital operations.[18]

The Italian government has also supported private sector participation, necessary to top up public funds. Additional financial instruments to accelerate sustainable development in Africa developed through international partnerships include the Growth and Resilience Platform for Africa, the Plafond Africa, the Trust Fund Framework Agreement and the Rome Process Financing Facility together with the Italy-World Bank declaration of intent (Bank of Italy 2024). The Cassa Depositi e Prestiti (CDP), a financial institution that supports strategic investments drawing from postal savings, plays a pivotal role in partnership with the African Development Bank (ADB 2024).

Pilot projects involving nine countries (Egypt, Tunisia, Morocco, Algeria, Kenya, Ethiopia, Mozambique, Ivory Coast and the Democratic Republic of Congo) were launched in 2024. Other projects in cooperation with Ghana, Angola, Mauritania, Senegal and Tanzania were announced in early 2025. Among the 21 projects listed, several have a relevant digital component. In Algeria a project on agricultural production has been announced, involving an Italian leading company (BF Group – Bonifiche Ferraresi). Another project foresees the creation in Algeria of a training centre for high-tech start-ups, with mixed Italian-Algerian financing (Italian Government 2025). BF Group recently signed a memorandum with Leonardo (the leading company in the aerospace, defence and security sector) to promote agricultural and technological development in Africa. It foresees the use of smart agriculture techniques (including satellites and digital technologies) to monitor crops and water management (Marelli 2025). Sparkle, the first international service provider in Italy and among the top ten global operators, announces its collaboration with Google and

[16] According to Law 227/1977 the Revolving Fund, now managed by CDP, has the scope to subsidise financial credits intended to improve the economic and monetary situation of beneficiary countries.

[17] A fund for the granting of loans to support the internationalisation of Italian companies, primarily small and medium-sized enterprises, managed by SIMEST (CDP). See SIMEST (2021).

[18] A fund managed by SIMEST intended for venture capital operations in countries outside the European Union, according to Law 296/2006.

others to build Blue and Raman Submarine Cable Systems, whose branches will connect Eastern Africa to EU and India.

In Morocco, the creation of a training centre for renewable energy and energy transition with the aim to support local start-ups has been announced, along with a telemedicine project which envisions the development of remote monitoring systems to assist patients (Marelli 2025).[19] Other relevant initiatives regard the Democratic Republic of Congo, where digital water management systems could be used to improve drinkable water access in Brazzaville, and Tunisia, where a centre for training and technological acceleration for innovative companies in the energy sector is set to be created with the help of Terna, the leading Italian company operating in electricity transmission networks (Marelli 2025).

With a regional perspective, the Mattei Plan supports the institution of an "AI Hub for Sustainable Development" in collaboration with UNDP. The centre, which will be based in Rome, aims to improve access to high-quality, locally relevant datasets; bridge the gap in specialised technical skills; reduce barriers to computing capacity and create an enabling environment to inspire and scale high-impact innovations. Being in its initial phases, three pilot programmes have been defined: the Startup Acceleration Pilot, the Local Language Partnerships Accelerator Pilot and the Green Compute Coalition. With a clear orientation to enhance a multi-stakeholder collaboration, the AI Hub relies on the four-pronged 'GROW' approach: Guide, Renew, Orchestrate and Weave. The so-called GROW approach is designed "to create a unified approach towards developing a pioneering African AI system". While promising, the approach has not progressed beyond the first step, Guide, which focusses on research and advocacy for strengthening private sector engagement (G7 and UNDP 2024). As for the AI Hub, Italy launched another collaboration with UNDP in November 2024: the "Italy's Digital Flagship with Africa Initiative" which aims to improve connectivity, develop public digital systems and catalyse innovative ecosystems in key sectors such as agriculture, e-justice, health, climate and e-commerce. This initiative focuses on four countries – Ivory Coast, Senegal, Ghana and Mozambique – and is in the first evaluating phase of the different needs and possibilities (UNDP 2024a).

[19] The project is implemented by Dedalus, leader in the hospital and diagnostic software sector.

A stronger role to foster Italian and EU synergies could be played by the Italian Agency for Development Cooperation (AICS). Since 2018, AICS has been responsible for indirect management of EU funding. In 2023 AICS joined the D4D Hub secretariat together with other national agencies such as GIZ (Germany), Enabel (Belgium), Expertise France (France) and AECID (Spain). AICS's participation in the D4D hub projects related to Africa can help advance the digital dimension of the Mattei Plan.

Italy alone cannot match the political and economic influence of competing powers in Africa (Simonelli et al. 2024). As suggested by the collaboration with UNDP, the digital strategy of the Mattei Plan can succeed only if closely integrated in multilateral frameworks, such as UN, of which Italy has traditionally been a strong supporter. Though being a national-driven strategy, both the effectiveness and legitimacy of Italy's initiatives are largely predicated on its capacity to cooperate with and receive support from international organisations and to foster a European strategy rooted in shared values, such as democracy, rule of law and sustainable development, even in time of crisis. Italy can also leverage its traditional horizontal and holistic approach that aims not only to build economic partnerships but also to promote a human-centred development. This implies careful feasibility analyses of the various digital initiatives and an assessment of their social impact. This more comprehensive approach could represent a comparative advantage over other competitive models of development such as the BRI one promoted by China.

Italian digital cooperation: What role for CSOs and academia

Some Italian stakeholders view the digital pillar of the Mattei Plan as a valuable opportunity for strengthening Italy's role in development cooperation and paving the way to new forms of partnership with African countries (Del Monaco et al. 2024). Nevertheless, several critical aspects are worth considering. The Plan's chances of success will depend on Italy's capacity to make full use of the characteristics of its engagement in Africa such as the strong pre-existing network of civil society organisations working in several countries and its decentralised and multi-level approach that emphasises inclusiveness. Notable examples are the initiatives aimed at digital skills training and knowledge transfer such as the agreement recently signed with Ethiopia for creating a High-Tech Innovation Business Incubation Centre to strengthen digital services which includes 4.5 million euro in funding for startup training, smart kiosks for

digital services and related job creation, and the Local Language Partnership Accelerator Pilot, part of the AI Hub, which focuses on underrepresented African languages in the digital world.

