



Manufacturing for Accelerated Recovery in the Post-C19 Era

How technology is shaping competition and collaboration in a converging world

How should Governments respond?

Dr Martyn Davies, Managing Director, Emerging Markets, Deloitte

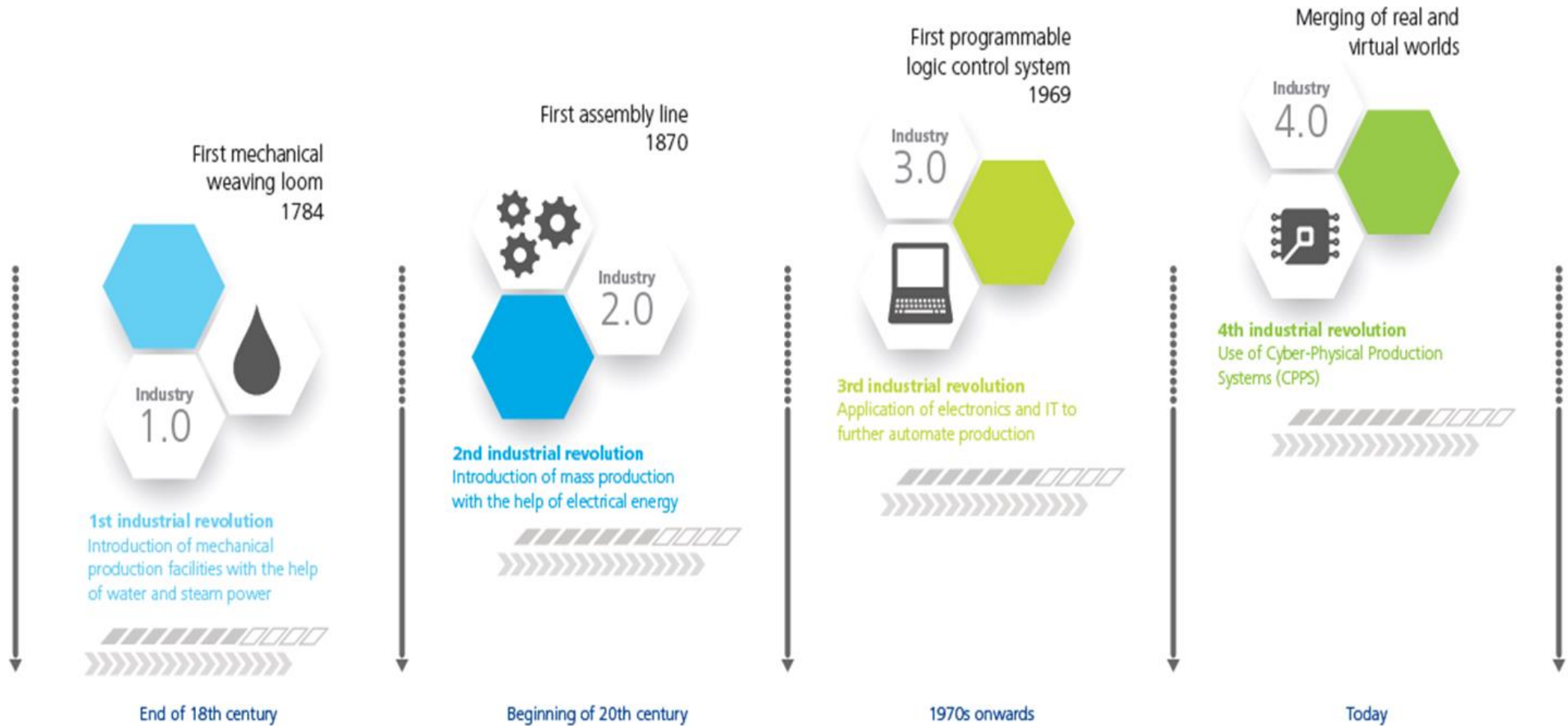
Presentation to United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

30th November 2021

Understanding the 4IR

Is it different this time?

