



**BANKING IN AFRICA: STRATEGIES AND SYSTEMS  
FOR THE BANKING INDUSTRY TO WIN IN THE  
FOURTH INDUSTRIAL REVOLUTION.**

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# 1. INTRODUCTION

## 1.1 Banking sector in Africa is at cross roads

If the banking industry continues with the business as usual approach, it faces the risk of failure and going into extinction. We have Nokia, Kodak, Post office services as examples from previous revolutions. The need to put in place strategies and systems that are agile, scalable, provide rapid service, ideally at real time and expand areas of contact with client in a safe environment where client data is protected is key to making banking in Africa still relevant in the fourth industrial revolution. The competition from Financial Technology Companies (Fintechs) and Mobile network operators (MNO's), which are providing the same financial services in a better way, threatens the survival of the current banks. What was at stake after the global financial crisis of 2007-2008 was the continued existence of many banks, but what threatens us today is the survival of banking industry itself. John Chambers, former CISCO CEO, stated that up to 40% of the world's biggest companies will not exist in a meaningful way after the next decade, if they do not adequately prepare themselves for the 4th industrial revolution. The banking industry will have to undergo a very complex, uncertain and drastic strategy and Systems adaptation if they want to be part of the financial industry of the future.

This presentation covers the technological transformation and opportunities brought about by the fourth industrial revolution and the need to have the right strategy and systems in place to be able to take advantage and win. It discusses the different strategies and its impact on the Banking Industry in Africa. The recommended strategies and conclusions are arrived at through the practical learnings gained from our Africa Expansion Journey which took us to South Africa, Mauritius, Zambia and Senegal, in addition to interviews with some key stakeholders in the banking industry.

## 1.2 The Need for the Right Strategy and Systems

What comes to mind when you hear the word "Strategy?" Richard Rumelt, Professor of Business and Society at the University of California, claims that there has been an unfortunate tendency of equating motivational slogans and financial goals with strategy. A good strategy is a specific and coherent response to- and approach for- overcoming the obstacles to progress, like responding to changing market dynamics.

A good example of how an effective strategy can transform an economy, a sector or a company is the country of

Mauritius. In 1960, the country was a mono-crop economy which was supported by sugarcane. Today (2017) Mauritius is a well-diversified economy ably supported by Agriculture, Tourism, financial services sector, information technology centres and has become a vibrant business hub. More than 25 000 global companies with investment interests in Africa and India have established their head offices there. The country strategy is understood by all its stakeholders- whether we were talking to government officials, private sector community, the economists or the ordinary men on the street, the national strategy what clearly understood by all.

According to Francisco Gonzalez, Group Executive Chairman BBVA, the strategy and the systems required in the 4IR can only succeed if it is guided by clear vision, committed leadership and firm Principles of prudence.

## 1.3 The Fourth Industrial Revolution (4IR)

We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. Klaus Schwab, Founder and Executive Chairman of World Economic Forum, stated that the First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production and the Third used electronics and information technology to automate production. Now a Fourth Industrial Revolution which is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.

The speed of current breakthroughs has no historical precedent. When compared with previous industrial revolutions, the Fourth is evolving at an exponential rather than a linear pace. It is an era driven technological advances that enable the capabilities of the smartphones in our pockets, a mix of low-cost and high-power computers, high-speed communication, smarter robots and augmented (artificial) intelligence. According to Brad Stulberg, Researcher and columnist at New York Times, the Fourth Industrial Revolution is now. The ability to realize these gains will depend, in part, on the strategies during these early years which the players adopt and the willingness to reframe their business and operating models to make the most of this new technological infrastructure.

#### 1.4 Opportunities being presented by the 4IR

Like revolutions that preceded it, the Fourth Industrial Revolution has the potential to raise global income levels and improve the quality of life for populations around the world. Below are some opportunities which the 4th IR presents:

- Access to the digital world. Technology has made possible new products and services that increase the efficiency and pleasure of our personal lives. Buying a product or a Service, making a payment, transferring funds, listening to music, watching a film, or playing a game- any of these can now be done remotely. Technological innovation will also lead to a supply-side miracle, with long-term gains in efficiency and productivity. The new technologies have created entirely new ways of serving existing needs and significantly disrupt existing industry value chains. Disruption is also flowing from agile, innovative competitors who can oust well-established incumbents faster than ever by improving the quality, speed, or price at which value is delivered.
- Enhancement of organization's ability to fulfil customer expectations. Customers are increasingly at the epicenter of the economy and companies, which is all about improving how customers are served. There is also growing transparency, consumer engagement, and new patterns of consumer behavior (increasingly built upon access to mobile networks and data), which presents opportunity for companies to adapt the way they design, market, and deliver products and services.
- Opportunity to shape industry regulations. Legislators and regulators in the banking industry in Africa are being challenged to an unprecedented degree and for the most part are proving unable to cope. Business must collaborate more with regulators to reinvent the regulatory framework and also to ensure they truly understand what it is they are regulating.