The Mattei Plan can build on the role of civil society organisations and academia, based on their expertise, and coordinate partnerships in the digital sector. Italian CSOs, like Oxfam, Coopi, Soleterre for instance, have a long-lasting experience in building partnerships and planning projects, and in adapting their activities to local structures and needs (Lunardini et al. 2024). Some development projects have already integrated ICT and AI in development cooperation in Africa, especially in Kenya and Mozambique. In Mozambique AICS has implemented a project on digital transformation managing directly funding from EU (so-called "cooperazione delegata").

Civil society and universities can play a role in the design and implementation of initiatives under the Mattei Plan by sharing expertise and innovative methods to measure the social impact. They can help foster African digital skills and, at the same time, address negative externalities that digital transformation can generate. The Mattei Plan could take advantage of with Italian initiatives such as the AfricaConnect 2021-2025 (University of Sant'Anna),[20] the GLOBEC (University of Pavia), the Center of Data and Complexity for Society from Sapienza University[21] or with projects such as LIFT LAB (Save the Children), a global innovation hub supporting projects in twenty countries (Save the Children 2024).

Conclusion

While Africa faces growing digitalisation needs, persistent structural gaps – such as the lack of digital infrastructure, weak data governance and insufficient digital skills – remain critical hurdles to sustainable and equitable progress. Several actors, such as the AU, the New Partnership for Africa's Development Agency and the African Development Bank, are already engaged in development cooperation across the continent. But the EU and Italy are also invested in the continent's digital development. EU has made significant efforts to strengthen the partnership with Africa, notably through the Global Gateway initiative, which emphasises the pivotal

[20] See Scuola Superiore Sant'Anna website: *AfricaConnect*, https://www.santannapisa.it/en/africaconnect.

[21] See the official website: https://cdcs.di.uniroma1.it.

role of the private sector. Within this framework, Italy's Mattei Plan can catalyse infrastructure investment, energy transition and skills transfer under a horizontal partnership model. Though still in its early stages, the plan has generated important synergies not only with key international partners like the UNDP but also with other G7 and EU initiatives focused on infrastructure needs, with strong participation of leading Italian companies.

The success of the Mattei Plan depends not only on its ability to foster effective private-sector partnerships. Stronger coordination with Italian and African civil society organisations and academic centres can maximise its impact. To avoid exacerbating divides or reinforcing imbalances, a multifaceted approach is essential, one where public and private actors work together to enhance digital skills and promote local ownership.

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5. Global Gateway and Mattei Plan: Advancing EU-Africa Digital Cooperation for Inclusive Growth

Marianna Lunardini and Darlington Tshuma

Since the launch of the European Union-African Union Digital Economy Taskforce in December 2018, digital cooperation has emerged as a strategic focus point for the EU-Africa partnership.[1] More recently, the European Commission President Ursula von der Leyen underscored a strategic link between Africa's digitalisation and Europe's demand for critical raw materials at a June 2025 High-Level Summit in Rome on 'The Mattei Plan for Africa and Global Gateway' (European Commission and Italy 2025). For Europe, Africa's extractive sector is crucial to the artificial intelligence (AI) revolution and global supply chains for high-tech (e.g., mobile phones, electric vehicles) and defence industries (e.g., semi-conductors and military-grade tech). For Africa, when paired with investments in digital infrastructure, skills development and local innovation ecosystems, resource-driven partnerships can leapfrog the continent's participation in global value chains and reduce dependency on raw commodity exports. In the Democratic Republic of the Congo (DRC), for instance, the extractive sector is a significant source of revenue, accounting for more than 70 per cent of export earning receipts (Mo Ibrahim Foundation 2025). Yet the sector's strategic importance is undermined by governance deficits as well as transparency and accountability challenges.

[1] The EU's digital cooperation with Africa is mainly driven by the Global Gateway strategy through initiatives like the EU-Africa Digital Economy Partnerships, Digital for Development Policy and the Africa-EU Space Partnership Programme. See for example, the European Commission DG for Communications Networks website: *Africa*, https://digital-strategy.ec.europa.eu/en/node/9815.

Strengthening digital governance and developing Africa's digital public infrastructure can enhance transparency and reduce illicit trade in critical minerals. From a development standpoint, Africa's digital sector and digital transformation holds immense potential to accelerate inclusive growth and tackle multidimensional development challenges. By expanding access to digital technologies and services and bolstering digital literacy programmes, the continent can unlock substantial progress in healthcare, education, agriculture and financial inclusion while catalysing innovation, entrepreneurship and decent job creation for its rapidly growing population. Digitalisation, when paired with supportive governance frameworks and investments (digital skills and hard infrastructure), becomes a powerful enabler for sustainable development.

This chapter examines the EU-Africa digital partnership through two concrete European policy instruments, one multilateral and one bilateral: the EU's Global Gateway and Italy's Mattei Plan, underscoring a dual-track approach that combines a collective Team Europe strategy with member state initiatives. The analysis aims in particular to assess how these complementary strategies can be better aligned to shape a coherent and unified Team Europe framework for sustained digital cooperation with Africa.[2] The authors employed a mixed-methods approach to gather comprehensive data on the EU-Africa digital partnership. The approach included extensive desk research, analysing existing academic and grey literature, complemented by two events: a roundtable discussion organised by the Istituto Affari Internazionali in Rome in May 2025, as well as a side event held by IDOS, the Mo Ibrahim Foundation and ETTG on the margins of the 2025 Ibrahim Governance Weekend (IGW) in Marrakesh, Morocco. Both events brought together experts, institutional stakeholders from Europe and Africa, practitioners and private sector representatives who provided nuanced insights and perspectives from which this chapter benefited.

[2] This chapter was prepared as ETTG Policy Brief No. 8/2025, in close coordination with a second ETTG Policy Brief that analyses digital transformation in Africa (see Chapter 1). Prior paper published by ETTG, supported by the Mercator Stiftung, can be accessed on ETTG website at this link: https://ettg.eu/global-gateway-mattei-plan-euafrica-digital-cooperation.

