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**Economic Commission for Africa**  
**Committee on Private Sector Development, Regional Integration,**  
**Trade, Infrastructure, Industry and Technology**  
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**General discussion on the theme of the first session of the Committee on Private Sector Development, Regional Integration, Trade, Infrastructure, Industry and Technology, “Private sector development and the digital economy in support of regional integration in Africa”**

## **Private sector development and the digital economy in support of regional integration in Africa**

### **Issues paper**

#### **I. Introduction**

1. The accrual of maximum benefits from regional integration processes has traditionally depended on, among others, the ability of integrating entities and their constituents to take advantage of economies of scale and effectively participate in regional and global value chains. In the digital era, however, regional economic integration entails more than just physical connectivity. It now increasingly requires making strides towards digitization and embracing digital economies that are based on digital communication networks and information communication technologies. This enhances interstate cooperation and efficiency of production, marketing and delivery of goods and services. Broadly speaking, digitization could facilitate and enable regional integration through a number of channels, including: the use of digital technologies, such as the Internet for trade, investment and tourism. Just as digitization enables regional integration, meaningful progress in regional integration opens up opportunities for the emergence of thriving digital economies. Furthermore, regional integration creates bigger markets and associated economies of scale, which act as an incentive to private sector investment in the development of both hard and soft digital infrastructures.

2. The value of the global digital economy is estimated at more than \$11.5 trillion and is set to rise to more than \$23 trillion by 2025.<sup>1</sup> With the largest and fastest growing young population in the world, Africa cannot afford to be left behind in adopting the use of a digital economy for its economic development and transformation. For the past ten years, the continent has recorded the highest global growth in Internet access, with an increase of 23.1 per cent, from

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\* E/ECA/CPRTIIT/1/1.

<sup>1</sup> Economic Commission for Africa, *Economic Report on Africa 2019: Fiscal Policy for Financing Sustainable Development in Africa* (Addis Ababa, 2019).

2.1 per cent in 2005 to 24.4 per cent in 2018.<sup>2</sup> Improving the use of a digital economy will have a positive impact on the implementation of important regional initiatives such as the African Continental Free Trade Area. Similarly, the private sector has a critical role to play in exploiting digitization in support of regional integration. The sector generates an estimated 70 per cent of the continent's output, approximately two thirds of its investment and 90 per cent of employment. The contribution of the private sector to job creation is seen as one of the most effective and sustainable strategies for elevating many African populations out of poverty.

3. In 2019, the Economic Commission for Africa Conference of African Ministers of Finance, Planning and Economic Development was held in Marrakech, Morocco. Emerging from that meeting was the message that there was a clear need for African countries to integrate digitization into their national development strategies and plans, and for the private sector to work collaboratively with Governments in both policy formulation and implementation. African countries could harness the opportunities of a digital economy through the implementation of policies, programmes and regulations designed to remove national barriers, promote connectivity, digital skills, research, innovation and entrepreneurship.

4. The present issues paper explores the role of the private sector in harnessing the full potential of digitization to deepen the integration of African countries. Following this introductory section, the paper is organized as follows: sections II, III and IV provide discussions on the nexus between digitization and trade, digitization and industrialization, and digitization and infrastructure development, respectively, from a regional integration perspective, while highlighting the role of the private sector. Section V explores the opportunities and challenges of digitization and the role of the private sector in tackling these challenges. Section VI presents the conclusion and questions raised for discussion.

## **II. Progress in the digital economy and prospects of enhancing trade integration through digitization in Africa**

### **A. Progress in the digital economy**

5. The breakthrough of the digital economy in Africa is impressive and the growth of digital technology has been one of the region's biggest success stories during the past 15 years, with the public sector being the major contributor to this growth. African Governments continue to play a catalytic role in attracting private investment in digital technologies, which is key in supporting the region's integration agenda. In 2000, Africa had proved its capacity to leapfrog technology by embracing the mobile telecoms revolution.