How can African Banks, whether large or small, strategize and put in place the right systems and still remain relevant in this fourth Industrial revolution? Below strategic solutions which the banking industry in Africa needs to employ in order to successfully navigate the challenges and take full advantage of the massive opportunities coming with the 4IR.

## 2. WINNING STRATEGIES

A research by Norbert Schwieters, Partner with Pricewaterhousecoopers (Pwc) Germany, suggests that the Industrial Internet presents unprecedented potential gains for companies that claim leadership roles. Their ability to realize these gains will depend, in part, on their actions during these early years: the capabilities they build and the extent to which they reframe their business and operating models to make the most of this new technological infrastructure.

### 2.1 Rethink Your Business Model

Kevin Benedict, Thought leader and Founder of Digital intelligence, pointed out that transforming an enterprise is always difficult, but when an enterprise is highly profitable - digital transformation is even harder. The temptation to follow the maxim, "Don't fix what isn't broken," is just too compelling. "When you average 8% income growth for 35 years, it can breed a sense of, 'Why do we need to change? Things are working,'" John Mackey, CEO of Whole Foods, said in a recent interview with The Wall Street Journal. Today, however, Whole Foods is struggling to compete with other lower priced grocery stores that have embraced organics and healthier foods. If you take your eye off the game for a second, consumers will change directions on you.

The challenge enterprises are faced with today is that digital technologies are changing the way consumers behave faster and in different ways than executives have ever seen before. Today's profits can hide or mask the serious problems of tomorrow.

#### 2.1.1 Disruption in the business world

The business world has become accustomed to disruption and incumbents that cling to old business models lose ground to startup's that introduce new products and services at much lower prices. The next industrial revolution will accelerate this sequence, especially in banking, by reducing costs and improving efficiency at a broad scale. Companies that are slow to change will lose to those that rethink their business models to take advantage of the new platforms and the new opportunities. Banks cannot make money indefinitely by following its traditional business model as more flexible competitors (Disruptors) are taking market share.

### **2.1.2 Cut back on archaic, legacy activities and measurements**

Significant investments in Research and Development, operations, and customer experience and have to cut back legacy activities that no longer apply. This will take perseverance and discipline, but your competitive advantage lies with your role in the infrastructure of the future. Selling or shutting down less essential practices, and focusing your portfolio of products and services more effectively, can make you fit for growth in this new world.

There is need to shift measurement of banking profitability using traditional financial measurements like profitability, loans market share etc and start measuring an organization's level of investment into the future. In Senegal UBA bank has started the tracking of non-financial measurements as key success factors. In the top three is a key measure of level of digitization of the whole bank. The country CEO pointed out that average age for the population is quite young at 18 years old, and these being young (millennials) they are quite techno-savvy and very soon will be leaving banks opting for competition (disruptors) to get the required financial services. The rate of mobile penetration is also quite high, at above 70% and these will benefit from digitization. The company has no intentions or strategies to expand its branch network which is only 10 across the whole country as the strategy is shifting towards digitalization. In fact in 2016, the bank was awarded recognition as the most digitized bank in Senegal.

### **2.1.3 Time to shift towards robotic process automation (RPA)**

According to a research by Deloitte Consulting, banks should use modern technology to replace the mundane work which is normally left to human beings. In our journey into Africa the use of robots and Augmented Intelligence (AI) is something which is not yet engraved in African banks. Robots are arriving in the form of a technology termed "robotic process automation," (RPA), with the emphasis squarely on the process automation. RPA exists as software and are designed to automate a wide range of processes that tend to be repetitive, labor-intensive, and rule-based. For example in Finance and Operations, tasks like recording journal entries, reconciling general ledger accounts, claims processing, returns management, inventory processing and network monitoring can all be done using RPA.

RPA is a relatively simple and inexpensive software-based technology which costs about one-third of what a globally sourced employee might cost, requires no special hardware, and plays well in almost any IT environment. Business users typically resolve any exceptions or escalations that might occur as robots do the lion's share of the work.

RPA has also been found to be 15 times more efficient than humans and offers up to 90 percent cost-reduction opportunity, depending on the characteristics of the function to which it's being applied. In addition RPA can run 24/7, it can grind through time-sensitive reporting tasks that often require staff to log night and weekend hours in order to meet deadlines. It is often more accurate, with some companies reporting the complete elimination of data re-entry and rekeying errors.