5.1 Advancing EU-Africa digital cooperation for inclusive growth and shared prosperity

Africa's digital sector holds great promise for addressing complex development challenges in key sectors like healthcare, agriculture, education and finance. However, realising this promise requires robust governance frameworks that not only attract private sector investments but also ensure effective regulation to safeguard public interest and promote inclusive digital development. Africa's digital and governance landscape is characterised by fierce geopolitical and geoeconomic competition involving several players and actors, ranging from States to multilateral development banks, development partners and private actors including big tech companies such as China's Huawei and Tecno Mobile, Hong Kong-based Infinix, South Korea's Samsung, or the US Google, Meta, Amazon, IBM, Oracle and HP (Tafese 2022). This emerging geopolitical and geoeconomic rivalry among global technology giants has heightened concerns over asymmetric power relations, technological dependency and data sovereignty (Qobo and Mzyece 2023). Given that major leading big tech firms and digital service providers are headquartered in China, North America and, to a lesser extent, Europe, African countries often lack meaningful control over critical digital infrastructure and platforms. This imbalance reinforces structural constraints and limits the continent's ability to shape its digital future autonomously. Scholars have referred to this phenomenon as 'digital colonialism' (Nothias 2025), pointing to the ways in which external actors dominate digital ecosystems in Africa, thereby perpetuating historical patterns of control and marginalisation in new technological domains. For instance, the African Private Equity and Venture Capital Association (AVCA) notes that external investors largely headquartered in North America accounted for over 42 per cent of all venture capital deals between 2019 and 2024, with African-based investors contributing only 20 per cent of total venture funding (AVCA 2025). This underscores enduring challenges within Africa's digital sector with respect to technological sovereignty, limited local ownership and restricted access to financing.

EU-Africa digital partnership is one of the strategic areas for EU-Africa cooperation. In 2021, the EU launched the Global Gateway to mobilise up to 150 billion euros in investments for sustainable infrastructure projects

in Africa.[3] The Global Gateway targets five key infrastructure areas, including: quickening green transition; boosting digital transition; accelerating sustainable growth and improving working conditions; enhancing health and pharmaceutical systems; and improving education and training. Designed to offer an alternative to Chinese investments in Africa backed by the Belt and Road Initiative and its brainchild, the Digital Silk Road (DSR),[4] the Global Gateway has focused on three key elements: bridging Africa's infrastructure gaps, capacity building through regulatory and data governance frameworks, and digital skills training programmes, the latter largely through Digital Economy Packages in countries like Nigeria and Kenya. Under the EU-Nigeria Digital Economy Package (2021-2024), the EU planned to invest over 820 million dollars to support Nigeria's digital transformation (European Commission 2022). However, according to internal EU briefing documents, Global Gateway efforts seem to have been 'thinly spread' in its first years of implementation, compounded by a lack of focus on strategic priorities and coordination with European partners (Verhelst and Wax 2024).

Against this backdrop, both within the Global Gateway and the Mattei Plan, Team Europe[5] places greater emphasis on building Africa's digital public infrastructure system and closing critical infrastructure gaps through a combination of skills training programmes, technical support (soft infrastructure) and deployment of hard infrastructure, joining forces with UN agencies to ensure an effective implementation. Team Europe's focus on building submarine cables and data centres and deploying satellites is vital for digital connectivity in Africa (Cariolle 2021). It is no

[3] See European Commission DG for International Partnerships website: *EU-Africa: Global Gateway Investment Package*, https://international-partnerships.ec.europa.eu/node/2530_en.

[4] DSR is China's global digital infrastructure undertaking involving Chinese technology companies building telecommunications networks, AI capabilities, cloud computing, e-commerce, surveillance technologies and other high-tech innovations around the world. In 2020, China, through DSR, concluded cooperation agreements with at least 16 African countries to build infrastructure projects, including fibre optic connections, sea and underwater cable connections, energy and water systems supported by Chinese firms.

[5] The Team Europe initiatives consist of joint efforts made by EU institutions, member states, development agencies, the European Investment Bank, the European Bank for Reconstruction and Development and national development banks.

coincidence that in 2024, under the Mattei Plan, Italy and the United Nations Development Programme (UNDP) partnered to launch the AI Hub and the Digital Flagship Initiative to support digital connectivity, deployment of digital public infrastructure and digital innovation in Africa.

As can be gleaned from Table 1 (below), the EU is funding important infrastructure investments to improve digital access, albeit without sufficient accompanying projects to promote accessibility and affordability. Current digital infrastructures supported by the EU include building new submarine cables connecting Europe and Africa. For instance, the Blue-Raman cable systems link Europe, Africa and Asia and are set to be completed in 2026 with a collaboration between Google and the Italian company Sparkle, under the Mattei Plan (TeleGeography 2025). In addition, the EU-funded Medusa Optical Fibre Cable will link north Africa with Europe, installing 7,100 km of cables in the Mediterranean Sea. Finally, under the Global Gateway, an EU infrastructure project in Mauritania will support the country's connection by building a second submarine cable to complement the African Coast to Europe cable, providing additional data capacity not only for Mauritania but also for its landlocked neighbours. Infrastructure projects built in Africa not only help diversify markets for submarine cable connections and reduce vulnerabilities associated with single-route dependencies, but also support broader efforts to localise technological infrastructure. This, in turn, strengthens data sovereignty by ensuring that data servers and digital assets remain under the jurisdiction and control of African countries. For example, submarine cable breaks in 2024 on the West African coast had far reaching economic, social and security ramifications for countries entirely dependent on this cable connection (Munga 2025).

