



ICT RDI Roadmap

Embrace The 4th Industrial Revolution: Creating South Africa's Future Workforce

Mr. Akhona Damane

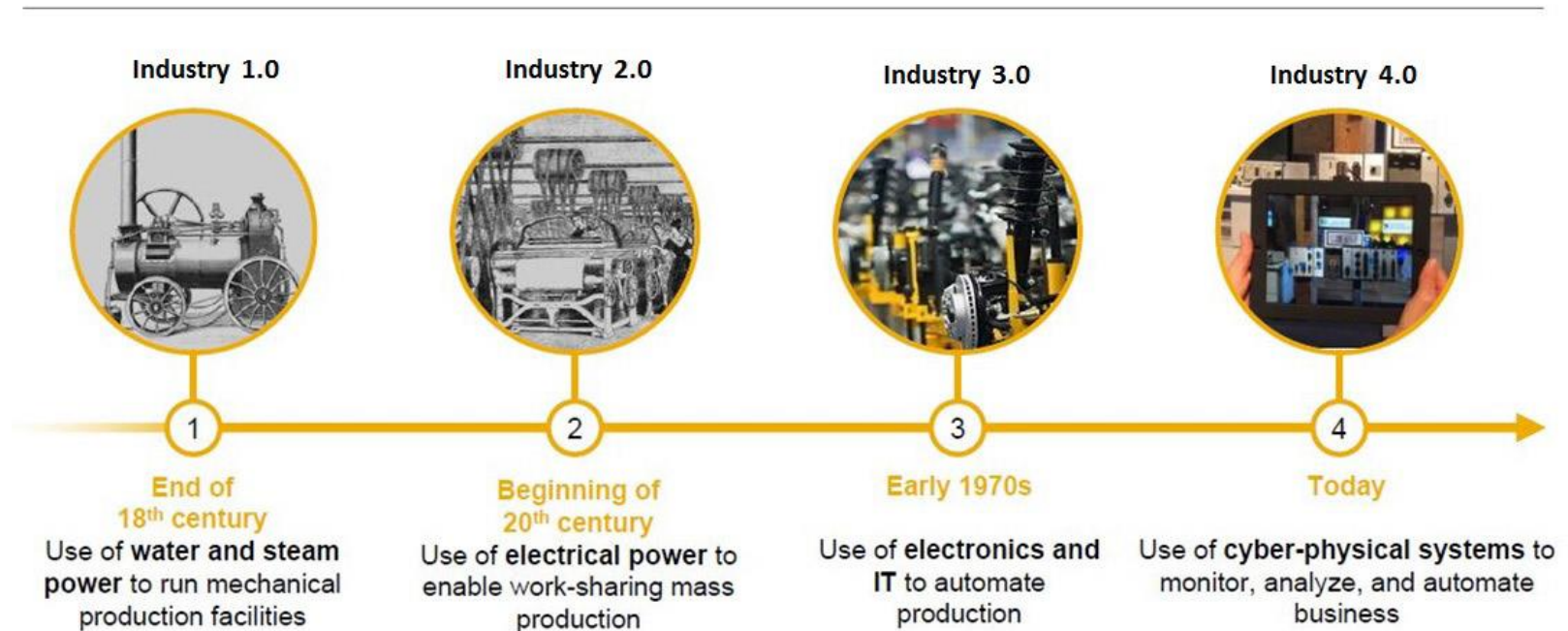
14 November 2018, CGCSA Summit, Bryanston
Towards Digital Advantage:
Roadmapping South Africa's ICT Future

Presentation Outline

1. Enter the 4IR
2. The Future of Work in the 21st Century
3. Opportunities for the Consumer Goods Industry
4. Leveraging on the ICT RDI ecosystem

