Digital Transformation

and Navigating towards 5IR



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Balancing Opportunity, Costs and Risks

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4IR and beyond:

How did we get here and where to?

4IR: how did we get here?





"The changes are so profound that, from the perspective of human history, there has never been a time of greater promise or potential peril."

- Klaus Schwab, The Fourth Industrial Revolution

Balancing benefits and risks

1st Industrial Revolution	2nd Industrial Revolution	3rd Industrial Revolution	4th Industrial Revolution	5th Industrial Revolution	In the 5IR, mind meets machine -
Mechanisation	Electrification	Automation and Globalisation	Digitalisation	Personalisation	harmoniously
Occurred during the late 18th and 19th centuries, mainlv in Europe and North America	From the late 1800s to the start of the First World War	The digital revolution occurred around the 1980s	Start of the 21st century	2nd decade of the 21st century	It is hoped that the 5IR will be more inclusive and sustainable The 5IR, which can be said to have
Steam engines replacing horse and human power	Production of steel, electricity and combustion engines.	Computers, digitisation and the internet	Al, robotics, IoT, blockchain and crypto	Innovation purpose and inclusivity	begun from the year 2020, sounds utopian
Introduction of mechanical production facilities driven by water and steam power	Division of labour and mass production enabled by electricity.	Automation of production through electronic and IT systems	Robotics. artificial intelligence, augmented reality, virtual reality	Deep, multi-level cooperation between people and machines	Economic analyst, advisor and author Pranjal Sharma's book The Next New: Navigating the Fifth Industrial Revolution, points to a 'creative destruction of business models'

"The rise of technologies like artificial intelligence, process automation and unmanned vehicles should not be at a human cost. Nor should it be at the cost of the planet" - Pranjal Sharma, The Next New: Navigating the Fifth Industrial Revolution



Al's fascinating impact on the world – Workplaces Disrupted

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All ability to acquire knowledge and think like humans

Different Al terms: Al, Machine Learning (ML) and Deep Learning (DL)

> Artificial Neural Networks (ANN) key component

ML: learning technique used within Al algorithms

DL: an approach to ML

What is AI?





At the 4IR core

Convergence of data from various sources

Al and the 4IR are interconnected

4IR comprises various technologies: cloud, Al, automation, IoT, etc. ML, other AI derives value from data

Quantum computing can enhance Al

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Unlocking the potential of businesses



Al enhances value in informationintensive domains (marketing, healthcare, finance)

Frees humans from repetitive tasks



Retail and banking industries driving AI system investments



Al improves efficiency, accuracy, and decisionmaking across industrial sectors



Al and digital twins jointly enhance processes and systems

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Unlocking the potential of businesses

Retailers adopt AI automation tools like iOCO's Procure-to-pay

Al tools to customise offerings + data led predictions + trends etc.

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> AI optimises call centres by analysing caller sentiment and routing calls effectively

End-to-end solution for invoice management

Personalised communication in fundraising Fraud detection handling significant turnover Predictive maintenance of equipment Rotary clubs - training on AI tools

> Al revolutionises banking and deepens digitisation



AI and Ethics in business

Ensure AI technologies are unbiased and uphold integrity Interpret AI to deliver fair and unbiased outcomes in diverse societies

Design technology aligned with equitable values Enhance environmental and social governance, supporting ESG considerations

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Generative AI will transform work across industries



Work time distribution by industry and potential AI impact

Based on their employment levels in the US in 2021



40% of working hours across industries can be impacted by Large Language Models (LLMs)

Why is this the case? Language tasks account for 62% of total worked time in the US. Of the overall share of language tasks, 65% have high potential to be automated or augmented by LLMs.

Source: Accenture Research based on analysis of Occupational Information Network (O*NET), US Dept. of Labor; US Bureau of Labor Statistics.

Notes: We manually identified 200 tasks related to language (out of 332 included in BLS), which were linked to industries using their share in each occupation and the occupations' employment level in each industry. Tasks with higher potential for automation can be transformed by LLMs with reduced involvement from a human worker. Tasks with higher potential for augmentation are those in which LLMs would need more involvement from human workers.

Fastest growing vs. fastest declining jobs

Top 10 fastest growing jobs

Top 10 fastest declining jobs

1.	AI and Machine Learning Specialists	1.	Bank Tellers and Related Clerks
2.	Sustainability Specialists	2.	Postal Service Clerks
3.	Business Intelligence Analysts	3.	Cashiers and ticket Clerks
4.	Information Security Analysts	4.	Data Entry Clerks
5.	Fintech Engineers	5.	Administrative and Executive Secretaries
6.	Data Analysts and Scientists	6.	Material-Recording and Stock-Keeping Clerks
7.	Robotics Engineers	7.	Accounting, Bookkeeping and Payroll Clerks
8.	Electrotechnology Engineers	8.	Legislators and Officials
9.	Agricultural Equipment Operators	9.	Statistical, Finance and Insurance Clerks
10.	Digital Transformation Specialists	10.	Door-To-Door Sales Workers, News and Street Vendors, and Related Workers

Source World Economic Forum, Future of Jobs Report 2023.

Note

The jobs which survey respondents expect to grow most quickly from 2023 to 2027 as a fraction of present employment figures

Data - premised services

Hyper-personalisation is critical for success

Customer Expectations:

Sophisticated and Personalised interactions

<u>Hyper-Personalisation</u>:

Understand customers deeply Leverage data Offer tailored services

Three Key Aspects:

To achieve hyper-personalization — Know Your Customer Data Analysis Actionable Insights

Implementation:

Modern tech WOW Machine Learning Al Custome<u>r-centric culture</u>









Culture shift and

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Skills

A broader education ecosystem for financial services

- Competing for the same skills within the financial services sector is not a sustainable approach
- Partnerships society, enterprises and government need to work together to bridge skills gaps. Skills should not be developed in isolation
- The holistic skills ecosystem must also focus on preventing the poaching of talent
- We must strategically identify the skills we need and work together to nurture these talents
- We must futureproof talent by equipping them with skills for an evolving sector

Figure 1 Farinha and Ferreira's Triple Helix Triangulation model²



The digital skills – jobs imbalance

- South Africa has a skills shortage estimated to be in the region of around 77,000 high-value digital jobs
- Without the right IT skills in place, digital transformation and growth will be hampered
- A larger pool of relevant skills is necessary to increase South Africa's opportunities in the global 4IR and 5IR
- Because of the skills gap, over 50% of employers are recruiting ICT skills internationally
- At the same time, 46.5% of South African youth are unemployed



Tech Skills Availability in Africa





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How to prepare:

- 1. <u>Embrace Technology</u>: Provide cutting-edge technology and digital tools that facilitate remote work, collaboration, and flexibility.
- 2. Offer Personalisation: Implement personalised learning and career development plans to match individual needs and aspirations.
- **3.** Focus on Well-Being: Promote a healthy work-life balance, mental health support, and flexibility to enhance overall well-being.
- 4. Emphasise Sustainability: Align with their values by promoting ESG initiatives and ethical business practices.
- 5. Foster Inclusivity: Promote a diverse and inclusive workplace culture, addressing social justice and equality concerns as we are and will continue witnessing disruption at speed.
- 6. Provide Growth Opportunities: Offer clear career paths, mentorship, and leadership development programmes for ambitious employees.



Scaling data-driven outcomes with security:







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Questions

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