Regional Training on Producing Register-based Population Statistics in Developing Countries
27– 31 October 2013

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SESSION3: REGISTER MODELS

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Sources:
-United Nations (2011): Using Administrative and Secondary Sources for Official Statistics: A Handbook of Principles and Practices
-United Nations (2007): Register-based Statistics in the Nordic countries
-Wallgren, A. and Wallgren, B. (2007), *Register-based Statistics: Administrative Data for Statistical Purposes*, John Wiley & Sons, Ltd, Chichester, UK.

Different types of registers

Registers

Base registers

Specialized registers

Administrative
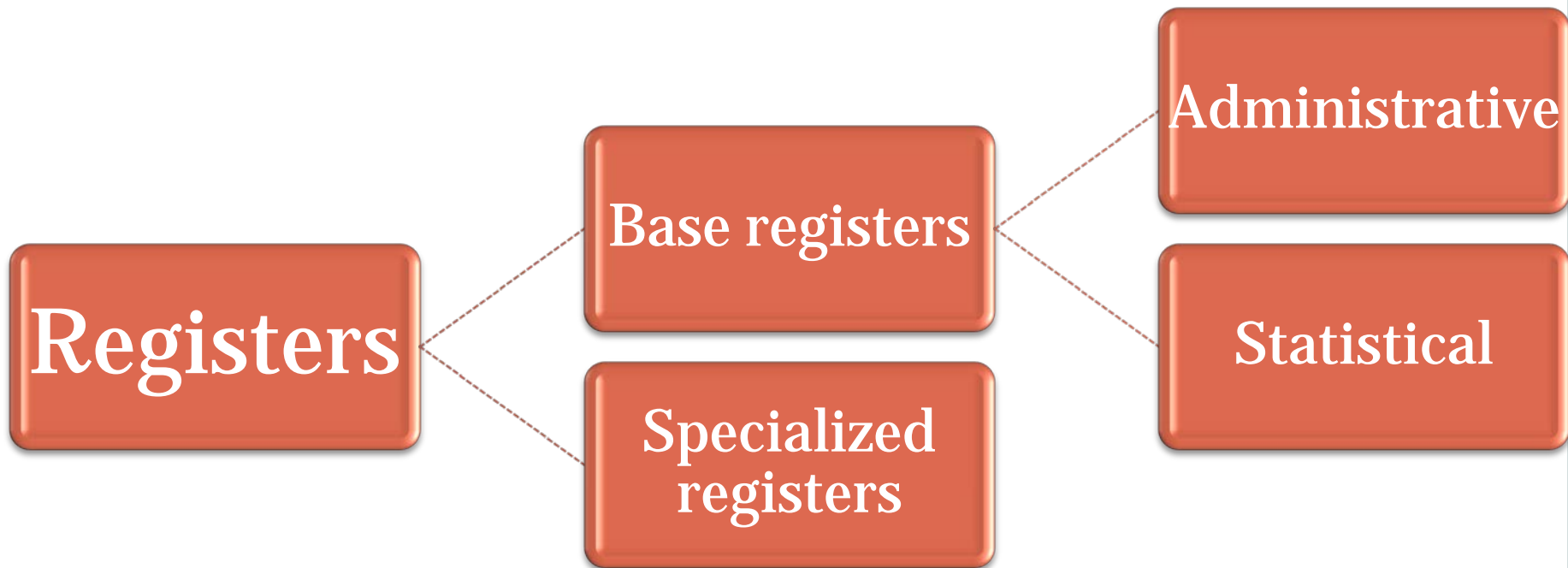
Statistical

Administrative base registers

➤ Basic resource for public administration (non-statistical purposes)

➤ Keep stock of units (entry and exit)

➤ Important unites to be registered are normally, *persons*, *properties* (real estate, buildings and dwellings)*,* and *businesses* (enterprises and establishments)

➤ Example: central population register (CPI)

Statistical base registers

➢ Based on the corresponding registers

➢ Define important populations and link to other base registers

➢ Contain information from specialized registers

➢ Important unites to be registered are same as administrative base registers

Specialized registers

➢ Serve specific purpose (not public administration)

➢ And specific target population (students, labour,..)

➢ Often receive data from base registers

➢ Examples: *Vehicle* register, *education* register, *activity* register,…

Which units do we register?

Base register

- Person

- Property

- Address

- Business

Entry & exit:
When?
Where?
What?

