COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

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Submissions from entities in the United Nations system and elsewhere on their efforts in 2018 to implement the outcome of the WSIS

Submission by

United Nations Economic Commission for Africa

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 22^{nd} session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

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Report of the implementation of the WSIS in Africa in 2018 December 2018

1. Executive Summary

This report is prepared in response to the resolution 70/125 of the General Assembly that calls for the continuation of the annual reports of the Secretary General of the UN to inform on the implementation of the WSIS outcomes, through the CSTD, to the Economic and Social Council taking into account the follow-up and review of the 2030 Agenda for Sustainable Development. The report highlights major activities carried out by stakeholders in 2018 to implement the WSIS outcomes in Africa. It has been prepared by the UN ECA following information gathered from member States as part of the follow up and monitoring of the WSIS activities and from its own ICT initiatives and activities in the region.

Unlike the preceding development goals (MDGs), SDGs are unique in their evolutionary approach in that ICT is seen as an essential means for achieving many of the development goals. In this case, ICT is exemplified by the Internet, which has already become established as new social infrastructure in countries around the world. However, Africa is still the less connected region compared to other regions of the world with about 20 per cent penetration of the Internet. However, 2018 also saw major developments in expanding connectivity and broadband access through infrastructure development. Currently, there are many international undersea network cables in place along the eastern and western coasts of the African continent. The main cables on the eastern side cross the Indian Ocean, connecting East Africa with South Africa and the Middle-East region, while on the west side they connect the west side of Europe (U.K., France, Spain, etc.) with countries on that side. Crossing the southern Atlantic Ocean, they also connect with Brazil as a gateway to South America. There are also many international undersea cables, mainly from Asia, connecting with various European countries on the Mediterranean coast via the Red Sea and landing at locations along the north coast of Africa. Projects including DARE (east coast, scheduled for 2018), Africa-1 (east coast, 2018), Liquid Sea (east coast, 2018), and SACS (west coast, 2018) are also in the construction stages. Through those projects, Africa has been connecting with international undersea networks at a rapid pace in the past ten years, and it is clear that it will also connect with Asia and North and South America by high capacity communication networks in the future.

On the policy and regulation front, there is still an obstacle in the development of technology neutral and convergent licensing regimes, promotion of competition, establishment of fair interconnection rules and tariffs, management of resources such as radio frequency spectrum and numbers, design and execution of universal access strategies and the enforcement of standards. Transparent and non-discriminatory access to the networks are the foundation for improved national and regional broadband networks. In this regard, there is a growing focus on the improving the regulatory frameworks and introducing innovative policy mechanisms in adopting new and emerging ICTs in achieving the SDGs.

2. A brief analytical overview of Trends

A brief analytical overview of trends and experiences in implementing WSIS at national, regional and international levels and by all stakeholders highlighting achievements and obstacles.

The digital economy in Africa is promising and opening up enormous potentials for sustainable development. Investments in mobile broadband coverage (3G or 4G networks) are growing. Smartphone penetration is also expanding from 37% in 2017 to 44% in 2018 and projected to increase to 51% by 2019. This is encouraging innovations in the Internet and mobile-based applications and technologies. This growth in the ICT sector directly affects the SDGs. The mobile industry alone is projected to contribute to USD \$ 142 billion, or 8.6 percent of GDP, to Sub-Saharan Africa economies by 2020. This ecosystem also employed about 3.5 million in the region last year, and contributed USD \$13 billion to the public sector through taxes.

As a result, there has been a tendency in the region in moving from increasing growing of new and emerging ICT innovations and adoption of new and emerging financial technologies that UNECA and other stakeholders have been supporting in the last one year. Some of the activities are highlighted below:

(i) Report on Blockchain technology

ECA has finalized the report on Blockchain technology. The report explored the potential of Blockchain Technology in Africa as it is considered one of the revolutionary and most intriguing technologies currently in the market. Entrepreneurs, startup companies, investors, global organizations and governments have all identified blockchain as a revolutionary technology. It also highlighted a number of opportunities for Africa in a wide array of areas: governance and elections; security; healthcare; contracts; reduced transaction costs as well as the potential to increase intra-African trade.

