Towards an Administrative Data Centric Statistical Infrastructure

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Outline

- **Drivers**
- **Statistical infrastructure**
  - Definition
  - Statistical registers
- **Administrative data centric approach**
  - Corporate strategy
  - Data acquisition
  - Corporate initiatives
- **Conclusion**

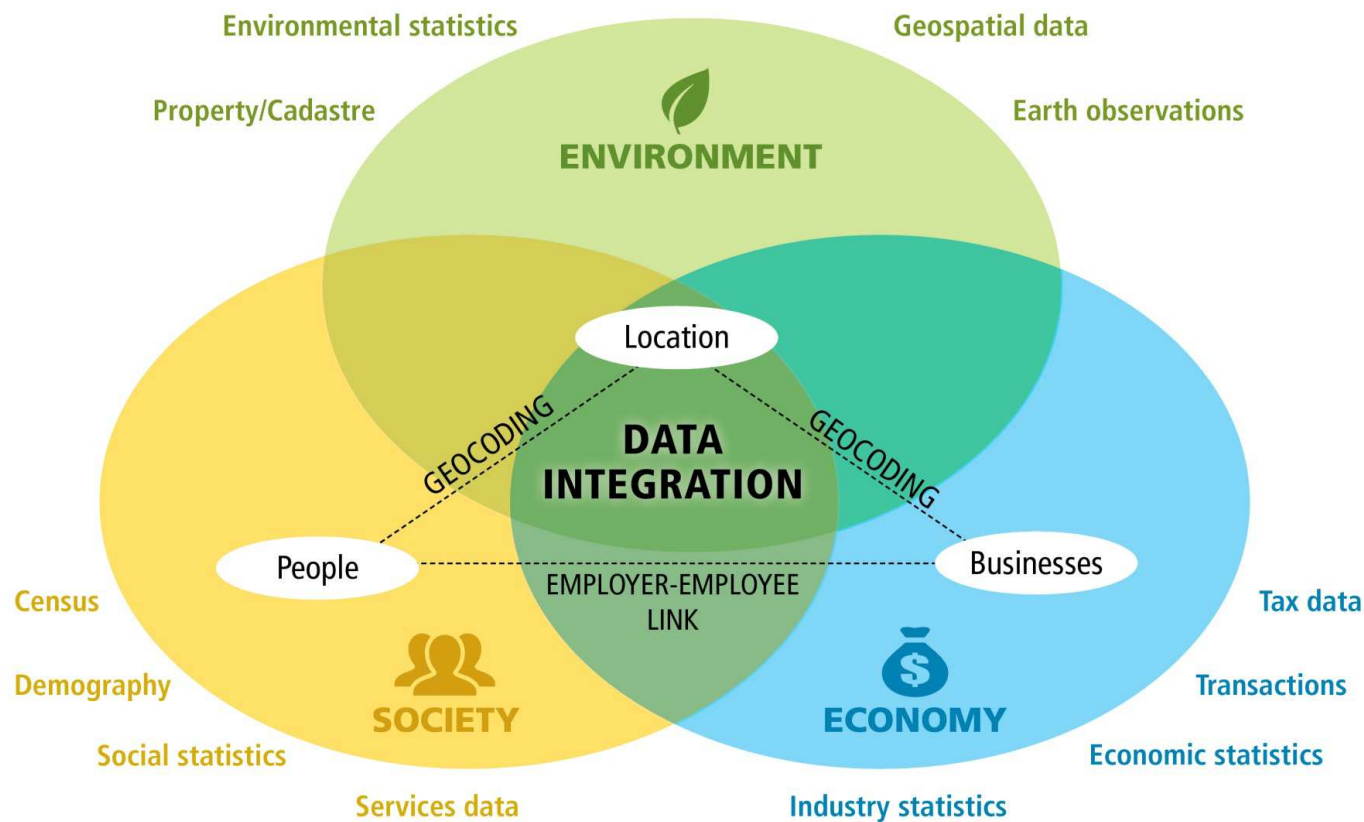Statistics Canada • Statistique Canada

Drivers

- Increasing demand for statistical information on a growing range of topics with increasing granularity to inform evidence based decision making

- **Administrative data (including 'Big Data'),** play an increasingly important role in Statistics Canada's statistical programs

- Need to adapt and improve the current Statistics Canada **Statistical infrastructure** and **data integration capacities** to support the efficient production of official statistics

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Statistical infrastructure: Statistics Canada's definition

- Activities and services that are administered to support a strong statistical system
  - **Professional and statistical services**
    - Sound statistical methodology
    - Standardized concepts and classifications (including geographic concepts)
    - Statistical metadata
    - **Statistical registers**
    - Provision of advice with respect to the *Statistics Act* and data-sharing agreements
  - **Operational statistical services**
    - **Collection** and dissemination activities

The statistical infrastructure supports the efficient production of official statistics

Source: Image extracted from a presentation made by the Co-Chairs of the UN Expert Group on the Integration of Statistical and Geospatial Information at the Sixth Session of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) - 1 - 5 August 2016

Factors being considered for the development of the new statistical registers

- ## Agile and robust

  - Interoperable with other in-house statistical registers and systems

  - Based on sound methodological processes
    - For example, updates and feedback mechanisms are based on sound business rules and information obtained from other statistical registers, surveys and other data set holdings

  - Following quality assurance principles
    - Quality assurance framework
    - Fitness for use of new data sets

Factors being considered for the development of the new statistical registers (continued)

- Data integration capacities

  - Can easily integrate new administrative data sets
    - New formats or important volume

  - Use of unique anonymized statistical identifiers

  - Use of other key variables when unique identifiers cannot be used

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Administrative data: corporate strategy

- **Solidified corporate approach**
  - Administrative Data Management Committee
  - Administrative Data Division
    - Corporate strategy for a more efficient use of admin. data
    - New policy instruments (new Policy and new Directive)
    - Provides corporate services
- **Communication strategy**
  - For internal and external stakeholders (see Q&As)
- **Acquisition strategy**
  - Data custodian acts as liaison with data providers
  - Foster collaboration and win-win approach with data providers

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Centralised data acquisition function

- Section dedicated to support data acquisition
  - Staff of 18, liaison unit and operation unit
  - Acquisition, documentation, preprocessing, quality evaluation
- New tools and processes
  - Broadcast to announce new potential acquisitions and gauge interest from the statistical programs
  - Creation of working groups to discussed needs
  - Templates for agreements and first contact letter
  - Tools to monitor ongoing acquisitions
  - Tools to evaluate fitness for use of new data sources

Administrative data centric initiatives

- ## Data linkage
  - Developing standards for record linkage processes

- ## Data analysis
  - Reviewing and assessing different visualisation tools

- ## Metadata management
  - Administrative data inventory (including Big Data)
    - Raw files (more than 800 sources)
    - Need to improve metadata for processed administrative data
  - Monitoring data access
    - According to agreements and need to know principle

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Conclusion

- **Important organisational changes**
  - Corporate approach and policy instruments
  - Improved support for data acquisitions

- **Exploring the use of new data sources**
  - Feasibility studies (scanner data, smart meter data)

- **Challenges**
  - Timely acquisition of new data sources
  - Developing new statistical registers

- **Opportunities**
  - Exploring new partnerships with the public and the private sectors

Questions?

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