Statistical registers

Specialized

- Person

- Property

- Address

- Business

- Activity

- Vehicle

....

- Other characteristics:
- education
- income
- health
- employment
- ....

Linking keys:
- PIN
- Address code
- Business Identification

Note on linking key

- Some units may need more than one linking key
  - Private vehicle links to PIN
  - Corporate vehicle links to Business code

- One linking key may combine two keys
  - Linking key for job unit is a combination of the business code (for establishment or enterprise) and PIN (for employed person)

# Models for creating registers

- Statistical registers play an important role in coordinating data from different sources

- No single approach exist since available sources differ from one country to another

- Possible approaches:
  - Combine multiple sources
  - Use centralized administrative register
  - Create a data sharing hub
  - Use admin data via satellite registers
  - A register-based statistical system

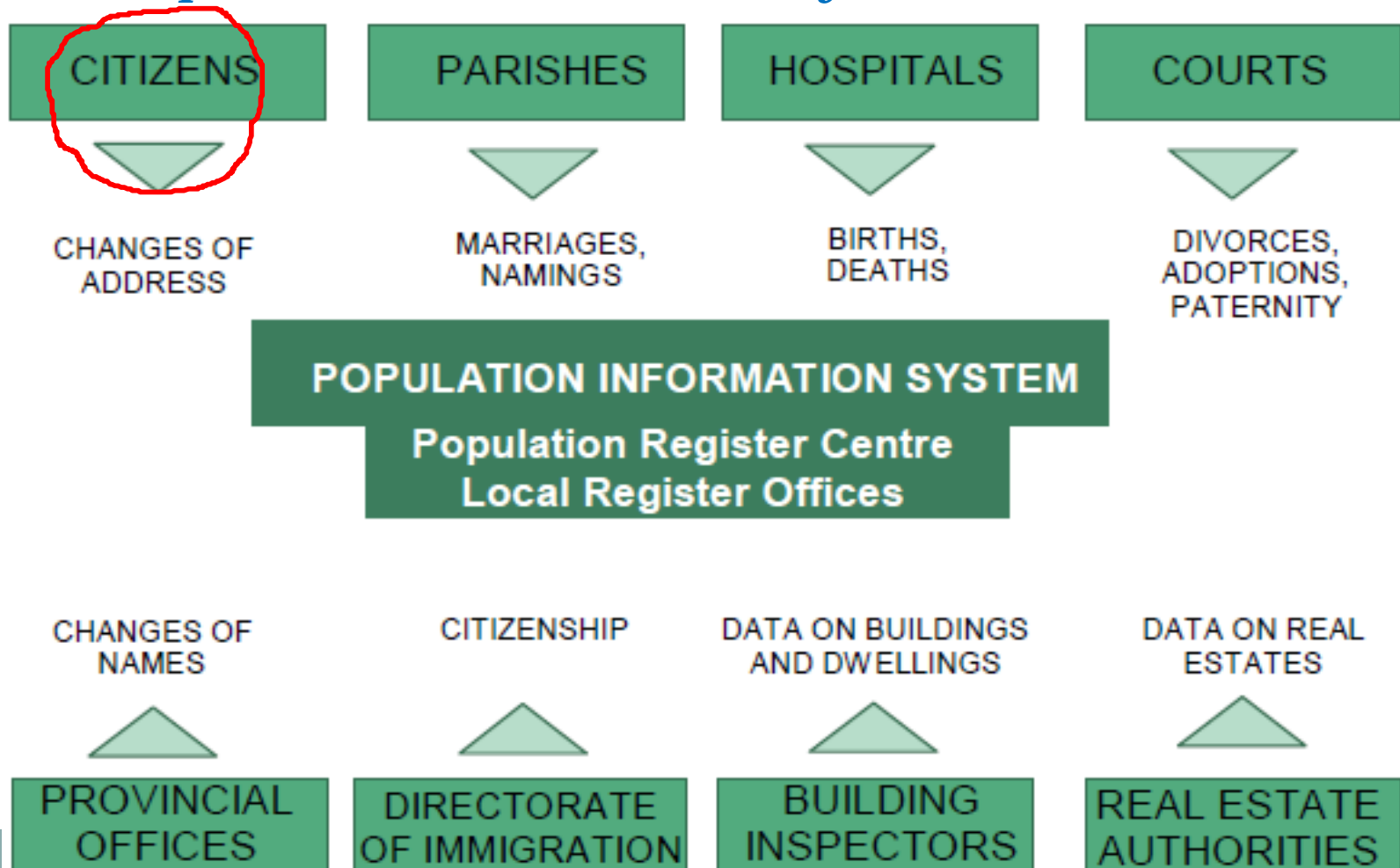## Statistical business register in UK

(Value added tax)