### **2.1.4 Combine RPA with Augmented intelligence (AI)**

According to Jeff Morgan, Research Engineer at Trinity College Dublin, some companies are combining RPA with other technologies to automate not only human actions but human judgement, thus the term Augmented Intelligence (AI). Through AI companies can create toolsets that can tackle simple judgment-based processes, predictive decision-making, and more, to produce virtual customer assistants, conversational user interfaces and many other advances.

Emilia Marius, Senior Business Analyst at PWC added that with respect to Customer Care, chatbots have evolved enough to create a human-like interaction with clients and are never tired. They can even feel the customer's moods and react accordingly. An example is Swedbank, which is already experimenting with such a system called Nina. The natural language processing system is handling over 30,000 conversations per month, satisfying over 75% of the bank's clients. Nina is already helping cut call centre costs. Bank of America is also investing in Erica, a chatbot with predictive capabilities, looking to become the personal advisor in your pocket. Of course, Amazon could not just watch the game. Alexa, the digital assistant, can retrieve balance information, buy stocks, and compare insurance ratings and more.

**2.1.5 Be mindful of high unemployment in Africa**

Africa has a challenge of high unemployment levels and according to a report by African Center for Economic Transformation, 50% of graduates being produced from various colleges across Africa have no jobs. RPA and AI are not here to drive up unemployment, but to free human resources from daunting mindless tasks and give them interesting, thoughtful targets. People trapped in repetitive jobs are facing high error levels and high turnovers. Hence the intention should be on increasing the efficiency and effectiveness of workforce rather than eliminating it. The people relieved of routine tasks should then be refocused toward more valuable or rewarding activities. Over time, organizations could see lower staff turnover, higher morale, and increased internal innovation.

**2.2 Invest in Robust Interoperable Platforms**

What the value chain was to the old industrial system, the platform is to the new. Norbert Schwieters (a partner with PwC Germany), defined a platform as a combination of interoperable standards and systems. It creates a plug-

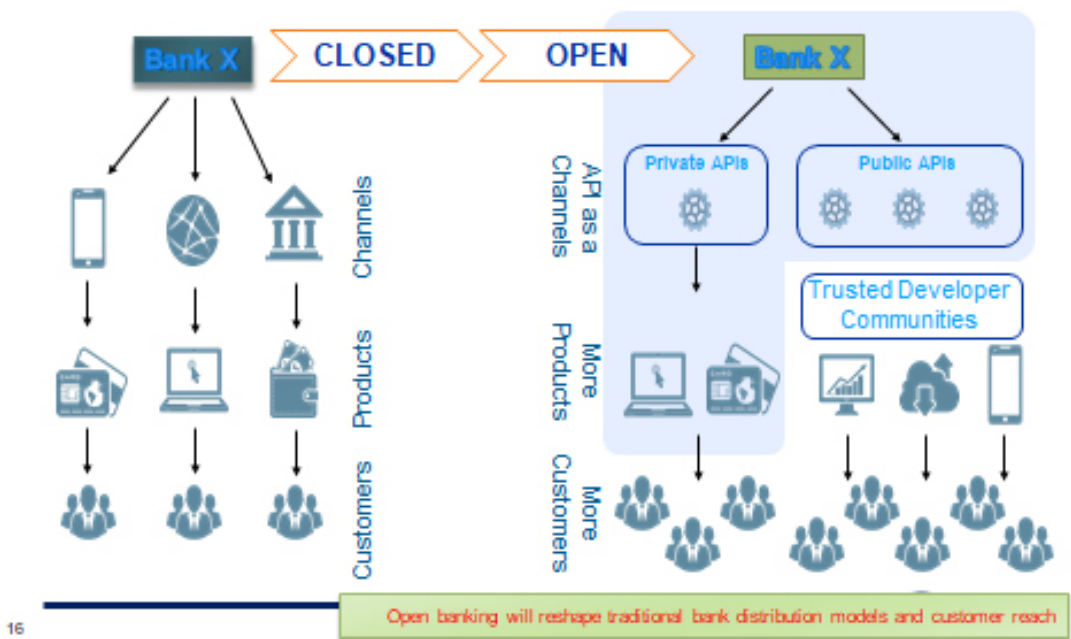
and-play technological base on which a wide range of vendors and customers can interact seamlessly with the same collection of the bank’s hardware and software and also with one another. The most successful platforms match customers with vendors, maintain an appealing and effective customer experience, and collect data and rents from people who use the system. A business that controls a popular platform — Microsoft with Windows, Apple with its mobile iOS, Amazon with its “everything store” merchandising system, Facebook with social media, and Google with its search engine — can influence the direction of evolution for a business-to-consumer market. The users of a platform become, in effect, an ecosystem: a group of companies exchanging goods and services.