Industrial revolutions: 1.0, 2.0, 3.0 and 4.0..

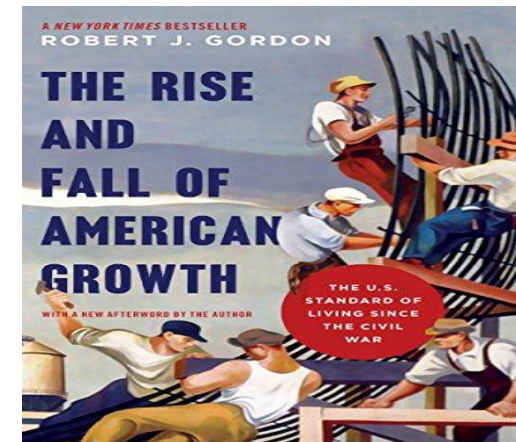
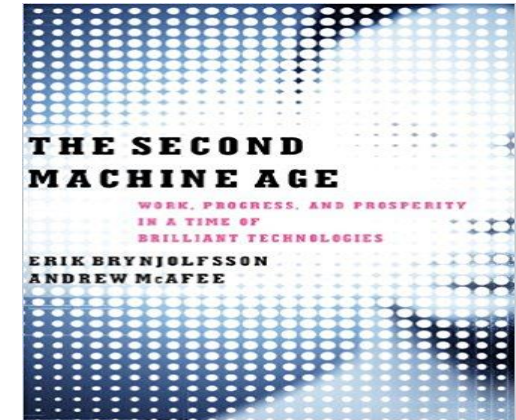


4th Industrial Revolution: It's the Techno-optimists vs the Techno-pessimists

- The 4IR is generating significant debate as to how companies and governments should respond to increase their competitiveness
- Technological change never been more rapid and is creating exponential opportunity

or

- Are we in a period of secular stagnation considering lack of productivity gain?
- The major impact of the Internet has already been felt
- Are today's innovations much less important than clean water, electricity, automobiles?
- *The impact of Covid-19 is now dramatically changing the technology landscape*



The rise of the robots and implications for employment



Africa's challenge - Capital is not terribly interested in labour-intensive industries

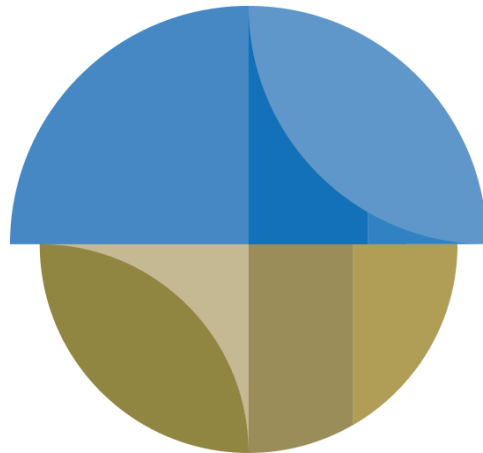
While the adoption of digital technologies will lead to the replacement of many traditional jobs, it will also create many new jobs and will lead to net gains. The changing job landscape will require massive reskilling of workers.



Job landscape

By 2025, new jobs will emerge and others will be displaced by a shift in the division of labour between humans and machines, affecting:

97 million



85 million

Growing job demand:

1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. Big Data Specialists
4. Digital Marketing and Strategy Specialists
5. Process Automation Specialists
6. Business Development Professionals
7. Digital Transformation Specialists
8. Information Security Analysts
9. Software and Applications Developers
10. Internet of Things Specialists

Decreasing job demand:

1. Data Entry Clerks
2. Administrative and Executive Secretaries
3. Accounting, Bookkeeping and Payroll Clerks
4. Accountants and Auditors
5. Assembly and Factory Workers
6. Business Services and Administration Managers
7. Client Information and Customer Service Workers
8. General and Operations Managers
9. Mechanics and Machinery Repairers
10. Material-Recording and Stock-Keeping Clerks

Reskilling needs



of current workers' core skills are expected to change in the next 5 years.