1. Enter the 4IR

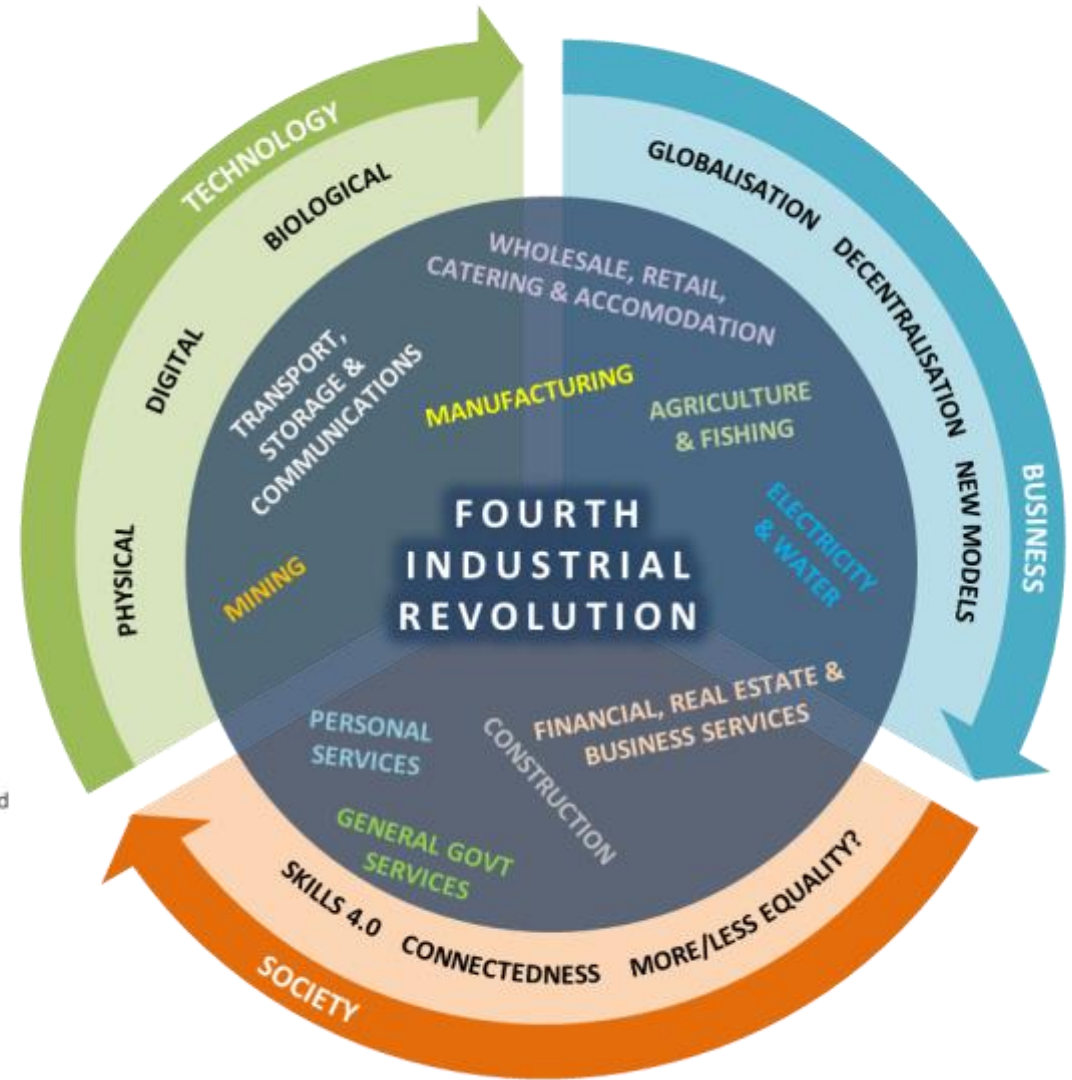
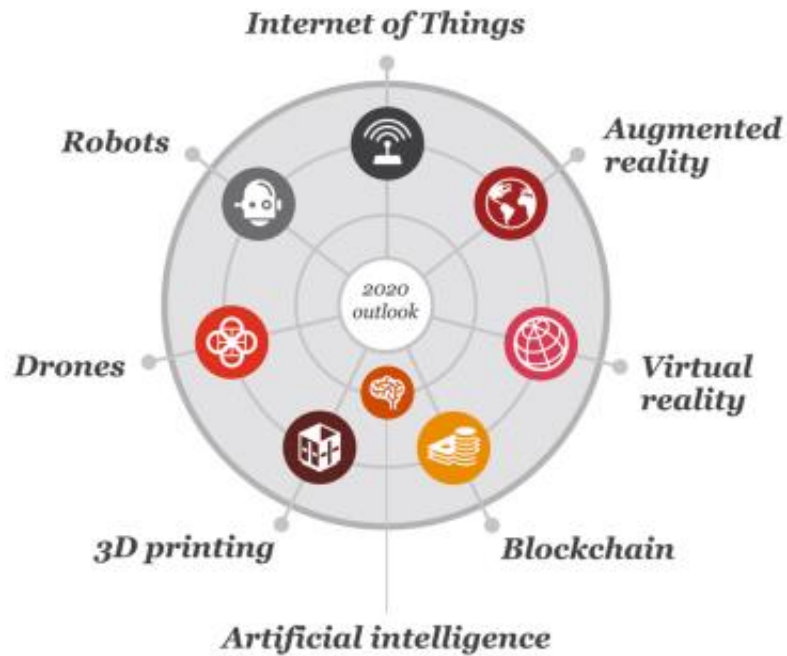
Four Phases of Industrialization