The below diagram is showing how banks should move from closed API’s (platforms) and open up for customers, Fintechs, MNOs, suppliers. It definitely helps in terms of developing customer centric products, ensuring 24/7 accessibility and the list goes on.

**Banking Models**

*From closed to Open*

*APIs are the enablers of new and open business models*



Connectedness and data sharing are critical components for the bank of the future. We need to be connected to customers, to vendors, to Fintechs, to mobile network operators and regulators. The exponential increase in real-time data — gathered from customers, equipment, and work processes — is giving companies new insights. Gathering and analyzing data are important but more it is critical to use the analytic results to recognize important patterns, and to gain insights that help you make the right choices and keep improving on customer service offering.

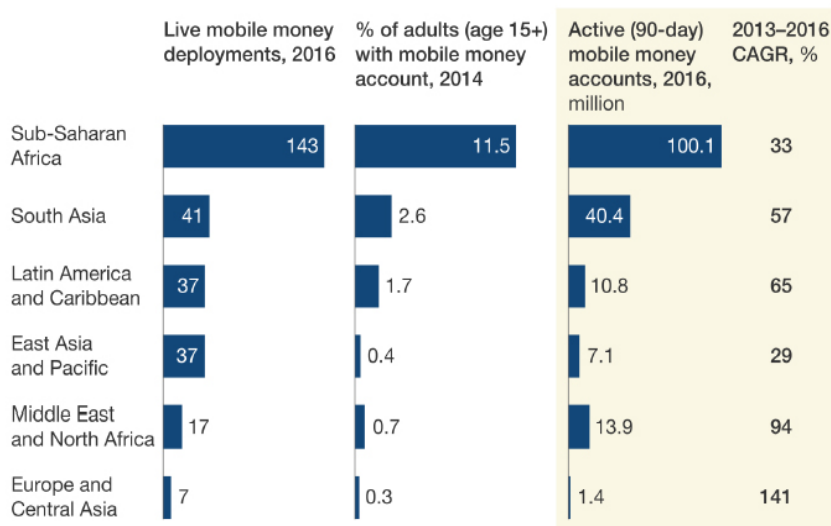
**2.2.1 Avoid multiple acquisition of same information from customers**

The Mauritian Central Bank is working on a single switch gateway for all payment systems. This will enable interoperability of systems among various players like mobile network operators, suppliers of services, Banks, central bank etc. This will enhance information sharing and eliminate multiple acquisition of same information (KYC requirements) by various players from the same customer. Ghana continues to see tremendous growth in Mobile Money Transactions by users of the service, at the end of September 2017 total value of transactions stood at GHS 109billion (USD24.5bn) This represents a growth of 112% over GHS 51.4bn recorded from January to September in 2016 (Source : Central Bank of Ghana (BOG) Nov 2017).

Another example is Kenya which currently has the best penetration of mobile money transfer services in the world. The latest Central Bank of Kenya (CBK) data shows that mobile payments grew 15 per cent to Sh1.19 trillion at the end of April compared to Sh1.04 trillion during a similar period last year. This double-digit growth in volumes came despite Kenya’s commercial banks in February launching their own platform for bank-to-bank cash transfer (called Pesa Link) which eliminates going through MNO wallets. Stephen Mwaura Nduati, a former Head of National

Payments System at the CBK, described PesaLink as a “low-level real-time gross settlement platform” where

**Africa is the world leader in mobile money.**



Source: GSMA Mobile Money Deployment Tracker; GSMA State of Industry Report 2016; World Bank Global Findex

McKinsey&Company

customers instruct banks to electronically transfer funds. Kenya has approximately 34.28 million mobile money users who transact on six major platforms— M-Pesa, MobiKash, Airtel Money, Orange Money, Tangaza, and Equitel. Now PesaLink has signed up about 3.5 million customers. Imagine the synergies and customer satisfaction which can be achieved in Kenya if all banks and MNO’s were to collaborate and ensure interoperability of platforms- the financials services will become cheaper and seamless throughout the country. This will significantly improve efficiency of the mobile money payment system as customers would be able to move funds straight from bank accounts to any other account/ wallet operated by a different bank and/or MNO. The reverse will be true when moving funds from MNO wallets to bank accounts. This eliminates the inconvenience of first moving funds from bank account to an MNO wallet before being able to transfer to a recipient who should also be a holder of a wallet under the same MNO.