Source: Future of Jobs Report 2020, World Economic Forum.

For example...15 jobs that didn't exist 15 years ago



Social Media Manager



AI-related Jobs



Content Curator



Data Scientist



Online Brand Ambassador



Virtual Assistant



Podcast Producer



Cloud Architect



Telemedicine Physician



Mobile Web Developer



SEO Analyst



Automated Driving Jobs



Experience Designers



Developer Evangelist



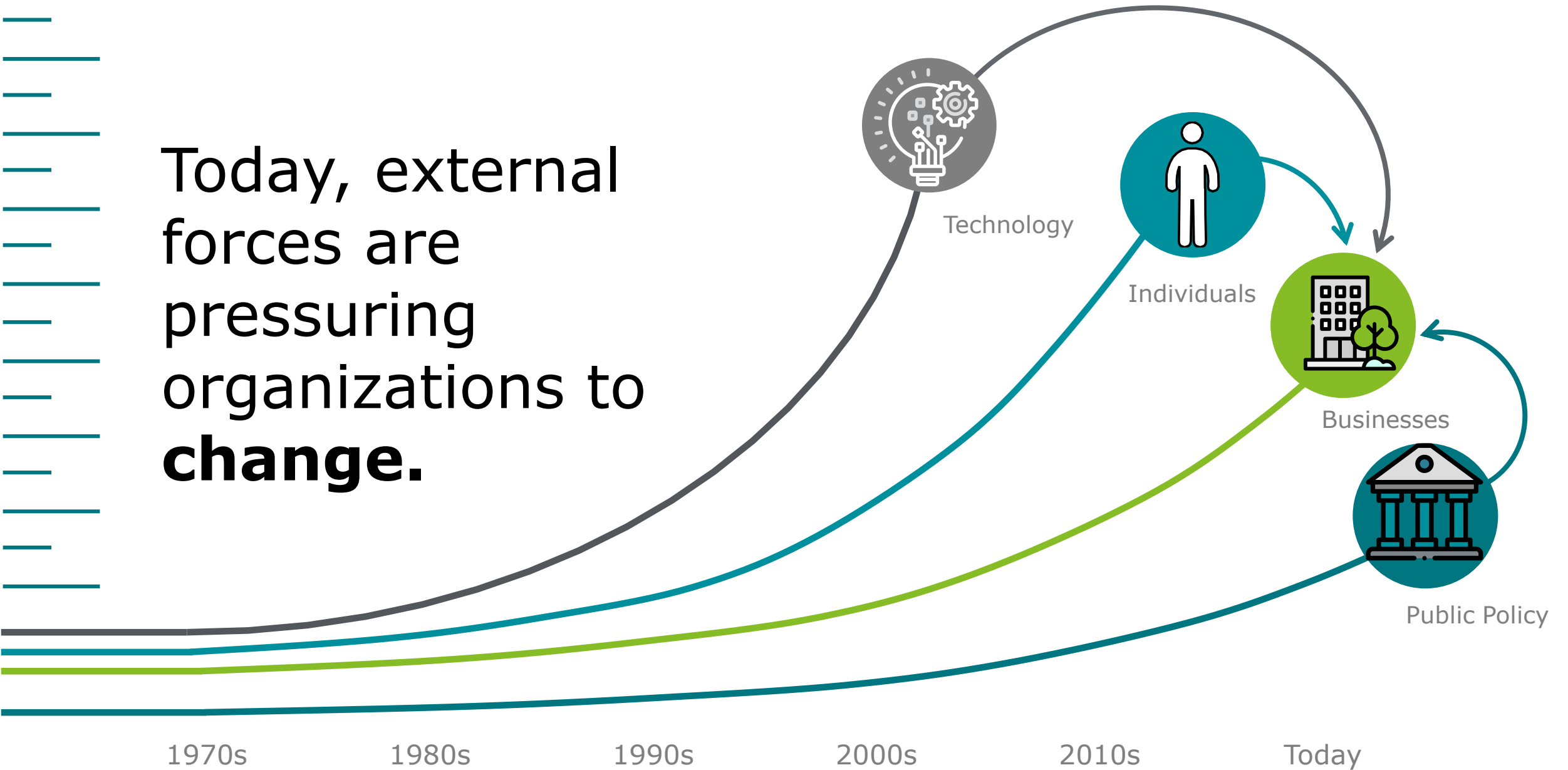
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Thoughts on the future of employment