6. The success in the growth of digital technology has largely been driven by telecoms service providers, especially the private operators that dominate the African market (MTN, Vodafone, Orange, among others). The establishment of mobile payment systems represents one of the greatest digital revolutions in Africa. Best examples include work by private sector operators that first marketed the offering – Safaricom in Kenya with M-Pesa, MTN in Côte d'Ivoire, or Orange in Western Africa – together with banks that rolled out similar types of solutions. There has also been growth in home grown

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<sup>2</sup> African Union–European Union Digital Economy Task Force, *New Africa-Europe Digital Economy Partnership: Accelerating the Achievement of the Sustainable Development Goals*. Available at [www.tralac.org/documents/resources/external-relations/eu/2865-new-africa-europe-digital-economy-partnership-report-of-the-eu-au-digital-economy-task-force-june-2019/file.html](http://www.tralac.org/documents/resources/external-relations/eu/2865-new-africa-europe-digital-economy-partnership-report-of-the-eu-au-digital-economy-task-force-june-2019/file.html).

solutions, including LittleCab of Safari Telecom, Tuteria, Gokada, Flutterwave with both Governments and the private sector creating pathways for the emergence of digital solutions. In addition, a big chunk of the growth in the African digital economy has been driven by a few major international groups such as Uber – the digital hailing transport service. Kenya has seen its foreign direct investment increase to \$672 million, up by 71 per cent in 2017, driven mainly by strong domestic demand and inflows into information and communications technology (ICT) industries.<sup>3</sup>

7. Regional economic communities have embraced and deployed digital technologies in support of regional integration programmes. Common Market for Eastern and Southern Africa (COMESA) is moving towards the full adoption of digital technologies to tackle developmental disparities within the bloc and enhance efficiency in regional economic systems. The region is working towards digital economic integration, as was highlighted by the theme adopted by the bloc for 2018–2019, namely, “COMESA: towards digital economic integration”. Ongoing efforts in that regard include the implementation of the digital free trade area, which empowers traders to perform cross-border trade using ICT tools to minimize physical barriers. COMESA member States are also implementing online marketing, which enables duty-free and quota-free trade within the region. Furthermore, COMESA has developed a new mobile application to be used by cross-border traders. The application assists in getting information on the various trade-related activities, and in affecting payments. Southern African Development Community (SADC) adopted an e-commerce strategy to fast-track intraregional trade and economic integration. It recommended the enactment of harmonized legal and regulatory frameworks to support e-commerce development within the subregion. In addition, SADC called for the passing of e-transaction, cyber-criminality, personal data protection, and consumer protection laws and reforms in the banking sector to harmonize laws and regulations for the integration of e-commerce requirements, including e-signature and authentication, mobile-banking e-payment and e-transfer.

8. In the case of the Economic Community of West African States (ECOWAS), its ICT policy is geared towards promoting the development of economic and technological infrastructure. All 15 ECOWAS countries are implementing a substantial number of 13 digitization programmes, based on jointly agreed policies. ECOWAS is mindful of the role of adequate communication in the realization of integration programmes. It is working to develop a reliable and modern regional telecoms broadband infrastructure, including the INTELCOM II programme, alternative broadband infrastructure and submarine cables as well as the establishment of a single liberalized telecoms market. In addition, ECOWAS ministers in charge of telecoms/ICT have adopted common minimum technical specifications for digital terrestrial television, and a road map for its implementation.

9. The Commission has been actively engaged in efforts to establish and promote initiatives on digital identity, digital trade and digital economy for Africa. In 2019, the African Union Executive Council mandated the African Union Commission and ECA, in collaboration with other partners, to develop a comprehensive digital trade and digital economy strategy to enable African countries to reap the benefits of the fourth industrial revolution and to facilitate the implementation of the African Continental Free Trade Area. This strategy, which is to be submitted to the African Union leadership in 2020, builds on existing strategies and policies at regional and national levels, and identifies policy priorities to expand access to digital technologies, and the deployment of these into productive purposes aligned with the continental developmental agenda. In ECA, the Centre of Excellence on Digital Identity, Trade and

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<sup>3</sup> TN/UNCTAD/ICT4D/08.

Economy has coordinated efforts towards the development of the strategy, and has led the synthesizing of the draft. In addition, ECA participated in the second session of the African Union e-Commerce Conference in October 2019, at which stakeholders and representatives of governments, private sector, academia and civil society were consulted to identify priorities and map immediate actions.

## **B. Prospect of enhancing trade integration through digitization**

10. Digitization revolutionizes trade in goods and services, from optimizing production and productivity to enhancing the competitiveness of African industries; opening opportunities for wider markets; facilitating more effective integration of businesses into national, regional and global value chains; cutting trade costs by improving trade facilitation, mostly through automation and adoption of digitally enabled platforms for trade processing; and using smart infrastructure. The rapid growth of digital technology has expanded the base of information, reducing the costs for information sharing, transmission and acquiring, and bringing innovation that has led to greater connectivity among people, businesses and Governments. African countries have ample opportunity to harness the digital economy as a driving force behind sustainable and inclusive growth.