## **2.3 The Banking Industry needs more and more collaboration**

### **2.3.1 Collaboration Fintechs and MNOs to reach the unbanked**

By 2025 Africa will boast a population of 1.47bn people connected to each other and to the rest of the world by more than 4bn connected mobile and smart devices. According to the UN's population report, Africa will account for more than 50% of world population growth boasting Africa among the youngest working populations in the world. In addition 2014 World Bank report found that approximately 66% of adults in Sub-Saharan are unbanked and operate outside of the formal banking sector. The GSMA mobile money deployment tracker also showed that Africa is the world leader in terms of mobile money deployments. Hence there is real scope for banking services to be extended to the unbanked population and the informal sector.

Rather than competing with Fintechs and MNOs, banking sector must partner or merger or collaborate more with them. This ensures that financial services are delivered to the whole population - both those who are unbanked and the under-banked. Fintechs are rapidly dealing with these challenges in areas such as payments, insurance and lending, which banks and other financial services players have struggled to holistically solve.

### **Major traditional banks are lagging behind in enabling the unbanked to have access to services**

We are living in an era of unprecedented change. Rapid innovation is more effective when you are open to collaboration with those outside your own company's walls. One of the most transformational of these changes has been the influence of the mobile phone which has become the most commonly used technologies on our planet. When people access financial services applications through their mobile phones, they become members of the digital economy, opening up a new set of opportunities, particularly for the unbanked - those individuals who are completely outside of the banking system today. The critical pieces necessary to make mobile financial services work is the relationship between mobile network operators and banks. To be effective, there needs to be a win-win relationship through partnership and collaborations between the banking industry and Fintechs (including MNOs).

We have talked about Kenya, which has the highest mobile money penetration in the world and how the financial services can be significantly improved through

for example interoperability of platforms. The same goes for South Africa, Mauritius, Zambia, Senegal and many other African countries. The amount of business being generated in the informal sector in Africa is even larger than formal sector in most African countries. In Senegal, Zambia and Zimbabwe the informal sector provides for more than 50% of the employment and country's GDP. The majority of the people in the informal sector already have mobile phones and yet they remain largely underbanked. For banks to offer financial services to this sector, partnerships and collaborations with MNO's and Fintechs is the way to go. Banks in Ghana have been in existence for more than 120 years and have managed to have a customer base of about 10 million. However, mobile operators have only been in existence for about 10 years and yet they have managed to reach out to 34million customers. The synergies which can be realised by cooperation between the two sectors will be immense. Mr Charles Mudiwa CEO of Stanbic Bank Zambia remarked that he does not see Fintechs as a threat to banking industry but as partners in the quest to satisfy the needs of our customers.

### **2.3.2 Collaborations with Fintechs results in opening of new markets and opportunities**

A report by BusinessLive publication of August 2017 indicated that the Rand Merchant Investment Holdings (RMI) made a 5% investment into a global Fintech (Prodigy Finance), through its Fintech investment arm, AlphaCode. Prodigy Finance is a marketplace lender for international MBA degrees. For instance, two years' tuition at a top global business school can easily exceed R1m, excluding living costs. This is beyond the reach of most graduates from developing countries who cannot meet traditional credit criteria. Prodigy Finance developed a credit scoring model which vets potential borrowers based on their future earnings potential. The company has never had to write off a loan and about 35% of its borrowers were of Asian and Indian origin, with South Africans making up about 8%. The average amount borrowed through the platform was 60% of the total cost of attendance. Since 2007, Prodigy Finance has provided over \$325m in funding to about 7,100 students. It expected to lend to 20,000 borrowers by the end of 2018. This new innovation definitely helps RMI in terms of rapidly reaching out to many new customers in a very short space of time.

### **2.3.3 Collaboration with Regulators**

Norbert Schwieters, PWC partner, and Bob Moritz, Chairman of PWC International, noted that current systems of public policy, decision-making and regulatory framework evolved alongside the Second Industrial

Revolution, when decision-makers had time to study a specific issue and develop the necessary response or appropriate regulatory framework. The whole process was designed to be linear and mechanistic, following a strict “top down” approach. But such an approach is no longer feasible given the Fourth Industrial Revolution's rapid pace of change. For business to operate fairly and efficiently, regulatory framework must be kept up to date. In order for this to happen, the banking sector in Africa and regulatory agencies will need to collaborate closely in order to come up with rules and regulations which are relevant in the fourth industrial revolution. If this does not happen, the regulations may not be friendly to the sector and may seem favouring the new entrants (disruptors).