- Manufacturing is like agriculture
- Rapid productivity growth leads to fewer employment opportunities - this has occurred in all countries
- In developed countries this has led to deindustrialization and unemployment
- In developing countries, it has led to premature deindustrialization
- Productivity growth has also increased the relative demand for skilled workers
- The share of manufacturing employment available for low skilled workers will inevitably decline
- The decline can be temporarily offset by improved competitiveness, especially increased exports and faster overall growth (but this is not a long-term strategy)
- Most employment growth will be in services and knowledge-based sectors
- Therefore so-called “industrial policy” is no longer an employment growth strategy

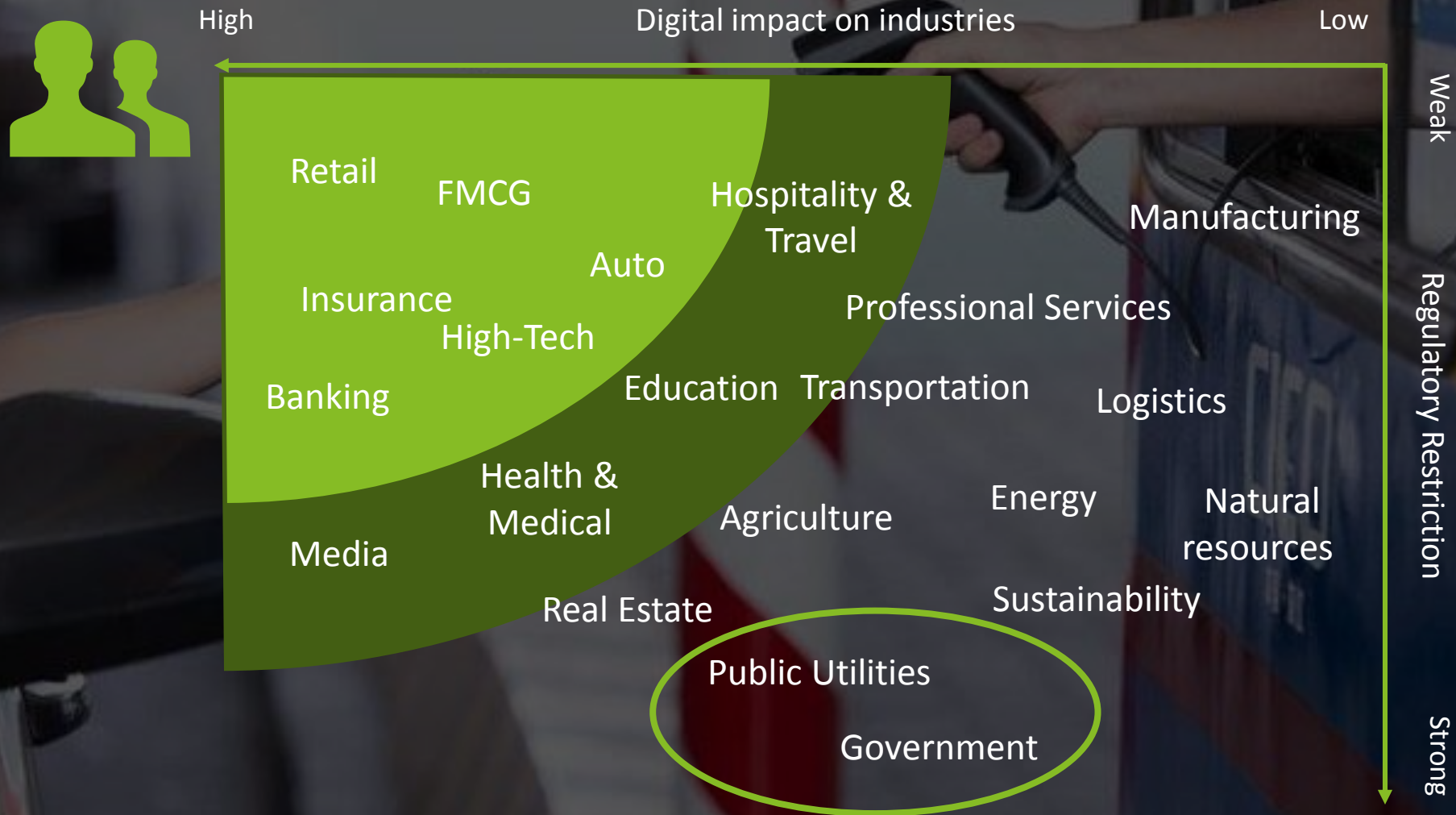
It is increasingly apparent that Government policy must adapt and quickly

