

# THE OF FUTURE WORK

IN NIGERIA

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# THE FUTURE OF WORK

IN NIGERIA

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## EXECUTIVE SUMMARY

**With a workforce of 85 million, Nigeria is home to an enormous labour market.**

However, this resource is characterized by low levels of skill and educational attainment - just 15% of the labour force has a post-secondary education.

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With a workforce of 85 million, Nigeria is home to an enormous labour market. However, this resource is characterized by low levels of skill and educational attainment—just 15% of the labour force has a post-secondary education.

**85m**

**NIGERIA'S  
WORKFORCE**

**15%**

**HAVE A POST  
SECONDARY  
EDUCATION**

**20.9m**

**ARE INVOLVED  
IN ONE FORM OF  
WORK OR THE  
OTHER**

**25%**

**ARE IN PAID  
EMPLOYMENT**

About 11.1 million out of the unemployed 20.9 million are involved in one form of work or the other with most of them involved in small and medium scale enterprises in the agriculture and small scale retail businesses. Overall, only 25% of the workforce is engaged in paid employment while half of the workforce has either just primary education or no formal education.



**Our vision of the future of work in Nigeria draws on the results of a survey of more than 900 stakeholders employed across 20 key sectors, 20 face-to-face interviews, and a literature review of more than 50 recent studies.**

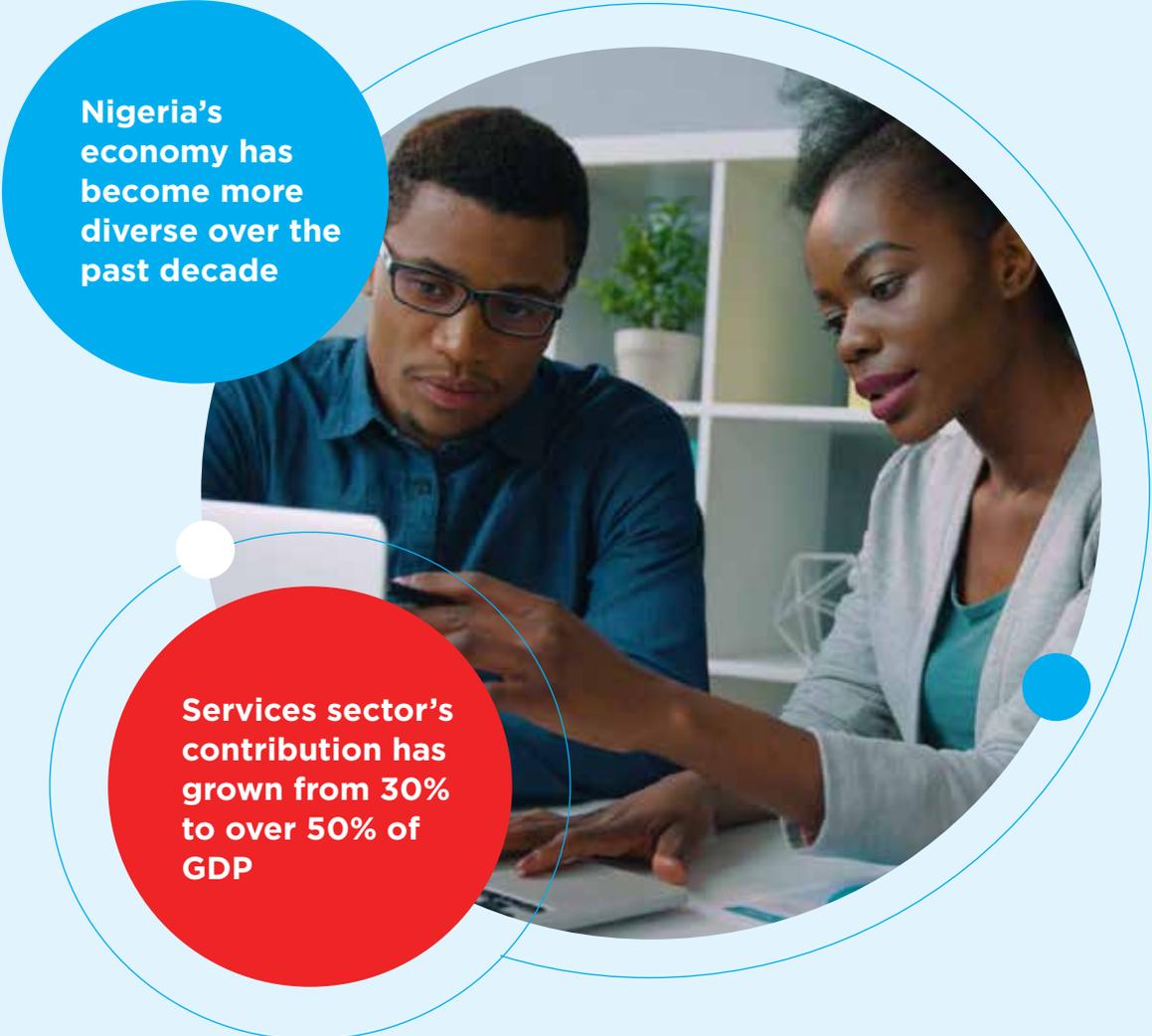
This report highlights workplace disruptions that are likely to arise due to several global trends that are underway in Nigeria. The reach of cloud computing, exponential growth in computer processing power, advances in artificial intelligence, and other emerging technologies are expected to bring about transformations in workplace efficiency, boost productivity, reduce transactional errors, drive convenience and lifestyle improvements, and foster the emergence of new occupations. These technologies will alter not only the kinds of work available to Nigerians, but also the nature of existing occupations, as well as the types of resourcing models' employers will use in the future.

Moreover, the impact of new technologies on human behavior will shape the demands that employees make of their employers and the expectations they will bring to their workplaces. The objective of The Future of Work Nigeria report is to describe challenges and opportunities that these disruptions represent for Nigerian workers and the private sector—as well as to facilitate efforts of governments, employers, and educational institutions to close skill gaps and prepare the Nigerian workforce for the future of work.

Our vision of the future of work in Nigeria draws on the results of a survey of more than 900 stakeholders employed across 20 key sectors, 20 face-to-face interviews, and a literature review of more than 50 recent studies. We explore the expected impact of technology adoption on the workplace from multiple perspectives, consider the implications of these changes, and recommend several courses of action that can benefit the Nigerian workforce, populace, and economy.



# Work Realities in Nigeria Today



**Nigeria's economy has become more diverse over the past decade**

**Services sector's contribution has grown from 30% to over 50% of GDP**

Information communication technology is already transforming some sectors in Nigeria, as are increases in machine capabilities and Nigeria's integration into the global economy.

Growth of the service sector has come with the emergence of new industries such as fintech, agtech, healthtech, and e-commerce—and, in some cases, a complete disruption of existing industries (e.g. telecommunications, postage services, etc.).

Nigeria's economy has become more diverse over the past decade and incomes (GDP per capita) have gradually increased from US\$1882 in 2017 to US\$ 1968.

Whereas the agriculture and oil and gas previously accounted for 39% of the country's gross domestic product (GDP) back in 2008, these two sectors now contribute about 30% to the country's GDP. Within the same period, the services sector's contribution has grown from 30% to over 50% of GDP.

The industries most impacted by technological advancement today are agriculture, banking and finance, travel/tourism, and data processing. Perhaps not surprisingly, educational attainment is a strong determinant of the sector Nigerians work in. The IT sector draws the most talent with post-secondary education (19%) while the agricultural sector employs over 60% of the labour force without secondary level education. Overall, however, only 25% of the workforce is engaged in paid employment while half of the workforce has either just primary education or no formal education. Across sectors, gender inequality remains a challenging issue—according to the National Bureau of Statistics, women make up just 36% of employees in “paid employment” and 38% of the employed labour force.

## THE FUTURE OF TECH IN THE WORKPLACE

All our respondents believe that technology will become a driving force within many formal and informal organizations over the next decade. Over 75% of survey respondents, for example, expect to see large-scale adoption of intelligent technology such as AI in the workplace. From intelligent robots in banking halls to law enforcement use cases, the industries most likely to experience high levels of disruption and workplace automation in Nigeria are agriculture, media and advertising, banking and finance, and healthcare. This will be the result of labour shortage in some of these industries while others would be driven by competitive forces, new technology enabled start-up disruptors, and the need to achieve error-free activities. The majority of employer and entrepreneur respondents believe that the full impact of workplace automation will be felt in less than five years and are already preparing for the transformations that are underway.

## IMPACT ON JOBS

Our survey respondents appear to be confident that, while adoption of new technologies will lead to large-scale automation of manual and routine tasks, more jobs will be created than lost. Although employees—particularly younger employees—are aware of the risks of pending job losses due to automation, the job decline will likely be mitigated by the emergence of new jobs, as new tasks arise within existing roles and the demand for multidisciplinary talent surges. As new jobs are created, the range of soft and hard skills required in the Nigerian workplace will change—employees will need to develop skills such as cognitive flexibility, service orientation, negotiation, and creativity in order to stay relevant in the workplace.





Survey respondents believe that freelance and contract-based jobs will increase as a proportion of employment, and that the banking and finance and manufacturing industries will experience the most significant job losses while the construction, agriculture, retail, and trade sectors will benefit from the changes to come.

# Impact on Talent

## MOBILE WORKFORCE AND TALENT STRATEGIES

Employers will need to adopt new ways of engaging with their workforce as employee-employer relationships become more fluid, faster-paced, and focused on results and impact. In a country where highly skilled employees are in short supply, talent attraction and retention strategies will increasingly include flexible working arrangements, opportunities for career progression, and excellent training / development programs. Meanwhile, the talent pool will increasingly become a mix of full-time employees, contractors, freelancers, and crowd workers.

## IMPLICATIONS

Concerned stakeholders need to fully understand the implications of changes that are already underway in Nigerian workplaces, and must be proactive in ensuring that the benefits and opportunities that arise from these changes are available to all Nigerians. Some of the issues include digital literacy, also ability to access and/or get job done through digital platforms against the conventional means, engagement would become short term based and may be more than one at a time (gig economy).

## EMPLOYEES

The future job landscape will likely be characterized by large-scale displacement of low-skilled workers and the creation of new roles requiring highly specialized technical skills and soft skills such as adaptability and the capacity to unlearn and relearn ways of doing business. Nigeria's low education attainment rates and inadequately skilled workforce mean that the livelihoods of millions of people are at risk. Without the right reforms, low-skilled workers will be left competing for fewer roles suited to their skill sets, further exacerbating the country's unemployment rate.

## EMPLOYERS

While the diffusion of technology into Nigerian organizations will produce (and has already produced) many workplace benefits, it will also result in greater operational complexity, which will need to be managed. In addition, Nigerian enterprises must reinvent their talent retention strategies to mitigate the risk of talent flight. Allowing skilled employees the greater flexibility of working remotely is one such strategy. However, remote work exposes companies to the risk of losing or compromising sensitive information. Employers must find a delicate balance between securing sensitive information and equipping workers with mobile capabilities that can drive efficiency and job satisfaction.

## GOVERNMENT

Nigeria needs to reshape its skills development agenda. Reforms in basic and higher education systems—and re-skilling the existing labour force via adult learning, vocational and technical trainings, and apprenticeships—are imperative for ensuring that skill sets meet employer needs; avoiding labour force redundancy.



## RECOMMENDATIONS



### EMPLOYEES

**Participate in upskilling programs** and opportunities in order to gain new technical and soft skills that will be needed in a changing work environment.

### EMPLOYERS

#### **Retrain the current workforce through upskilling**

Collaborate more closely with the education sector—and with other firms seeking to address skill gaps in their own workforces and in the communities around them—in order to help ensure that tomorrow’s workforce has the hard and soft skills they will need to thrive in a changing work environment, and that Nigeria’s businesses will not have to look far to find the talent they need.

### GOVERNMENT

**Reform the country’s education system** by refreshing the curricula (in partnership with the private sector), and improving accreditation, and rethinking the ways in which education is delivered.

**Expand access to communication technologies** to help facilitate new opportunities for all

**Expand social safety nets as short- and long-term buffers** against future displacement

**Incentivize job creation and protection** via policies that create a better environment for small businesses and critical, growing sectors

While the government has an important facilitating role to play, the investments that corporations make today in the Nigerian ecosystem—and the investments Nigerian workers make in themselves and their skill sets—will go a long way toward determining the degree to which all Nigerians have the chance to thrive in the future of work.

# PREFACE

**This report is one of our many efforts to enable an empowered population, and a more productive private sector.**



**Olufunbi Falayi**  
Managing Partner  
Passion Incubator



**Taiwo Ajetunmobi**  
Partner, Passion  
Incubator

Home to over 200 million people, Nigeria boasts the largest economy in Africa, the biggest producer and exporter of oil in the world and the first in Africa, and one of the choice destinations for FDI in Africa.

Nigeria also has some of the fastest growing cities in the world, and is forecast to be the third most populous country in the world by 2050 with a GDP of US\$4.4Tr.

Despite Nigeria's potential, and despite its comparative human capital advantage, the lack of skills has limited Nigeria and Nigerian businesses from optimizing this resource for growth: just 15% of Nigeria's 85 million labour force have post-secondary education.

In the Future of Work report, we look at how Technology has enabled Nigeria leapfrog its growth in certain industries, what it has disrupted, and how companies have adapted. We then look at the future with a view to identifying the key technology changes that will impact businesses in Nigeria, what kinds of skills will be in demand, and how Nigerians will work.

With this knowledge, we explore, by way of recommendations, how Employers, Employees, and Educational Institutions can position to remain competitive. We also explore ways Nigeria's government can provide an enabling environment for these changes.

At Passion Incubator, we believe that solving this challenge is not only critical for Nigeria's economic security, but also for the long-term sustainability and competitiveness of Nigerian businesses.

This report is one of our many efforts to enable an empowered population, and a more productive private sector. With our shared work spaces sitting over 500 SMEs and start-ups across our three locations, and our Collaborate\* platform where we enable collaboration between start-ups and corporates, we remain committed to powering Nigeria's economic rejuvenation.

We are privileged, honored and delighted to have had the support of our friends and partners on this journey; the team at Accenture, CMRG, Dalberg and Facebook. We are especially thankful to Union Bank for sponsoring this report, and providing access to their operations for relevant case studies.

The future of work is no longer a distant conversation, the future is here.

[www.collaborate.ng](http://www.collaborate.ng)

# Introduction

**Nigeria's labour market is one of Africa's largest. However, due to poor education and high structural unemployment, the country is unable to fully benefit from its demographic dividend.**

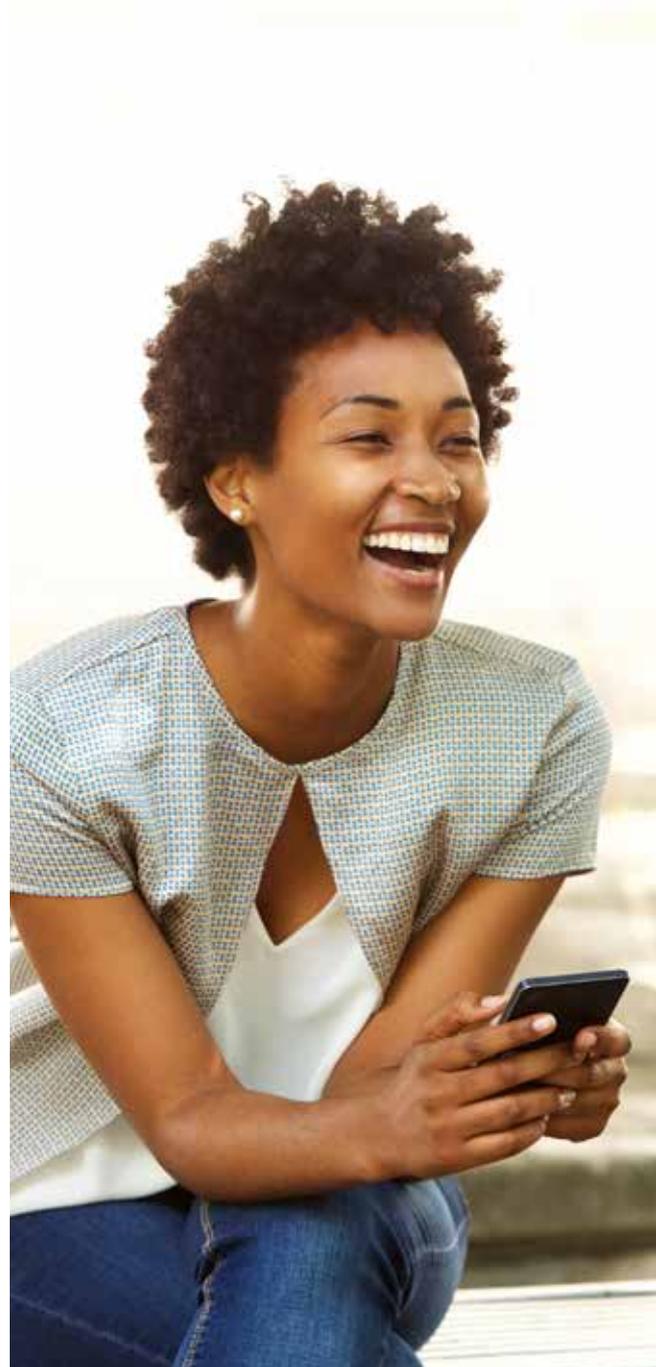




# Introduction

Nigeria is the most populous country in Africa and home to about a fifth<sup>1</sup> of sub-Saharan Africa's (SSA) labour force.

