INSPIRE CONFERENCE 2020 : AFRICA BEYOND THE HORIZON

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Background and Aims of the report.

1. Is Africa ready to take advantage of the 4th industrial revolution?
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2. How can you disrupt yourself beyond the Horizon?
   – **Nick Verd**. Author and keynote speaker. Recognized by thinkers 360 as one of the top 50 Global Thought Leaders and Influencers on digital disruption and the future of work. Content creator and consultant.

Is Africa ready to take advantage of the 4th industrial revolution? –Michael Niyitegeka.

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- Whether we are ready is something that we will judge ourselves.
- Context is critical for us to understand whether Africa is ready or not.
- In a nutshell, the 1st Industrial generation was where we had the steam engine, where we got stuck moving.
- The 2nd industrial revolution was the Assembly line where we were getting things manufactured on scale
- The 3rd Industrial revolution is/was the computing where we have Internet and where Nuclear energy became a big thing.
- We are now part of the fourth Industrial Revolution and it is comprised of three major blocks.
- The first part is where we talk about digitization and we are talking about integration of value chains
- Here we are looking at cloud computing, mobile devices and internet of things.
- Then we talk about the digital business models and custom access and in this case we are looking at location detection technologies where we see tools like Google Maps that are able to give you a summary a monthly update of where you usually are at
- And that monthly report tends to also demonstrate to you how technology has become an integral part of what we are doing.
- The other component is what we call advanced Human Machine Interfaces. It entails how human beings are beginning to interact with the machines and machines have a way of interacting with them

- Another component still in this space of the 4IR is the whole aspect around authentication and fraud detection and that really talks about the digitization of products and service offerings
- Here we are talking about how bits and pieces are being enabled to carry digital capability.
- So as we go through this conversation, the most critical aspect is to appreciate that the 4th industrial revolution is largely defined by devices, human beings, internet and data.
- These four are becoming a critical component in how the 4th industrial revolution is playing about.
- Question- What does Digital look like in Africa?
- To answer this you need to first appreciate that digital in Africa is changing.
- As of January 2020, the number of mobile connections on our continent was is about 1.08 BILLION.
- The number of internet users is growing by the day, we are looking at 453.2 MILLION
- The active social media users are 217.5 MILLION.
- Sometimes when you look at these numbers one would expect the internet users to connect with active Social Media.
- However the difference with Africa is that for a number of people connectivity is a big challenge.
- So we access internet through multiple devices as you could find that on one person there could be more than one device and because of the way the internet is structured, every connection is an internet address, and is a unique address.
- So when have an inflated number of internet users it does not necessarily mean that those are human beings.
- This means that we still have some work to do in that space.
- Question- what have we seen in the last annual change in digital use in Africa?
- First of all the total population has gone up by 2.5%
- The mobile phone connections have gone up by 5.6%.
- The internet users have gone have up by 10%. So more Africans are getting connected and going to the internet.
- And the active social media users have gone up by 12%.
- That is a very good thing for us because if we are going to be part of the digital economy then we need to get more people accessing digital and using digital.
- Now what we know also in terms of investment is that on the African continent we're beginning to see a lot of inflow of capital investing in tech startups
- In the last one year, the investment into tech startups as of end of 2019, Africa was able to attract $491.6 MILLION growing by 47%.
- The start-ups receiving investment went up by 50%.
- But also the number of investors went up by 61%.
- So on the bigger picture of the whole scheme is that the Tech in Africa is beginning to attract players who are willing to put in their dollars because it makes business sense.
- There are six sectors that are largely growing :
  -Fintech space
  -Logistics space

      -Transport

      -E-Commerce

      -Agri-tech

      -E-Health

- In the report that was done by Disrupt Africa, it says that Fintech for the first time saw their investment inflow going down and logistics and transport started picking up in terms of ability to attract investment.
- So question; what is the Status of the 4IR Initiatives in Africa?
- Largely IOT (Internet of Things) and big data most applied. This is where we have most of the applications that are being built.
- Secondly we are seeing significant interest picking up in the Additive Manufacturing; this where you begin to add computing power on your manufacturing resources. Then also AI is picking up, and companies like Google have set up on the African continent in countries like Ghana and they are beginning to attract local talent.
- Then the use of Drone Technologies such as in Rwanda where they are using drones to plan supplies and also a couple of other things.
- Block-chain in Agriculture and supply chain management is all picking up.
- The African Development Bank report study does state that of the 6500 Tech startups in Africa as of 2019, about 712 are in 4IR related development which is a good thing. By implication it means that people are beginning to build stuff that is driven by the 4IR Technologies.

Conclusion.

- Yes, because most of the technologies coming up that are 4IR related are fueled by the power of data and so if your data is up to scratch then you will definitely begin to leverage the benefits out of the fourth Industrial Revolution Technology.
- Yes, because we cannot run away from internet as an enabler and as a driver.
- You will understand that the things entailing the 4IR such as robotics, machine learning, AI, data science have their foundation in Data and Internet.
- And so Organizations that are investing in data and internet are indirectly interested in making the Fourth Industrial revolution to work.
- We are ready because of the things that we are doing such as talking about it and understanding how we can prepare people for it. We are also seeing some governments investing in strategy development. For example the Government of Kenya recently released their 4IR strategy at road map, South Africa has done the same and we are seeing the same in northern parts of Africa as well.
- And in Uganda we are part of the 4IR Co-working group and task force and we should be able to see our completed strategy in the next couple of months.
- Another thing is that the general regulatory environment is present so if we are to look at it from the policies perspective and the laws perspective, we realize that we are doing quite a lot.
- We have investment infrastructure and general academic training in ICT related disciplines so we are conclusively more of ready.

