



ECA



**IDDA3**

Third Industrial Development  
Decade for Africa 2016-2025

## CONCEPT NOTE

### HIGH-LEVEL EVENT ON IDDA III

**Promoting innovation and infrastructure development:  
A pathway for boosting manufacturing in the Fourth Industrial  
Revolution**

**Delegates Dining Room, 4<sup>th</sup> Floor  
United Nations Headquarters  
New York**

**25 September 2019  
8:00 - 10:00 AM**

## 1. BACKGROUND

In July 2016, the United Nations General Assembly adopted resolution A/RES/70/293 proclaiming the period 2016-2025 as the Third Industrial Development Decade for Africa (IDDA III). The proclamation was made based on the recognition that it is through sustainable industrialization that the continent will be able to have meaningful development. At the same time, the proclamation served to show that the international community is ready to enhance its partnership with African stakeholders for benefits that would go beyond the continent. It further called on the strengthening of public-private partnerships with a range of multi-stakeholders, and enhanced international co-operation, including North-South, South-South and triangular co-operation in order to expedite Africa's industrialization through the implementation of the IDDA III. Since the passing of the resolution two high-level events on IDDA III were held in the margins of the 72nd and 73rd UNGA in 2017 and 2018 respectively. The event this year will be the third one.

## 2. THEME

The theme of the high-level event will be “Promoting innovation and infrastructure development: A pathway for boosting manufacturing in Africa in the Fourth Industrial Revolution.” The importance of innovation and infrastructure (traditional and modern) for economic growth and development in the context of the Fourth Industrial Revolution (4IR) is widely recognized. Exponential technological progress puts high premium on local innovation capabilities for job and income generation through creation of new activities, innovative and green technologies, new opportunities for the inclusion of women and youth in real economy and for increased productivity, thus for realizing higher levels of environmental, economic and social returns. Physical infrastructure, traditional and modern, as well as quality infrastructure enables flow of goods, services, knowledge, and information to realize economies of scale and scope, and enhance competitiveness through reduction of production costs, division of labour in value chains and access to markets.

### Industry 4.0 and Africa

*Africa is facing new opportunities and challenges for pursuing inclusive and sustainable development triggered by new waves of digital innovations and combination of new technologies, which are driving the Fourth industrial revolution (4IR).*

*Industry 4.0 in particular, which represents the subset of the 4IR focusing on industry, manufacturing/production, offers new opportunities for Africa to create completely new business models, a solid business environment and lower costs of production, improving thus their productivity and competitiveness. Such an improvement could contribute to the development of African regional value chains and enhance integration into new global value chains, which are being established as a result of recent technological advancements. African countries can serve highly profitable niches in newly created value chains, as designers, trainers and those who modify products and services to local needs*

and customs. For example, the mobile money services in African banking could serve as a best practice example that could be utilized in other sectors.

*Whilst 4IR presents the above mentioned opportunities, it also presents Africa with multiple challenges.* Although it is anticipated that one of the most significant advantages for new technologies, such as 3D printing is lowering the barrier to local manufacturing for small businesses, they may render some outsourcing unnecessary, bringing with it a new division of labour and structural transformation in the global economy. In-shoring could become a new trend in industrialized countries, depriving Africa and developing countries of job opportunities. Many predict that 4IR will cause a polarization of the labour force, with an increasing share of employment in high-wage jobs and a decreasing share of employment in middle-wage jobs. In this scenario, a concentration of low-paid jobs in developing countries with a shortage of technology savvy human capital is likely, given that high-wage jobs will require increased digital skills.

*4IR is likely to be accompanied by increased demand for new skills in science, technology, engineering and math qualifications.* The skills and technology gaps between developed, developing countries and LDCs are likely to widen, because of significant asymmetry in the access to new knowledge, information, technologies, traditional and modern infrastructure, as well as in conditions for technological learning and innovation. Local innovation systems in Africa are weak to support technological learning and innovation of local enterprises and SMEs in particular.