**However, despite strong demographic trends (annual population growth is forecast at 4%<sup>2</sup>), and being home to some of Africa's most highly educated young people, Nigeria captures only about 49% of its human capital potential<sup>3</sup> — a 6% and 16% lag behind the sub-Saharan Africa and global averages, respectively.**



1. World Bank Group., 2018
2. National Bureau of Statistics. Nigerian Labour Statistics, 2016, 2017,
3. World Economic Forum, The Future of Jobs and Skills in Africa, May 2017



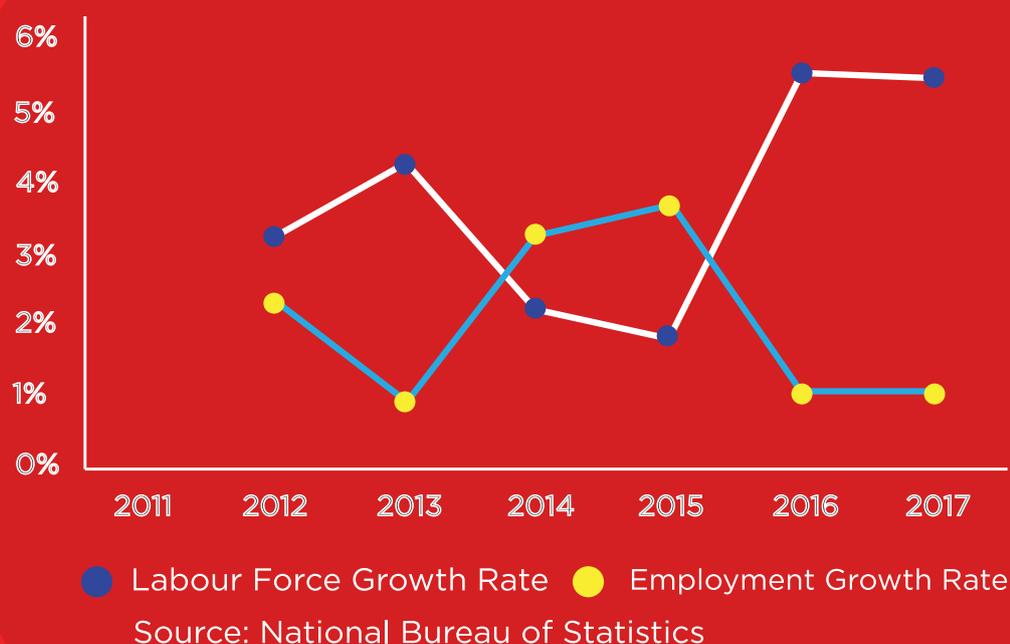
A combination of poor education, under-employment, insufficient employment opportunities, and the difficulty of starting a business lead the vast majority of the labour force to turn to informal entrepreneurship opportunities.

Nonetheless, the proliferation of new technologies and the emergence of technology-driven trends such as increased connectivity and workplace automation hold the promise of tremendous economic possibility within the country's labour market.

In the last decade, technology proliferation has led to the automation of activities that were formerly human driven (from laundry services to real-time cash transactions), bringing about fundamental changes to the Nigerian economy.

The number of technology driven startups in the country has also witnessed significant growth, drawing the attention of leading technology entrepreneurs such as Facebook CEO Mark Zuckerberg.

**Figure 1: Labour force growth outpaces employment growth**



## The Future of Work Nigeria Report highlights disruptions that could arise from technological changes, and the resulting opportunities that could emerge for the country's labour force

The Future of Work Nigeria Report examines the potential disruption that could emerge in the Nigerian workplace in the medium to long term, taking into consideration current global and local trends, as well as the peculiarities of the Nigerian labour market. This report further considers the impact technological changes may have on the country's workforce (job supply and skill demand) and talent attraction strategies, along with the future social impact of these and other related disruptions.

The objective of the report is both to prepare the Nigerian workforce for emerging / future opportunities as the nature of work changes and to facilitate the efforts of governments, employers, and educational institutions to fully capture the country's demographic by developing relevant programs to close skill gaps.

We begin the report by providing an overview of the country's labour market dynamics and outline recent technological advancements within key sectors via examples and case studies. We then examine trends that will serve as the driving force behind future changes, the degree to which technology will complement or substitute different types of labour, and the impact new technology will have on job supply and skill demand. Subsequently, we present business strategies for talent attraction and retention, and conclude with the future implications of our research findings and recommendations.



# The study methodology includes interviews, surveys, and desk research



## STUDY METHODOLOGY

The research at the heart of this report examines the future of work from the perspective of entrepreneur, employer, employees, and government, drawing on survey results, face-to-face interviews, and a literature review of more than 50 past studies on the subject.

Survey data, gathered in partnership with Communication and Marketing Research Group Limited (CMRG) come from 901 respondents across the fast-moving consumer goods (FMCG), finance, health, education, agriculture, public sector, energy/power, telecommunications, information technology, and media industries.

Our team established three strata within each sector: large corporates (5,000+ employees; more than USD 5 million in revenue), medium-sized corporates (2,000 - 5,000 employees; USD 1.5 - 5 million in revenue) and small and medium-sized enterprises (SMEs) (fewer than 2,000 employees; revenue of less than USD 1.5 million).

**901**  
RESPONDENTS



**10**  
INDUSTRIES



LARGE CORPORATES  
**5k+**  
EMPLOYEES  
**\$5m**  
REVENUE

MEDIUM-SIZE CORPORATES  
**2-5k**  
EMPLOYEES  
**\$1.5 - 5m**  
REVENUE

SMES  
**less than 2000**  
EMPLOYEES  
**less than \$1.5m**  
REVENUE

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Our team also conducted interviews with experts and key decision makers in five industries selected based on share of the labour force and degree of technology proliferation: agriculture, finance, trade, manufacturing, and health. We developed insights, case studies, and recommendations using the aggregate of survey and interview responses—individual survey and interview participants remain anonymous.

We conducted our assessment in two phases. We first identified global technological trends impacting the Nigerian labour market, as well as the changes that are anticipated to occur as a result of these trends. Based on available data and expert opinion, the probable areas of transformation are i) automation and work design, ii) skills demand, iii) talent attraction and retention, and iv) diversity and inclusion.

In the second phase of our study, we focused on those areas of transformation that we identified as already looming on the horizon—digital automation, skills, and talent. We sought to understand the technical potential and degree of automation within key sectors of the Nigerian economy in order to identify the impact that these factors are likely to have on the creation or elimination of jobs, the demand for talent, common recruitment practices, and the types of skills that employers will be looking for.

## TERMS OF USE AND LIMITATIONS

**The information contained in this publication is based on the experiences of survey and interview respondents coupled with research of Passion Incubator consultants. Union Bank of Nigeria Plc will not be liable for any claims arising out of the use of the report or reliance on any information contained therein.**



The future of work scenario presented is designed to create a basis for discussion among policymakers, businesses, academic institutions, and individuals, and to support preparation for the anticipated changes. It is not intended to serve as a prediction, a substitute for professional advice, or as a basis for any decision or action that may affect your business.

While the presented scenario is possible, it is not certain and can be influenced by several variables not considered by research respondents or the report producer.

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CHAPTER TWO

# Current Work Realities in Nigeria

OF WORK IN NIGERIA

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THE FUTURE

**Growing economic diversification, high levels of labour participation in the informal sector, entrepreneurship, and low income levels all characterize Nigeria's labour market**



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# Current Work Realities in Nigeria

Growing economic diversification, high levels of labour participation in the informal sector, entrepreneurship, and low income levels all characterize Nigeria's labour market

## THE NIGERIAN LABOUR MARKET

The Nigerian economy is far more diverse than it was a decade ago; while primary sectors—agriculture and oil and gas—previously accounted for 39%<sup>4</sup> of the country's gross domestic product (GDP) in 2008, these two sectors now contribute roughly 30%<sup>5</sup> to the country's GDP.

The rise in diversity of economic activity can be attributed to growth in the service sector, which is driven by innovation, technological advancement, internet proliferation, and globalization. These developments have led to the emergence of such new industries as fintech, agritech, healthtech, and e-commerce—and, in some cases, a complete disruption of existing industries (e.g., telecommunications, postage services, etc.).

The growth of the service sector has also resulted in a gradual increase in income levels, although starting from a relatively low baseline when compared to other African countries. The emergence of new industries and the transformation of established sectors, coupled with the current government's attempts to diversify the domestic economy, are expected to result in increased employment opportunities for Nigeria's labour force.

4 Central Bank of Nigeria. Statistical Bulletin, 2015

5 National Bureau of Statistics, Q4 and Full Year 2017, May 2018

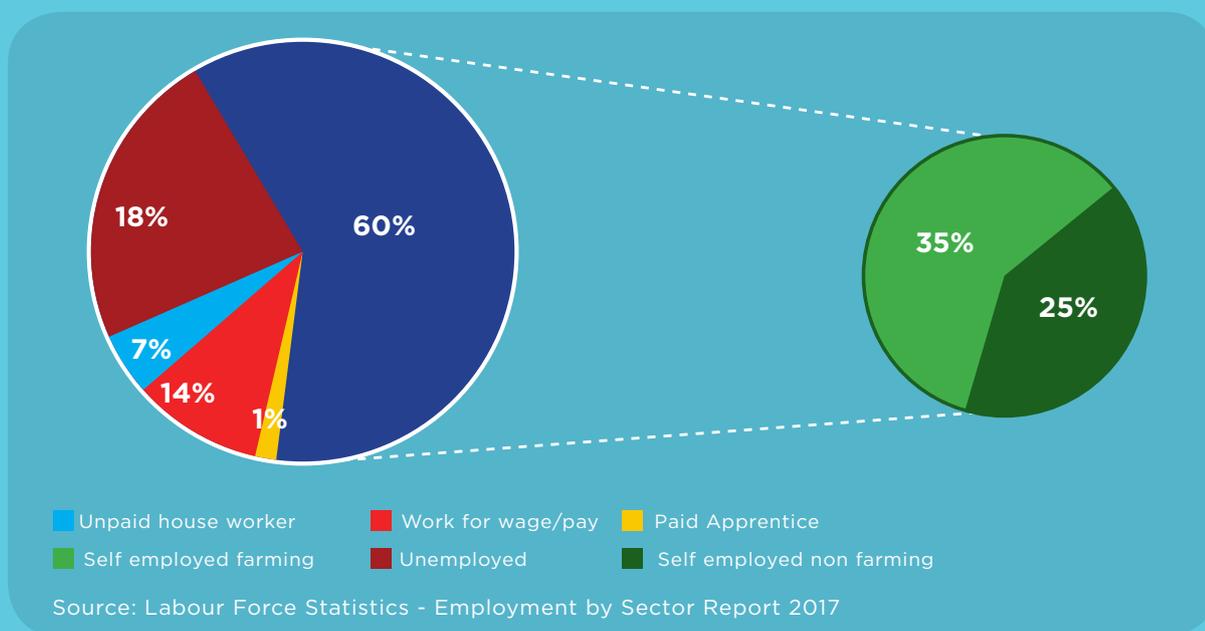


## LABOUR FORCE

Nigeria has a huge labour force consisting of 85 million people.<sup>6</sup> Labour force participation is generally high and characterized by:

1. **A young population** – 51% of the labour force is aged 34 and below, and 74% is below 44 years;<sup>7</sup>
2. **High levels of entrepreneurship** – only 25% of the labour force is engaged in paid employment;<sup>8</sup>

Figure 2: More than half of the Nigeria's 88 million labour force is self employed



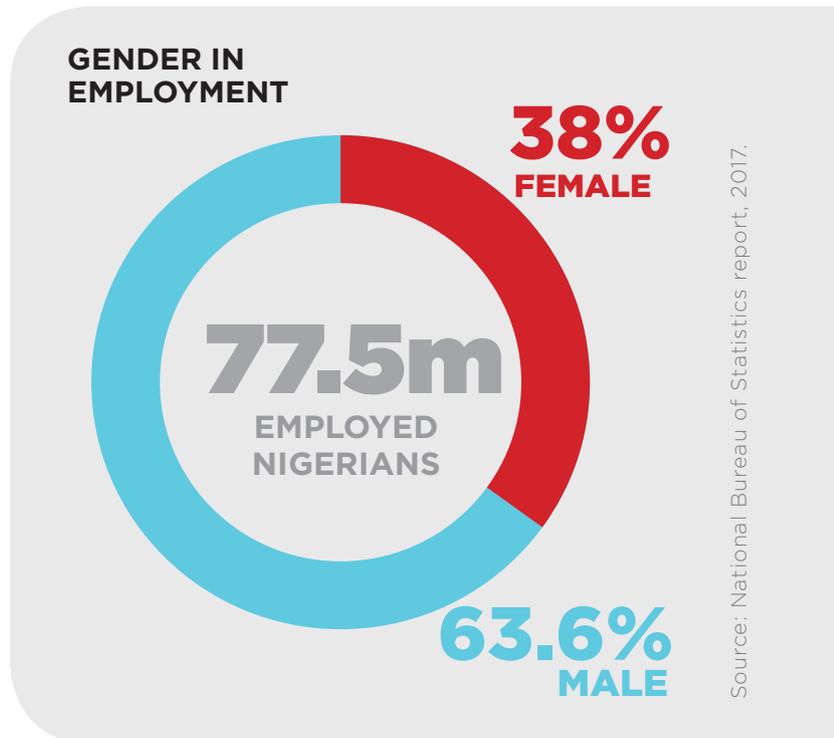
6 National Bureau of Statistics, Q4 and Full Year 2017, May 2018

7 National Bureau of Statistics, Q4 and Full Year 2017, May 2018

8 National Bureau of Statistics, Q4 and Full Year 2017, May 2018

## Skill levels and educational attainment among the labour force are generally low, making a large proportion of the Nigerian talent pool unqualified for the limited high-paying formal sector jobs that exist

- 1. Gender inequality:** For the period, 2010-2015, on the average, 72.3% of senior positions in State Civil Service were occupied by men compared to 27.7 % occupied by women<sup>9</sup>.
- 2. Inadequately skilled workforce** – currently half the work force either has only primary school education or no formal education at all; just 15% of the country's labour force has post-secondary education and the quality of education offered in most schools is generally poor.



### WORK OPPORTUNITIES, CHALLENGES, AND EDUCATIONAL ATTAINMENT

Our study suggests that educational attainment plays a huge role determining which sector individuals work in, the size of company that employs them, and the level of seniority they attain in their careers.

Employees without any formal education, for example, mostly are engaged in either manually intensive jobs in the agricultural sector or paid apprenticeships, while those with at least secondary school education are employed across a variety of sectors.

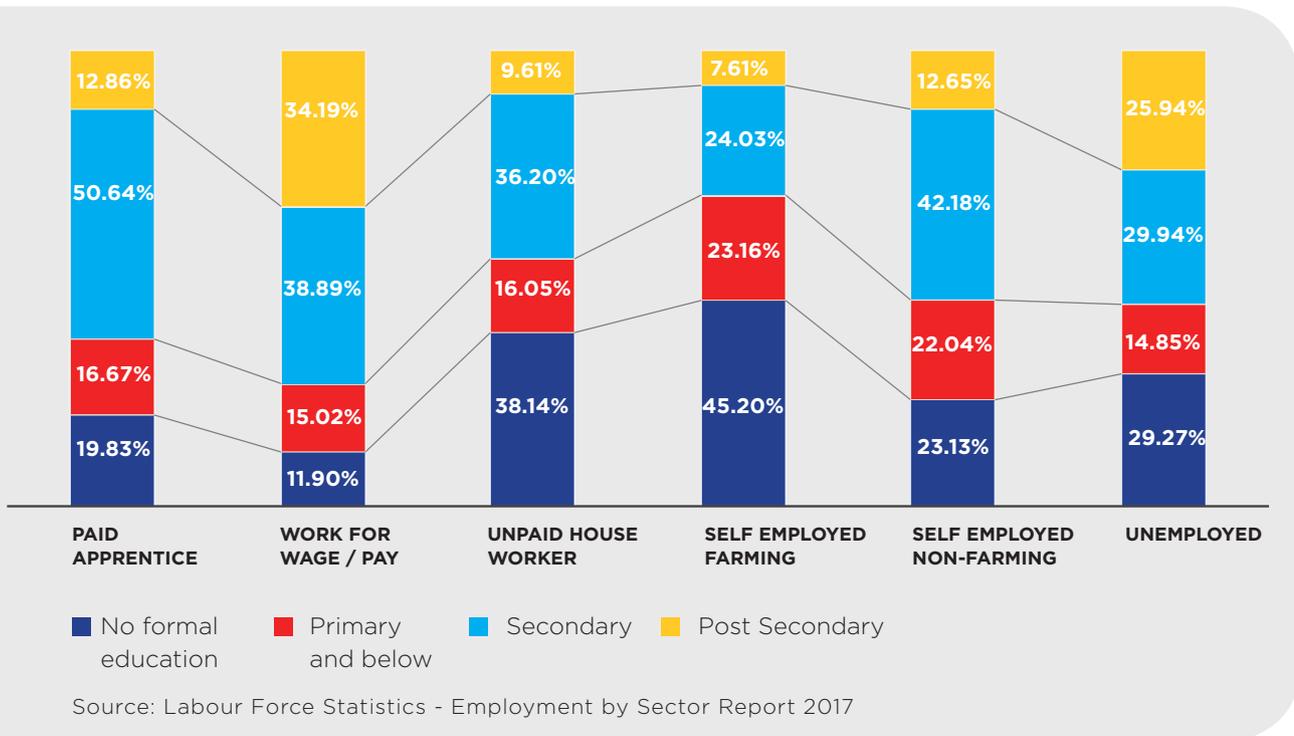
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Source: National Bureau of Statistics. labour force statistics report, 2017.



