

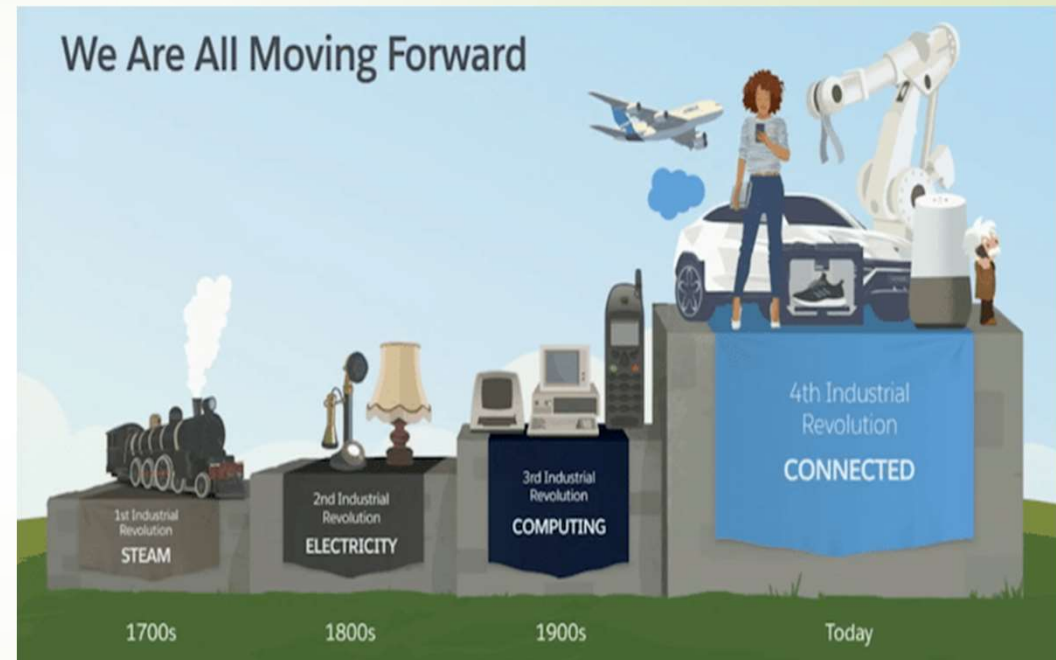
# Young Workers Facing the Fourth Industrial Revolution

By Martin Kaggwa



## In this presentation

- ▶ What is 4IR?
- ▶ What does 4IR entail?
- ▶ Opportunities and risks to young workers of 4IR technologies (Esp. MEC)
- ▶ Has Covid-19 fast-tracked 4IR?
- ▶ How should organised young workers respond to 4IR?