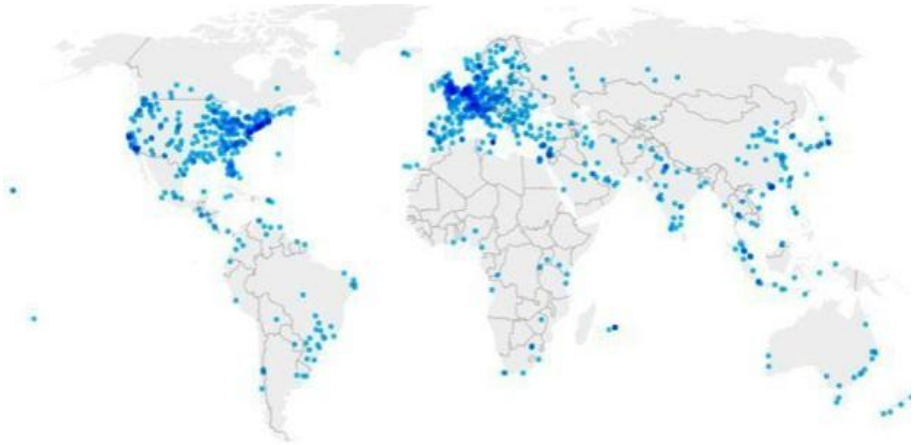
Table 1 | Africa's submarine cables supported by the Global Gateway

Project	Country
Construction of data centre in Nouakchott and submarine cable in Mauritania	Mauritania
Somalia connectivity expansion	Somalia
Eu-Africa-India digital corridor (Blue Raman cable)	Djibouti
Medusa optical fibre cable	Algeria, Egypt, Morocco, Tunisia

Source: authors' elaboration from European Commission DG for International Partnerships (2025).

Investments in hard and soft infrastructure are foundational to Africa's digital transformation. Data centres[6] in particular play an equally critical role in ensuring digital resilience and autonomy. Currently, Africa hosts just 2 per cent of the world's data centres (Africa DCA 2024), underscoring a stark infrastructural gap. Strengthening local data centre capacity is essential not only for enhancing data sovereignty and decentralised digital governance, but also for attracting investments in Africa's green and renewable energy sectors to expand energy access and build climate resilience.

Figure 1 | Data centres worldwide



Source: Pascual (2025) and Data Center Map.

With Africa's population set to double from 1.2 billion to over 2.5 billion people at the midpoint of this century (Sinha and Getachew 2024), building sustainable energy and water infrastructure projects to support digital transformation is crucial. Africa's data centre market is projected to grow at 12 per cent annually, reaching 3 billion dollars by 2025, with South Africa, Kenya and Nigeria emerging as key data hubs (UNCTAD 2024). However, energy and water reliability and environmental

[6] According to the Cambridge Dictionary, a data centre is a "building containing many powerful computers and the systems needed to keep them running, so that large amounts of data (= computer information) can be dealt with effectively and without interruption". A data centre can host the infrastructure of different companies.

sustainability continue to pose serious challenges, especially considering that nearly 600 million Africans still lack access to reliable and affordable electricity. The EU, through its Global Gateway strategy, aims to increase green energy production by investing in Africa's green and renewable energy sectors. This will achieve the twin objectives of expanding energy access for millions without access to affordable and reliable energy while building Africa's climate resilience. A crucial challenge will be to build 'green data centres' to strengthen Africa's response to climate risks while reducing the climate and environmental footprint of digitalisation to decarbonise Africa's digital transformation. As an example, the PAIX Data Centres, a leading pan-African data infrastructure provider and a member of the Global Gateway Business Advisory Group, has committed to powering 100 per cent of its data centre operations with renewable energy by 2030 (PAIX Data Centres 2025). If achieved, this pledge will reflect the company's broader alignment with EU sustainability goals and a strong commitment to Africa's green digital transition agenda. Across Africa, there are other encouraging examples of initiatives aiming to reduce the environmental impact and operating costs of digital infrastructure projects. The Rack Centre in Nigeria, for instance, aims to achieve approximately 35 per cent energy savings, 41 per cent water savings and 45 per cent carbon reductions throughout the overall life cycle of the materials (Rack Centre 2021). However, environmental performance data is not consistently disclosed across all infrastructure projects. For example, while the newly inaugurated Data Centre in Nouakchott, Mauritania (May 2025) represents a significant investment in regional digital infrastructure, publicly available information on its environmental footprint still remains limited (EIB 2025).

These examples show that the Global Gateway and Mattei Plan should have a stronger focus on an environmentally sustainable digital transformation to effectively support the European strategy towards development cooperation with African countries. As directed by the European Parliament, for sustained impact Global Gateway projects must strengthen coordination with the SDGs and the Paris Agreement and embody EU values of human rights, good governance, democracy, transparency and environmental sustainability (European Parliament 2025). This is also intended to support policy coherence and alignment with the 2017 European Consensus on Development (Council of the EU 2017).