Unfortunately, the country's formally educated face two major challenges: the dearth of well-paying, formal-sector opportunities and an inability to meet the highly competitive technical requirements of the few positions that exist. The later challenge is at least partially attributable to the lack of coordination between educators and employers. As a result, the unemployment level in Nigeria is highest among workers with post-secondary education.

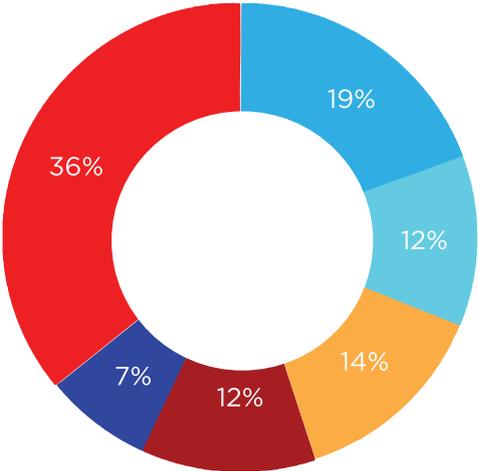
**Figure 3: Talent with secondary and post-secondary education make up the largest portion of employed and unemployed population.**



# The Information Technology sector is the single biggest employer of talent with post-secondary education while the agricultural sector employs over 60% of the labour force without secondary level education

**Figure 4: Top 5 employers of individuals with:**

...post secondary education



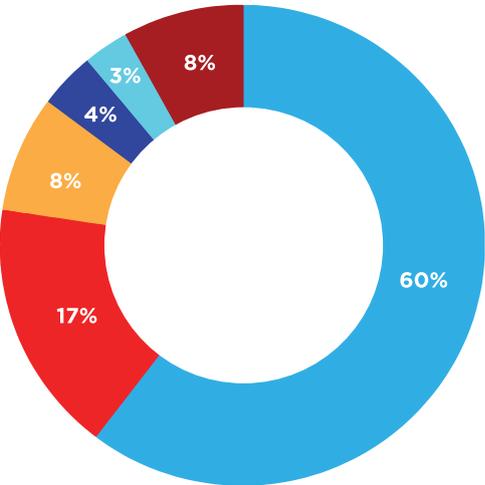
- Technology
- Media, Marketing and Creative Arts
- Education
- Banking and Finance
- Construction and real estate
- Other

**Other employers requiring post secondary education include**

Agriculture, Government/Military/Police, Mining/Quarrying/Oil, Manufacturing, Hotels and Restaurants, Wholesale Trade, Professional Services, Medicals, Transport and Storage, Travel Agent/Tourism, Retail Trade, Maritime, Investment Management, Power and Utilities

\*\*\* Information technology includes the telecommunications sector

...secondary education and below



- Agriculture
- Trade
- Manufacturing
- Services
- Storage
- Other

**Other employers requiring secondary education and below include**

Government/Military/Police, Mining/Quarrying, Hotels and Restaurants, Travel Agent/Tourism, Maritime, Power and Utilities

Data as at December 2018

# New technologies are affecting different sectors of the Nigerian economy with agriculture, banking and finance, and travel/tourism, being the most impacted

## TECHNOLOGICAL ADVANCEMENT IN NIGERIA'S LABOUR MARKET



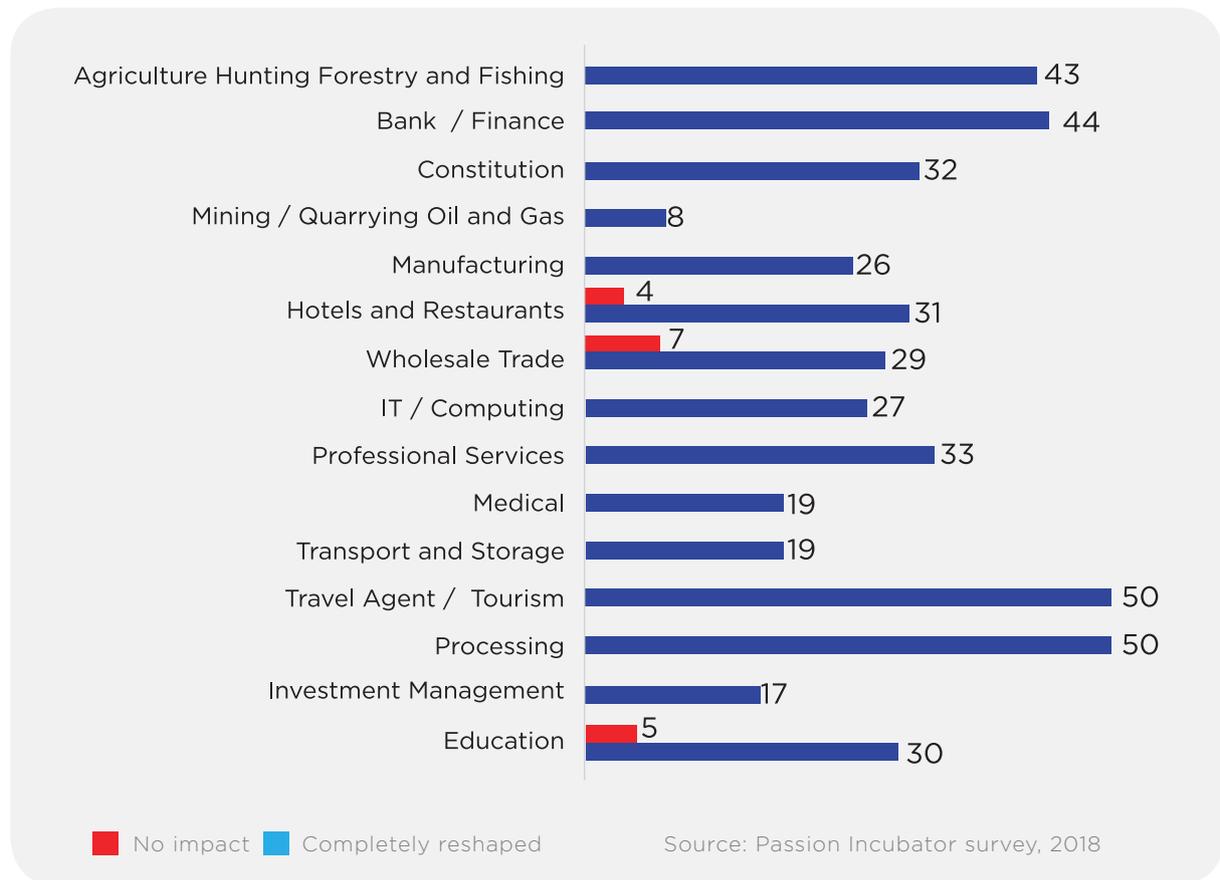
In Nigeria, as elsewhere, the spread of cloud computing, exponential growth in computer processing power, advances in artificial intelligence, and other emerging technologies are expected to bring about transformations in workplace efficiency.

They will also boost productivity, lower operating costs, drive convenience and lifestyle improvements, and foster the emergence of new occupations.

Today, Nigerian businesses across a number of sectors are deploying networked digital technology to their advantage. For example, at the computer village in Lagos (made up largely of informal traders), entrepreneurs are taking advantage of the opportunities brought about by the country's high internet and smartphone penetration. Vendors of similar gadgets (phone dealers, laptop dealers, accessories dealers, etc.) belong to WhatsApp groups, which they use as a medium for collaboration—marketing their goods/offerings, providing group members with business leads, informing one another of the latest or trending gadgets, tracking prices, etc.



**Figure 5: Technology has had the biggest impact on competitive dynamics in Travel/ Tourism, Processing, Finance and Agriculture Industries**



“When I get a request for a gadget I do not have, I post it on the group chat. Vendors who have it in stock then send me private messages on WhatsApp...”

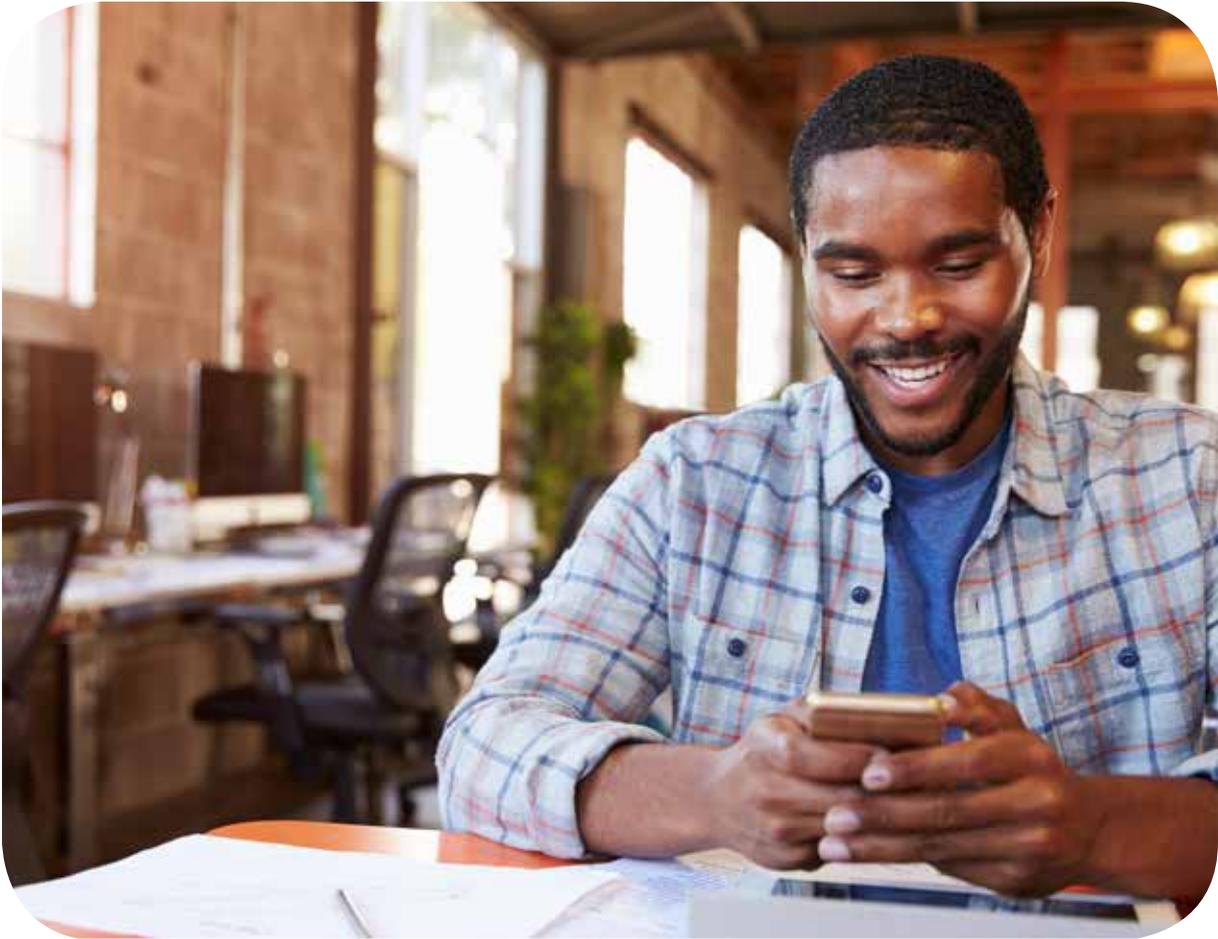
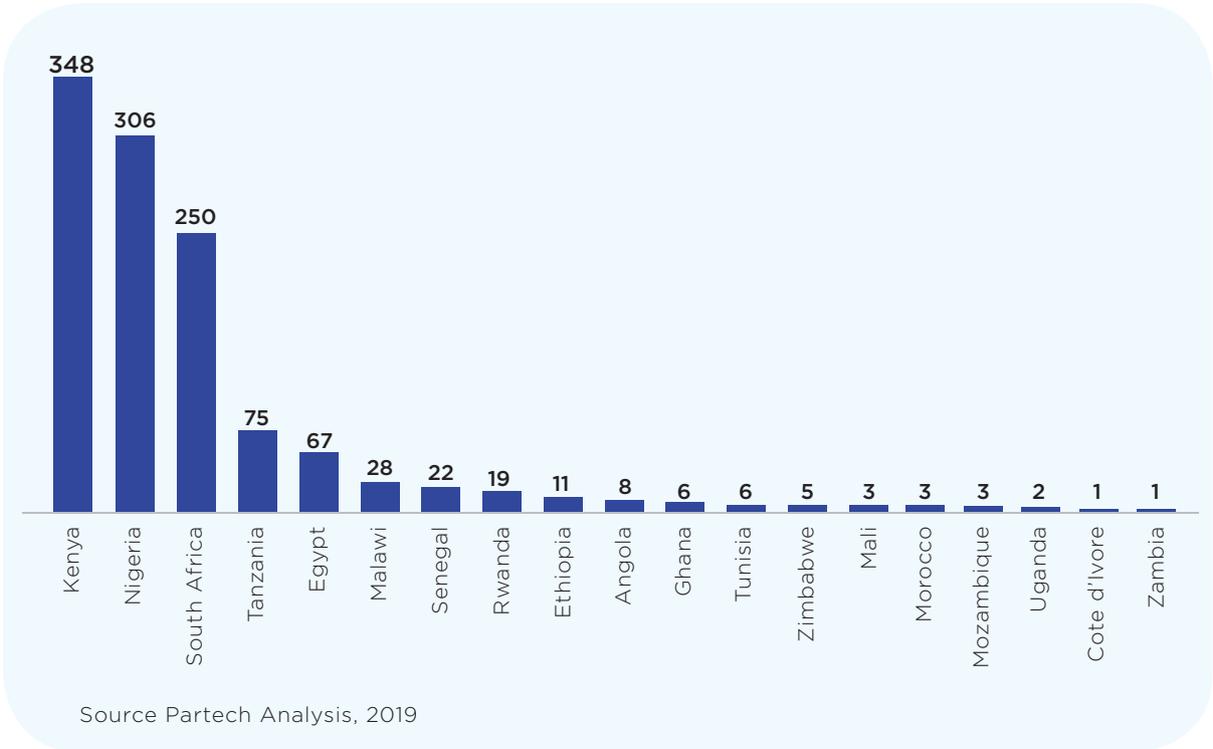
- Culled from *Techpoint.Africa*

## New technologies are affecting different sectors of the Nigerian economy with agriculture, banking and finance, and travel/ tourism, being the most impacted

Young entrepreneurs are also taking advantage of opportunities brought about by technological advancements to address critical social issues (such as financial inclusion and post-harvest losses) and business issues (such as operational bottlenecks and supply chain inefficiencies). **Today, Nigeria has become one of the most attractive destinations for international startup funding in Africa.** In 2018, the country attracted USD 306 million in technology startup funding, representing +167% YoY in funding over 26 deals(+53% YoY).



Figure 6: Total Start-Up funding per country 2018 (USD million)



# An Industry Take: Technology Adoption And Impact

## Quotes From Select Industry Leaders

### AGRICULTURE

“Drones and artificial intelligent soil analysis devices already exist and are here to stay in the agricultural sector, as this will reduce the time it takes a farmer to gather critical data and engage in soil test effortlessly. Now precise data on the quality and quantity of yield can be estimated right before planting and with advanced farming techniques, norms like farming seasons, weeding, even sunlight no longer hold sway in an agricultural discourse.”

“The agricultural industry has taken a quantum leap from what it used to be in the last decade and with the increasing use of AI, drone technology and satellites to track and process various activities and even to guaranty security, the coming years are laden with unlimited possibilities.”

“Sub-Sectors such a fishing, forestry, and crop farming will see increased use of drones.”

### HEALTHCARE

“Technological advancements such as integrating AI, machine learning, and also wearable devices are already in Nigeria. These will improve health engagements and outcomes ultimately.”