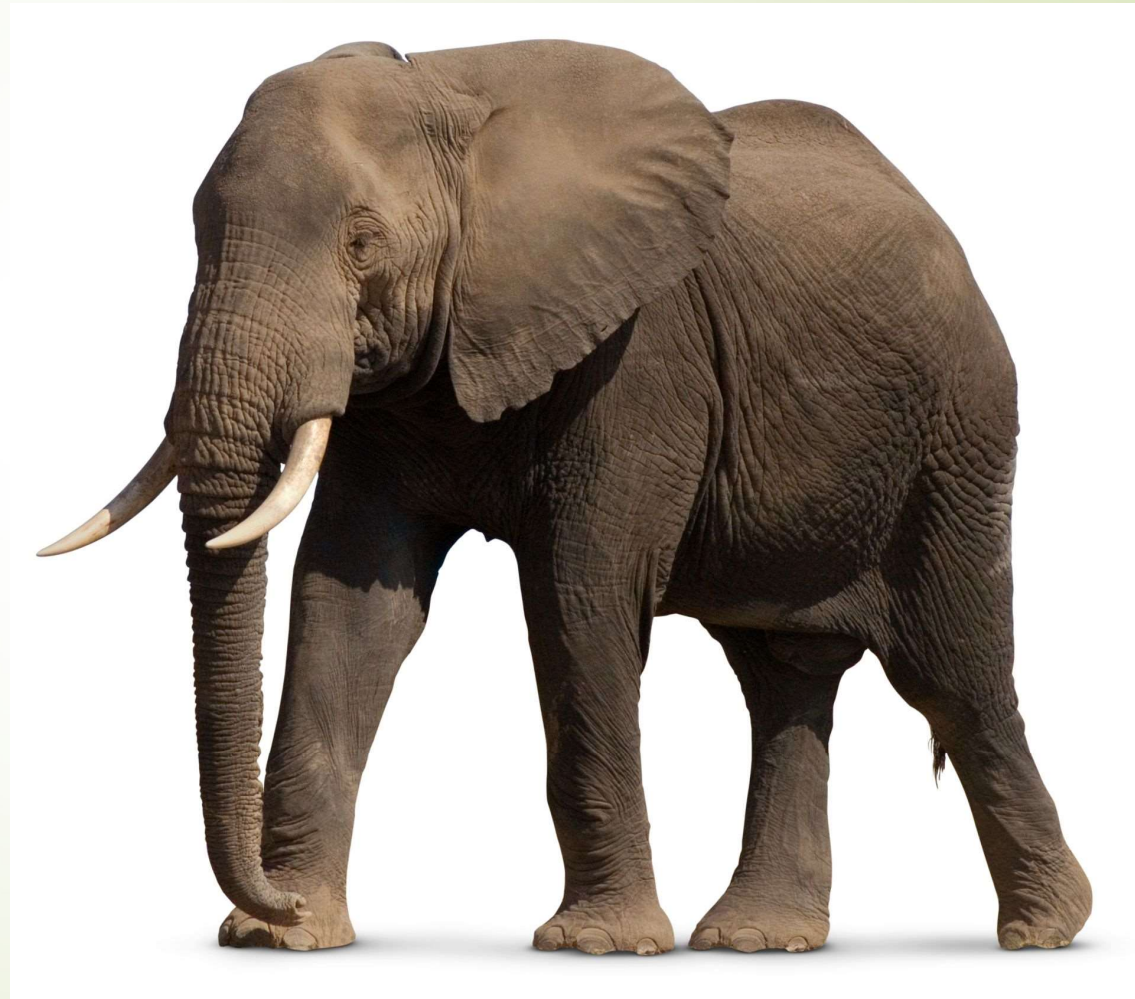


**Are we?**

## What is 4IR?

- ▶ Workers cannot engage with a phenomenon that they have not clearly defined
- ▶ An informed understanding and consensus by workers on what 4IR is before constructive strategies of dealing with it can be mapped out?

**The key question to reflect on: Is 4IR an ELEPHANT or parts of an ELEPHANT?**



## What is 4IR?

- ▶ Klaus Schwab: It is global development that is characterized by a range of new technologies that are fusing the physical, digital and biological worlds, impacting all disciplines or aspects of life.
- ▶ Industrial Revolution (**IR**): A fundamental change (based on technologies) in the way production of goods and services is conducted; and a way through which the produced goods and services are exchanged – **This is the elephant- the totality of 4IR!!**
- ▶ **4IR and accompanying technologies comes with benefits but also** make it easier to substitute humans with machines in the process of production and distribution of goods and services. The decision to substitute lies in the hands of private capital (Mainly) – **This is where mitigation strategies for protection of workers are required**
- ▶ Strategies to take advantage of 4IR while mitigating its adverse effects on workers need to approach 4IR not as an elephant but a collection **of parts of an elephant – the key elements of 4IR.**

## What does 4IR Entail?

- ▶ *The integration of cyber-physical and biological systems combined with Internet Of Things (IOT):* means that more than ever before, it is and will be possible to manage, control and manipulate what humans see and touch remotely through the internet.

**Implication to world of work:** Enables flexible, decentralised, but interconnected production systems. But can reduce head count, creates complex wages, benefits and remuneration systems. It further complicates workers' mobilization and subsequently to trade unionism

- ▶ *Big data:* The ability to collect massive amounts of information in real time, coupled with the ability to analyze and make us of it.

**Implication to world of work:** Raise questions who is collecting the data, for what purpose is this data collected and ultimately how ownership to this information changes the power dynamics between the workers and employers.