*Furthermore, and although there is an increasing number of African enterprises that are adopting 4IR technologies,* the current adoption rate and impact of 4IR technologies in Africa is still relatively low, compared to other developing countries, due to market barriers and other obstacles. Connectivity and accessibility infrastructure gaps are part of the biggest challenges for African countries, and progress in these will drive broader adoption of industry 4.0 by all stakeholders.

*To effectively deal with these challenges and ultimately benefit from 4IR, it is imperative that targeted interventions are undertaken in critical areas including in policy settings; education and human skills development among others.* In this regard, regional collective actions focused on the promotion of science, technology, engineering and mathematics (STEM) should be leveraged. These include but are not limited to the Science, Technology and Innovation Strategy for Africa (STISA) adopted by the African Union, to strengthen efforts to promote technology and innovation across the continent over the period 2014-2024; regional protocols on Science, Technology and Innovation adopted by various regional economic communities; the Smart Africa Alliance part of whose agenda is to support the implementation of a comprehensive Digital Transformation Strategy for Africa to guide a common, coordinated response to reap the benefits of the Fourth Industrial Revolution for Africa's socio-economic development.

### Infrastructure Development

*Africa needs massive investment in building its physical infrastructure to ensure its long-term sustainable development.* Infrastructure investment in Africa stood at approximately USD 63 billion (3.5% of the continent's GDP) in 2016. African national governments and

bilateral/multilateral institutions are the main source of infrastructure finance in Africa. In 2016, the contributions from national governments, represented 42% of total infrastructure financing, at over USD 26 billion.

*By some estimates, Africa's physical infrastructure investment needs remain substantial and are estimated at USD 68–152 billion over the coming decade.* These amounts are equivalent to 3.1% - 6.9% of GDP and cover both maintenance and replacement costs as well as the construction of new infrastructure assets. Moreover, new needs arise from rapid urbanization, population and economic growth as well as making infrastructure resilient to climate change (AUC/OECD, 2018). Current infrastructure investment of \$62.5 billion or 3.5% of GDP in 2016 implies a considerable investment gap. More recent estimates by the African Development Bank (AfDB) suggest that the continent's infrastructure needs amount to \$130–\$170 billion a year, with a financing gap in the range of \$67.6–\$107.5 billion. (AfDB, African Economic Outlook 2018).

*Improved quality infrastructure including in standardization, metrology, accreditation and conformity assessment services are critical to the enhancement of market accessibility in the digital era.* One of the major constraints for the limited accessibility of African products into international and regional markets is the lack of adequate quality infrastructure necessary to provide acceptable evidence that products and services meet defined requirements coupled with the lack of skills required to produce products of competitive quality. This has worsened with the advent of the fourth industrial revolution that increases the potential of e-commerce in growing industries. In Africa, digital trade, estimated at US\$5.7 billion, remains low even by the standards of most developing countries.

The continent's consumer e-commerce market makes up less than 0.5 percent of its combined GDP, compared with a global average of 4 percent. This is the result of several constraining factors. Dominant global e-commerce platforms tend to source digitally traded goods primarily in their home markets, predominantly the United States, China and other leading Organisation for Economic Co-operation and Development (OECD) countries. Combined with the poor quality of digital infrastructure in much of Africa, the deficit of physical infrastructure for delivery of digitally traded goods, the continued dominance of primary commodities and natural resources, it has become evident that Africa is lagging behind and finds itself on the wrong side of the increasingly broad global digital divide.

*Several measures undertaken to enhance both physical and soft infrastructure development should be leveraged and supported.* These include the adoption and launch of the Program for Infrastructure Development in Africa (PIDA), a strategic continental initiative involving all African countries to mobilize resources for modern infrastructure; the PIDA Priority Action Plan (PIDA-PAP) comprising of 51 cross-border infrastructure projects divided into more than 400 actionable sub-projects across four main infrastructure sectors, namely, energy, transport, transboundary water and Information Communication Technologies (ICTs); Efforts to encourage a standardization process across Africa under the aegis of the African Organization for Standardization (ARSO), and Pan African Quality Infrastructure institution and various development efforts that are being undertaken to support infrastructure development including investment and finance.