For example, in Zambia and Zimbabwe when the Fintechs and MNO's started offering mobile money transfer and other financial services three years ago, there was an outcry from the banking sector, appealing to the central banks to stop Fintechs until there are clear regulations. But both central banks could not stop the Fintechs simply because the innovation was helpful in terms of reaching out to the unbanked i.e. the financial inclusion agenda. This was notwithstanding the fact that there were no proper rules and regulations to govern this service. Instead of putting a spirited fight against innovation, banks were supposed to collaborate with Fintechs and regulators in order to come up with a sound regulatory framework.

There are new emerging innovations in the sector, which are least understood by regulators and governments. These include the issue of Blockchain technology and cryptocurrencies. Interviews with senior officials from Central Banks of Senegal, Zambia and Zimbabwe have confirmed that they do not have regulations to deal with these. In South Africa and Mauritius, they have set up teams investigating how these works and how they may use the technology to come up with country's own digital currencies and regulatory frameworks.

Banking sector should actually participate; partner and sponsor regulators in their jurisdictions in coming up with sound regulations in such grey areas, otherwise the outcome can be unfavourable to the sector. Hence proactive rather than reactive approach to regulatory issues is needed in the wake of rapid innovations and unprecedented change happening in the sector.

## **2.4 Design for customers**

The next industrial revolution is driven by large-scale digital technology. The new infrastructure is a web of connections among people: Producers and consumers in particular, are much more closely connected than they used to be. Through smartphones and social media, consumers can connect directly to primary producers of the products and services they buy.

### **2.4.1 Develop new levels of design acumen required**

Norbert Schwieters, Partner at PWC, pointed out that there is need for new levels of design acumen in order to succeed. People will interact with banks through online automated systems, and perhaps through robots in the physical world. Are these machines appealing or frustrating? Do they draw upon knowledge of ergonomics and human sensitivity? (Does it mimic the sequence and pacing of human interaction?) Equally important, are your systems adaptable? The more easily professionals and customers can change and customize their systems, without having to be an IT professional, the more effective they will be. As banks design new platforms, products and services there is need build a truly customer-centric enterprise, one that connects with what people genuinely want and need from the sector, thus generating commitment that will last a lifetime. Gone are the days of general products lines. It must talk to the customer's specific needs. After all, the future customer might actually be non-humans who are connected to the banking platform. Banks may be interacting with robots, with intelligent gadgets etc whose needs must be specifically met.

### **2.4.2 Focus on purpose, not products**

To differentiate your company, you need to develop a clear purpose: a value proposition, more effective than anyone else's that applies to everything you do. This means looking closely at the reasons people come to your company, the outcomes they expect, and the ways you can deliver. When you are clear about what your company is, and why you sell what you sell, people will trust you to deliver what you promise. Customers recognize when a company fulfills its purpose. They are interested not in products or services, but in outcomes. Consumers at a bank are not just buying a loan or a mobile App. They are buying a distinctive experience as well. Instead of thinking of your company as providing a particular type of product or service — car loan, bancassurance, mortgages, say



— think of it as a producer of outcomes. You are not just selling insurance; you want to provide peace of mind at the time of peril.

#### 2.4.3 Banking products are out of touch with customer expectations

The reason why the informal sector is not banking, per interviews conducted in South Africa, Senegal and Zambia, is mainly because the participants felt that banking products are inflexible, complicated and expensive. This is because banks offer generic account products and not something specifically designed for the targeted customer. Big data analytics techniques must be used to come up with tailor-made solutions to meet customer needs. Remarking on what banks should do to remain relevant in the new world Mr Aziz Dieye, Partner in Charge at CABINET AZIZ LLC Senegal, was forthright and said banks must go out there to the customer, understand and facilitate deals to happen.

In Zambia, a Fintech company called Zona wanted to launch a loan product into the market. However just before launch, they did a market research to test acceptability. It turned out that the targeted customers did not want a loan product but actually wanted a savings product. They had to change and specifically design and roll out a relevant product which has been widely accepted by customers. Banking sector must therefore focus on customer centric products, and should develop products with the customer as opposed to churning out products and services to customers.

#### 2.4.4 Don't ignore the millennials who are the customers of the future

According to the World Economic Forum 2017 report, it is predicted that by 2050, Africa will have 1 billion young adults who are under 18 years and 40% of the youngsters in the world will be from Africa. These are basically the customers of the future. A study by World Pay 2016 also showed that 60% of the young adults prefer not to handle cash at all. Hence digital products and Applications is the way to go. Below are the basic expectations of Millennials from banks:

- expect real-time information on their transactions in bank accounts.
- want their financial institution to keep current with digital innovations
- expect a “smooth and easy” experience
- Millennials love quirky personalization and

- they expect to be given choice on what account information they want and how they should receive it.