11. Expanding digital technologies offers the opportunity to unlock new pathways to rapid economic growth, create jobs and accelerate equal access to quality public services. Another important potential of digitization is that it can open new sectors, promote new markets, boost innovation and generate the productivity gains needed to lift living standards. Furthermore, regional markets, such as the one created by the African Continental Free Trade Area, can be served more effectively using digital technologies (including e-commerce, e-payments, e-governments, regional broadband infrastructures and smart cities). E-commerce is expanding rapidly in developing countries as more goods and services are traded online, facilitated by improved connectivity and the rapid proliferation of mobile phones, social media and new innovations. For e-commerce to expand the market access of manufactured products in Africa, it is important that there are uniform cross-border e-commerce rules and regulations. Cognizant of this, several African countries are implementing policies, individually and collectively, towards harmonization for the digital economy.

12. Digitization constitutes part of the broader effort to eliminate non-tariff barriers through paperless trade and digitization of trade measures, which also reduce international trade costs. If efficient technology is not deployed, this may create another non-tariff barrier. Most regional economic communities continue to improve their trade facilitation measures by embracing digital technologies to complement, and make more effective, the physical infrastructure connecting the regional economic community member States. COMESA continues to implement the COMESA Virtual Trade Facilitation System, an electronic trade facilitation initiative developed to monitor consignments along transport corridors throughout member States. At present, the Facilitation System is used in the Northern Corridor States of the Democratic Republic of the Congo, Kenya, Rwanda and Uganda, with other member States, including Djibouti, Ethiopia, Malawi, the United Republic of Tanzania and Zambia, also having adopted it.

13. The Agreement Establishing the African Continental Free Trade Area offers a unique platform for African Governments to establish institutional arrangements for cooperation on the digital economy, and provisions to support digital capacities and industrialization. Regional integration agendas such as

this Agreement need to include regional support for building a data economy; cloud computing infrastructure; strengthening broadband infrastructure; promoting e-commerce in Africa; promoting regional digital payments; making progress on a single digital market in the region; sharing experiences on e-government; forging partnerships for building smart cities; promoting digital innovations and technologies; and building statistics for measuring digitization.

### III. Industrialization in the digital era

14. Industrialization has been a key driver of development (historically and globally) which has usually followed the traditional route, consisting of the relocation of large amounts of labour from conventional agriculture to industry, and later to services (see figure I), however, this has not happened in Africa, as the share of employment in industry has remained stubbornly around 10 per cent (see figure II). Manufacturing value added in the region's GDP has in fact fallen from nearly 12 per cent in the 1970s to 10 per cent in the past decade.

Figure I

**Employment shares through typical industrialization (percentage)**

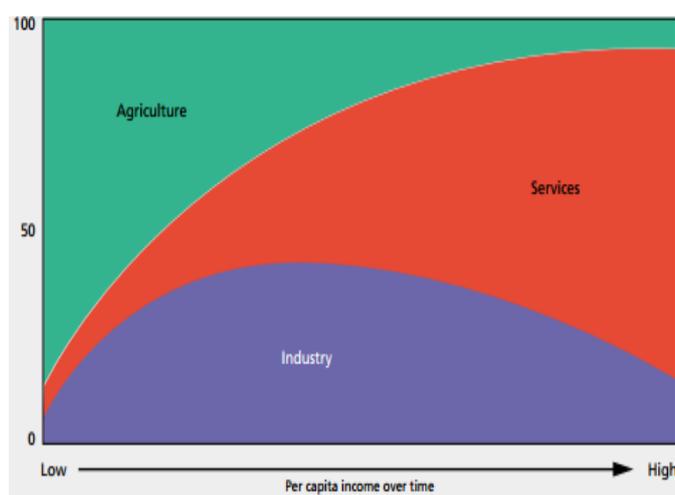
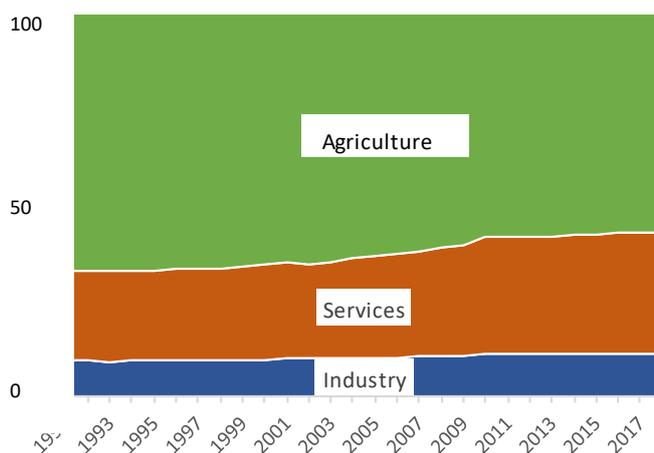


Figure II

**Employment shares in Africa (percentage) 1991–2017**



Source: World Development Indicators, World Bank (2019); see <http://datatopics.worldbank.org/world-development-indicators/themes/economy.html>.