(Pay-as-you-earn)
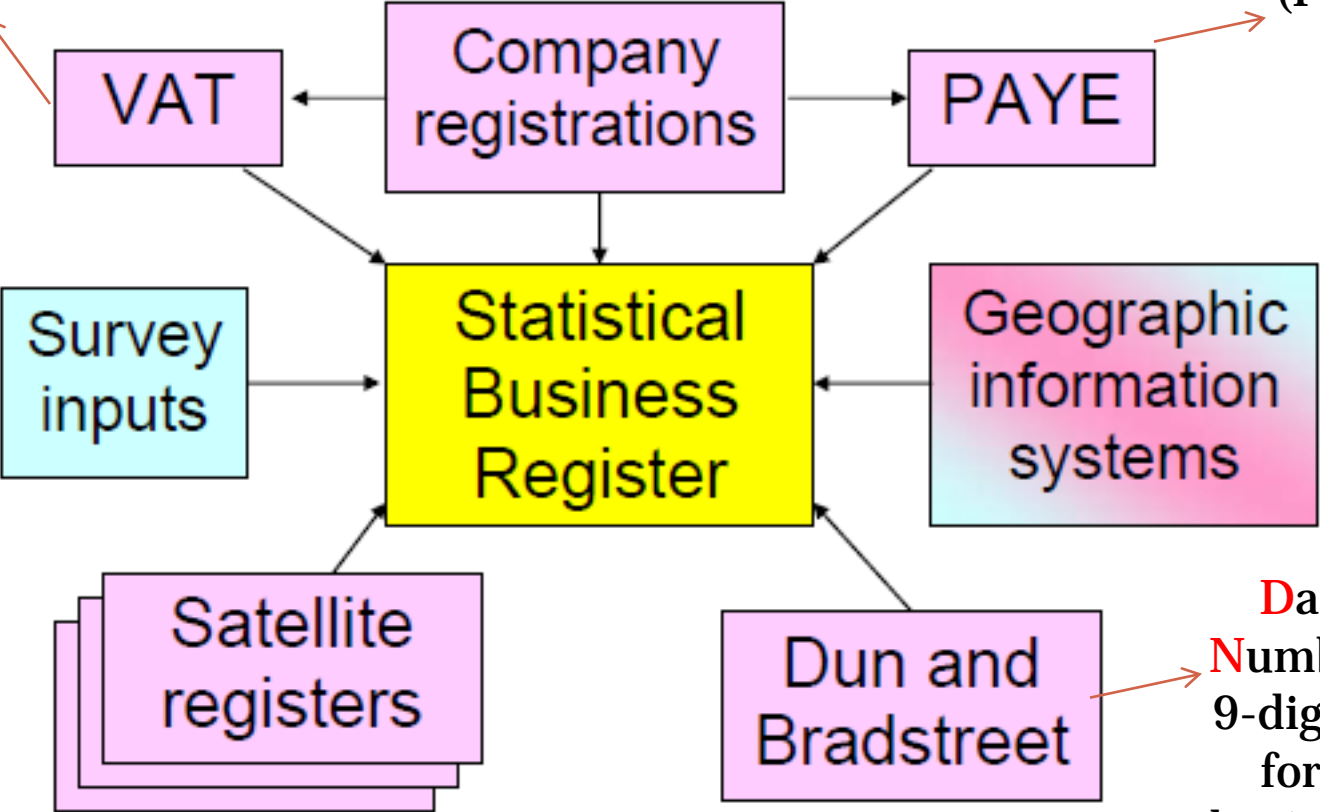
Data **U**niversal **N**umbering system: 9-digit unique code for 225 million business worldwide