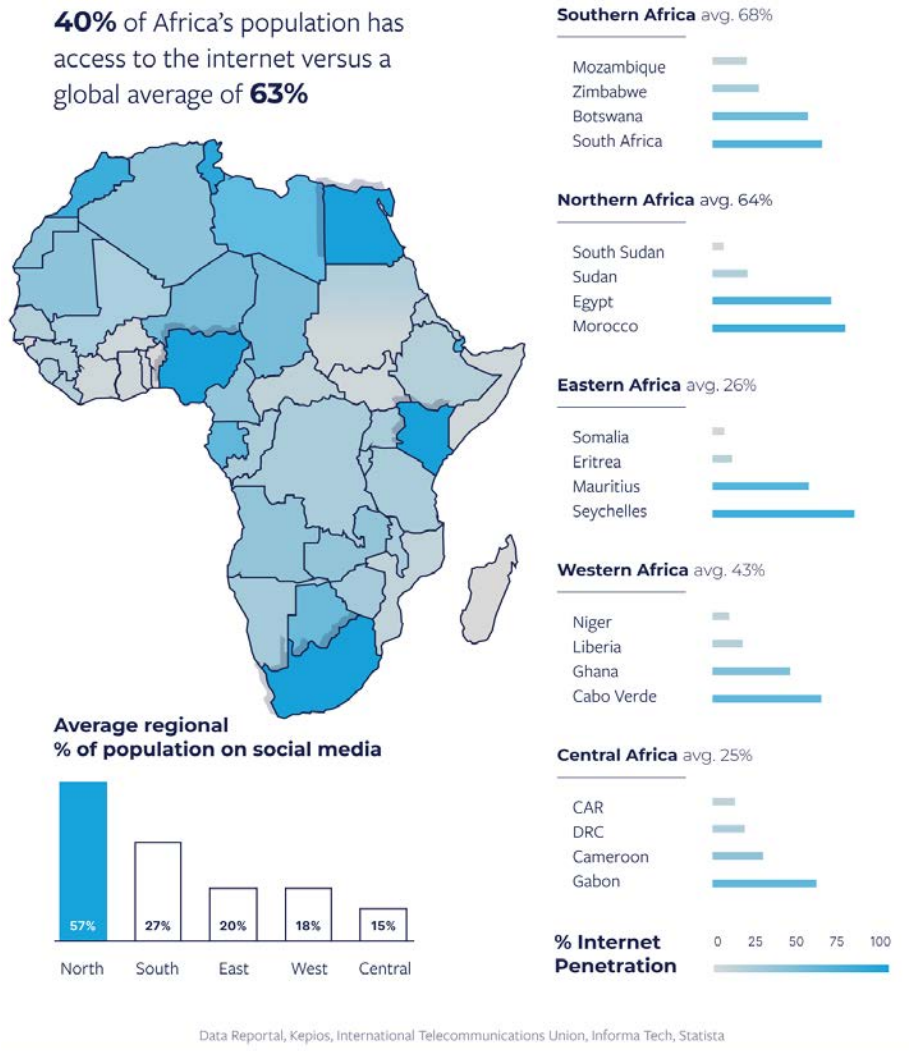
5.2 Leveraging Africa's digital public infrastructure for inclusive growth and governance

Currently, only about 40 per cent of Africans (significantly below the global average of 68 per cent) can use the internet effectively, reflecting broader inequalities and a persistent digital divide (ITU 2025). This means that a disproportionate segment of the population is not only excluded from access to digital public goods, but continues to exist on the margins of both the economy and society. However, as more Africans join its burgeoning consumer class (Ncube and Lufumpa 2014), digital technologies offer a pathway to drive inclusive economic growth, improve public service delivery and foster sustainable development. For example, M-PESA – a mobile money platform that does not require a traditional bank account – has facilitated access to financial services for previously 'unbanked' informal business operators in Kenya. Between 2006 and 2016, access to financial services in Kenya increased significantly from under 30 per cent to over 75.5 percent of the population (Suri and Jack 2016). Widespread adoption of M-PESA played a pivotal role in this transformation, with estimates indicating that the platform lifted approximately 2 per cent of Kenyan households out of poverty within a decade (Suri and Jack 2016). Leveraging digital technologies, the Kenya Revenue Authority increased value-added-tax collection by more than a billion dollars between 2016 and 2017 (Okunogbe and Santoro 2023).

Improvements in revenue generation and collection through deployment of Digital Public Infrastructure (DPI) systems can unlock sustainable investment in critical digital infrastructure like energy and water systems, fibre cable networks, data centres, skills training, and research and development. In Ghana, technological advancements have substantially lowered the cost of integrating identity data across government functions. The introduction of the national identification system, the 'Ghana Card', in 2021 marked a shift in public sector efficiency. As a result, the number of registered tax filers rose from fewer than 4 million to nearly 6.6 million in 2024. Importantly, the Ghana Revenue Authority reported that it could now identify and trace approximately 85 per cent of the population, compared to just 4 per cent under the previous system, significantly enhancing the country's capacity for tax compliance and domestic resource mobilisation (Mo Ibrahim Foundation 2025). The Kenya and Ghana cases illustrate the potential of digital technologies to drive

inclusive economic growth and improve livelihoods, for instance by boosting domestic resource mobilisation, which is key to support development-related goals, especially in a context where traditional aid and development budgets are crunching.

Figure 2 | Internet penetration rates in Africa



Source: CRE Venture Capital website: *Infographic #1: Internet Penetration*, https://www.cre.vc/news-slider/internet-penetration-in-africa-infographic.

Africa currently leads in the number of digital identity initiatives. However, nearly half of these remain at pilot phase, highlighting the need for stronger institutionalisation and scale-up (IIPP 2025). This uneven progress underscores opportunities and challenges for consolidating DPI as the backbone of Africa's development. Similarly, DPI plays a critical role in monitoring development progress and tracking SDG targets. For instance, DPI is being used to address climate change by enhancing early warning systems in Ethiopia (UNDP 2023a: 34).

Both the Global Gateway and the Mattei Plan can build on the foundational base created by countries like Kenya and Ghana where deployment of digital systems has had a transformative impact on the lives of citizens. A notable example is Ghana's Business Regulatory Reform Unit, established in 2017 by the Ministry of Trade and Industry with technical assistance from the ACP Business-Friendly programme (Arlet and Wager 2024). This initiative leverages digital platforms to promote business-friendly, inclusive and responsible policies and legal frameworks, and enhance citizen engagement and participation in public policy processes. One of the key outcomes of this project is the roll-out of Ghana's 'virtual courtrooms', and e-justice project to facilitate speedily resolution of disputes and legal matters (Addadzi-Koom 2022). This is particularly important against the backdrop of studies that show that an estimated 4 billion people currently live outside the protection of the rule of law because of their marginal position in society (Finucan et al. 2018). In countries with fragile and weak governance systems, digitalisation of public services and goods can enhance stability and security by improving transparency and accountability, enhancing responsiveness and accessibility in the delivery of public services. This is particularly true in contexts where causal linkages can be drawn between deficiencies and chronic incapacity in service provision and conflict, instability and insecurity; or where the social contract is weak (UNDP 2023b). Disruptive digital technology solutions and AI-powered innovations that bridge digital divides and improve delivery of public goods and services can help build stable and secure communities.