15. Several reasons explain why it has been difficult for Africa to industrialize. The continent faced greater trade competition on international

and domestic markets than other economies when they industrialized. As a result of the structural adjustment programmes of the 1980s, many African economies had lower trade barriers to protect import-competing industries than did other industrializing regions. Lastly, the type of industry that has tended to do well in Africa has been capital-intensive resource extraction, rather than labour-intensive manufacturing.

16. In the digital era, the industrialization of the continent has become more difficult because manufacturing has transitioned from dependence on endowment with a large, unskilled, low-wage workforce, to greater reliance on automated, capital-intensive, and skill-dependent processes. According to research undertaken by the World Bank in 2016, the resulting “robotization” risks eroding the employment generated by industry, putting at risk as much as two thirds of jobs in developing countries.<sup>4</sup> At the same time, “re-shoring” risks shifting industrial work back to the developed world. While the relative lack of an industrial sector and poorer capacity for digital adoption have shielded the continent’s industrial sector from the kinds of falling employment seen in more developed economies (such as the United States of America) that lack of digital adaptive capacity for modern manufacturing also makes further industrialization more challenging in Africa.

17. Traditional patterns of industrialization have also become less effective because digitization is changing where value is created in the production process. Traditionally, much value was derived from the manufacture of products. Value is shifting to services in the pre- and post-production stages of manufacturing as new technologies, such as the Internet of things, cloud computing, computer-aided design, additive manufacturing and big-data analysis, become more important to the overall value generated by manufacturing. As a result, more of the traditional value of industry may be migrating to digital services.

18. Industrialization, however, is still possible, partly because not all subsectors of industry face the same pressures from digitization. Subsectors that are less amenable to digitization can continue to offer avenues for the traditional labour-intensive forms of industrialization. This is especially true of countries that have sufficient access to cheap labour and low-cost inputs to rival Asian markets. Nevertheless, a business as usual approach risks not just further deindustrialization, but also fails to take advantage of new opportunities offered by digitization. The digital economy can lower barriers to entry and help to connect micro, small and medium-sized enterprises with global markets and value chains through providing the services necessary to facilitate their exports, including simplified payments and logistics. Digital applications are already being leveraged to promote innovation and entrepreneurship, including the empowerment of women as traders, and mobile and digital solutions are contributing to filling credit gaps. Technologies such as communication networks and e-commerce platforms are facilitating new opportunities for businesses and workers in developing countries.

19. The large-scale uptake of digital technologies in Africa is still underway. As a relatively new phenomenon, there are fewer tried and tested routes to learn from in navigating industrialization in the digital era. This makes the recommending of policy responses to industrialization through digitization inherently difficult. Governments can respond by improving their policymaking processes so that they are more reactive to a fast-changing environment – in other words, policymaking needs to be both adaptive and properly coordinated.

20. In addition, African countries should increase investment in the areas of digital physical infrastructure and digital skills development. Better digital

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<sup>4</sup> World Bank, *World Development Report 2016: Digital Dividends* (Washington, D.C., 2016).

connectivity infrastructure is found to have a positive impact on the employment of workers in jobs of both categories of skill - high and lower skilled. Investing in skills development can help the African labour force to adapt to a rapidly changing skills landscape.

## IV. Digitization and infrastructure development

21. Regional infrastructure is critical both for promoting the economic integration of the continent and in linking it to the global economy, however, there are gaps in the regional and subregional infrastructure that undermine physical connectivity on the continent and impede the free movement of goods and services. Digitization can improve the effectiveness and efficiency of the transport and energy sectors in Africa, especially in support of regional integration, with the private sector playing an active role.

### A. Digitization in the transport sector

22. Access to the Internet is spreading rapidly throughout Africa, offering new opportunities in the use of information technology (IT) to solve the myriad problems that the continent faces in its transportation infrastructure and services, especially in relation to planning and managing mobility and access and road safety. These IT systems simplify administrative procedures and logistics processes, monitor traffic movement along corridors and provide real-time information to stakeholders to support them in their decision-making. Innovative digital technology can support data collection and analysis, and substantially improve data and statistical exchanges and the harmonization of transport data and statistics.