“Most hospitals still use the traditional modes of patient engagement, largely driven by paper. However, the fire is starting to catch on as more facilities are beginning to show interest in digitizing their processes. In the not so distant future, this wave will consume the whole sector, just like the banking digitization a few years ago, and healthcare utilization will increasingly be by virtual channels in the form of telemedicine and will not be purchased by physical cash.”

“Digitization of all healthcare processes will form the bedrock on which smart technologies will begin to play. AI, machine learning, wearable devices, medical robotics, and 3D printing will be the next wave in the health sector.”

“Medical wearable devices will play a large role in virtual consultations, taking important clinical data such as vitals and even biochemical measurements that would ordinarily require a clinic or hospital visit. Wearables will be enabled to constantly take measurements such as pulse, blood pressure, etc., empowering caregivers to make a tailored approach to management of patients.”



“3D printing will be utilized more for tissue and organ replacement. It will also increasingly be utilized in tailor-made food for any individual requiring a specialized diet.”

“Medical robotics will be used to develop organs such as the eyes and even limbs for amputees.”

“Technologies currently being used in the health sector include: electronic medical records (web and mobile app), disease tracking (mobile app), maternal and neonatal apps (mobile app), online doctor (web and mobile app), and clinical workflow (web and mobile app).”

## **FINANCIAL SERVICES**

“Current technologies being used in the financial services include USSD, artificial intelligence, and Open API.”

“The industry already leverages machine learning and data science to digitize the credit assessment process informing a loan decision in minutes. AI as a technology is expected to continue to permeate other spheres of the financial industry and service in general, from credit scoring to collections to customer service—in the next 10 years.”

“Big Data, has helped the sector have better focus on the key business drivers as well as the needs of the consumers. Process Automation has helped reduce labour intensive tasks, thereby increasing staff productivity and reducing settlement errors. Biometrics technology has helped for the authentication of customer transactions hereby reducing the volume of fraudulent transactions.”

## **MANUFACTURING**

“The clean cookstove industry uses top-lift updraft (TLUD) and ‘rocket stove’ technology.”

“The adoption of technologies like biomass pellets is expected to result in consumer migration from charcoal and firewood. So far, biomass pellet production and sales have also created jobs for women micro-entrepreneurs who serve as last-mile distributors.”

“The sub-sectors to be impacted by these technology trends are: financial services, healthcare, and e-commerce.”

## TRAVEL AND TOURISM

Driven by a growing number of young, modern consumers, both internet penetration and e-booking are growing fast in Africa.

Travelers are faced with the cumbersome process of either planning (flight and hotel bookings, ground transportation, etc.) and creating a worthwhile experience (places to visit, tour guide, etc) trip. This is due to the fragmentation and lack of consumer-friendly process of making a trip. Travelbeta, Wakanow, and TravelStart are leading the way in leveraging technology to disrupt the sector. The companies cater to customer needs in the areas of flights, hotels, airport pickups, vacation packages, corporate packages, visa assistance, and international telephone services

**travelbeta**

**Wakanow**

- Flights
- Visa Assistance
- Hotels
- International Telephone Service
- Mobile Bookings
- Airport Pickups
- Vacation Packages
- Corporate Packages

- Flights
- Visa Assistance
- Hotels
- Affiliate Bookings
- Airport Pickups
- Vacation Packages
- Corporate Packages

**HQ:** Nigeria / **Size:** 51 - 100  
**Market:** Nigeria

**HQ:** Nigeria / **Size:** 400 - 600  
**Market:** Nigeria



# Technology Enabled New Sector Entrants

## CASE STUDY 1: AGRICULTURE



Crowdfunding for farm efficiency | [www.farmcrowdy.com](http://www.farmcrowdy.com)



Farmcrowdy is digital crowdfunding platform that connects small-scale farmers in Nigeria with investors who are looking both to create impact and earn a return on their investment. The platform helps farmers scale their operations and increase food production by providing the farmers with finance, farm inputs such as improved seeds, training on modern farming practices, and access to a market to sell their harvest. Within the first 24 months of launching, the company generated close to USD 6 million in farm sponsorships via their technology platform to support :

- 5,500 acres of maize farms in Kaduna State
- 2,000 acres of rice farms in Kwara State
- 500 acres of cassava farms in Akwa Ibom State
- 700,000+ poultry farms in Ogun, Kwara, Osun, Kaduna, Oyo, and Lagos States, with a mortality rate below 4% (compared to the industry standard of 5%)

Supported by:





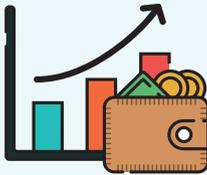
### Sign Up

Sign up on [farmcrowdy.com](https://farmcrowdy.com) or download the mobile app (Android/iOS) and create your Farm Sponsor profile



### Sponsor or follow farms

Browse farms. Sponsor as many as you can afford according to the expected returns you prefer. You can also follow the farms that interest you.



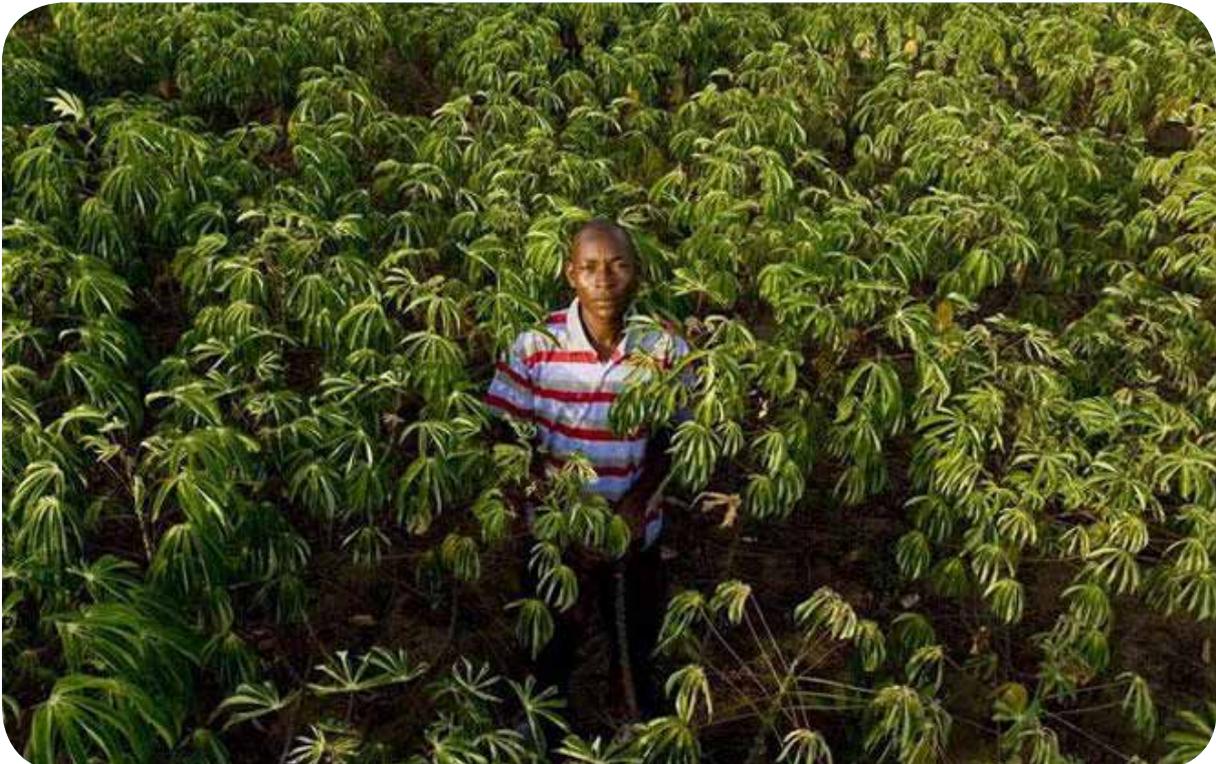
### Earn returns after harvest

Upon harvest, the produce is sold and profit is split between sponsor and farmer. Return after harvest is usually between 6% and 25% per farm cycle.



### Learn

Acquire meaningful knowledge through updates, blogposts, forums, and other relevant content in the agriculture space.



## CASE STUDY 2: TRADE



Production to Transaction | [www.afexnigeria.com](http://www.afexnigeria.com)



AFEX Commodities Exchange facilitates the transition from production to transaction for agricultural commodities by providing secure storage and a ready market for both farmers and buyers to participate in. The company does this by building on existing logistics systems by deploying storage solutions in the largest grain-producing states. AFEX securitizes the commodities held in their warehouses, instills integrity of trade and facilitates access to finance using an electronic warehouse receipt (e-WR) system.

AFEX issues farmer-subscribers an electronic warehouse receipt for the produce they have stored in AFEX warehouses. The electronic warehouse receipt is used as collateral by the farmers to access financing from financial institutions and is tradable on the exchange (which is also managed by AFEX).

The e-WR system is a real-time online inventory management system with the ability to transfer stock between buyers, sellers, and banks. It represents a legal title of ownership and offers increased reliability, lower transaction costs, and limitless geographic reach. E-WRs can be transferred to a new holder or a lender (where the stored commodity is pledged as security against the receipt for a loan) to secure financing for the purchase of seeds, fertilizers, and equipment for farming operations. It can also be used by cooperatives and commodity merchants to access working capital facilities from financial institutions.

Producers and processors are able to store products at AFEX's warehouse locations, eliminating the extra cost of moving grains between states before sending to the final market.

# CASE STUDY 3: FINANCE



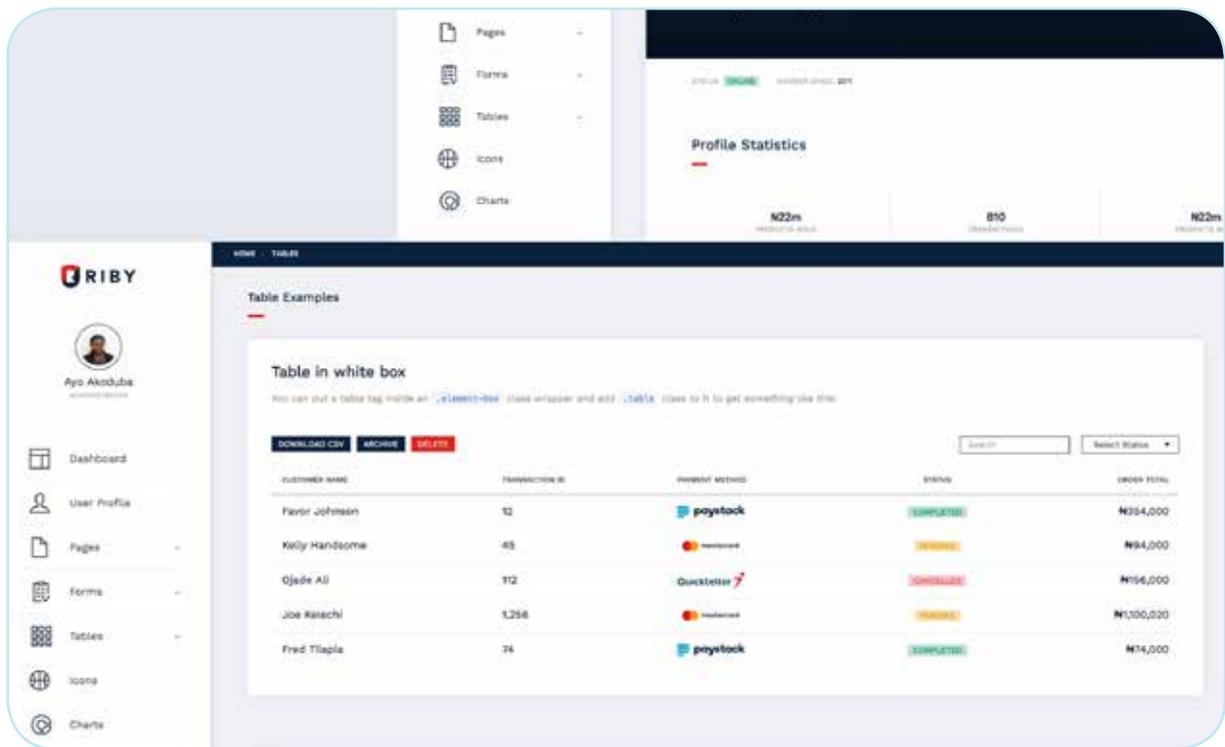
Cooperative digital banking | [www.riby.me](http://www.riby.me)



OF WORK IN NIGERIA

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THE FUTURE



The Riby Digital Banking Platform for Cooperatives is a custom-built banking system for cooperatives, savings and trade groups, and their members.

The platform provides relevant, adapted features to help SMEs and salary earners within cooperatives to save consistently, borrow easily, and invest.

Riby currently serves millions of cooperative members.

## CASE STUDY 4: HEALTHCARE



Digital blood bank | [www.lifebank.ng](http://www.lifebank.ng)



LifeBank is a healthcare technology and logistics startup that's in the business of saving lives. The company believes that no African should die from a shortage of essential medical products at the hospital level, and is on a mission to ensure that these products are available. LifeBank works with hospitals across Africa around the clock to find lifesaving medical products and deliver them to the hospitals in the right condition. The startup mobilizes blood donations and, using a technology platform it developed, takes inventory of all blood available in the country and ensures that blood is delivered to where it is needed in Nigeria.

**LifeBank has moved over 11000+ products, served 600+ hospitals, served 6000+ donors, and saved 2500+ lives**

The case studies above explore several ways that new technologies are enabling new industry entrants—with demand for new talents which require new investments in the right kind of interventions and educational improvements

Although the technological advances highlighted in the examples and case studies above may suggest that automation will lead to the replacement of Nigerian workers by machines, history shows that (i) when such advancements are accompanied by educational improvements and (ii) the government deliberately eases workers into the changes that are to come with forward-thinking interventions and policies, the Nigerian economy can be transformed from a “crude oil powered agrarian economy” to a highly industrialized economy powered by a host of new occupations largely in the private sector.

As the technological transformation occurs, the Nigerian workplace will become a place where machines and humans interact daily—and where workers will need to acquire new skills to remain relevant.

Already, these new tech-enabled entrants have facilitated high rise in demand for data analysts, digital marketing experts, front and back end developers and programmers, quality assurance and business analysts and a host of others.

CHAPTER THREE

# The Future of Work in Nigeria

OF WORK IN NIGERIA

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THE FUTURE

**Respondents believe that global trends such as the proliferation of smart technologies and artificial intelligence will affect industries in Nigeria**



**Passion Incubator**  
[www.passionincubator.ng](http://www.passionincubator.ng)



# The Future of Work in Nigeria

## THE FUTURE OF TECHNOLOGY IN THE NIGERIAN WORKPLACE

**Respondents believe that global trends such as the proliferation of smart technologies and artificial intelligence will affect industries in Nigeria**

### Technology proliferation and workplace automation

Around the world, increases in machine processing power, the proliferation of smart technologies, and advancements in artificial intelligence and robotics are leading to unprecedented levels of automation and digitization in the workplace.

48% of our survey respondents indicated that they understand and are involved in identifying the role of Information Technology in the workplace; the expanding automation of routine physical activities is expected to drive an increase innovation and productivity, a rise in living standards, and the displacement of lower-skilled workers—all of which represent major changes for the labour market and for traditional business models.

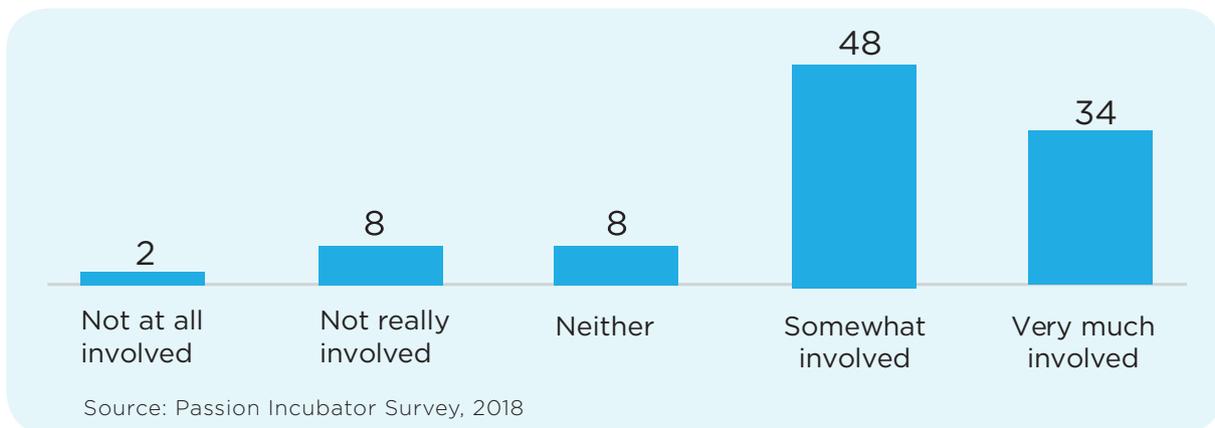
**80%**

of entrepreneurs and business leaders surveyed say that information technology will be the biggest driving force behind workplace automation in Nigeria



Although many of these technologies are yet to be deployed at scale, others are already common in many countries, industries, and industry sub-sectors. In Nigeria, where traditional models of work still largely predominate, the majority (over 80%) of survey respondents indicated their awareness of the changing dynamics in the global workplace and their expectation that these changes will play out in Nigeria, as well.