Population information system in Finland

Create a data-sharing hub

Data holdings

Government agency
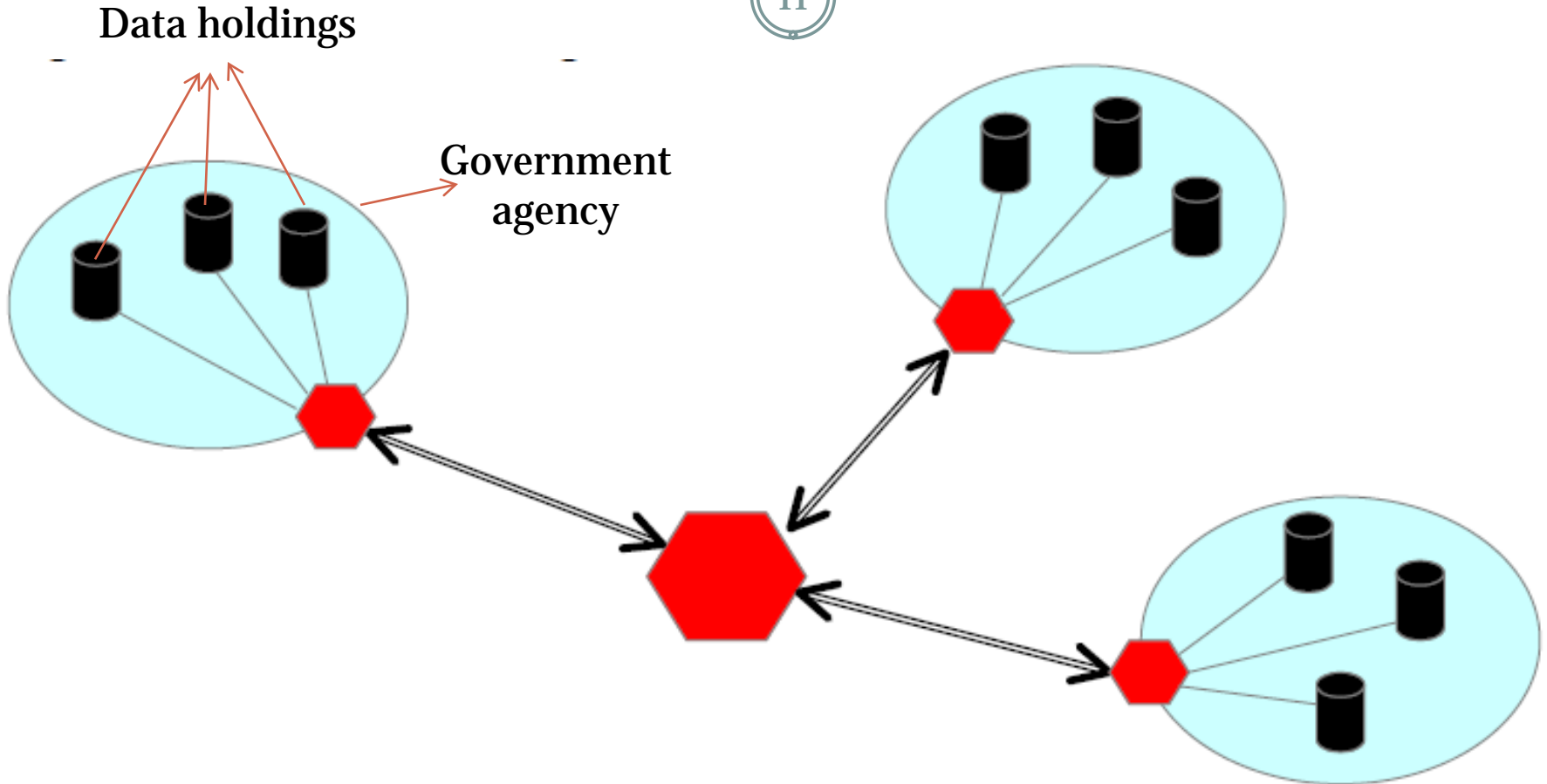
Integrated Data Infrastructure

Outputs

Official Statistics
Statistical releases
Powerful research

Statistics NZ

Ministry of Education

Ministry of Social Development

Ministry of Business Innovation and Employment

Central linking concordance (CLC)

Inland Revenue

Longitudinal Business data

Justice Sector

Accident Compensation Corporation

New Zealand Customs Service

SOURCE: STATISTICS NEW ZEALAND

Using admin data via satellite registers

- Also called "*associated registers*"

- Source-specific registers meeting specific *criteria:*

  - Not yet integrated into, but capable of being linked to statistical register
  - Limited in scope but extensive in coverage of units and variables
  - Contain variables not available in statistical registers
 - They are not from surveys