5.3 The EU's menu of offers: Global Gateway and Team Europe

In the evolving global 'battle of offers', as described by former European Commission Vice-President Josep Borrell in 2023, the EU is trying to

present a variegated menu of offers to its global partners. This is intended not only to compete but to coexist with other major international initiatives, positioning the EU as a credible alternative through its diversified and transparent approach to development finance. Some of the ambitious goals of the Global Gateway have raised concerns among African partners about whether they serve mutual development goals or primarily the EU's economic, security and strategic interests, with a "more aggressive EU interest-driven use of its resources" (Okumu and Fattibene 2024). In addition, the Team Europe approach aims to harness the EU's and its members' capacity to mobilise significant investments under the 2021-2027 Multiannual Financial Framework, while simultaneously laying the groundwork for a robust financing pipeline in the forthcoming 2028-2034 Framework (Bilal 2025).

On the one hand, the Global Gateway has a strong focus on digital hard infrastructure, with the majority of the digital projects involving building of submarine cables and data centres; fibre optic cables in the DRC, Zambia, Zimbabwe, Malawi and Mozambique; and 4G deployment in Madagascar and Tanzania. On the other hand, the EU initiative has developed fewer projects to support Africa's governance and digital innovation. For instance, in Kenya and Nigeria, the Global Gateway has led to a country-based project, the 'Digital Economy Package', helping to accelerate and boost digitalisation through deployment of DPI, skills training and e-governance initiatives. The number of these country-based approaches should be further expanded as they could create the right enabling environment where digital hard infrastructure can effectively deliver positive outcomes. In addition, country-tailored strategies are key to supporting initiatives in different areas of the digital transformation, targeting more local and smaller projects in specific countries, supporting a multi-levelled approach and boosting the potential of the Global Gateway.

To better align EU initiatives with Africa's development priorities, relevant partnerships and collaborations have been established with African stakeholders, as recently illustrated by a partnership agreement with Smart African Alliance, supported by the D4D Hub (European Commission DG for International Partnerships 2024), launched to offer technical assistance and capacity building for African States. The Smart African Alliance brings together 40 African countries to develop smart solutions using AI and ICT. This partnership demonstrates the power of Team Europe Initiatives when leveraged in pursuit of common goals, in this case, the

digital sector through the EU's D4D Hub. The multi-stakeholder platform brings together EU institutions, 16 EU member states, their development agencies and International financial institutions for a better alignment of digital priorities between Europe and Africa. However, a major drawback is that to date, only a limited number of countries through their specialised Development Agencies have committed dedicated financial and human resources to support the operationalisation of the Secretariat's activities, namely GIZ (Germany), Enabel (Belgium), Expertise France (France), AICS (Italy) and AECID (Spain).

The D4D Hub could not only foster EU-Africa dialogue but also contribute to locally anchored digital governance models aligned with country-specific needs and regional integration agendas. In Sub-Saharan Africa there are three ongoing initiatives: Digital and Green Innovation Action, iPRIS (ICT Policy & Regulation – Institutional Strengthening) and Data Governance in Africa. Under these initiatives a great focus is on fostering EU-Africa harmonisation of digital policy ecosystems and on strengthening innovation between Europe and Africa. For instance, training and technical assistance are at the core of the iPRIS initiative, highlighting the importance of the platform in creating preconditions for multistakeholder participation and for private sector involvement. The D4D Hub aims to improve coordination among EU member states, while at the same time leveraging private sector engagement in digital transformation, across four regions: Sub-Saharan Africa, Latin America and the Caribbean, the Asia-Pacific and EU neighbouring countries. This structure reveals an EU digital development strategy driven by geopolitical interests and competition. Balkanisation of the African continent could potentially hinder the EU's capacity to support AU-led frameworks on regional and continental integration.

5.4 The Global Gateway and the Mattei Plan: Different strategies, same vision?

The EU member states' engagement within the Team Europe framework reflects the diversity of national strategies in advancing Africa's digital transformation. For instance, Italy's Mattei Plan offers a salient example of how national initiatives can complement and deepen the broader EU-Africa partnership. This was underscored during the high-level meeting held in Rome in June 2025, co-chaired by Italian Prime Minister Giorgia Meloni and European Commission President Ursula von der Leyen, where

both parties affirmed the synergy between the Mattei Plan and the Global Gateway. President von der Leyen emphasised that the two strategies are working 'in synergy' by pooling EU and member state resources to unlock private sector capital, marking the increasingly great importance of private engagement in both strategies. Investments seem to have become a key element for EU strategies, as mentioned by von der Leyen when describing the potential of the 'Global Gateway investment fund' (European Commission DG for International Partnerships 2025). Central to both frameworks is the strategic mobilisation of private capital to complement declining levels of public development assistance.

The Mattei Plan could be considered a 'catalyst within larger frameworks', supporting strong (and with a larger financial base) international partnerships for infrastructure development such as the Lobito corridor or the Blue-Raman submarine cables (Simonelli et al. 2024). The Italian flagship initiative is considered to have a business-driven model structure supporting Italian private companies and private-public partnerships through bilateral channels. However, its strategy has also evaluated close collaboration with multilateral organisations to leverage its ability to be a key player in Africa's development. Taking the case of the main important initiative on digital cooperation, the 'AI Hub for Sustainable Development', the centre was undertaken in collaboration with UNDP. In fact, while having digitalisation as a transversal aspect in many projects (in the energy or agricultural sector for instance), at the continental level, the Hub aims to improve access to high-quality, locally relevant datasets; bridge the gap in specialised technical skills; reduce barriers to computing capacity; and create an enabling environment to inspire and scale high-impact innovations. The initiative is still in an early piloting phase, as it was only launched in June 2025. Another collaboration with UNDP rolled out in November 2024 is 'Italy's Digital Flagship with Africa Initiative'[7] which aims to improve connectivity, develop Africa's DPI and support innovation in e-governance, e-justice, health, agriculture and e-commerce.