Today, external forces are pressuring organizations to **change.**



Digital Disruption Map

Digitalisation is impacting different industries in different ways. Consumer and B2C sectors lead; it is accelerating in B2B; government and state-entities will be impacted next as the peer and competitive pressures build

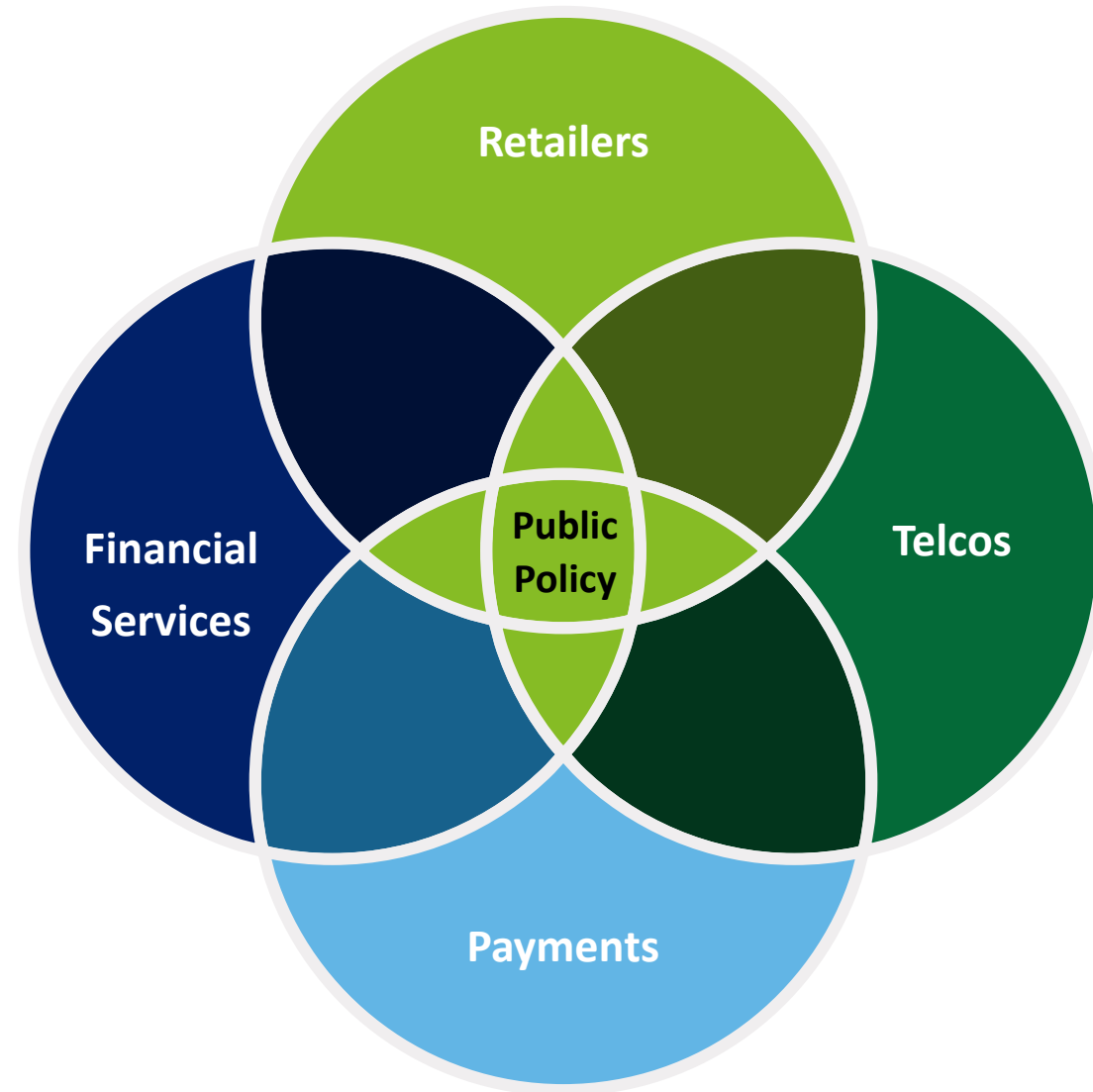


The Convergence of industries

How technology is blurring the lines of industries

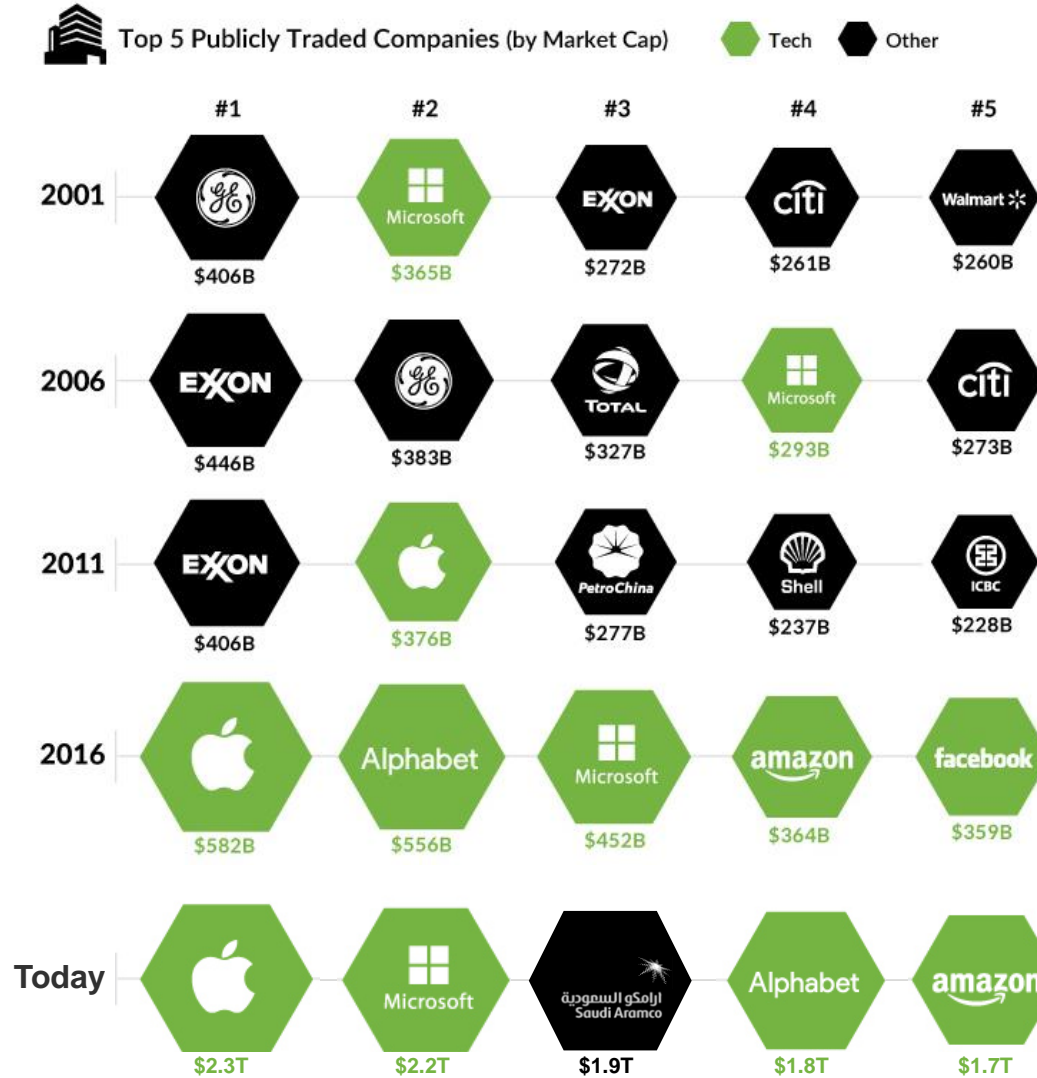
The shift to Tech & the convergence of industries – How do developing countries capture the new value?