How can you disrupt yourself beyond the Horizon? – Nick Verd.

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- You cannot stop the fourth Industrial revolution but you can influence its direction and impact in your life. Do not focus on the threats; focus on the opportunities!
- We need to start looking ahead and asking ourselves questions like;
- In the industry that I am, is this job going to still be viable in the next 5 years?
- Are the certificates that I have right now going to still be relevant in the next 5 years?
- Is this position am currently having going to be automated in the next 5 years?
- When we ask ourselves these questions we are repairing the roof when the sun is still shining.
- We are not waiting for circumstances to happen before we start thinking out of the box.
- Question- what does personal disruption mean?
- Many people think of disruption only in terms of new business models but disruption also works at a personal level, where people who want to pivot change and move ahead in life can disrupt and reinvent themselves.
- Personal disruption at its core is the ability to adopt forward thinking, evolve and reinvent yourself.
- Question – what is the 4IR?
- Well the term "Fourth Industrial Revolution" also referred to as 4IR or Industry 4.0 was coined by Klaus Schwab, Founder and Executive Chairman of the world Economic Forum in 2016 and published a book titled the same name.
- Mr. Schwab defines it as "a fusion of technologies that are blurring and the lines between the physical, digital and biological spheres."
- The 4IR simplified are basically in the things that we use every day. Such as;
  - Think GPS Systems that suggest the fastest route to your destination.
  - A voice activated virtual assistants such as Apple's Siri.
  - Personalized Netflix recommendations.
  - Personalized adverts based on your online activities.
  - Face book's ability to recognize your face and tag you in a friend's photo.
  - Banking from the comfort of your home.
  - Hit a button; get a taxi or food at your door.

- For Evidence of how quickly technology is moving, we compare telephone and Pokémon Go. It took 75 years for 100 million people to get access to the telephone but the gaming app "Pokémon Go" hooked that many users in less than one month in 2016.

- In order to start developing an exponential mindset, we have to first answer three critical questions

- Is up-skilling the ultimate solution to unemployment?

If everyone obscures will it then solve the problem of unemployment? If everyone acquires relevant skills the new economy is demanding, will everyone then have access to a job?

There are three reasons why this is not the solution;

- Digital transformation is happening.
  When processes and businesses go digital, it definitely means that less employees ,less overhead, so there will not be need for many human in an organization. And with Covid 19 happening, it is just driving digitalization especially in Africa at a rate never seen before. There are organizations here on the African continent that pre-covid, never would have embraced digital transformation, they would never have imagined their employees working from home. But because of Covid 19, they embraced digital transformation in just a matter of weeks. That is the kind of change that Covid 19 is forcing institutions and organizations into. So to state it clearly one reason why up-skilling is not the ultimate solution is because the digital transformation that is taking place at a faster rate also means that jobs are being lost at an equally faster rate.
- Exponential organizations.
  These do not need that many humans to do their work it means that they rely more on systems, automation and machines to run operations.
  More and more organizations are becoming exponential and they are using less and less people for example an organization that had 10,000 five years ago can do as much work with half the employees this year 2020. And that is the reality of what is happening right now.

- Intelligent machines: robotics. (Robotics Don't get sick)
  When you think about what is happening with Covid 19, there is a lot of worry about employees getting sick at work. This very worry itself is going to drive many organizations to embrace robotics, intelligent machines, Artificial Intelligence at work. Because when you consider robots, you do not have to worry about them getting sick. These are the realities that are happening. So we should keep in mind that as we teach in schools, even though everyone picks up the right skills, there will not be enough jobs for everyone.
- What other alternatives do youths have or is employment the only pathway to success?
- Does Africa need more degrees, MBAs and PHDs?
- As we answer the above questions it is important to point forward that some organizations are hesitant to train their employees because of the fear that they may leave not seeing how this traps the organization down.
- One example to clearly put out the impact of intelligent machines on jobs is given by Klaus Schwab, founder and chairman of World Economic Forum, he said in 2014, the three biggest

companies in Detroit had a market capitalization of $36bn, revenues of $250bn and 1.2 million employees. But in 2014, the three biggest companies in Silicon Valley had a considerably higher market capitalization amounting to $1.09tn, generated roughly the same revenues $247bn but with only about 137,000 employees ,that's about 10 times fewer the employees.

- It's also important to note that things were already bad before the pandemic. In July 2019, Nissan announced plans to cut 12,500 jobs around the world to focus on electric vehicles and driverless technology.

Conclusion.

- It is important to note that job loss due to automation is irreversible and due to that, job security is now an illusion as Artificial intelligence can handle insurance claims and basic book-keeping, manage investment portfolios, do legal research, and perform HR tasks.
- So for the question of how you can effectively disrupt yourself beyond the Horizon, the answer lies in realizing the fact that 4IR has democratized entrepreneurship.
- Now there is opportunity for businesses that can even be run from a smart phone or internet Café.
- This is where the biggest opportunities of the 4IR is;
- The Hobby economy. People can turn to their hobbies to make a living.
- The passion economy.
- The Gig economy.
- The Freelance Economy.
- These are all now versed into digital Economy.
- You can now start something of your own with little money just having a phone and access to the internet.
- All this is how the youth can disrupt themselves beyond the horizon after all the future of jobs is going to be the jobs that you will create by yourself. 4IR is not about new technologies or Apps; it's about a new era, new ways of thinking, new ways of making a living and new ways of doing business.