The Italian strategy demonstrates an approach focused on the overall continent, different from the regional one of the European D4D Hub. While Italy is supporting the EU platform, Rome is not directly participating in ongoing Sub-Saharan initiatives, acting instead as coordinator for

[7] This initiative focuses on four countries, namely Côte d'Ivoire, Senegal, Ghana and Mozambique.

the countries neighbouring the EU. Moreover, the Italian Hub is based on the GROW approach (Guide, Renew, Orchestrate and Weave),[8] that focuses more on leveraging ongoing national and international strategies in a specific country, based on local needs (UNDP 2024: 18). Improving a convergence of the two plans could avoid possible duplication and strengthen both policies. Lastly, the collaboration with UNDP promotes an approach more aligned with development goals – for example the Local Language Partnerships Accelerator Pilot in the AI Hub – which would enhance the strategy of the Italian Plan. Synergies between the AI Hub and the D4D Hub could be fostered following a Team Europe approach that valorises the strengths of both strategies.

5.5 Recommendations for the EU-Africa digital partnership

This chapter has analysed the role of international cooperation and the relevance of the EU-Africa digital partnership for supporting African countries in the roll-out and operationalisation of their digital transformation strategies. The strategies of the EU and its member states, such as the Global Gateway and the Mattei Plan, have been examined to assess Team Europe's capacity to act as a key development partner for Africa, leveraging innovation within the continent and supporting ongoing initiatives. Action in the following areas can enhance a mutual EU-Africa digital partnership:

- Support a Team Europe approach in cooperating with African stakeholders, by deepening collaboration among EU partners and strengthening the role of platforms such as the EU D4D Hub and Italy's AI Hub for Sustainable Development. The Italian Hub could incentivise pilot projects focused on AI-powered applications, developing a blueprint for deploying trustworthy AI for green and sustainable digital infrastructure that can be replicated across different regions.
- For sustained impact, European and African partners should consider setting up Joint Monitoring Committees with representatives from the Italian, EU and African governments to ensure strategic alignment between Global Gateway, the Mattei Plan and African frameworks to

[8] The GROW approach will be implemented in the countries first involved in the Mattei Plan: Algeria, Côte d'Ivoire, Egypt, Ethiopia, Kenya, Morocco, Mozambique, the Republic of the Congo and Tunisia.

mitigate the risk of disjointed digital initiatives led by competing external actors.

- Streamline public, philanthropic and private sector investments with national, regional and sub-regional development frameworks to ensure alignment and compatibility with African policy frameworks, for instance Africa's Digital Transformation Strategy (2020-2030) and the AU's Continental AI Strategy.
- EU-Africa digital partnership should support the implementation and widespread adoption of DPI in Africa. The focus should be on the most promising DPIs, including interoperable digital ID systems, secure payment platforms and trusted data exchange frameworks, with the goal of moving beyond the pilot stage to full-scale deployment.
- To reverse disparities in access to capital in undercapitalised markets, leverage the Africa-Europe Innovation Partnership initiatives by establishing a Digital Innovation Catalyst Programme under the Global Gateway-Mattei Plan framework, focusing on accelerating Africa-led digital solutions in priority sectors such as e-governance, fintech, agritech, healthtech and education.

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Conclusion

Marianna Lunardini and Darlington Tshuma

As the chapters in this volume demonstrate, digitalisation and digital transformation is reshaping Africa's economic, political and sociocultural landscape. These transformations are not merely a technological shift, they represent a structural transformation that is redefining how Africans work and learn, interact, conduct business and trade, and govern. Over the past two decades, internet access in Africa has expanded at an average rate of 16.7 per cent, more than double the global average of 8 per cent (Ecofin Agency 2024). Today, nearly 40 per cent of Africans are now digitally connected, unlocking progress across multiple sectors. Expansion in connectivity continues to catalyse entrepreneurship and innovation. For instance, Africa's e-commerce market alone is projected to exceed 59.2 billion US dollars by 2050, while mobile technologies added 170 billion US dollars to Africa's economy in 2023, equivalent to 8.1 per cent of the continent's GDP. E-commerce penetration rate is projected to reach 44 per cent by 2027. Nigeria alone has over 90.9 million e-commerce users (TechCabal Insights 2023). These transformations demonstrate the power of digital transformation in revolutionising retail and commerce across Africa.

Similarly, digital transformation is enabling African governments to improve and modernise public administration, expand access to public goods and services (education, health, justice and social protection), and strengthen governance systems. Across countries such as Rwanda, Ghana, Benin and Côte d'Ivoire, governments are integrating digital tools to improve service delivery, enhance transparency and promote inclusion (African Development Group 2025). Digital public infrastructure (DPI), including national identification systems, mobile money platforms (M-PESA in Kenya, Telebirr in Ethiopia, Ecocash in Zimbabwe and Airtel Money in Nigeria, Zambia etc) and e-governance frameworks is helping to bridge inequality gaps, promote financial inclusion and enhance

domestic resource mobilisation. For instance, investments in digital solutions and the modernisation of the tax system in Ethiopia has enabled government to increase domestic resource mobilisation by increasing revenues from 152 billion Birr to 323 billionBirr (approx. 986 million to 2.095 million US dollars), marking a 112 percent increase in the first quarter of the 2025/2026 fiscal year (Seyoum 2025).These developments reflect and underscore the continent's growing resolve to chart its own digital destiny, guided by national digital strategy frameworks, the African Union's Digital Transformation Strategy (2020-2030) and the Continental AI Strategy.

As various chapters have shown, at the heart of this transformation lies Africa's demographic bulge. By 2050, the continent's population will reach 2.5 billion representing more than 40 per cent of the world's working-age population. This demographic shift is both an opportunity and a challenge for the EU-Africa partnership. Yet, when harnessed positively, it positions Africa as the next global hub for innovation, labour and consumption. Harnessing this demographic shift through digital skills, education and entrepreneurship will be essential for translating Africa's potential into shared prosperity. Africa's demographic weight also provides strategic leverage to negotiate fairer terms in trade, technology transfer, and investment with external partners including the EU. As authors in this volume illustrate, despite progress, persistent structural challenges remain. Unequal access to digital tools, weak infrastructure, unreliable energy and limited regulatory coherence threaten to widen divides both within and between countries. Roughly 600 million Africans still lack access to electricity – a critical enabler of digital connectivity. Disparities in income, gender and geography further constrain participation in the digital economy. Without targeted interventions, these gaps risk undermining progress towards the SDGs and Agenda 2063.

