



The Role of ITRI in Taiwan's Digital Transformation of Economy

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***Platform Strategy For Digital Transformation of Industry
- 2018 International Conference on Industrial Technology
Innovation***



Digital Transformation

- **Wikipedia**

- **The change associated with the application of digital technology in all aspects of human society. The transformation stage means that digital usages inherently enable new types of **innovation and creativity** in a particular domain, rather than simply enhance and support traditional methods. [optimization vs transformation]**

- » **Digitization (conversion)**
- » **Digitalization (process)**
- » **Digital transformation (effect)**

- **Other Studies**

- » **MIT Sloan School of Management**
 - **Center for Digital Business (1999)**
 - **Institute for Digital Economy (2013)**
- » **World Economic Forum and Accenture (2015 .. 2017)**
 - **Digital Transformation Initiative**
 - **2017 report > \$100 trillion value over the next decade**





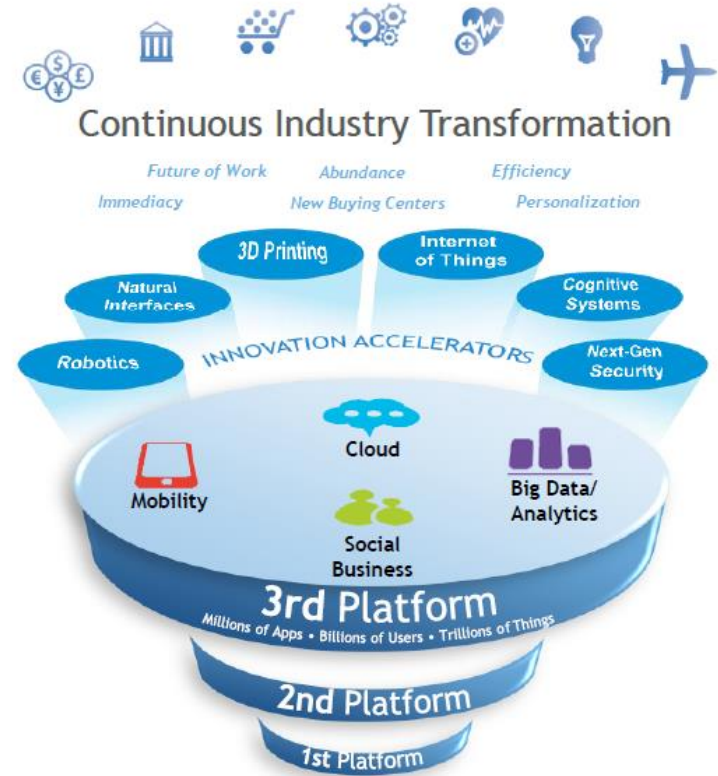
- **World Economic Forum: System Initiatives (14)**
 - *Shaping the Future of Digital Economy and Society*
 - » *Digital Transformation (Launched in 2015)*
- **Davos Panels**
 - *Davos 2016 - Press Conference: The Digital Transformation of Industries*
 - *Davos 2016 - The Digital Transformation of Industries (CEO meeting)*
 - *Davos 2017 - Press Conference: The Digital Transformation of Industries*
 - *Davos 2018 - Strategic Outlook The Digital Economy*
- **Reports – Digital Transformation Initiative (WEF & Accenture)**
 - *Executive Summary : January, 2017 (71 pages)*
 - » *Around the theme of the Fourth Industrial Revolution*
 - » *13 industries + 5 cross-industry topics*
 - » *6 Technologies : 3D Printing, Artificial Intelligence, Autonomous Vehicles, Big Data & Cloud, Internet of Things, Robots & Drones*
 - » *\$100 trillion value over the next decade*
 - *Executive Summary : May, 2018 (75 pages)*
 - » *7 technologies, 6 themes, 13 industries, opportunities (challenges)*
 - *Detail reports: 12 Industries, 6 Cross-Industry Themes, 6 Technologies*