# What does 4IR Entail?

- ▶ *Cloud computing*: Using computer facilities, both hardware and software, owned by an external party.

**Implication to world of work:** It reduces the cost of Information and Communication Technology (ICT) for any business. Despite its cost saving attributes, adoption of cloud computing outsources in-house ICT job opportunities.

- ▶ *Robotics*: Focuses on the development and use of robots. Robots are computer-based devices programmed to perform functions ordinarily ascribed to humans (Kumar, 2018)

**Implication to world of work:** With improvement in Artificial Intelligence, robotics will put more workers, even those involved in carrying out complex and non-routine functions, at risk of job losses.

# What does 4IR Entail?

- ▶ Artificial Intelligence (AI): The creation of intelligent machines that are able to function and reason, to some extent, like human beings in solving real life problems.  
**Implication to world of work:** AI can increase efficiency, safety and extension of business life. However, its application can lead workplaces with no workers. The adverse socio-economic ramifications of workerless workplaces can be severe.
- ▶ Additive Manufacturing: Is about 'printing' rather than assemble products during the manufacturing process – technically called 3D modelling and printing  
**Implication to world of work:** Additive manufacturing narrows the value chain of creating products and in the process, it cuts out suppliers of auxiliary resources, leading significant job losses in the manufacturing sector.

# Opportunities and risks to young workers of 4IR technologies (Esp. MEC)

Will depend on the relationship between workers and the 4IR accompanying technologies - Workers Technology Category (WTC).

## **Opportunities:**

- Flexibility and zeal to acquire new high-tech skills – (Sector and activity specific)
- New technology-related jobs (Known and unknown)
- New jobs to mitigate\manage the undesirable outcomes of 4IR

## **Risks**

- Low\no relevant skills
- Not availed the opportunity to be part of high-tech production even with skills
- Low bargaining power of organised labour

# Opportunities and risks to young workers of 4IR technologies (Esp. MEC)

Will depend on the relationship between workers and the 4IR accompanying technologies - Workers Technology Category (WTC).

WTC Category	Economy (Money in pocket)	Everyday life	Overall well-being
1. Technology owners (Have IP)	Positive	Positive	Positive
2. Active technology users	Mainly positive but can be negative – spend more than they earn	Mainly positive but can be negative	Mainly positive but can be negative – Being controlled, tech addiction
3. Involuntary technology users	Mainly negative but can be positive – facilitates spending	Negative but can be positive	Mainly negative
4. Spectators of technology	Negative	Negative but can be positive in a few cases	Negative but can be positive in a few cases

# Has Covid-19 fast-tracked 4IR

➤ For some element of it: yes:

- Online shopping
- Zoom/MS etc meetings
- Covid contact tracing
- Fast tracked retrenchment in some companies – gave them an excuse to automate

**BUT**

➤ Also revealed is the number of companies closures and job losses it can create

# How young workers respond to 4IR

Young workers should advocate for interventions to protect workers and citizens against some of the technologies of the 4IR: How?

- ▶ Identify value chain areas within each sector that need to be protected from automation and technology, and those that can be 'let go'.
- ▶ Advocate that government comes up with an entity that oversees introduction of technologies in the country. As a rule of thumb, the impact of new technology on jobs and employment will have to be considered
  - Labour should lobby to be part of the pre-introduction evaluation of technologies.
- ▶ Advocate for local policies that encourage labour intensive production for labour intensity production being considered in government procurement.
- ▶ **Ultimately organized young workers should do all it can (legally) to make laying of workers through 4IR technologies expensive – At least in the short run.**