(ii) High-Level Roundtable co-hosted by the Chairmanship of the G77 and the Regional Commissions on Technology and Innovation for Sustainable Development: regional experiences to promote youth employment and address inequality. July 2018

The High-Level roundtable discussion was chaired by the Minister of Planning, Monitoring and Administrative Reform, Egypt, Chair of the G77, and with the participation of Ministers from different regions and the Executive Secretaries of the Regional Commissions. The roundtable provided a platform for sharing a diversity of national experiences and ongoing regional efforts that aim to harness technology and innovation in support of inclusive economic growth and sustainable development, with a focus on addressing inequalities and generating employment opportunities, especially for youth. The roundtable provided a better

understanding of the existing landscape of national and regional initiatives, best practices and solutions that aim to leverage the ongoing technological revolution in support of inclusive economic growth, employment generation, sustainable development and youth engagement. In particular, the Executive Secretaries of the Regional Commissions shared experiences on technology and innovation for sustainable development and also highlighted the importance of the regional approach in reaching the SDGs. The roundtable recommended that ECA to provide a strong and holistic support to countries, in this regard, ECA and partners need to adopt strategic support frameworks in line with the needs for the alignment of the national development frameworks with SDGs and Agenda 2063

(iii) Ad hoc expert group meeting on Nanotechnology and the Achievement of the Sustainable Development Goals in Africa November 2018

ECA organized in November 2018, an Ad hoc expert group meeting on Nanotechnology and the Achievement of the Sustainable Development Goals in Africa. The EGM aims to identify the current trends and the opportunities that nanotechnology realistically offers African countries and to explore the scope for regional and national collaboration and cooperation to bridge the nanotechnology skills, research and infrastructure gaps to meet the Sustainable Development Goals more than 20 African universities in Africa

(iv)Ad hoc expert group meeting on Artificial Intelligence(AI) and the future of the African economy December 2018

The objective of the meeting is to explore policy and regulatory option for the development, adoption and diffusion of Artificial intelligence. The EGM therefore explore the potential of AI in support of inclusive economic growth and assess the current status and challenges (socioeconomic, technological and scientific, legal and ethics) in the development of AI in Africa. The EGM will examine the potential gains that AI will bring to African countries with respect to Employment created, Unemployment/job losses, GDP growth, TFP (Total Factor Productivity), Cybercrimes, etc.

(v) Review of the national ICT policy of the government of South Sudan

To promote the economic and social development of its member States, ECA provided support to the Government of South Sudan to review the 2012 ICT policy and produce a report Sudan to review its current national ICT Policy with a view to enhancing the effectiveness of the contribution of ICTs to the implementation of the country's economic and social transformation agenda. The report identified gaps and constraints in the implementation of the current ICT policy as well as appraises the performance of the ICT sector over the past five years with respect to Government's strategies to achieve her ICT vision for the country. The Report describes the development and performance of the ICT sector over the past five years from the market, technical, competitive, regulatory and regional integration perspectives in order to gauge the success or otherwise of the strategies being employed by GOSS in achieving

its ICT vision for the country. A National ICT Policy Review Stakeholder Workshop" was organized in Juba on February 7, 2018.

3. Innovative policies, programmes and projects

African countries are moving towards integrating new and emerging technologies particularly in the financial and business sector. Africa has moved from a development-focused ICT predominantly concentrated on bridging the digital divide to shifting to the uptake and impact of these ICTs in order to transform societies and economies. In this regard the adoption of FinTech (Financial Technologies) with over 301 Start-ups in the last few years demonstrates this trend. Some of the innovative initiatives in this regard include:

FinTech- It is also estimated that just over half of the 282 mobile money services operating worldwide are located in Sub Saharan Africa in 2016, there were already 277 million registered mobile money accounts across the region which is about as much as the rest of the world put together. Although 100 million of those accounts are active, that number still far exceeds customer adoption in South Asia (the second region biggest region for mobile money) in terms of market share, which has 40 million active accounts. While the trend in growth of adoption of mobile money and other fintech solutions such as the blockchain shows increasing, the challenge involving trust and security is a key factor that is expected to slow down such growth.

Digital Identity (**Digital ID**) - as a result of concerns indicated above, there is an important development in terms of adopting the digital identity (digital ID) applications. Initiatives in implementing Digital ID have become increasingly acknowledged among countries and UNECA and other stakeholders have initiated such project in selected countries in Africa. Furthermore, it is also promoted as part of the SDGs target where the target of providing legal identity for all people by 2030 is now a part of the UN SDGs framework.

4. Conclusion

African countries have encouraged the adoption of the technologies that are suitable to the social and economic development of their respective countries through the many initiatives of innovation centres, labs and start-ups that is key for the growth of a dynamic industry. The growth of such dynamic industry will develop indigenous knowledge and capability including growing the local content and knowledge in the digital economy. This in turn will allow the growth and involvement of the private sector taking much of the role of the government that was traditionally dominated the ICT sector in the continent. The government's role will therefore focus in creating the enabling environment through the policies, strategies and legal and regulatory frameworks pertinent to the knowledge economy thereby advancing the achievement of the SDGs.