23. Numerous initiatives to dismantle the obstacles to trade and transport, mostly spearheaded by regional economic communities, have been implemented or are ongoing in Africa. These initiatives generally seek to reduce the time and cost to clear goods at a border crossing, costs incurred to transport goods on a corridor; and improve average travelling speed. Most regional economic communities have harmonized or introduced vehicle load and dimension controls. COMESA, for example, has introduced a Regional Customs Transit Guarantee scheme, which has been implemented in the Northern Corridor countries of Kenya, Rwanda and Uganda. Similarly, progress has been made on modalities to integrate the system into the customs information technology systems of these countries.<sup>5</sup>

24. Intra-African trade would more than double, rising from 10.2 per cent in 2010 to 21.9 per cent in 2022, if continent's free trade area is effectively implemented, coupled with the reduction of non-tariff barriers. This will significantly increase cross-border mobility in Africa, and coping with this would require a combination of strong cross-border infrastructure and efficient transport services. This explains why the African Union Commission, with the support of ECA, is championing the concept of "safety, mobility, automated, real-time traffic management" (SMART) corridors that seems set to shape the future of regional transport corridors in Africa.<sup>6</sup> It epitomizes the use of digital technology in the transportation sector in support of regional integration.

<sup>5</sup> Simon Mevel and Stephen Karingi, "Towards a Continental Free Trade Area in Africa: A GCE modelling assessment with a focus on agriculture", in *Shared Harvests: Agriculture, Trade and Employment*, David Cheong, Marion Jansen and Ralf Peters, eds. (Geneva, International Labour Office and United Nations Conference on Trade and Development, 2013, pp. 283–284).

<sup>6</sup> SMART corridors are modal or multimodal surface transportation corridors with quality infrastructure and logistic facilities, between two or more countries, used to carry intraregional and international cargo and passengers facilitated by the latest trade facilitation tools and conducive policies.

25. In 2019, the European Union created the Africa-European Union Task Force on Transport Connectivity. The Task Force, among other things, examined ways of using digitization to improve transport planning and decision-making and to increase the efficiency and effectiveness of transportation networks. It explored how artificial intelligence applications could improve the efficiency of African transportation services, including in railways, ports and airports. In the rail sector, for example, advances in automation, self-diagnosing, or real-time geolocation tracking have made trains considerably smarter and safer. In addition, it has been suggested that block chain technology could be tapped into to improve logistics efficiency in all modes of transportation. In the road sector, innovative digital technologies could be used to identify road conditions and to reduce delays and improve transparency. Digitization also enables the integration of driver and vehicle records, which facilitates the enforcement of traffic rules and regulations, thereby improving road safety. The Commission is working closely with the African Union Commission to promote the use of decision-support systems in road safety management – a core component of the region’s post-2020 road safety strategy that ECA and the African Union Commission are developing.

26. Digitization presents great opportunities for Governments to establish partnerships with the private sector. The private sector plays an important role in providing IT services in the transportation sector. It develops software and supports their application at national and regional levels by supplying and installing such software and building the capacity of government officials, intergovernmental organizations and other end users to derive the maximum benefit from them. The private sector also plays an important role in developing and building IT infrastructure and in funding and undertaking research on innovative IT solutions.

27. There are, however, several hurdles to the application of digital technologies in the transportation sector in Africa. For example, a lack of funding hampers the implementation of IT projects in African countries, in particular cross-border projects such as those designed in the context of the SMART corridor initiative. The inadequate capacity of member States and regional organizations to implement such projects, or even to raise the awareness and understanding of stakeholders on the importance of IT systems, has also been identified as a challenge.

## **B. Digitization in the energy sector**

28. There is a huge gap in the energy sector. The continent’s generation capacity is not increasing enough to meet the growing demand, mainly because of increased consumption (2.6 per cent annually), economic growth and rising urbanization rate (3.5 per cent annually). More than 600 million people (or 77 per cent of households) have no access to electricity. It is estimated that the lack of access to electricity costs the African economy approximately 2.1 per cent of GDP on average. The power sector alone requires \$40.8 billion annually – \$26.72 billion for capital expenditure and \$14.08 billion for operations and maintenance.<sup>7</sup>