**Figure 7: How involved are you in identifying the impact of and opportunity intelligent technologies and workplace automation?**



## Information communication technology is already transforming some sectors in Nigeria

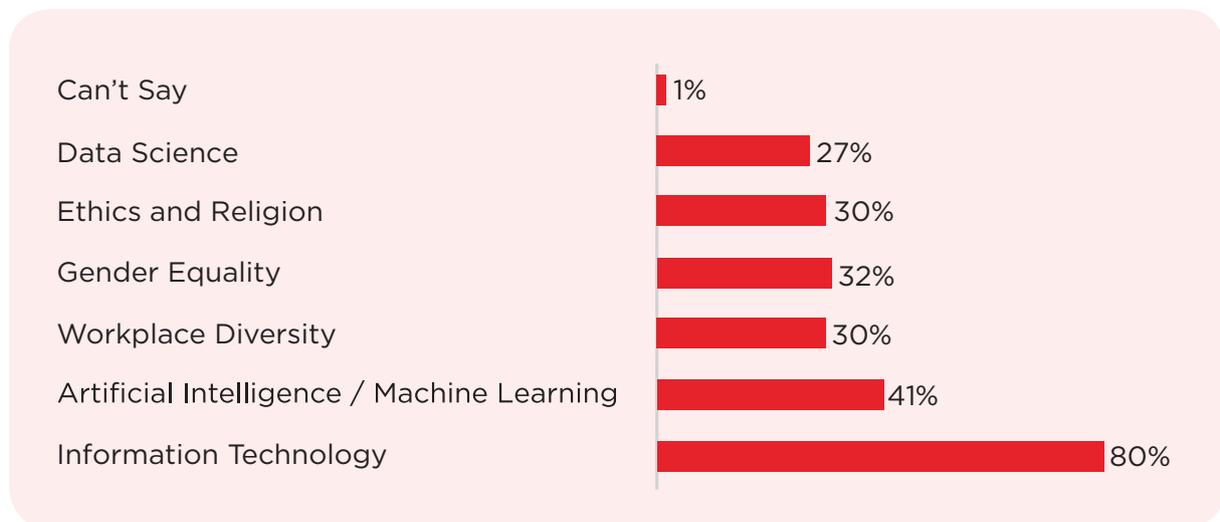
As Figure 8 indicates, diffusion of IT technologies and artificial intelligence rank at the top of trends that a broad cross-section of Nigerian workers in targeted industries expect to impact the Nigerian workplace in the next decade. The proliferation of information and communications technology (ICT), advances in machine learning, and continuing globalization will all impact the pace at which and degree to which these changes are likely to occur.

### Proliferation of information and communications technology (ICT)

ICT penetration levels in Nigeria are among the highest in Africa. Currently, mobile penetration in Nigeria is 84% (2% above Africa's average), internet penetration is 54% (20% above Africa's average), and smartphone penetration (currently about 20%). The internet, mobile phones, and mobile computing gadgets (tablets, smartphones, laptops) have improved business and human connectivity in unprecedented ways, changed the way work is done, created new jobs, and revolutionized the way businesses compete.

Today, businesses rely on mobile apps for employees who work remotely, consumers are shopping and carrying out payment transactions using their mobile devices, companies are buying fewer pool cars and encouraging employees to use Uber and Taxify/Bolt, businesses are turning to chatbots to resolve customer complaints in real time, and companies are using digital platforms for their retail and marketing efforts.

**Figure 8: Which of the following global trends do you see affecting the Nigerian workplace in the next 10 years?**



## Globalization and increases in machine capabilities, processing power, and access are also impacting Nigeria's workplaces

### 1. Globalization

Nigeria's integration into the global economy has led to enhanced market access, increased flows of finance and trade, and near-instantaneous knowledge exchange, among other benefits. It is also changing the way work is distributed and sourced, facilitated by easier communication and greater connectivity.

Globalization is expected to spur higher levels of digitization as individuals and institutions seek ways to simplify and reduce the cost of cross-border interactions and transactions. In addition, it will accelerate the diffusion of new workplace practices and technologies.

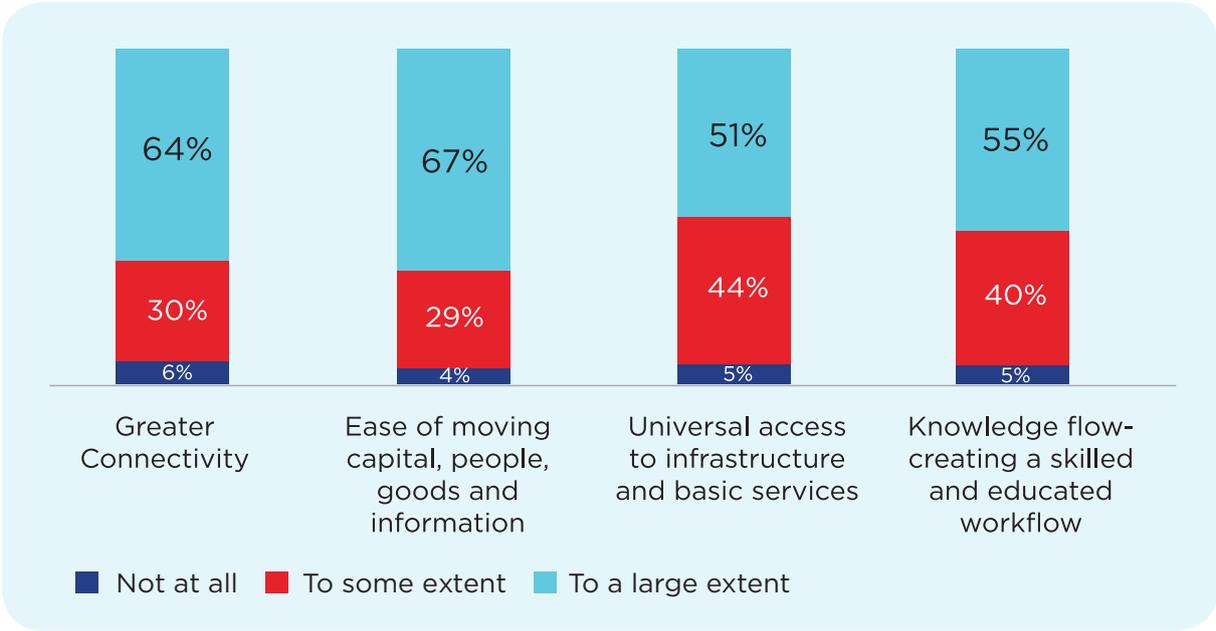
### 2. Machine capabilities

Machines today have vast processing capabilities, operate at faster speeds, and have more storage and simpler interfaces, which make them easier to use and manage. These improvements all foster greater efficiency, productivity, and accuracy in the workplace, and make virtual collaboration between businesses easier, regardless of geography.

As prices drop for new digital technology, and as awareness spreads of the benefits of powerful networked computing, we expect to see greater adoption across Nigerian organizations

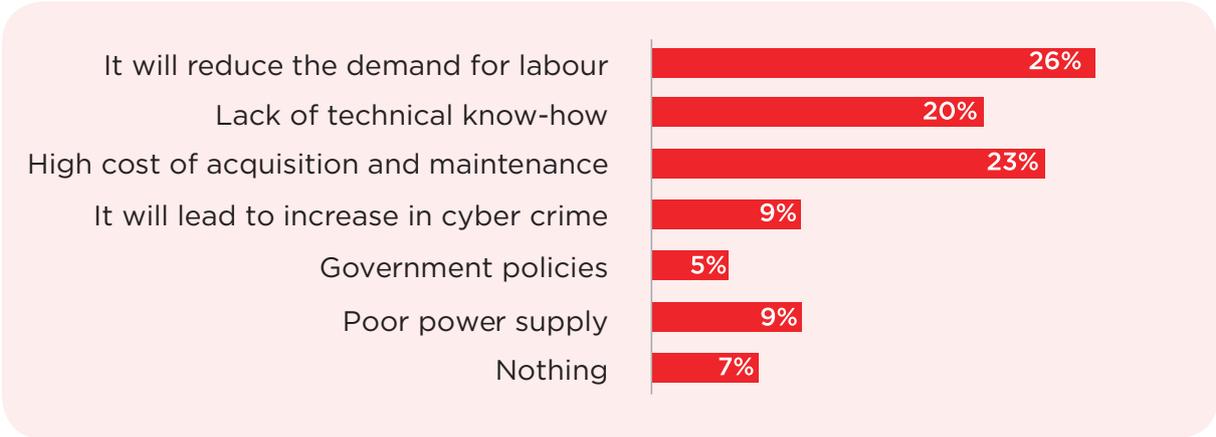


**Figure 9: To what extent do you think globalization has impacted the following areas in Nigeria?**

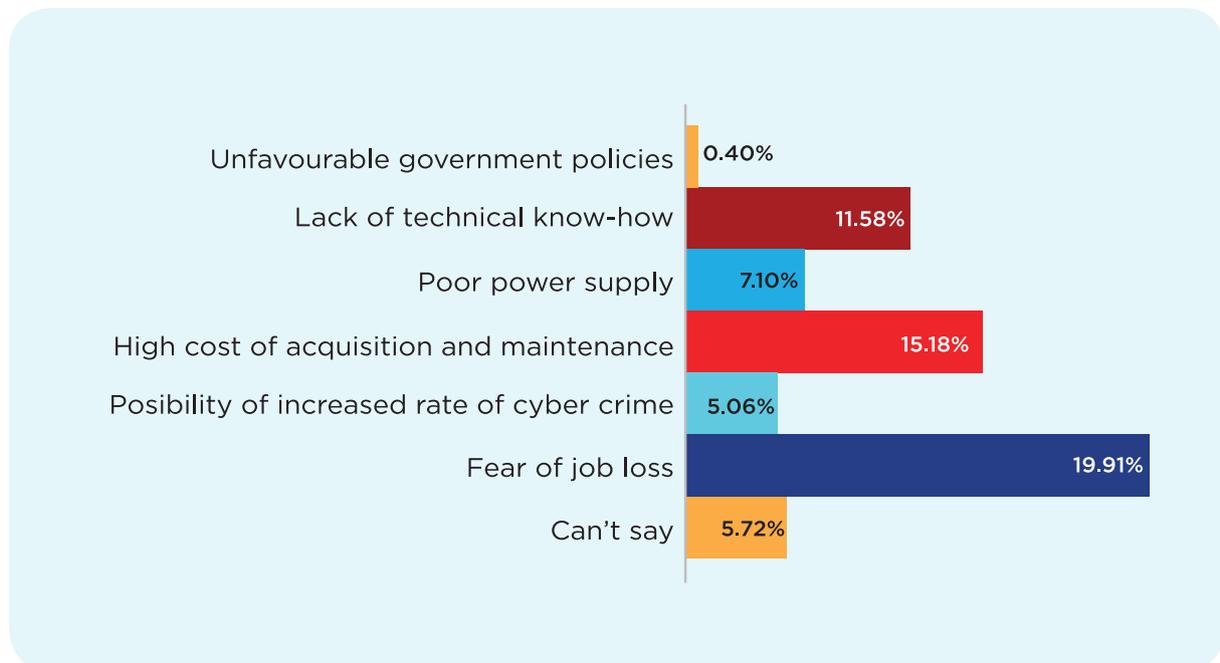


**Nonetheless, the fear of job loss, high cost of acquisition, and lack of technical know-how threaten to slow the pace of technology adoption in Nigeria**

**Figure 10: Employer perspective on the biggest threat to the adoption of technology in Nigeria**



**Figure 11: Employee perspective on the biggest threat to the adoption of technology in Nigeria**



### 1. **Fear of job loss [It will reduce demand for labour]**

The general apprehension around labour cost reductions due to automation could lead to social pressures on business decision makers to slow down the pace of automation. In addition, it may cause policymakers, who are currently struggling to generate sufficient jobs to absorb the country's young and growing labour force, to create stringent regulations that may serve as barriers to technology adoption.

### 2. **High cost of acquisition and maintenance**

The cost of automation technologies relative to labour cost impacts the pace and level of automation in the workplace. In Nigeria, where labour is cheap and abundant, it may be difficult to provide a business case for certain technology acquisition. For example, due to low wages, business decision makers engaged in manufacturing are likely to delay acquiring industrial robots, which may cost billions of Naira.

### 3. **Lack of Technical know-how**

Typically there is a lag between the period when technology is made commercially available and the time when there is enough trained talent available to deploy or use the technology effectively.

In Nigeria, where the level of technical skill is already low, employers complain about the difficulty of finding people locally with the requisite skills for deploying new technological solutions. Many solutions actually require a combination of multiple technologies, which further increases the challenge of finding qualified employees.





**Despite the aforementioned deterrents, respondents believe technology will be adopted on a large scale, creating significant changes in industries such as financial services**

### **Scale and impact of technology adoption**

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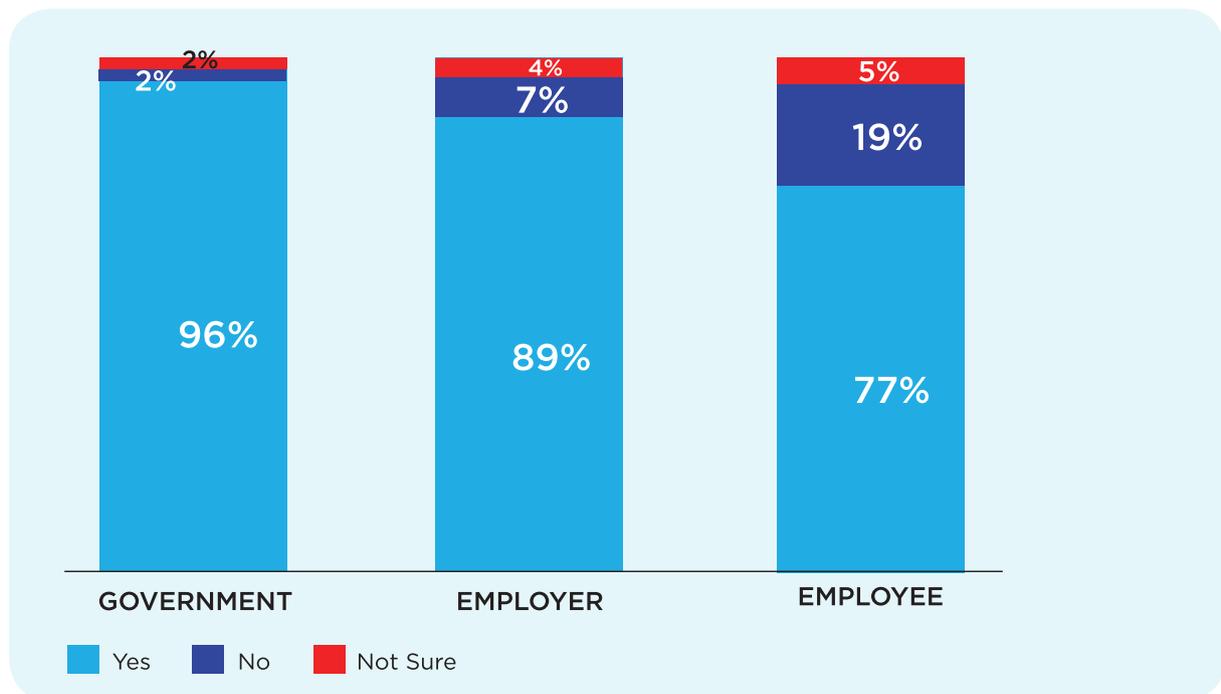
Survey results show that Nigerians believe that technology will become a driving force within many formal and informal organizations over the **next decade.**

Over 75% of survey respondents, for example, expect to see large-scale adoption of intelligent technology **in the workplace.**

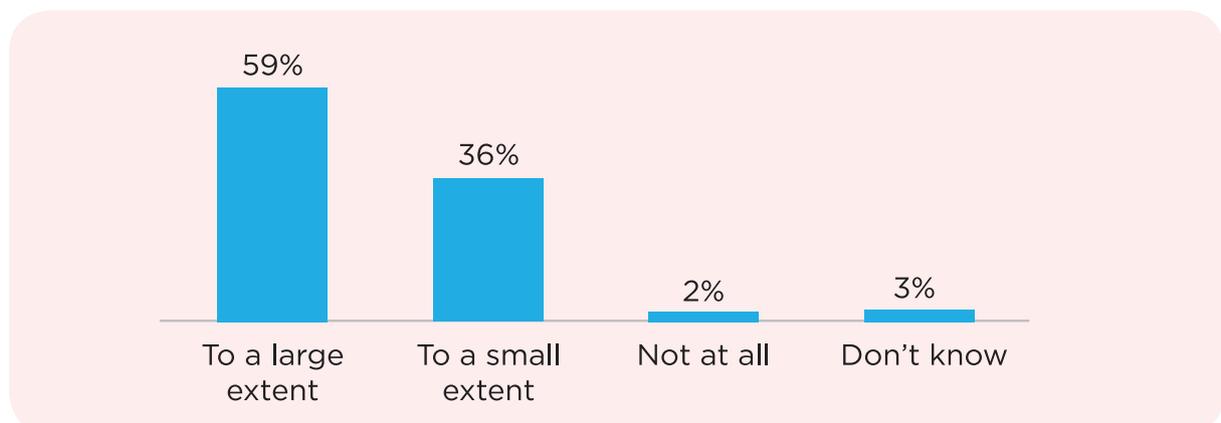
Already, accelerators such as Facebook NG\_HUB and Coven Labs are facilitating the growth of local startups focused on artificial intelligence, machine learning, and deep technology. In addition, corporate and government organizations are increasingly deploying technologies to facilitate decision making and customer value capture, improve work speed and precision, and outpace the competition.