Satellite Register — Statistical Register

- When registers are used as sampling frame, satellite registers can add value to statistical registers by:
  - Increase coverage of target population
  - Providing auxiliary variables for stratification and estimation
  - Reduce amount of information needs to be collected by survey

- Examples: retail trade, hotels, large enterprises,...
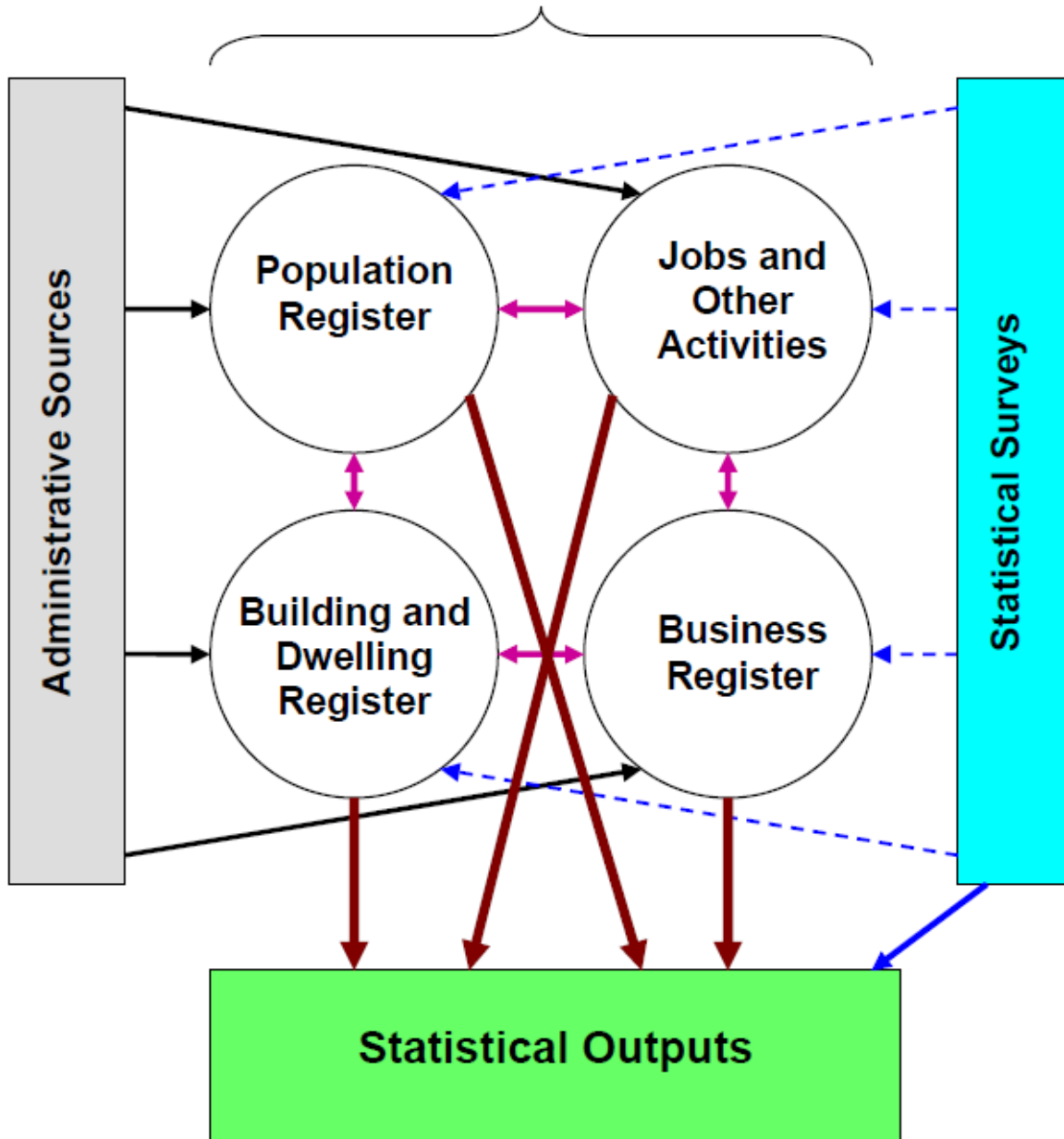
A generic model for register-based statistical system