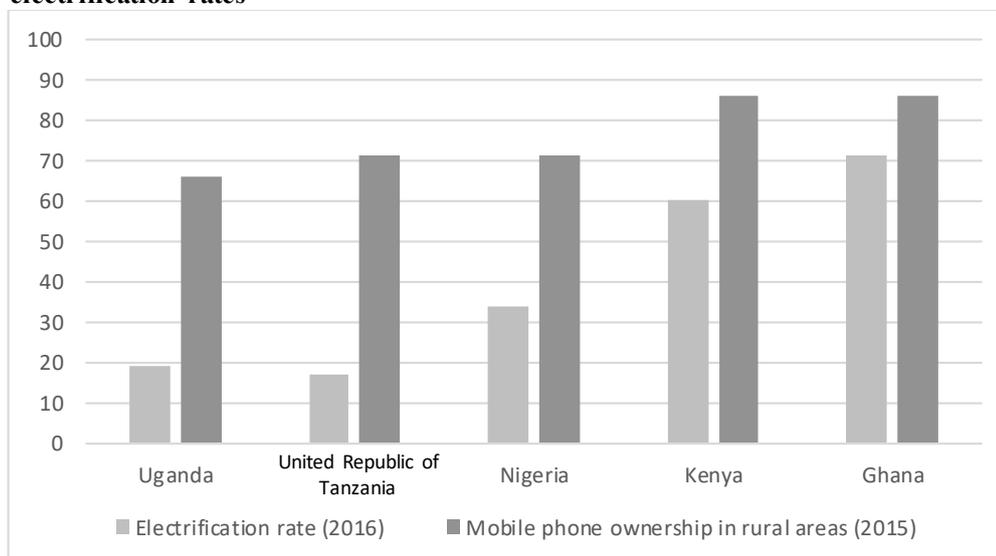
29. Digitizing the power sector is seen as a viable approach to fast-track electricity access to the 1.1 billion people in the world who still have no access. This is the case as digitization provides a platform for technology leapfrog, as it occurred in the communication sector. For example, in many African countries, mobile phones are more prevalent in homes than electricity (see

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<sup>7</sup> African Union/NEPAD-OECD, *Increasing Private Investment in African Energy Infrastructure* (2015). Available at [www.oecd.org/daf/inv/investmentfordevelopment/44171355.pdf](http://www.oecd.org/daf/inv/investmentfordevelopment/44171355.pdf).

figure III), and mobile phones and the associated infrastructure, such as cell towers, could be the foundation for increasing modern energy services.

Figure III  
**Mobile phone ownership in selected African countries versus electrification rates**



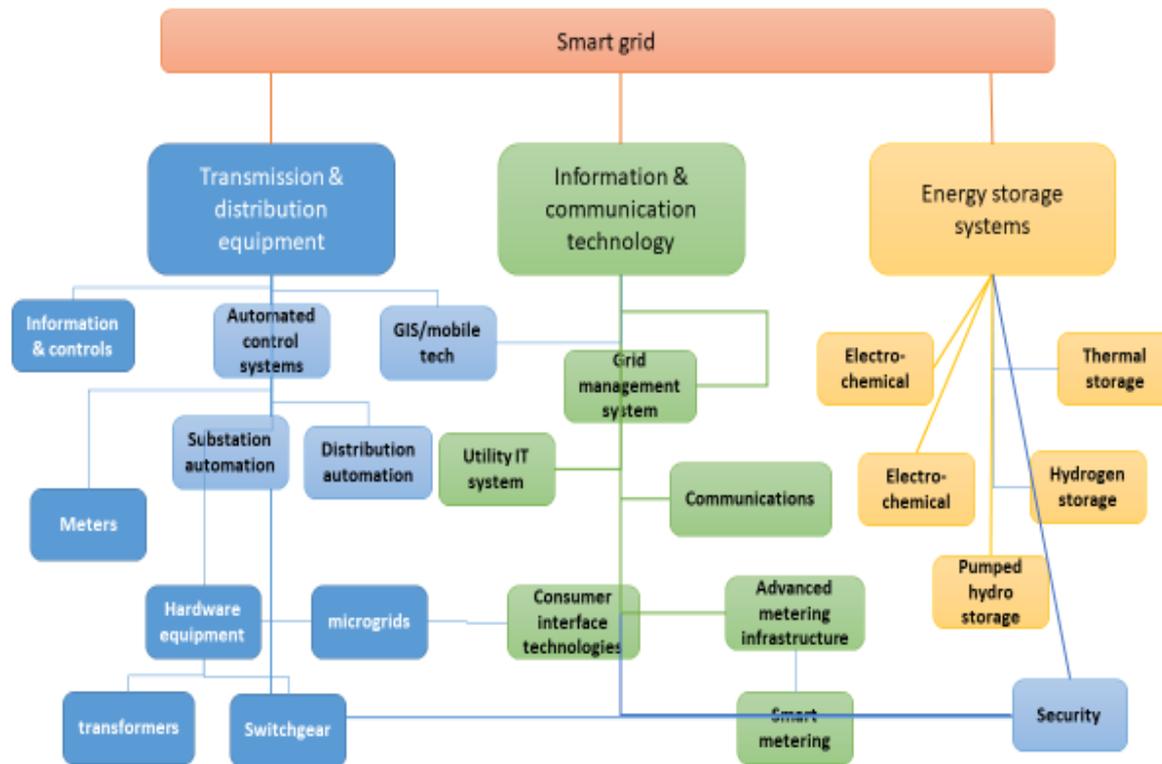
Sources: *Energy Access Outlook 2017: from Poverty to Prosperity* (Paris, International Energy Agency, 2017); STATcompiler (USAID, 2017).