21st Century (Disruptive) IT Industry

- **Wikipedia – 3rd Platform “三十年風水輪流轉”**
 - *A term by International Data Corporation (IDC) for a model of a computing platform.*
 - *Interdependencies between **mobile computing, social media, cloud computing and information/analytics (big data)**, and possibly the Internet of Things.*
 - *First Platform (Mainframe) – late 1950’s*
 - *Second Platform (Client/Server) – mid 1980’s*
 - *Third Platform – early 2010’s*
- **IDC.com**
 - *The 3rd Platform will be a leading driver and force of innovation across a period spanning more than 20 years.*
 - *Explore the 3 Chapters of 3rd Platform Evolution*
 - » *2007+ : Experimentation*
 - » *2015+ : Multiplied Innovation*
 - » *2022+ : Autonomy*

3rd Platform Drives Digital Transformation



Source: IDC, 2015

- “這是最好的時候，也是最壞的時候”
 - 查爾斯·狄更斯《雙城記》

Source : Wikipedia, IDC



IT to Business



- **Big 3 Management Consultancies @ Wikipedia**
 - **McKinsey & Company : Global Management Consulting**
 - » \$10+ billion (revenue, 2018); 27,000 (employees, 2018)
 - » **Business Core Functions**
 - Marketing & Sales, Operations, Strategy, Organization, ...
 - Digital McKinsey, McKinsey Analytics, ...
 - **Boston Consulting Group**
 - » \$5.6 billion (revenue, 2016); 14,000 (employees)
 - » **Capabilities**
 - Marketing & Sales, Operations, Strategy, Organization, ...
 - » **Digital BCG**
 - Digital Agenda
 - Digital Capabilities
 - **Bain & Company**
 - » \$3.7-4.5 billion (2017); 8,000 (employees)
 - » **Capability Insights**
 - Digital, Information Technology, Analytics, ...
 - Bain Digital
- **Many more**
 - **Accenture Digital** (\$34.8 billion; 442,000)
 - **Deloitte Digital** (\$38.8 billion; 264,000)
 - » Big Four Accounting: PwC, E&Y, KPMG
 - **Capgemini Consulting** (\$12.8 billion Euro; 200,000)
 - ...

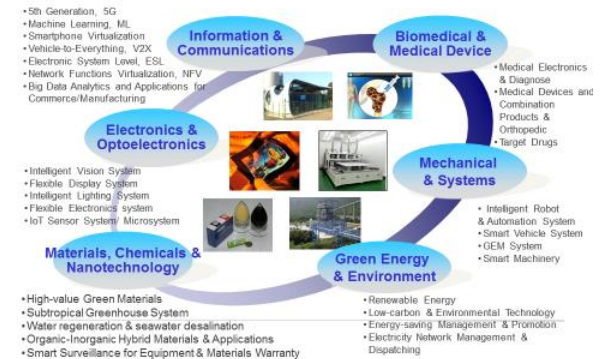
Source : Wikipedia, McKinsey, BCG, Bain, Accenture, Deloitte



Industrial Technology Research Institute



ITRI Interdisciplinary Technologies Development



- **An Introduction**
 - *ITRI (工業技術研究院) is a nonprofit R&D organization engaging in applied research and technical services. Founded in 1973, ITRI has played a vital role in transforming Taiwan's economy from a labor-intensive industry to a high-tech industry.*
- **Missions**
 - *Research and Develop Key Technologies*
 - *Stimulate and Drive Industrial Development*
 - *Generate Economic Value*
 - *Elevate Social Well-being*
- **Organization**
 - *Industry, Science and Technology International Strategy Center*
 - *Commercialization and Industry Service Center*
 - *ITRI College*
 - *Service Systems Technology Center*
 - *Computational Intelligence Technology Center*
 - *Information and Communications Research Laboratories*
 - *Biomedical Technology and Device Research Laboratories*
 - *Green Energy and Environment Research Laboratories*
 - *Material and Chemical Research Laboratories*
 - *Mechanical and Mechatronics Systems Research Laboratories*
 - *Electronic and Optoelectronic System Research Laboratories*
 - ...

Source : ITRI



"Because its purpose is to create a customer, the business has two - and only two - functions : marketing and innovation. Marketing and innovation create value, all the rest are costs."

- Peter Drucker



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