



INSTITUTIONALISATION OF THE 4IR BY THE SA MUNICIPALITIES

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OBJECTIVES OF THE STUDY

- Establish theoretical and conceptual framework behind 4IR.
- Examine the institutional benefits of 4IR.
- Examine the challenges and risks of 4IR.
- Examine the drivers of 4IR.
- Propose mechanisms for institutionalisation of 4IR.



INTRODUCTION AND BACKGROUND

- ❑ 2012 - Concept focused on automation and machines
- ❑ 2017 - Big data
- ❑ 2016 - Robotics, IOT, Artificial Intelligence, 3D Printing, Nanotechnology
- ❑ Inevitable for municipalities
- ❑ Korea leads eGovernment (World)
- ❑ Tunisia leads eGovernment (Africa)



KEY SUCCESS FACTORS FOR KOREA

- Strong Government Leadership
- ICT Governance
- Technology Support
- Performance-Based Programme Management
- Customer oriented eGovernment Services
- One Stop Shop/Single Window-Information Network Villages



INSTITUTIONAL BENEFITS OF 4IR

- Loss Savings: Use of data to identify wastage.
- Time savings: use of real-time data.
- New product development: use of data to develop new products.
- Predictive Analysis.
- Artificial Intelligence: use of data to take intelligent decisions.
- E-Government, eServices (cheaper)



DRIVERS OF THE 4IR

- ❑ Responsive policy innovation.
- ❑ Technologies infrastructure.
- ❑ Research and innovation
- ❑ Smart and responsive strategy.
- ❑ Learning and development.



CHALLENGES AND RISKS OF 4IR

- Job losses
- Skills shortages
- Poor infrastructure
- Cyber insecurity
- Low adaption



WEF TOP 10 SKILLS

- Complex problem solving
- Critical thinking
- Creativity
- People management
- Coordinating with others
- Emotional and (social) intelligence
- Judgement and decision-making
- Service orientation
- Negotiations
- Cognitive flexibility



QUESTIONS (THEMES)

- Theme 1 : Structures
- Theme 2 : Strategies
- Theme 3 : Policies
- Theme 4 : Processes
- Theme 5 : Infrastructure
- Theme 6 : Digital Tools
- Theme 7 : Digital Competencies
- Theme 8 : Attitudes and Values



STRUCTURES

- Integration of IT and Digitization Offices
- Establishment of ICT & Digitization Strategic Committees



STRATEGIES

- ICT and Digitization Strategy.
- Human Capital Strategy.
- 4IR Learning and Development Strategy.



INFRASTRUCTURE AND TOOLS

- Connectivity broadband infrastructure.
- Hardware and software upgrade.
- Digital technologies e.g. Drones, Robots,
- eLearning or Virtual Platforms.
- eServices.



TECHNICAL DIGITAL COMPETENCIES AT FINANCE

- Advanced Analytics
- Finance Automation
- Digital Finance
- Intelligence Finance or Financial Intelligence
- Data Science
- Cyber Finance



TECHNICAL DIGITAL COMPETENCIES AT EDP

- ePlanning
- Drone Piloting
- eMedia Marketing
- Data Science
- Digital Development
- Machine Learning



TECHNICAL DIGITAL COMPETENCIES AT GOVERNANCE AND ADMINISTRATION

- eGovenance
- ePublic Participation
- eRecords Management
- Data Science
- Drone Piloting
- eServices



VALUES AND ATTITUDE

- Adaptability
- Willingness to learn
- Willingness to change
- Embracing disruption
- Innovativeness
- Customer centricism



THANK YOU

QUESTIONS