The adoption of these technologies is expected to bring about unprecedented changes and high levels of automation to the Nigerian workplace. Fifty-nine percent of formal and informal sector businesses—mostly in the financial services, health, construction, information technology and maritime sectors—foresee extensive changes to their industries as a result of these developments. Meanwhile, respondents in the hotels and restaurants, retail trade, and travel industries believe that while technology proliferation will bring about some changes, its impact on industry dynamics will be small.

**Figure 12: Technology will be adopted on a large scale over the next 10 years?**



**Figure 13: To what extent do you think technological advancement such as artificial intelligence, automation, mechanization, etc., will impact your business in the coming years?**



# The industries most likely to experience high levels of disruption and workplace automation in Nigeria are agriculture, media and advertising, banking and finance, and healthcare

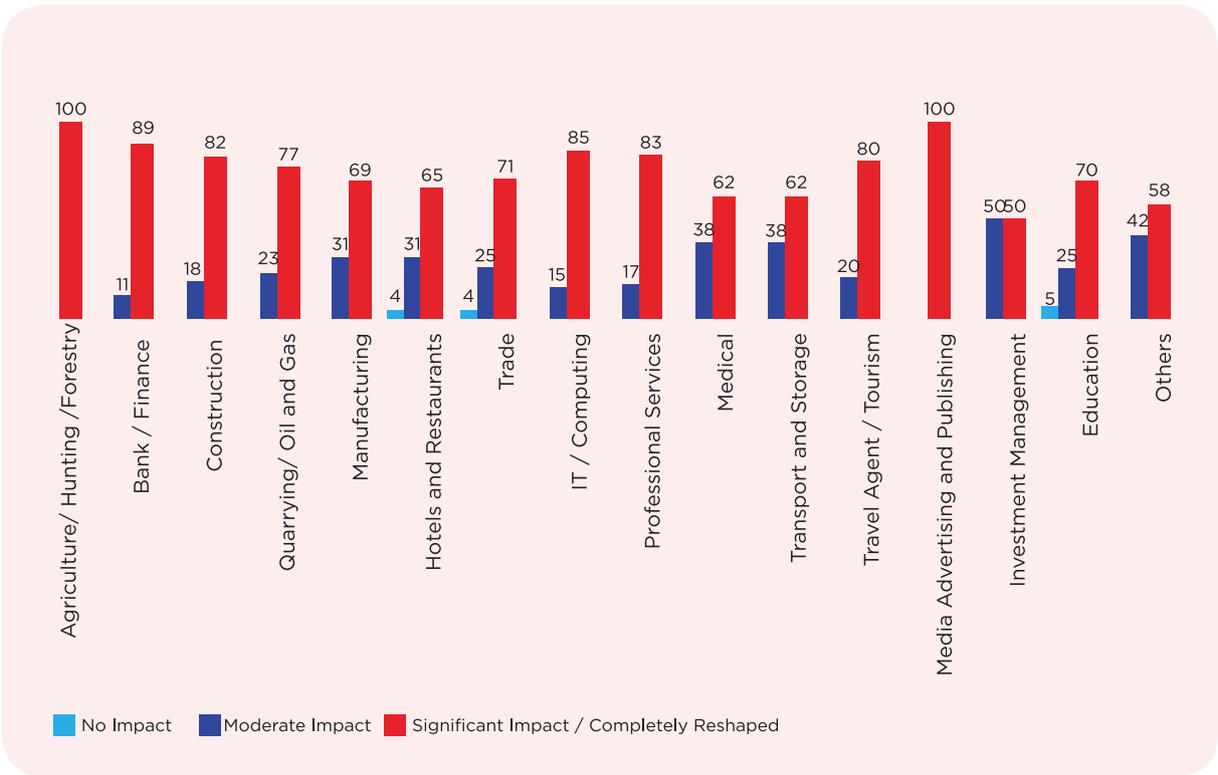
## Nigeria’s automation potential

One of the key changes brought about by new technologies is a high level of workplace automation. Industries considered “at risk” are those that feature jobs requiring numerous, repetitive, manually-intensive, and time consuming tasks.

In Nigeria, the industries perceived to be least susceptible to automation (based on history and industry interviewee perspectives) are investment management, transportation and storage, hotels, and restaurants.

Industries most prone to high levels of automation are: agriculture, trade, media and advertising, banking, information technology, healthcare, and manufacturing.

**Figure 14: Industries least and most affected by technology in the last 5 years (%)**



### Sectors most prone to automation employ a significant portion of the labour force

The banking and finance, construction and real estate, and IT sectors currently employ about 40% of the labour force with post-secondary education, while agriculture employs 60% of the workforce without secondary school education.

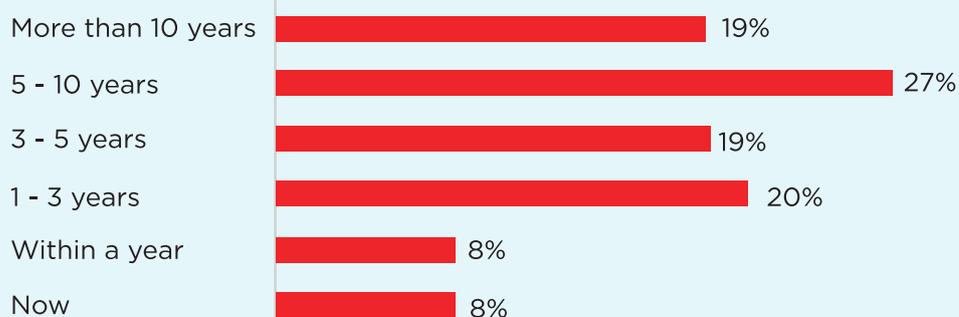
## The majority of employers and entrepreneurs believe that full impact of workplace automation will be felt in less than five years and are already preparing for the transformations that are underway

### Pace of workplace automation

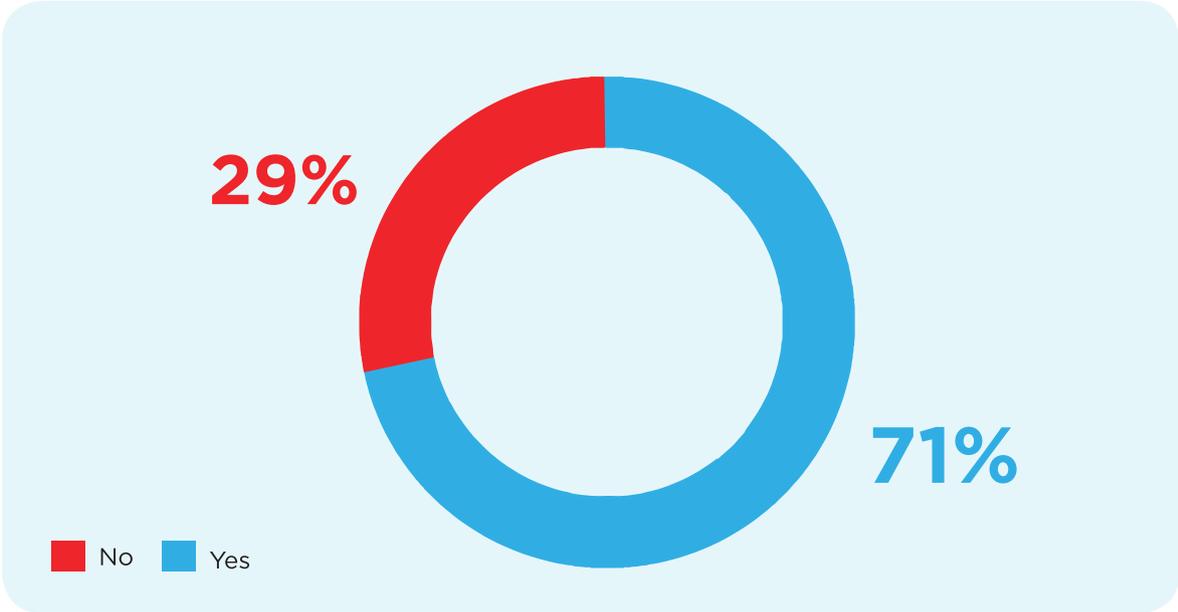
Although survey results show some uncertainty about the projected time of full scale workplace transformation, 55% of employers and entrepreneurs believe that the full impact of the workplace automation revolution will be felt in Nigeria in less than five years, and 80% of survey respondents believe the full impact will be felt in less than 10 years. Entrepreneurs and respondents employed in the government sector believe the anticipated workplace transformations are imminent (i.e., occurring in less than five years) while 58% of corporate sector respondents believe that changes will happen at a more gradual pace.

Regardless of the anticipated timeline, Nigerian businesses are already making preparations for the changes that are underway. Seventy-one percent of employers say they have clear strategies for managing the changes they expect automation and AI to bring to their business, and are optimistic about their level of preparedness. Based on survey responses, the power and utilities industry appears to be the least prepared for these changes while the public sector and the data processing and IT/computing industries are the most prepared.

**Figure 15: When do you think the full impact and scale of automation and AI will be felt by your business?**

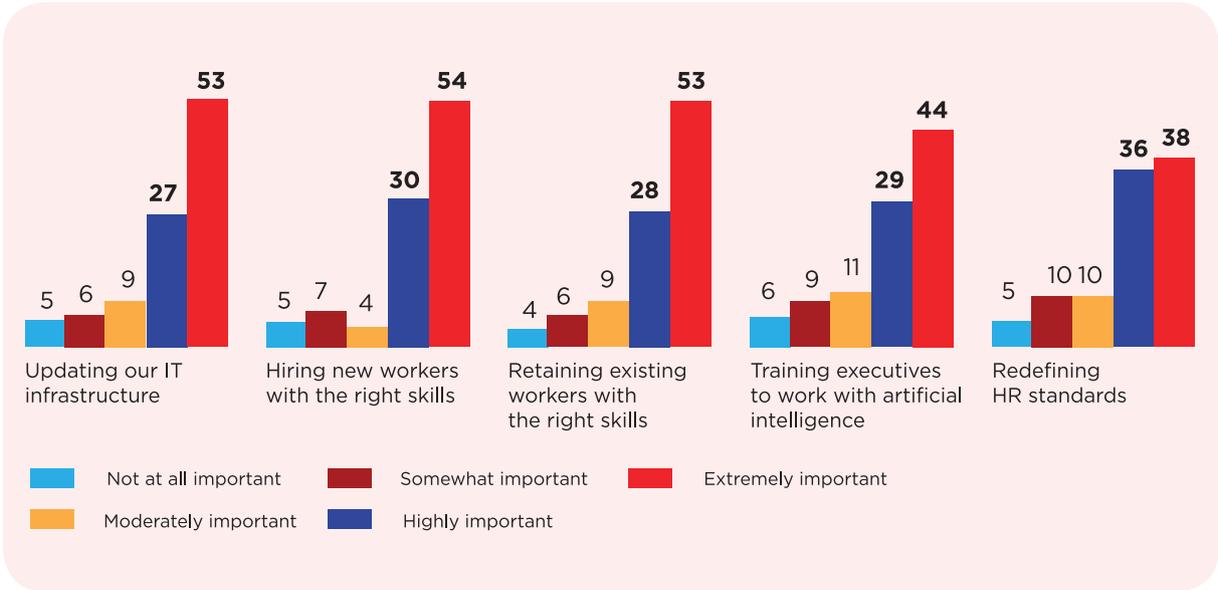


**Figure 16: Does your business have a strategy for managing the impending changes?**



Hiring new, qualified talent, retraining existing employees, and updating IT infrastructure are considered the most important measures businesses are currently taking to prepare for the future of work.

**Figure 17: What measures are you currently taking to leverage technologies and help your business shape the future of work?**



## CASE STUDY 5:



# Union Bank of Nigeria uses robotics to automate the reconciliation of ATM transactions



**Industry:**  
Banking and Finance

**Employees:**  
Over 2,700

**Region:**  
Nigeria

**Years in operation:**  
102

**Robotic process automation (RPA):**

The scheme is aimed at automating mundane repetitive processes. The first application of the scheme is with ATM transaction reconciliations across the 1,000 ATMs operated by Union Bank Nigeria.

Union Bank of Nigeria Plc (“Union Bank” or “the Bank”) was established in 1917 and is one of Nigeria’s long-standing and most respected financial institutions. Union Bank offers a portfolio of banking services to individual, small & medium enterprises (SME), commercial and corporate clients, leveraging a robust channel mix of branch and alternative channels with a robust geographical network comprising more than 300 sales and service centers, and over 1,000 ATMs spread across Nigeria.

## THE CHALLENGE

As part of efforts to fulfil our simpler, smarter bank promise to customers, we continue to optimize our business processes, including automating our routine processes. With over 1,000 ATMs and millions of transactions spread across the 36 states of the country, and each machine processing thousands of transactions daily, reconciliation was a herculean task.

The challenge: How quickly can we refund our customers within the shortest time? The reconciliations of the ATM were done manually - work started very early each day to reconcile the previous days' transactions. Necessary refunds were made and the bank's position with other banks are ascertained and reconciled with NIBSS position. These reconciliations usually took approximately six hours on a daily basis with over a 100 staff across the network. This meant the bank's customers could only hope to get refunds on a T+1 basis.

## THE SOLUTION

Union Bank introduced Robotics Process Automation (RPA), the first in the industry. The technology was introduced into the bank to help improve the efficiency of our processes. Also, using the Robots for mundane and repetitive activities within our business process, which led to the ATM reconciliation process being automated with RPA technology.

Other processes where RPA is currently being implemented include - Settlement, E-Business Operations, Central Reconciliation, Money Transfer and Foreign Operations.

## THE IMPACT

With the implementation of the ATM reconciliation using the RPA technology;

- Over 1,000 ATMs are reconciled in less than 2 hours bank wide. This previously took an average of 6 hours per branch
- Timely reversals to customers account. Previously, reversal was between 24-48 hours, now we do same day reversals within the settlement cycle
- Reduction in the number of customer complaints relating to dispense errors on our ATM,
- We remain the top two bank on Not On Us transactions in the country
- Reduction in the cost of reconciling our ATMs

## THE FUTURE

We will continue to identify activities from our 1000+ processes that can be robotized in order to continue to consistently guarantee the best customer experience. The next phase of RPA will leverage artificial intelligence for better results.