In conclusion, the future of industrialization in Africa in the 4IR will continue to be impacted by the changing landscape of manufacturing triggered mainly by the emergence of advanced digital technologies and the increasingly blurred line between manufacturing and services. The digital divide highlighted above and the absence of legacy of industrial systems create a window of opportunity for African countries to boost traditional manufacturing in targeted sectors as well as present a potential to leapfrog to advanced manufacturing and services. African countries must undertake bold and innovative approaches including in education and skills development as well as in infrastructure (hard and soft) development to address the constraints affecting traditional manufacturing while setting the path for a digitalized manufacturing sector.

The recently ratified AfCFTA also provides a unique opportunity. With an envisioned market over 1.2 billion with a growing middle-class, the AfCFTA is expected to have a number of benefits including among others, catalyzing systematic structural transformation of countries from resource- and low technology-based economies to more diversified knowledge-based economies; encouraging intra-African capital flows, improving the attractiveness of African countries for investment flows from outside the continent; and stimulating cooperation in other areas such as innovation, technology transfer, and continent-wide infrastructure development.

### 3. OBJECTIVES

The objectives of the event are to:

- (a) Discuss and highlight key elements required to promote innovation and infrastructure in favor of boosting manufacturing in Africa.
- (b) Reflect on innovative ways of leveraging global partnerships within the IDDA III framework to maximize support for innovation and infrastructure development in Africa.
- (c) Identify current and potential sectors that provide opportunities for stakeholders on the ground to circumvent traditional paths in industrial development using modern technology such as Industry 4.0.
- (d) Discuss ideas to mobilize financial and non-financial resources to support interventions in infrastructure development within the IDDA III framework for maximum effect.

### 4. FORMAT

The event will be held in the form of a breakfast meeting in the margins of the 74th Session of the United Nations General Assembly. It will be co-hosted by UNIDO, the African Union Commission (AUC), the United Nations Economic Commission for Africa (ECA), the African Development Bank (AfDB), the AfroChampions Initiative, the African Export-Import

Bank (Afreximbank) and the International Telecommunication Union (ITU). The event will be officially opened by the President-elect of the UNGA (tbc) and remarks will be provided by heads of co-organizing institutions.

The event will be organized around two main sessions. Session 1 will be a high-level dialogue of selected Heads of State and Governments (IDDA III Champions) and will largely be policy dialogue expected to elucidate key policy elements and strategies that need to be promoted to support context industrial development in the context of the 4<sup>th</sup> Industrial Revolution. Session 2 will also be a high-level panel comprised of senior representatives from co-organizing organizations, the private sector, academia, regional economic communities, development financial institutions and other stakeholders and will discuss innovative ways of leveraging global partnerships within the IDDA III framework to support innovation and infrastructure development in Africa. Participants will engage with one another in an open and dynamic multi-stakeholder format, geared toward knowledge sharing, mutual learning and generating actionable recommendations. Last but not least, an interactive session will be held with contributions coming from the high-level participants. The event will be moderated by a renowned journalist.

## 5. EXPECTED PARTICIPANTS

The High-Level event will bring together Africa's industrial development stakeholders including African Heads of State/Government (selected IDDA III Champions); Ministers; high-level representative from the African Union Commission; heads of organizing agencies; UN agencies; heads of African regional organizations; private sector representatives; representatives of development and/or financial institutions and banks partnering with African countries; representatives of the donor community; civil society and non-governmental organizations; academia and media.

## 6. EXPECTED OUTCOMES

- (a) High-level consensus on key elements to support the development and/or enhancement of efforts focused on the promotion of innovation and infrastructure development in favour of boosting Africa's manufacturing sector.
- (b) High-level consensus on innovative ways of leveraging global partnerships within the IDDA III framework to support innovation and infrastructure development in Africa.