30. Africa is on the threshold of the diversified energy generation, with more exploitation of renewables such as hydro, wind and solar. There are regional power projects under the auspices of the Programme for Infrastructure Development in Africa (PIDA) and others that are country based but could play a role in increasing energy generation and therefore capacity. The decreasing costs of renewable energy technologies is also attracting investment in these technology. The strong policy push for rural electrification and development is also facilitating the renewable energy agenda towards distribution systems that include micro-grids, digital substations and storage. It is also recognized that the current Africa grid is characterized by partial control, poor technology integration and optimization, reactive maintenance, and fragile systems.<sup>8</sup> In addition, the grid is ill-equipped to integrate the variable nature of renewables and the future grid is expected to accommodate varying capacities from multiple sources, deliver flexible power load as determined by demand, and be intelligent enough to be controlled remotely and have predictive maintenance.

31. Essentially, this “smart” grid will consist of an interface of transmission and distribution equipment, information and communication technologies and energy storage systems (see figure IV).

<sup>8</sup> Frost and Sullivan, *Digitization of energy transmission and distribution in Africa* (2018). Available at [www.gegridolutions.com/press/gepress/2018/WP-Digitization.pdf](http://www.gegridolutions.com/press/gepress/2018/WP-Digitization.pdf).

Figure IV  
Main pillars of the future “smart” grid



Source: Frost and Sullivan, *Digitization of energy transmission and distribution in Africa* (2018).

32. It is encouraging that African power pools are adopting digitization as a strategy to optimize power supply. In 2017, the West African Power Pool contracted General Electric to undertake a turnkey grid digitization project throughout the region, which will be completed by 2021. The objective is to improve reliability and stability of energy in the region, improve regional exchange through existing interconnections, and optimize energy costs to the consumer.

33. While the lack of suitable infrastructure is a handicap, it also presents good opportunities for the continent to leapfrog into digitized power systems, as very little investment is in place. At present, the foundation for a digitized energy sector is in place. It is forecast that, by 2026, \$300 billion could be added to the continent’s economy if countries decide to adopt digitization.<sup>9</sup>

34. The opportunities for digitization in Africa to take root are immense, however, a number of new policy and regulatory challenges remain, including: devising ways of dealing with issues relating to cyber-attack security, associated with digitized power systems; tackling challenges in obtaining and protecting data and connectivity; and developing new ways of regulating and thinking about energy governance.

<sup>9</sup> Engineering News, “The Impact of Digitalization and IoT on the African Energy Sector”, 28 January 2019.

## V. Opportunities and challenges of the digital economy

### A. Opportunities

35. Digitization, despite its challenges and policy deficits, offers great opportunities for African countries to transform their economies, improve their competitiveness, strengthen their integration, and reduce their cost of doing business. Digitization creates opportunities through facilitating more efficient industrialization, international trade in goods and services, foreign direct investment inflows, effective infrastructure integration and connectivity. Closing the digital divide may play a critical role in the development of emerging economies, as it can improve social and economic equality, favour social mobility of people and boost innovation and economic growth.

36. As the continent is improving its efforts in investing more in connectivity, suitable policy reforms, support to policy dialogue and technical assistance, it may be able to accelerate growth models by allowing the digital economy to influence all sectors of the economy and society.