“The Fourth Industrial Revolution, which includes developments in previously disjointed fields, such as artificial intelligence and machine-learning, robotics, nanotechnology, 3D printing, and genetics and biotechnology, will cause widespread disruption not only to business models but also to labour markets over the next five years, with enormous change predicted in the skill sets needed to thrive in the new landscape”

(World Economic Forum, 2016)

1. Enter the 4IR (continues)



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#TechMegatrend

Source: M.Ford, CSIR (2017)

1. Enter the 4IR (continues)

Alarmists!

- Job losses (only tech ninjas will survive)
- Robotics will take over our world!
- FOMO

Realists!

- It's a progressive revolution
- There are always opportunities
- Africa presents unique opportunities (customise to indigenous settings)

2. The Future of Work in the 21st Century

Trends: Future of Work

- ❑ Towards a Green Economy
- ❑ Flexible Re-Skilling
- ❑ Sharing Economy (eg UberEats)

Source: ILO 2017

Considerations by the CGI (R&D and Innov.)

- ❑ The Circular Economy (as addressed in the DST's White Paper on Science, Technology and Innovation)
- ❑ Re-skilling and Upskilling through MOOCs (nano-degrees)
- ❑ Life-long learning
- ❑ Culture of Innovation and co-Creation
- ❑ Early Adopters of 4IR

Source: A.Damane (2018)

3. Opportunities for the Consumer Goods Industry / Skills4.0 Preparation



1. Knowledge about ICT

- > Basic Information Technology knowledge
- > Ability to use and interact with computers and smart machines like robots, tablets etc.
- > Understanding machine to machine communication, IT security & data protection



2. Ability to work with data

- > Ability to process and analyze data and information obtained from machines
- > Understanding visual data output & making decisions
- > Basic statistical knowledge