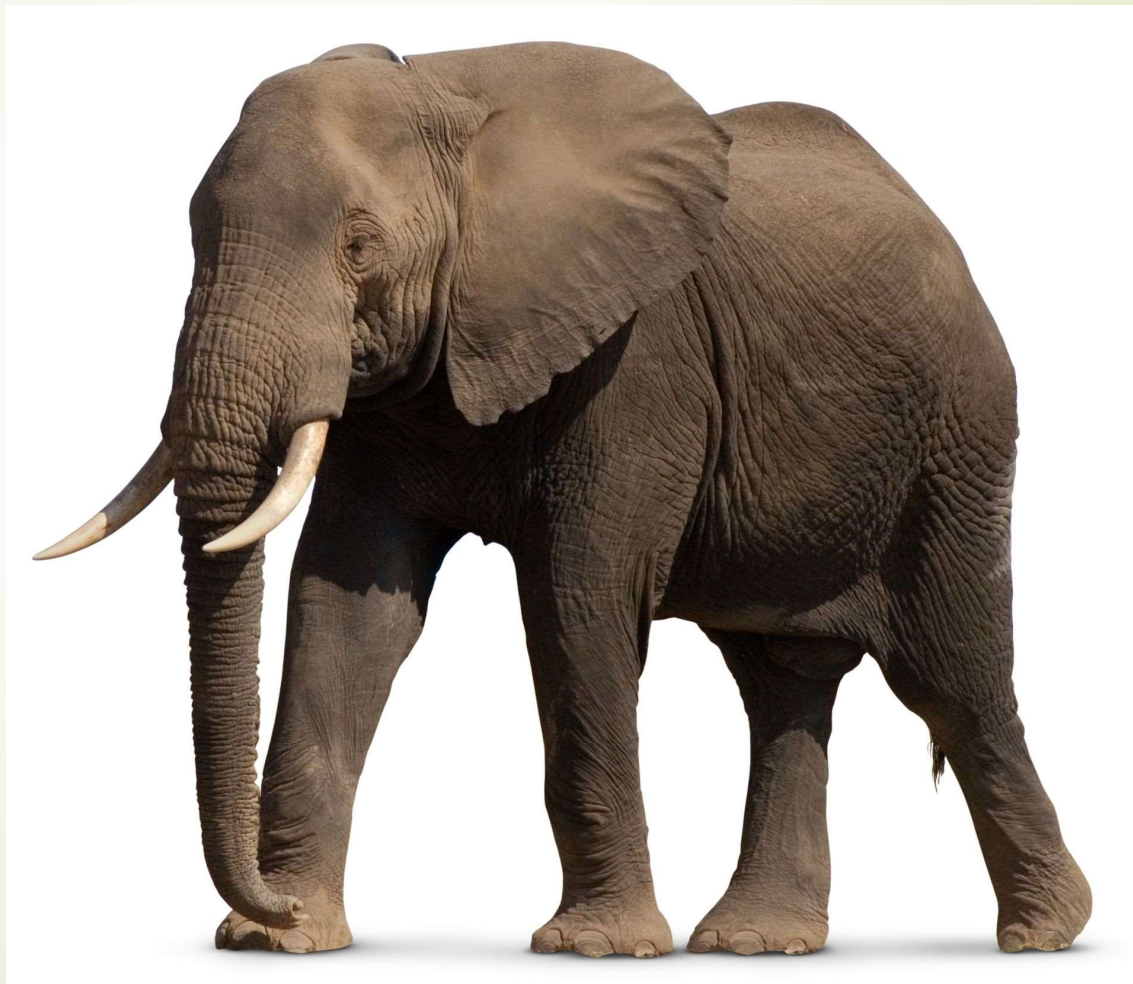
## Concluding remarks

- ▶ Not everybody will be part of the 4IR – Many will be observers. Hence the need to create safety net for the casualties of the 4IR. This could be one of new the roles of Trade Unions
- ▶ The decision on how to undertake production is a subjective one based on interest- If profits remain the key determinant of how to produce, under the 4IR, there will be a job loss blood bath!!
- ▶ Once captured by a certain technology, you are almost captured for ever!! Hence the need to be cautious before you embrace. Because the technology is available it does not mean that you need it.
- ▶ The country should approach embrace of 4IR technology with a clear understanding that although some aspects of these technologies can assist in achieving its development goals, to the owners of the technologies, the country is just a market that has to be tapped into.

## Concluding remarks

**So is the elephant here?  
OR Some parts of the  
elephant (eyes and ears  
are here?)**

**Should we allow in the  
whole elephant or parts  
of the elephant?**



# Thank You