Hence institutions should invest heavily in connectivity to ensure there is real-time accessibility all the time and should help millennials navigate toward a solution. The required components of meeting these needs include: adopting a mobile-first approach to provide personal, relevant and contextual solutions. Consider partnering with Fintech start-ups. Banks need to take a human-centric approach in their product development strategies. They should also leverage their customer data strategically to design and deliver an experience that is mobile, personalized and value-added. Banks must ensure they have online and social media platforms which are monitored real time to address the queries, suggestions and feedback from the millennials.

## 2.5 Dynamic Leadership and Skills

### 2.5.1 Put humanity before machines

You might think the principle of putting people before machines is so obvious that it goes without saying. If people are shut out of jobs, creative opportunities, income, and customer satisfaction; embracing technology will backfire. Business, in particular, will thrive in this new world only if its leaders understand the place of human values.

Set up your enterprise to foster better connections among people, to encourage humane behavior, and to build the requisite capabilities that overcome technological isolation. Your company will need people who can understand the technologies of the industrial infrastructure, such as artificial intelligence and analytics, but who are also adept at working with an organization's culture. Leaders who help people take pride in their endeavors will be critically important as suggested by Jon Katzenbach, the Managing Director of PWC USA. Most important of all will be a basic attitude of respect for human beings; as technology becomes more proficient at this larger scale, one of the most distinctive thing about people will not be their ability to solve problems or achieve results, but their empathy, intuitive judgment, and authenticity; their abilities to care, connect, and choose, in ways we can't predict in advance.

### 2.5.2 Banks should invest in 'talent hubs' in light of the war for talent

In a report by McKinsey and Co, Digital disruption, coupled with economic growth, has fueled an intense talent war, with organizations struggling to fill vital digital roles, such as big data, analytics, creative, social media and digital

strategy specialists. As such, the global emergence of attractive regional talent hubs in which organizations can build “hot houses” for “start-up-like” teams within their business are becoming, and will continue to become, increasingly familiar. Hence leaders should be dynamic and be able to create an environment which is an enabler of creativity, production, innovation and company culture. Think of Google’s offices, which ooze company culture through every primary colored writeable wall and slide, or the open work spaces that encourage chance meetings and, therefore, collaboration or innovation.

The leadership skills required should also create an environment in which young talent, Millennials, are free to work and excel. Hence the organization should have space to operate as talent incubators or nurseries. Michael Cook, Senior Manager at Center for the Future of Work EMEA, emphasized that the idea that millennials want freedom to work remotely is false. The real story is that millennials want to work closely alongside their boss to learn and also to make a good impression. Office design, therefore, needs to foster this, from seating arrangements that put management within touching distance of graduates, through to collaboration and break-out areas that encourage chance encounters of differing hierarchies in the business. Google has made an art out of the “chance encounter,” specifically designing office spaces with layouts that maximize “casual collisions”.

**2.5.3 Massive retraining of skills set is required**

A McKinsey & Company study found that about 30% of tasks in 60% of occupations could be computerized and last year, the Bank of England’s chief economist said that 80m US and 15m UK jobs might be taken over by robots. In 2013, a highly cited study by Oxford University academics called The Future of Employment examined 702 common occupations and found that some jobs – telemarketers, tax preparers, legal work, customer care, and reconciliations are at more risk than others like product development and relationship management. As already seen above, the fourth industrial revolution requires new skills set, which makes at least 50% of current skills redundant. This includes the sector’s human capital departments - new skills are required.

Through automation, use of AI and the internet of things, the jobs themselves won’t entirely vanish; rather, they will be redefined. However it is likely that the current staff will lack

the new skillsets required. One of the greatest challenges of leaders in the banking industry is about coming up with staff redevelopment programs to ensure that people are not made redundant but acquire new skills required in the future like design thinking, creativity, solving problems in complex situations.

Martin Ford, a Futurist specialising in impact of Robots and Artificial Intelligence, explains the jobs that are most likely to be at risk are those which “are on some level routine, repetitive and predictable”. The table below analyse the predictions on which job/skills set may be seriously affected by the 4th IR:

	<b>The least safe jobs</b>	<b>Chance of Automation</b>
1	Telemarketer	99%
2	Loan officer	98%
3	Cashier	97%
4	Paralegal and legal assistant	94%

Whereas currently, banking employees consists of tellers, data crunchers, KYC, Credit judgements etc, in future skills critically required include Data scientists, product designers, Augmented Intelligence (AI) Managers, Machine learning, Empathy Redux etc. Hence banks must have a comprehensive plan on staff development, talent recruitment and retention and this need to start now.