Convergence is a key challenge for companies and industries today. Digital technologies have disrupted markets at a rapid pace, with ongoing modernisation connecting previously disconnected sectors. Financial services often underlie many of these connecting sectors as financing and payment systems remain central.



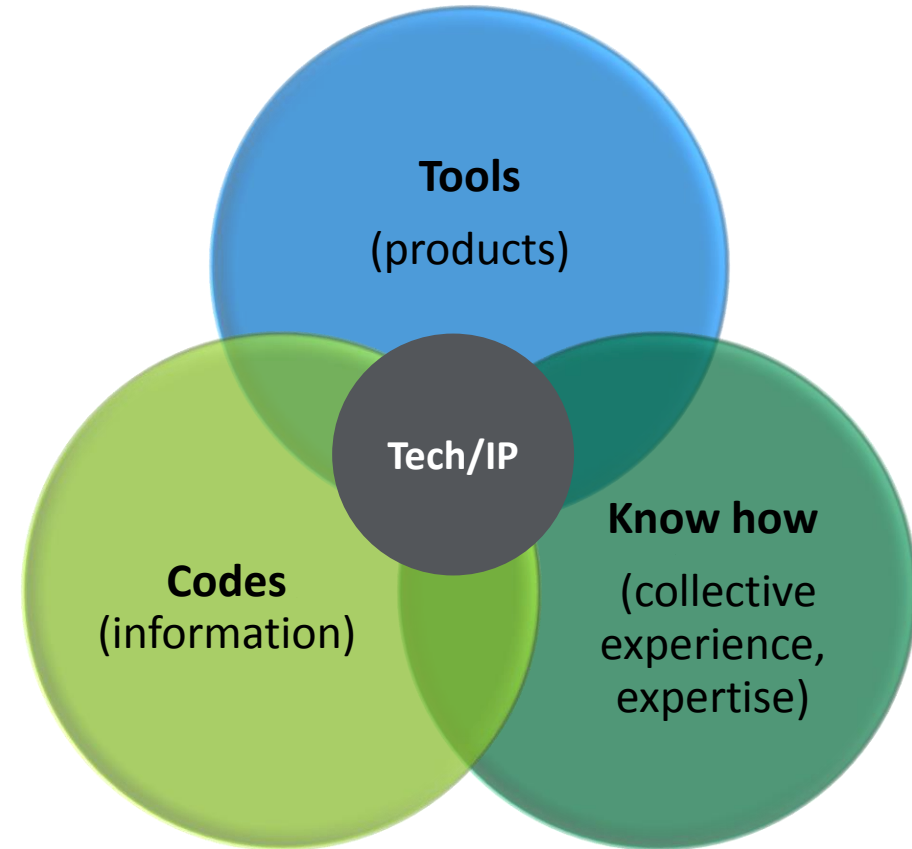
Geo-economics of the new tech-driven world