# Impact on Jobs

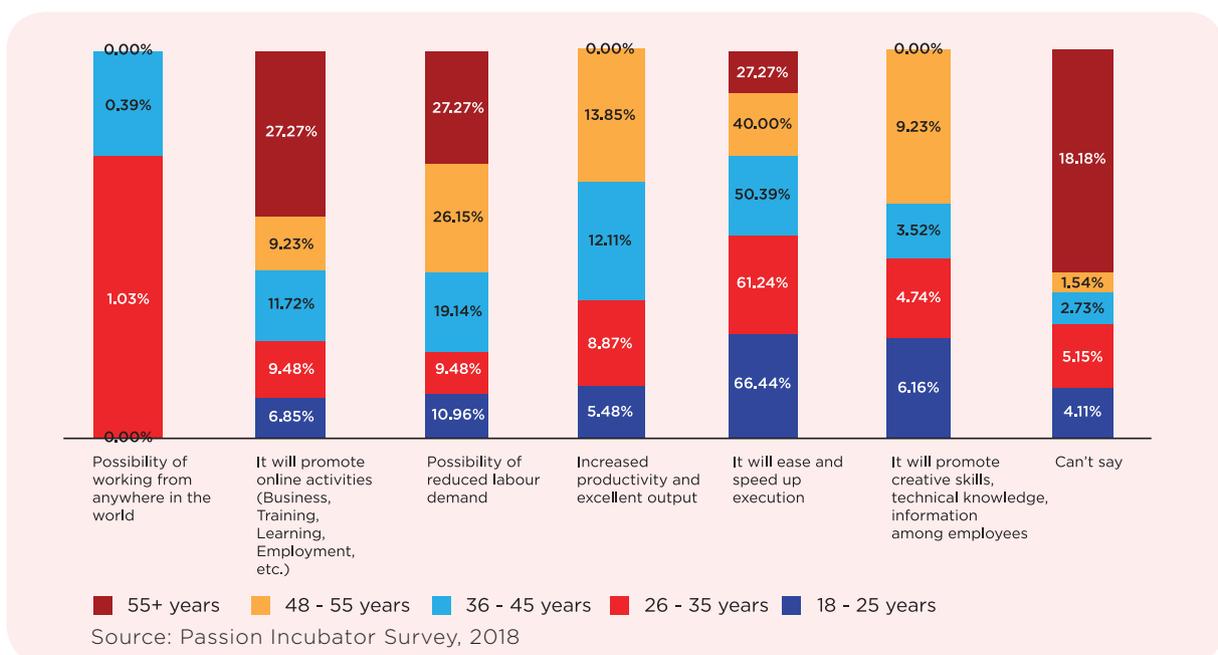
**Impact on jobs:** adoption of new technologies will lead to large-scale automation of manual and routine tasks, but more jobs will be created than lost

## Will jobs be created or lost?

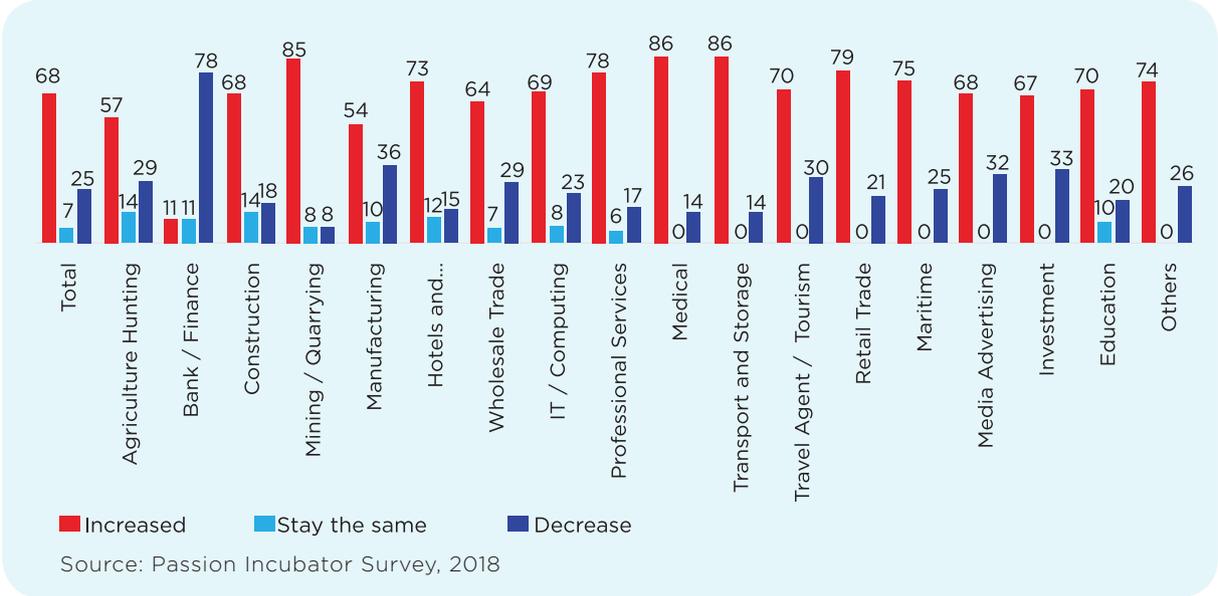
A direct implication of technology proliferation is the automation of routine, low-skilled jobs. The World Economic Forum (WEF) currently estimates that 46% of work activities in Nigeria are susceptible to automation, suggesting that a significant portion of the Nigerian labour force is at risk of losing their livelihoods. The survey results show that employees aged 25 to 45 in the primary sectors are more aware of the risks of impending job losses due to automation than are older respondents in any sector. Older and younger respondents alike are focused on the benefits of automation (such as speed of task execution).

However, the job decline due to automation will likely be mitigated by the emergence of new jobs, as new tasks arise within existing roles and the demand for multidisciplinary talent surges. Job availability will be further driven by the entrepreneurial nature of the Nigerian workforce, which already has produced an increasing number of homegrown digital creators, designers, and solution providers. Overall, employers and entrepreneurs (68%) believe that more jobs will be created than lost.

**Figure 18: In what way(s) do you think intelligent technologies will impact jobs in the future?**



**Figure 19: Do you expect your number of employees to increase / decrease over the next 10 years as a result of technology?**



**Impact on jobs:** the banking and finance and manufacturing industries will experience the most significant job losses

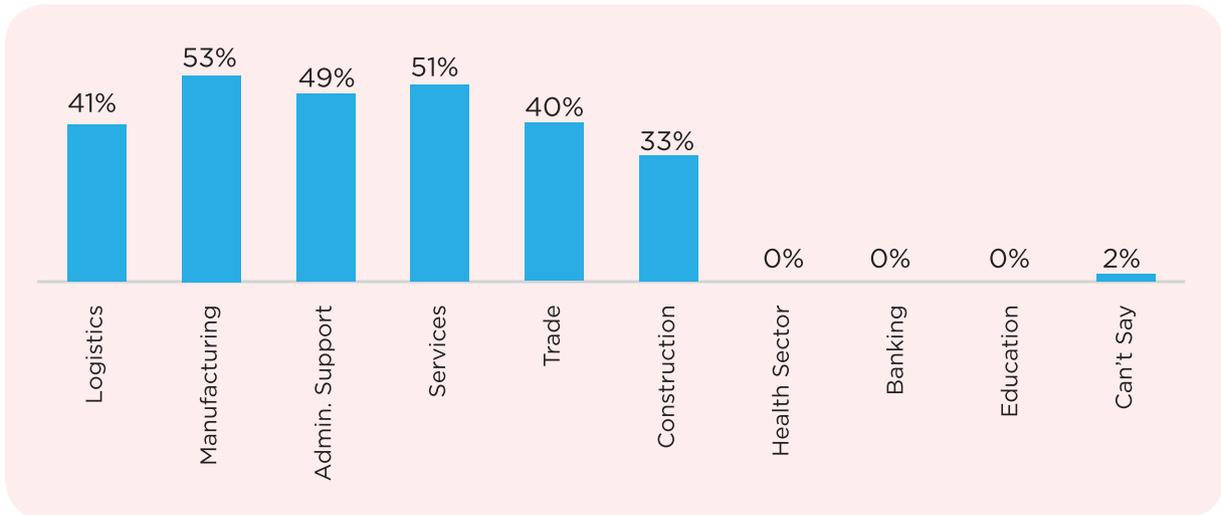
**What industries will experience the greatest job losses / gains?**

While employers believe job losses will be greatest in the banking and finance industry, employees believe jobs in the banking and health sector are safe and jobs in the manufacturing industry are most at risk.

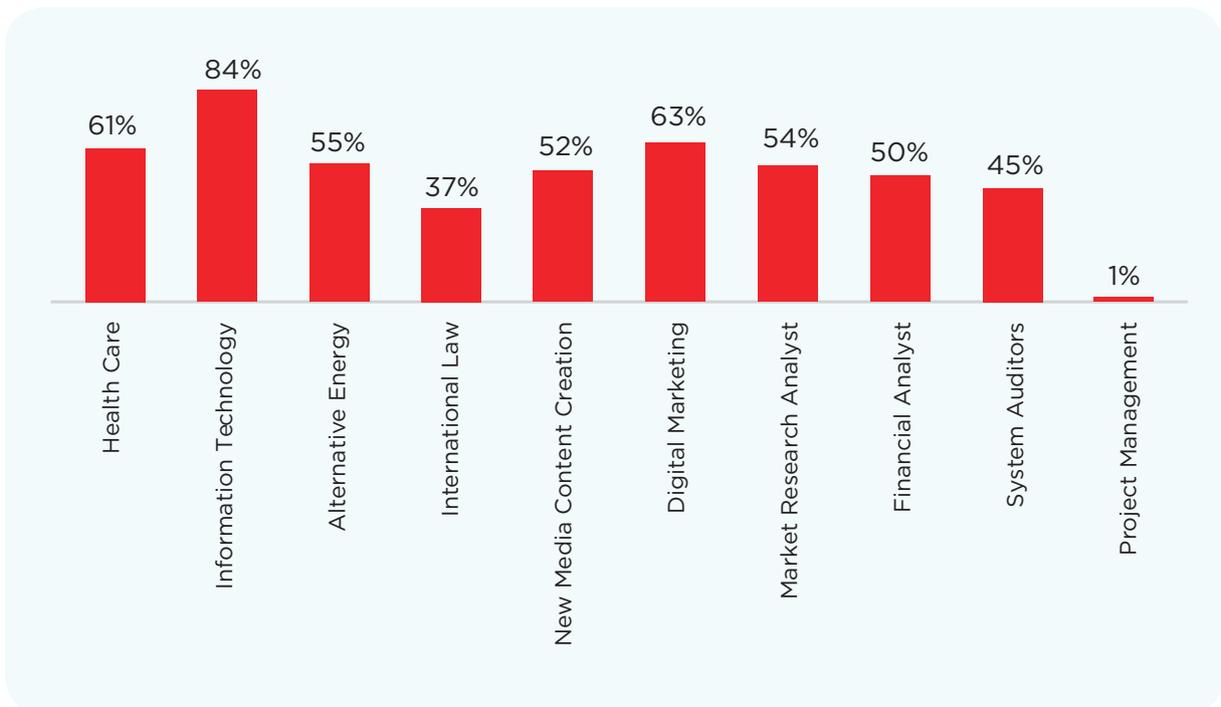
The sectors with the greatest job creation potential, according to educators, are IT, healthcare, and digital marketing. Healthcare is also singled out by employers for its job creation potential, as is the professional services sector.



**Figure 20: Which class of jobs do you think is at risk with the advancement of technology?**



**Figure 21: With the emergence of Automation and its imminent impact on the present-day marketplace which jobs will you regard as the “jobs for the future”?**



**The Employer Survey Shows That Employers Believe That Jobs Will Be Created Across Existing Sectors**



**Impact on jobs:** the Construction, Agriculture, Retail, and Trade sectors will benefit; freelance and contract-based jobs will increase



## TYPES OF JOBS

In Nigeria, local infrastructure initiatives and demographic trends are expected to result in more jobs in construction, retail, agriculture, and trade. There will also be a surge in the supply of software development jobs, jobs focused on customer relationship building and people management, short-term consulting jobs, and agency jobs (due to the expected growth in agency banking).

We also expect to see a rise in demand for user interface experts and professionals who can blend digital and STEM skills with traditional business skills. In addition, the rise of open source talent marketplaces in Nigeria will lead to an increase in the number of freelance, contract, and open source jobs available.

This trend—which is currently underway in Nigeria’s software development, professional services, media and entertainment, and transportation and logistics sectors—is expected to continue in the short to medium term, and to extend to other sectors of the Nigerian economy, such as healthcare. Some of the jobs of the future will include data analysts/scientists, software and applications developers, information security analysts, database and network professionals, digital marketing and sales professionals, robotics engineers, amongst others.

# An industry take:

## Quotes From Select Industry Leaders

### FINANCIAL SERVICES

“Technology adoption will cause a reduction in human personnel as well as a consolidation of current processes. Ultimately, new job roles will be created; however, there will be a reduction in the roles of certain operational services such as tellering, settlement officers, and customer service executives.”

“Most of the jobs to be created will be in software development, product design, and customer/user experience and product management roles. This change will be driven by the need to use the data to design and build new solutions and the technical ability to create and deploy the products using an agile method.”

### HEALTHCARE

“Jobs will be lost as a result of technology adoption while new jobs will also be created. Increased job opportunities will occur for biomedical engineers, data analysts, software engineers, virtual assistants (nurses, medical assistants, physician assistants), and robotic surgeons.”

“Jobs will most likely be created in the clinical-focused sectors (doctors, radiographers, scientists, etc.). While there will be some jobs created by the tech platforms, it will not be as significant as the clinical jobs where there is a huge deficit at the moment.”

“The need to serve an exploding population and provide decent healthcare for them will create more job opportunities. More so, there will be a need to train more people quickly. Technology can play a role in training.”

### AGRICULTURE

“There will be reduced menial jobs and more intellectually inclined jobs; robots will execute while humans will either control, build, or program the robots”

“More jobs will be created, and that there will be need for more pilots and software engineers. This will be as a result of increased utilization of drones.”



## MANUFACTURING

“Impact on jobs and skills will be positive, and jobs will be created as a result of these changes. Jobs will be created more in distribution and retail. For the clean cookstove industry, consumer behavioral changes in cooking will be responsible for driving job creation. Consumer demand will create opportunities for growth, which will require increases in production, hiring new staff, and expanding product distribution.”



# Impact on Skills

Employees need to develop skills such as cognitive flexibility, service orientation, negotiation, and creativity in order to stay relevant in the workplace

## IMPACT ON FUTURE SKILL REQUIREMENTS

As new jobs are created, the repertoire of soft and hard skills required in the Nigerian workplace will change. While technical skills such as programming, software development, and data analytics will remain highly sought after, survey and interview results show that soft skills top the list of those most important for employees of the future.

Survey respondents who began their jobs five years ago or less believe that cognitive flexibility and novel/adaptive thinking are the skills that will be most valued in their professional careers moving forward—which aligns with what employers indicate they will be looking for. However, those who have not switched jobs in the past 20 years believe that coordinating with others and computational thinking are and will be most valued.



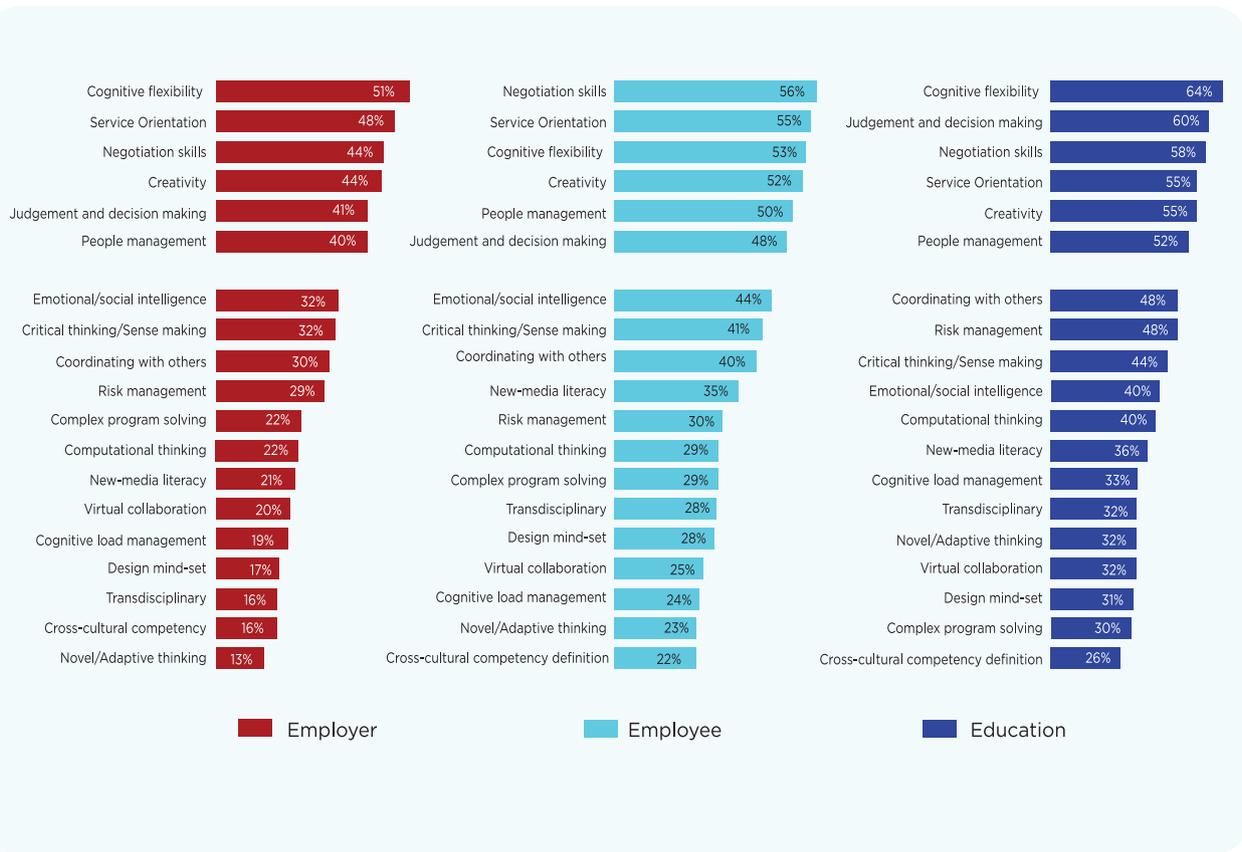
**Figure 22:**  
Which of the following skills do you think will disrupt the present way business is run in the next 20 years?