37. The continent's progress in achieving a digital economy was not only visible in Internet connectivity but also in mobile-cell phone subscriptions and in households with a computer, and that the trend was affecting the economy as a whole. The GDP for mobile economy was forecast to reach 7.6 per cent (\$214 billion) of the overall African GDP by 2020. This is from 6.7 per cent of the overall GDP in Africa in 2016, representing \$153 billion of the total mobile economy. Technology-related productivity gains in crucial sectors (such as financial services, education, health, retail, agriculture and government) in Africa are predicted to reach between \$148 billion and \$318 billion by 2025.<sup>10</sup>

38. Digital economy use in Africa is growing faster than in the rest of the world. Modes of doing business and trade are changing with positive contributions to economic growth and regional integration initiatives such as the African Continental Free Trade Area. The digital economy plays a key role in supporting African economies, in particular micro, small, and medium-sized enterprises. In this globalized economy, digital trade is key in connecting these types of enterprises with purchasers abroad for cross-border orders and provide the supportive services necessary to facilitate their exports, including simplified payments and logistics. A digital economy can also be a tool for boosting intra-regional trade as demonstrated in current work by ECA. If implemented effectively, the digital economy can reduce transaction costs of doing business, improve delivery of goods and services, and present new opportunities for innovations and job creation.

### B. Challenges

39. Reaping the benefits from enhanced digitization is not easy as it requires a series of structural adjustments. Actions and policies towards fostering physical access to the Internet remain a priority among African countries, which is key in tackling some of the challenges facing developing countries. Developing countries lack skilled workers relative to developed countries, and there is concern that a digital economy will benefit the latter at the expense of the former. Furthermore, there are growing concerns that digital trade embodies network effects that can lead to market concentration and in turn lead to anti-competition issues.

40. A number of African countries do not have access to network connections, devices, software and applications. Countries continue to face

<sup>10</sup> GSMA, *The Mobile Economy 2016*. Available at [www.gsma.com/mobileeconomy/2016/global/](http://www.gsma.com/mobileeconomy/2016/global/).

huge gaps in high-speed Internet access that have important effects on media access, such as streaming video. Findings from a 2016 study undertaken by Facebook pointed out that in emerging economies, especially in rural or remote areas, more than four billion people remain unconnected to the Internet. In 2017, the gap in Internet use was more acute for women, with 32.9 per cent fewer women having access to the Internet in African least developed countries. Accordingly, bridging the digital divide requires providing adequate infrastructure and services both in the poorest countries and poorest areas of developed countries. Furthermore, nearly two billion people do not have a mobile phone, which is the easiest way in emerging economies to get connected to the Internet. Therefore, bridging the digital divide requires making the Internet accessible for the poorest people.

## VI. Conclusion and emerging issues for discussion

41. Digitization offers plenty of opportunities for African countries to enhance their regional integration agenda, including through enhanced trade opportunities under the framework of the African Continental Free Trade Area. Alongside the broadened economic space opened up by the free trade area, digitization provides opportunities to the private sector – in terms of more lucrative investment opportunities and greater ease of doing business – in particular in respect of moving goods and services, and making payments for transactions. These will contribute significantly to increased job creation and poverty reduction in a number of African countries. On the other hand, digitization has brought challenges, including the fears that a digital economy will favour countries with more advanced skills, and that it is biased towards technological development. In the light of the above issues, the following questions are proposed for discussion:

(a) What types of policies should African Governments put in place to support the development of the private sector, which would then contribute to the emergence of an inclusive digital economy that would enable various stakeholders to leverage the opportunities offered by African regional integration initiatives, such as the African Continental Free Trade Area?

(b) What are some of the major challenges that impede the African digital economy from thriving and what policy interventions are needed to overcome these challenges such that the digital economy can serve as a true enabler of the continent's integration and economic transformation?

(c) How should the private sector and African Governments collaborate in order to close the digital divide, and to fill the continent's infrastructure deficit?

(d) What policies should be put in place to achieve more reduction in costs and increased Internet penetration rates in African countries?

(e) What role should institutions such as ECA, and pan-African institutions such as the African Union Commission and the African Development Bank, play in the development of infrastructure and promotion of the growth of the digital economy towards the enhancement of regional integration?

(f) To what extent would a comprehensive continental digital trade and digital economy strategy enable Africa to reap the benefits of the fourth industrial revolution?

(g) What is the demand and gap in the supply of IT systems in Africa and how can IT systems be used effectively to tackle energy and transport infrastructure and services challenges in Africa?

(h) What will it take to raise the awareness of African countries and organizations on the importance of using IT systems in the transport sector to promote regional integration and to build their capacity to implement such systems?

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