THE ROLE OF DATA IN MAKING SINGAPORE "SMARTER"

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SINGAPORE RECOGNISED THE IMPORTANT ROLE OF DATA

- Reliable and timely statistics provides the basis for measuring national progress and information about effectiveness of policies and programmes.

- Reliable, standardised & comparable statistics are a key element towards objective measurement, and tracking of performance.

- Composite indicators such as the 'Global Smart Sustainable Cities Index' will provide a summary of the baseline reference point and future trends of smart and sustainability performance based on key dimensions (e.g., economy, environment, society and culture) and standardised sets of indicators, enabling benchmarking across cities or countries,

- Provides insights to drive behavioural change, and empower decisions

… AND HAVE A WELL-ESTABLISHED NATIONAL STATISTICAL SYSTEM

Decentralised Statistical System

- Singapore has adopted a decentralised statistical system since 1973. Official statistics are collected and compiled by the Singapore Department of Statistics (DOS) as well as Research and Statistics Units (RSUs) in government ministries and statutory boards.

Singapore Statistical System	
DOS	• National statistical authority responsible for official statistics on the Singapore economy and population
Gazetted RSUs	• Responsible for statistics on specific subject matters under the parent ministry's purview; • Empowered to issue requisition for data under Statistics Act
Non-Gazetted RSUs	• Responsible for statistics on specific subject matters under the parent ministry's purview; • Collect data under administrative regulations or other Acts

…HIGHLIGHTING OUR COMMITMENT TO COLLECT GOOD DATA

Benefits of the Decentralised Statistical System

- The decentralised statistical system fosters closer contact and greater interaction between statistical personnel and data users, leading to more relevant statistics being collected and analysed.

- Through leveraging administrative records, a larger range of statistics can be compiled on a more timely and cost-effective basis.

- With statistical personnel specialised in subject matters, can better focus on providing quality statistics

- Complemented by greater coordination of statistical activities and adoption of common standards, through the co-ordinating role played by DOS to minimise duplication of work and reduce respondent burden, frequent discussions with relevant agencies on statistical matters, and legislative and administrative changes which promote the adoption of national statistical standards.

BIG PICTURE – SINGAPORE AS A "SMART" NATION

- Harnessing data for informed policy making, and better quality of life
- A economy that is driven by knowledge and information
- Every piece of datum represents a decision point of a human being
- Smart nation is how you can aggregate all these decision points to understand human decision making at the national level
- Leveraging technologies and innovations to transform data into information:
  - Smart home
  - Smart building
  - Smart transportation
  - Smart wearables for health and lifestyle
  - Data analytics and Artificial Intelligence

HOW WE ARE EMBRACING DATA TO INFORM POLICIES AND STRATEGIES IN IMDA

Producing and disseminating ICT & Media statistics from national surveys & telecom operators

- Enterprise surveys (manpower, usage, industry performance)
- Household surveys (access, usage)
- Telecom and pay TV statistics from operators

Monitoring, benchmarking and development of digital economy indicators

- Willingness to invest, build technical capacity and capability, explore new data sources and apply innovative processes

SINGAPORE PARTICIPATED IN ITU'S SMART SUSTAINABLE CITIES PILOT EXERCISE, JUST COMPLETED AUDIT OF PHASE 2 WITH ITU AUDITOR

- The ITU Focus Group for Smart Sustainable Cities has formulated a list of KPIs to measure Smart Sustainable Cities and has invited Singapore to participate in a pilot exercise to assess their KPI framework using Singapore data. The pilot project will contribute to ITU's international standardization of the indicators and the subsequent development of a 'Global Smart Sustainable Cities Index' derived from this set of indicators.

- ITU Sec-Gen met with PM Lee on 2 June 2015 and mentioned this project to PM Lee, hoping to have Singapore's participation. Singapore accepted, signed an agreement on 13 Oct 2015 and became one of the pilot cities.

- Subsequently, an IMDA internal project team with representatives from various divisions was formed to undertake the effort. As IMDA is the national focal agency for ITU, we have reached out to the relevant agencies for assistance on the indicators, arranged for the auditor visit and verification of data with agencies.

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ROLE OF DATA IN SINGAPORE ILLUSTRATED BY THE SSC KPI

- The KPIs are divided into 3 dimensions:

- **Economy**
- Examples include:
  - **No. of public transport stops with dynamic information available**
    - Traffic congestion is becoming a major problem in many global cities and cities are investing in public transport as one of the most efficient ways to move people around the city. Providing riders with information on the status of the system along with the arrival and travel times (i.e. dynamic information) will encourage transit use.
    - For this indicator, the use of data will help to gauge the efficiency of the public transport system in the city. An increasing trend and higher values are considered positive.

  - **Percentage of water distribution system monitored by ICT**
    - Water loss from distribution systems is a problem in almost all cities around the world, but can be a serious issue in areas where water is scarce. This problem deserves immediate attention and appropriate action to reduce avoidable stress on scarce and valuable water resources.
    - Water losses in urban networks not only lead to economic losses for the utilities, but also reduce the number of people that have access to water. Where urban water supplies are concerned, minimizing losses from the system to the lowest technically feasible level is an urgent requirement. Thus, making use of data to achieve this objective is important for water-scarce Singapore.

ROLE OF DATA IN SINGAPORE ILLUSTRATED BY THE SSC KPI

- **Environment**
- Examples include:
  - **Greenhouse gas (GHG) emissions per capita**
    - In order to prevent the most severe impacts of climate change, countries have signed on to the United Nations Framework Convention on Climate Change (UNFCCC), and agreed to cooperate with the aim of limiting the increase in global average temperature and the resulting climate change impacts. In this context, the industrialized countries need to annually prepare and submit precise and regularly updated inventories of greenhouse gas (GHG) emissions.
    - A declining trend and lower values are considered positive.

  - **Energy consumption of public buildings**
    - Buildings can account for a significant proportion of the energy use, GHG emissions and resource use within a city. Energy efficiency and energy reduction in buildings can reduce GHG emissions, conserve resource and mitigate against climate change.
    - Low values should be pursued.
    - A declining trend is positive.

ROLE OF DATA IN SINGAPORE ILLUSTRATED BY THE SSC KPI

- **Society and culture**
- Examples include:
  - **Average life expectancy**
    - "Life expectancy at birth reflects the overall mortality level of a population. It indicates the average number of years that a newborn is expected to live if current mortality rates continue to apply and summarizes the mortality pattern that prevails across all age groups - children and adolescents, adults and the elderly." (World Health Organisation, 2006)
    - An improving trend and higher values are considered positive, and is an outcome indicator of sustainable development.

  - **Percentage of city inhabitants covered by basic health insurance or a public health system**
    - Lack of health insurance coverage or a public health system is a significant barrier to accessing needed health care, including preventive services.
    - Basic health insurance would provide financial risk protection and cover essential health-care services at an affordable cost and should be counted.
    - An improving trend and higher values are considered positive, and is an input indicator for sustainable development.

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THANK YOU

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