Overall, the soft skills projected to be the most critical for survival in the future labour market across industries include cognitive flexibility, critical thinking, problem solving, negotiation skills, people management, creativity, collaboration, entrepreneurship, and leadership.

The most sought-after technical skills will be related to information technology.

## Project skills for the future were presented to Employees, Employers, and the Education providers, to identify, based on their professional experiences, those that will be relevant in the next 10 to 20 years



## An industry take: Skills Required For The Future

### **AGRICULTURE**

“The type of skills that will be required are software development and machine learning. This will require a high level of education and training, comparable to that attained by commercial pilots of manned aircrafts”.

### **MANUFACTURING**

“The type of skills required will be technical, managerial, sales and marketing personnel.”

### **FINANCIAL SERVICES**

“Skills required are: coding skills, business analysis, data mining, software development, cloud engineering, software developers, and data scientists, and finance specialists.”

## **Survey results show that, in terms of hard skills, programming and other technology related skills came top (78%).**

This is followed by Entrepreneurship, according to 68% of the sampled employers of labour. Business owners look forward to the future where each employee in their organizations has the requisite skill to grow their businesses.

These two skills highlighted above came top and were endorsed by at least two-third of the Employers. The closest to them was Business Intelligence, mentioned by 43% as an hard skill that is continually relevant to their businesses. Employees surveyed were also in agreement, with majority validating that these skills are needful to stay competitive and relevant in the workplace of the future.



# Impact on Talent

## Mobile Workforce and Talent Strategies



Technology adoption will result in workforce mobility as workers will increasingly work outside of the office walls

### THE MOBILE WORKFORCE

A major trend across Nigerian enterprises is the migration of business applications to mobile devices (such as laptops, tablets, and smartphones), the cloud, and platforms. This, coupled with an increase in workplace automation and the adoption of intelligent technologies, will result in new ways of working, enhanced connectivity between businesses and customers, and an increase in remote collaboration. Employers will adopt new ways of engaging with their workforce as employee-employer relationships become more fluid, faster-paced, and focused on results and impact.

Consequently, the Nigerian workplace will increasingly be characterized by the eradication of organizational and geographic boundaries, as more and more workers work outside the office walls. The empowerment workers feel at having their work at their fingertips and the overall integration of the office and a mobile device can transform a range of workplace dynamics, from the way employees engage with the organization to the organizational culture and even talent attraction.

# CASE STUDY 5:

## Union Bank uses “Flexwork” to power remote work engagement across all its offices in Nigeria



**Industry:**  
Banking and Finance

**FlexWork:**  
Human Capital  
Engagement  
Remote Work



### THE CHALLENGE

Workplace expectations are evolving globally. Beyond traditional compensation & benefits, people are increasingly looking for work environments where they can grow and thrive, professionally and personally. With employees at the heart of business success, forward-thinking organisations seek ways to help their people integrate work and life. Accordingly, Union Bank prioritized work-life integration and sought to boost productivity by reducing non-value adding activities e.g. hours spent commuting to-from client locations in Lagos, Africa’s most populous city.

## THE SOLUTION

**Union Bank developed a solution called Flexwork.** This solution allows employees increased flexibility around their work locations – Flexlocations and work times – Flexschedule.

**Flexlocations:** Employees are allowed to work remotely, from their homes, or a pre-booked UBN branch, close to home.

**Flexschedule:** Employees rotate work in shifts within teams, providing 24-hour coverage for key services e.g. ATM services.

**Flexwork process is managed through a workflow solution.** This ensures visibility of requests, allows supervisors/teams stay organized and avoid gaps in productivity. Using Flexwork is also complimented by the bank's state-of-the-art, tech solutions for teleconferencing and collaboration.

Thus, employees are able to work independently on deliverables and connect to meetings from anywhere within the state or country. With the option to work from branches close by, employees can plug into secure network-based applications, ensuring bank/customer information stays protected.

## THE IMPACT

Though still in a testing phase, early signs of increased staff productivity and enthusiasm are indicators that the initiative will be a success. The reported time savings by staff should also help increase staff productivity if well channeled.

## Flexible working arrangements and opportunities for career progression are strategies for mitigating talent flight

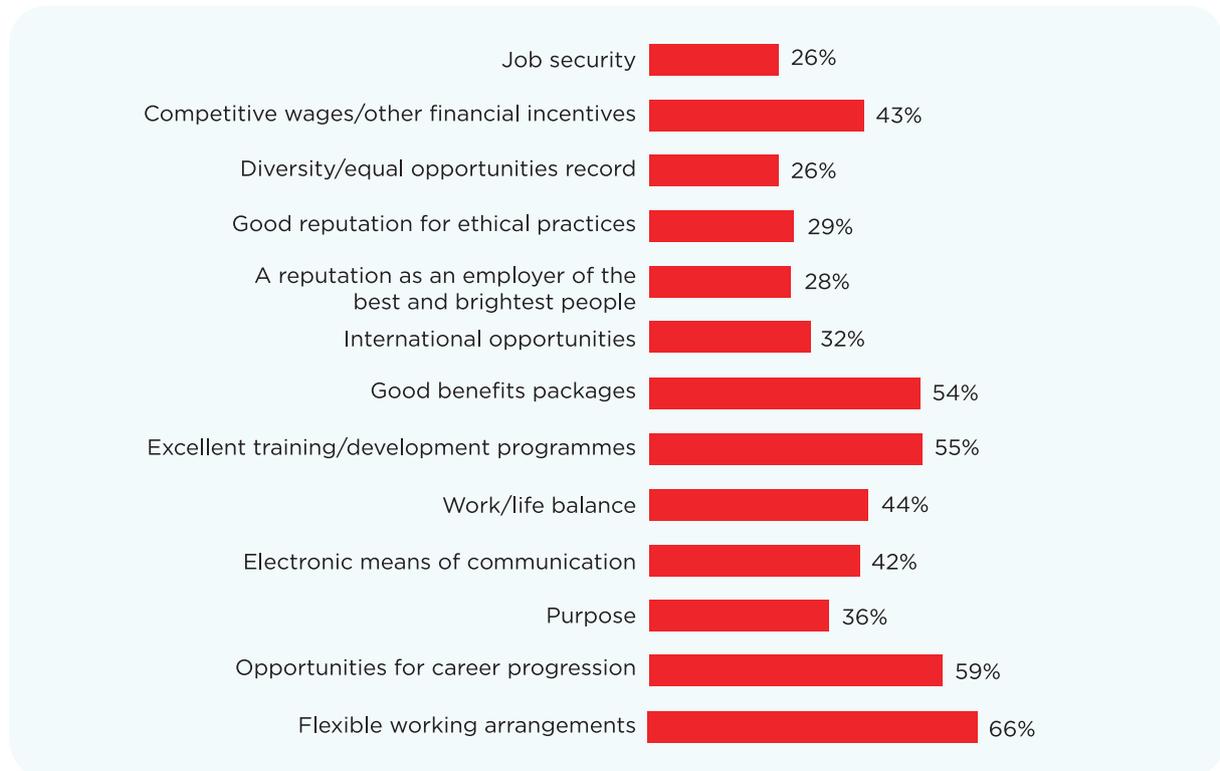
### ATTRACTING AND RETAINING TALENT

With the advent and rise of open source and online talent ecosystems such as Andela, Fiverr, TbcA, Uber, Kobo 360, and so on, connecting contractors and freelancers with employers has become easier than ever. The reach of these communities and networks is often global, well beyond the traditional geographical limits. Technology now facilitates the ability of talent to move across roles, markets, and geographic borders—making talent flight a major threat for the future workplace.

In a country where highly skilled employees are in short supply, employers must be proactive with their talent attraction and retention strategies, developing models suitable for building and managing teams of full-time and freelance talent.

We asked employers what they thought the most talented employee of the future would require of their employers. They highlighted such features as flexible working arrangements, opportunities for career progression, and excellent training / development programs as the most important for attracting future employees.

**Figure 25: What do you think the most talented employees will expect from employers in the future?**



## The talent pool will increasingly become a mix of full-time employees, contractors, freelancers, and crowd workers.

The rise of open source/online talent ecosystems and the rapid pace of innovation across business will result in a future talent pool that is a mix of full-time employees, contractors, freelancers, and crowd workers. Furthermore, as technology drives the pace of innovation in Nigeria's labour market, businesses will seek talent pools and systems that can be rapidly assembled and reconfigured, and will rely less on traditional employment models. In this scenario, traditional hierarchical business models will likely be replaced by team-based models and decision-making protocols.

"Technology narrowed the gap between people and places, and in the process has also increased the level of competition among companies globally. To survive the fierce competition of this century, companies need to get top talents and highly versatile workers that are not always readily available or willing to relocate to the company's address. Remote / flexible work in companies will in the nearest future be more than just an option but key to the survival of companies."



## **TALENT STRATEGY:**

# An industry take - Skills Required For The Future

### **AGRICULTURE**

“The incursion of technology into every workspace and the increasing growth and demand for technology solutions in Nigeria will make her workforce more geographically and occupationally mobile. Geographically because hindrances like transportation (physical and virtual) are gradually becoming nonexistent and with the hybridization of disciplines or specialties and emergence of newer ones, occupational mobility will continuously be on the rise in Nigeria.”

“Talent can be attracted by constantly engaging the universities and companies in the industry. More so, talent will be attracted by allowing more flexible working hours and work processes; creating an active learning and development environment; and focusing more on the individual than just his/her deliverables.”

“The future workforce will have options at their disposal, thus eliminating traditional workforce ethics; this will give room to more productivity and increased results for several organizations.”

## **TALENT MOBILITY & STRATGEY:**

### **MANUFACTURING**

“Nigeria’s future workforce will be very mobile, resulting from the online talent ecosystems, and remote collaboration tools. With this, companies will be forced to embrace flexible/remote working, easy recruitment and training to attract talent.”

“...creating a competitive workforce team with good remuneration package will help attract the right talent in the industry.”

### **FINANCIAL SERVICES**

“Work-life balance and other non-financial benefits will be key for talent attraction and retention.”

“Physical presence at work will likely not be as important as it has been the past few decades. Equivalent accountability can be achieved using tools and technologies that do not require physical presence.”

“Online talent ecosystem is one of the drivers of workforce mobility.”

“There will be a change in the terms of employment contracts due to mobility of skills. Most companies will employ staff on fixed-term contracts instead of permanent contracts. More so, there needs to be a general re-think of talent acquisition and retention, from recruitment to onboarding to compensation to performance measurement, in order to adjust for the changing demographics of more multicultural teams across geographies.”

## HEALTHCARE

“Companies that offer a flexible work environment will likely attract the best talents. Remote or dynamic workspace, a comprehensive compensation package, a clear path in career advancement—these will greatly influence talent acquisition.”

“To attract and retain talents, remuneration will continue to be the biggest motivation for employees. Creating a career path for talent will also be an advantage.”

“The workforce is expected to be more mobile, particularly as more and more people move from feature phones to smart devices. There will be a great opportunity to build platforms through which patients can interact with physical locations seamlessly.”

“Flexible conditions may apply to radiologists and cardiologists, but not likely for other clinical staff.”

“Attracting top tier talent will become more difficult as globalization makes it easier for them to move to higher paying geographies. Technology might help in being able to leverage their knowledge from these geographies but it will not stem the talent gap.”





CHAPTER FOUR

# Implications and Recommendations

OF WORK IN NIGERIA

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THE FUTURE



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## While the diffusion of technology into Nigerian organizations will produce (and has already produced) many workplace benefits, it will also result in greater operational complexity, which will need to be managed.

The potential opportunities for economic prosperity, societal progress, and individual flourishing in the future world of work are enormous. Yet, these depend crucially on the ability of all concerned stakeholders to fully understand the implications of changes that are already underway in Nigerian workplaces, and to be proactive in ensuring that the benefits and opportunities that arise from these changes are available to all Nigerians.

### TECHNOLOGY

While the diffusion of technology into Nigerian organizations will produce (and has already produced) many workplace benefits, it will also result in greater operational complexity, which will need to be managed. Furthermore, improved interconnectedness and the transmission of sensitive business information to mobile platforms exposes businesses (and individuals) to cyber security threats and new attack vectors. Organizations and individuals therefore need to take appropriate steps to secure sensitive information.

### JOBS

The future job landscape will likely be characterized by large-scale displacement of low-skilled workers and the creation of new roles requiring highly specialized technical skills and soft skills such as adaptability and the capacity to unlearn and relearn ways of doing business. For a country with low education attainment rates and an inadequately skilled workforce, the livelihoods of millions of Nigerians are under threat. Without the right reforms, low-skilled workers will be left competing for fewer roles suited to their skill sets, further exacerbating the country's unemployment rate.

### SKILLS

As a consequence of the future jobs landscape, Nigeria needs to reshape its skills development agenda. Current skill levels among the workforce predict a low capacity to adapt to the requirements of future jobs. Reforms in basic and higher education systems—and re-skilling the existing labour force via adult learning, vocational and technical trainings, and apprenticeships—are imperative for ensuring that skill sets meet employer needs and avoiding labour force redundancy. Cognitive flexibility, Service Orientation, Negotiation skills, Creativity, Judgment and decision making, People management, Emotional/social intelligence, Critical thinking/Sense making, Coordinating with others, and Risk Management are the top ten soft skills employers want to see in their employees as previously highlighted.

### TALENT

Businesses and organizations already cite talent gaps as a challenge of operating in Nigeria, and are likely to experience even worse talent shortages due to the risk of talent flight. Employers that are unable to



find talent locally may be driven to move specialized roles abroad, resulting in reduced knowledge transfer and reinforcing a cycle of talent shortfalls for local companies. Nigerian enterprises must therefore reinvent their talent retention strategies to mitigate the risk of talent flight.

One talent retention strategy is the rise in opportunities to work remotely. However, remote work exposes companies to the risk of losing or compromising sensitive information. Employers must find a delicate balance between securing sensitive information and equipping workers with mobile capabilities that can drive efficiency and job satisfaction .

## **Below, we recommend non-exhaustive courses of action that can foster positive outcomes for the Nigerian workforce, populace, and economy**

### **Reform the country's education system**

Reforms in nursery, primary, secondary, and tertiary education, as well as the development of vocational training centers, will determine the degree to which the next generation of workers will thrive in the future labour market. The current curricula will need to be refreshed to include digital and soft skills and should be developed in tandem with future employers. More broadly, reforms will need to ensure a departure from rote learning and involve rethinking how education is delivered, including both

traditional classrooms and online methods. As part of a more robust educational system, the roles of teachers should be enhanced, professionalized, and require accreditation that recognizes their skills.

### **Retrain the current workforce**

Retraining and upskilling the 85 million people engaged in the Nigerian workforce will minimize the level of displacement that occurs from the transition now underway and bring about new opportunities. Individuals' access to and willingness to undertake reskilling will also be important—and partly determined by the costs and time associated with the process, as well as clarity around its potential returns.

### **Develop social safety nets**

Safety nets can serve as short- and long-term buffers against future displacement and provide some level of income security, thereby minimizing the social cost of labour market disruptions. Governments, insurers, non-profits, unions, and other organizations will need to work together to determine the appropriate mix, reach, and financing model.

### **Incentivize job creation and protection**

Job creation can be incentivized via policies that create a better environment for small businesses and growing sectors and occupations in Nigeria. Policies that foster job creation could also target industries that are prone to high levels of automation. Furthermore, supporting entrepreneurs through better access to markets, finance, and skills can have significant benefits for economic resilience, innovation, and new job creation. Vastly improving such support and using it as a deliberate strategy to shape the future of work may improve outcomes for many people.



## Enhance digital access

Regardless of the future pace of technological change, expanding access to communication technologies will be key to facilitating new opportunities for all, including by enabling more collaborative work, virtual work, access to information, and access to markets. It will also result in greater work flexibility, which could help increase labour force participation of women and, in turn, address deficits in skilled labour supply.

## Manage mobility

In the future, common credentials for recognizing skills and standardized qualifications for all levels of education across different systems, countries, and languages will become even more critical.

Minimizing talent flight will require improving recognition and accreditation of Nigerian educational institutions, streamlining the hiring processes, developing the right employee engagement strategies, and making compensation competitive with other economies and markets.

## Collaborate

Closer collaboration between businesses and the education sector—and among firms seeking to address skill gaps in their own workforces and in the communities around them—can help ensure that tomorrow's workforce has the hard and soft skills they will need to thrive in a changing work environment, and that Nigeria's businesses will not have to look far to find the talent they need.



# Appendices

## Table of Acronyms

ACRONYM	MEANING
API	Application Programming Interface
ATM	Automated Teller Machine
e-WR	Electronic Warehouse Receipt
FMCG	Fast-moving Consumer Goods
GDP	Gross Domestic Product
ICT	Information And Communication Technology
RPA	Robotic Process Automation
SME	Small And Medium-sized Enterprise
SSA	Sub-Saharan Africa
UBN	Union Bank Of Nigeria
USSD	Unstructured Supplementary Service Data

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