Over the last 10 years, tech companies have replaced oil companies as the largest companies in the world. Today there are only two non-tech companies in the Top 10: Saudi Aramco and Berkshire Hathaway. Since the turn of the century, market capitalisation of the largest companies has seen a dramatic increase. US-listed companies account for 59 companies of the Top 100 companies today.



Considering the recipe of economic competitiveness and success

Competitiveness is determined by the transfer of technology

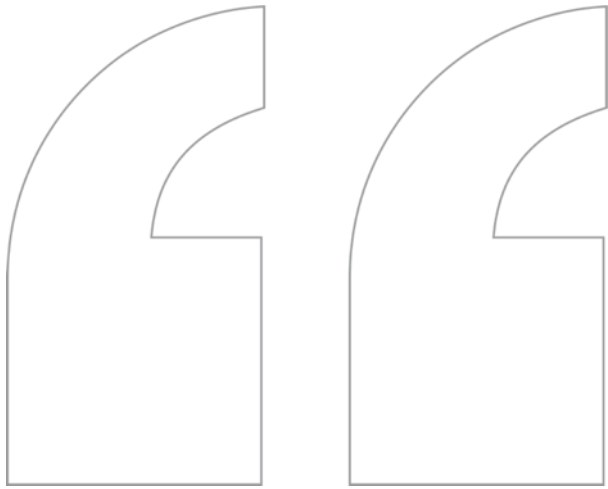


Ricardo Hausmann, Harvard University, Theory of Economic Complexity

The rapid digital shift from simple vs complex processes

The adoption of digital technologies provide platforms for the more rapid dissemination of skills and ideas. This is evident in economies that are having to make the rapid move away from industrial to knowledge based drivers of value in their economies

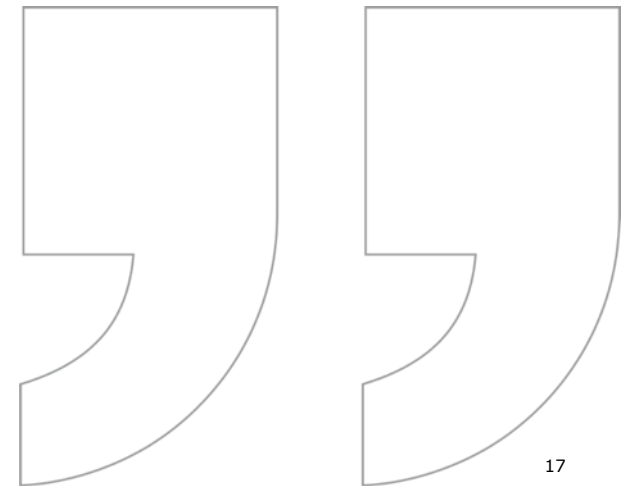




Always be in beta. Always think of yourself as if you need to be **re-engineered, retooled, relearned,** and **retaught** constantly. **Never think of yourself as finished**—otherwise, you really will be finished.

➤ **Thomas L. Friedman**

***Radically open: Tom Friedman on jobs, learning, and the future of work**
(Deloitte Review)*





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