3. Technical know-how

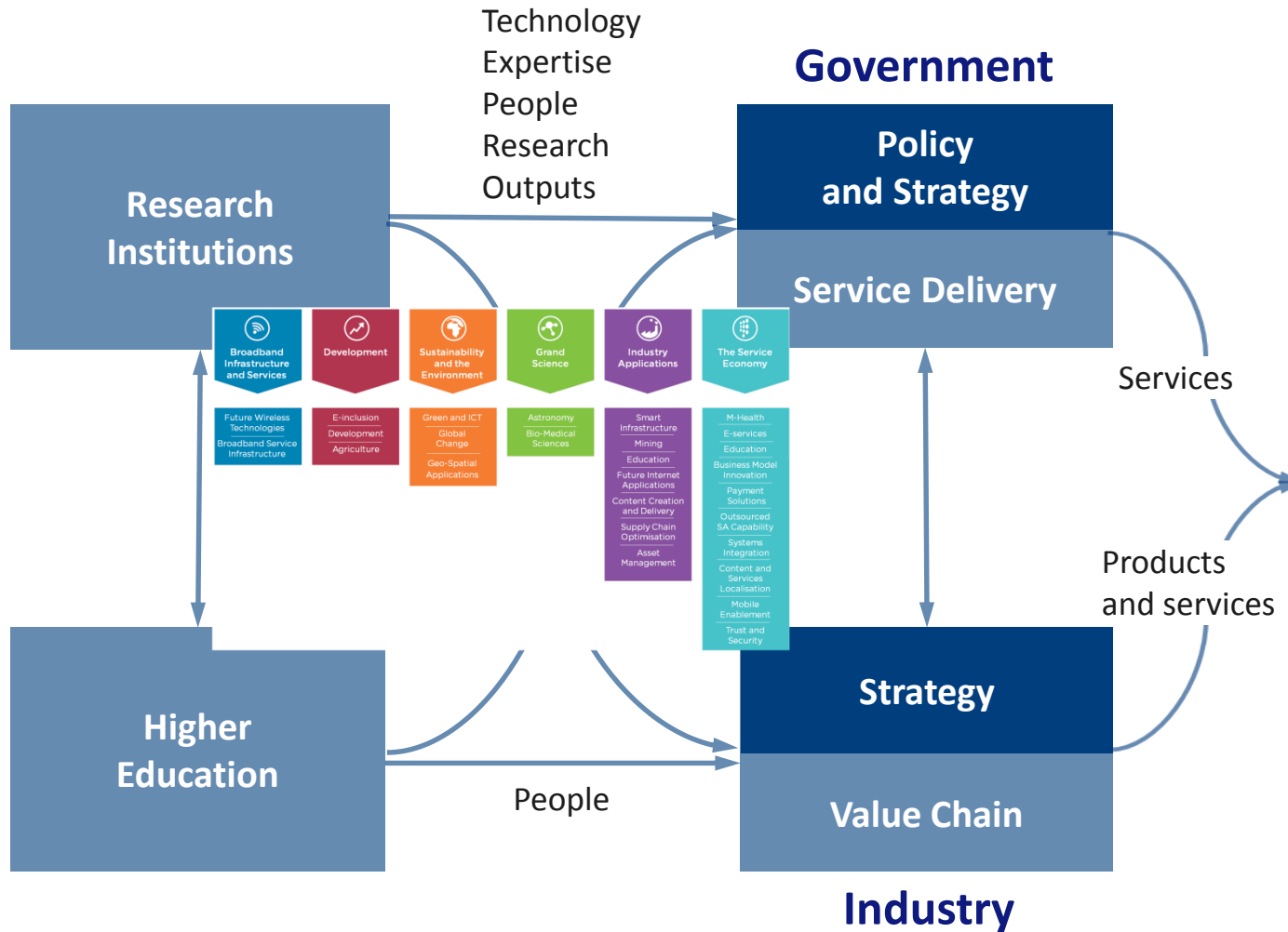
- > Inter-disciplinary & generic knowledge about technology
- > Specialized knowledge about manufacturing activities and processes in place
- > Technical know-how of machines to carry out maintenance related activities



4. Personal Skills

- > Adaptability & ability to change
- > Decision making
- > Working in team
- > Communication skills
- > Mindset change for lifelong learning

4. Leverage on the ICT RDI Ecosystem



National Outcomes

- ▶ Improved quality of basic education
- ▶ A long and healthy life for all South Africans
- ▶ All people in South Africa are and feel safe
- ▶ **Decent employment through inclusive economic growth**
- ▶ **A skilled and capable workforce to support an inclusive growth path**
- ▶ An efficient, competitive and responsive economic infrastructure network
- ▶ Vibrant, equitable and sustainable rural communities with food security for all
- ▶ Sustainable human settlements and improved quality of household life
- ▶ A responsive, accountable, effective and efficient local government system
- ▶ Environmental assets and natural resources that are well protected and continually enhanced
- ▶ Create a better South Africa and contribute to a better and safer Africa and World
- ▶ An efficient, effective and development oriented public service and an empowered, fair and inclusive citizenship



SIYABONGA

THANK YOU

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Contact Us:

Mr. Akhona Damane
Manager: Office of Digital Advantage

Email: ODA@csir.co.za

Adamane@csir.co.za

Web: <http://DigitalAdvantage.co.za>