**2.5.4 Diversity**

The leaders of tomorrow must also ensure the staff/ team embrace diversity with respect to culture, race, skills set, age, and religion. This will ensure products and services are well thought through and healthy debates are done in meetings or brainstorming sessions. In Mauritius it was very interesting to see how different races collaborate and work together for the common good of the country. There is religious, cultural and racial tolerance and the country strategy permeates through the diversified population. Another good example of diversity and tolerance is Senegal where the president is a Christian yet Christians only form 5% of the total population and the rest is Muslim. Leaders have a challenge to ensure their teams are balanced and ready to tackle the challenges which come with the next revolution.

## 3. CONCLUSION AND RECOMMENDATIONS

The banking sector needs to wake up before it is too late as the risks of being irrelevant and extinct are real. At the moment, banking sector in Africa is not yet ready for the 4IR. Broad and bold strategies are required quickly to salvage the sector from the threats posed by the digital revolution. Fintechs and other providers of financial services from all over the world, have the potential to eliminate traditional banks within the next 10 years if urgent steps are not taken to change the way we do business.

### 3.1 Mindset shift is required

These innovations driven by the 4IR have the potential to make the banking industry and the world stronger, more efficient and better- but this is not a given. For people, there must be a shift in the mindset. Difficult as it may be, the future of work looks very different from the past. The Banking industry in Africa needs people with grit, creativity and entrepreneurial spirit to embrace this future, rather than those who cling to the status quo.

### 3.2 Human and machine

People can actually be better at their jobs with the technology of today and the technology that is yet to come rather than fearing that their human skills will be devalued. Humans and computers play differently and each has strengths and weaknesses. Computers can store massive amounts of data and are unbiased in their decision-making. Humans can read their opponent's weaknesses, evaluate complex patterns, and make creative and strategic decisions to win. Even the creators of artificial chess-playing machines acknowledge that the best chess player is actually a team of both human and machine. The world will always need human brilliance, human ingenuity and human skills. This shift will enable staff of the banking industry to make smarter decisions, solve tougher problems and do their jobs better.

### 3.3 Recommended banking sector strategies

The authors believe that the strategies below will ensure banking sector remains top of mind to customers hence benefit from the 4IR:

- Rethink your business model - move away from the traditional approaches to of measuring performance and start looking at investments into the future. Non-

financial measures like levels of digitalization, research and development investment, levels of robotic process automation (RPA) and augmented intelligence (AI) should be measured to ensure affordability, efficiency and accuracy when serving our customers.

- Invest in robust and interoperable platforms- the future of works is all about being interconnected. Banking systems need to be ready to communicate with other systems of important stakeholders like customers, suppliers, Fintechs and regulators. The Sector should move away from current requesting for customer information which is readily available on other platforms like MNOs and regulators. Operate with open API's and let the systems communicate with each other.
- Collaboration and partnerships with Fintechs, MNOs and Regulators cannot be over-emphasized. The unprecedented speed of innovation and disruptions calls for the sector to look outside internal capacity in order to remain relevant. Gone are the days when banks rely on internal IT departments, which usually take forever to come up with solutions for customers. Traditional IT departments should refocus their attention to security and stability issues of the platforms as the institutions make efforts to foster win-win partnerships and collaborations with MNOs and Fintechs in order to speedily bring breakthrough solutions to customers. Regulators are also paramount and hence the sector should participate and sponsor development of rules and regulations to govern the various innovations coming with the 4IR.
- Design for customers (customer centricity) - the application systems used by customers must have the right appeal and should be user friendly even for non IT specialists. Products must meet the specific needs of our diversified clients, be it millennials, the aged, business customers and even non-humans (who are the customers of the future). Engage the customers before launching products and services and ensure they develop the product with you rather than developing products for them. Time must be taken to understand the purpose of the product/service and ensure it is solving a particular customer need. That way the customer will see the value of the banks.
- Have dynamic leadership and relevant skills- there is too much emphasis on machines and automation coming with the 4IR. There is need for leaders who put humanity before machines. The right mix and diversity of staff with respect to age profile, race, culture, religion and skills is quite critical. All these must be allowed to contribute in meetings at all company levels, be it

product/service development or strategy formulation. Talent hubs and chance offices should be encouraged to help stimulate creativity and innovation. Above all, redevelop and retrain staff as close to 60% of all current occupations in the sector are likely to be irrelevant with the coming of the 4IR.

The above, are the ingredients required for banks to survive the challenges and benefit from the opportunities presented by the 4IR.

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