As Chapters 1, 2, and 5 show, the pace of digital transformation is uneven both across countries and among social groups, creating challenges for social inclusion and inclusive growth. Against this backdrop, the EU-Africa digital partnership offers both opportunity and responsibility. Through frameworks such as the Global Gateway and initiatives like Italy's Mattei Plan, the EU is supporting infrastructure development, regulatory harmonisation and innovation ecosystems across Africa. Investments in submarine cables, data centres, and broadband expansion such as the Mauritania-ACE cable project are enhancing regional connectivity

and promoting cross-border data integration. The EU's regulatory experience, particularly in digital governance and data protection, provides a valuable model for supporting African efforts to develop coherent and human-centred digital frameworks. EU-Africa digital cooperation must implement a comprehensive strategy that takes into account social inclusion in order to ensure that everyone benefits from Africa's digital transformation.

At the European level, negotiations for the next EU 2028-2034 multiannual financial framework (MFF) are unfolding amidst profound geopolitical instability, economic competitiveness concerns, and a pressing need for more defence spending and strategic autonomy (Fattibene 2025). MFF negotiations provide an important opportunity for the EU to reaffirm its strategic partnership with Africa through intensified digital cooperation. By integrating digital transformation more explicitly into the MFF's external action instruments, the EU can help address Africa's digital infrastructure deficits, promote digital governance and strengthen human capital development. Such investments would not only support Africa's ambitions under the Digital Transformation Strategy for Africa (2020-2030) but also advance EU's own strategic interests, including building resilient digital ecosystems, securing diversified supply chains and fostering trusted technology partnerships. A recalibrated MFF that mainstreams digitalisation across its external action priorities could, therefore, become a cornerstone of a mutually beneficial EU-Africa digital partnership.

Going forward, the European engagement must move beyond infrastructure financing and normative rhetoric. True partnership demands co-creation, local agency and shared ownership. African priorities, as articulated in national and regional digital strategies, should serve as the foundation for sustained collaboration. The EU's role should evolve from that of a traditional donor to a strategic enabler, helping to support African innovation, strengthening institutional capacity, fostering conditions for sustainable investment and long-term technological sovereignty. EU member states such as Italy are called to support the European effort under the Team Europe framework, working together to reach the common goal. Competition over Africa's digital sector, illustrated by the EU's Global Gateway, Italy's Mattei Plan, China's Digital Silk Road, US technology partnerships and Gulf states' digital investments underscore the geopolitical significance of digitalisation (Soule 2023). In this crowded landscape, the

EU must distinguish itself by promoting a progressive partnership anchored in mutual respect, transparency and inclusivity. Supporting African digital sovereignty through local data ownership, open standards and ethical AI governance will be key to ensuring that Africa's digital future is defined by Africans themselves. As the authors in this volume have shown, energy access and climate resilience are also central to Africa's digital transformation. Initiatives such as the World Bank's "Mission 300 partnership", aiming to connect 300 million Africans to electricity by 2030 demonstrate that digital transformation and green transitions are mutually reinforcing. For sustained multiplier impact, digitalisation must therefore be embedded within broader sustainability strategies that link clean energy, water access and climate adaptation.

Finally, this volume underscores that the EU-Africa digital partnership is not only a matter of economic cooperation, but also a strategic collaboration that embodies a new form of multilateralism rooted in reciprocity, not dependency, co-investment, not charity. In an era of declining aid and fragmented geopolitics, digital cooperation offers a blueprint for redefining development partnerships away from transactional exchanges to transformative alliances. When guided by these principles, the EU-Africa digital partnership can become a cornerstone of a broader post-aid development architecture, one defined by equity, shared prosperity and collective resilience. As the authors in this volume show, Africa's digital transformation is not merely about playing catch up with the rest of the world, it is about reimagining the global digital order. And in this reimagining, Europe's role will be tested not by its promises, but by its ability to partner with Africans in building a just, connected and sustainable future.

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By 2050, Africa's population is projected to reach approximately 2.5 billion people. By the end of the 21st century, the African continent will account for 40.6 per cent of the world's working age population, underscoring an urgent need to create at least 20 million new jobs annually. These demographic transformations present both opportunities and challenges for EU-Africa cooperation under both the Mattei Plan and Global Gateway frameworks. For Africa in particular, the digital sector has the potential to drive innovation, spur economic growth, empower rural communities, foster continental integration and accelerate progress towards achieving Sustainable Development Goals (SDGs) and Agenda 2063. At the same time, Africa's digital transformation is sparking discussion over asymmetric power relations that mirror past historical injustices. With majority of digital infrastructure, platforms and services originating either in China, North America and to a lesser extent Western Europe, questions around technological dependency, lack of transparency, data sovereignty and the risks of perpetuating "digital colonialism" have come to the fore. The EU-Africa digital partnership under Mattei Plan and Global Gateway frameworks can serve as catalysts for strengthening African agency by enhancing digital governance frameworks, investing in targeted capacity-building programmes and mobilising resources to bridge infrastructure and financing gaps.
This edited volume aims to provide rigorous analysis of the main challenges and opportunities for digital cooperation and partnership between the EU and Africa through two key European policy instruments, the EU Global Gateway and Italy's Mattei Plan. The volume situations EU-Africa digital partnership within a broader digital landscape increasingly being shaped by geopolitical and geo-economic rivalry among global powers enabling informed analysis of the EU-Africa partnership on the global geopolitical chessboard. The analysis focuses on four macro-themes: (i) digital governance frameworks and policy, (ii) technological control and data sovereignty, (iii) digital infrastructure gaps, and (iv) opportunities and challenges for Italy-EU-Africa digital partnership going into the future. Furthermore, the book delves into the current state of global digital landscape from the perspectives of both Africans and Europeans and contains nuanced and targeted recommendations for strengthening the EU-Africa digital partnership.

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