Data access, use and exchange at different maturity levels

Statistics Estonia – practice and considerations
Main challenges for the next decade

- **Strong data governance**
  - Multiple-source data

- **Low administrative burden**
  - Once-only principle

- **Real-time data mining**
  - Quick decision-making

- **Globalisation and Big Data**
  - More in-depth information

- **High quality of statistics**
  - Indicators with metadata

- **User-friendly dissemination**
  - Personalised information

- **Real-time information**
  - Faster and simpler information

- **Reliable information**
  - Quality data for media
Main challenges based on our experience

- **Strong data governance**
  - Multiple-source data

- **Low administrative burden**
  - Once-only principle

- **Real-time data mining**
  - Quick decision-making

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Currently less than 30% of data come from surveys; administrative data are used in more than 68% of statistical activities.

Once-only principle is laid down by law in Estonia.

Extensive data governance becomes essential for finding, linking and quality of data.

Big data (mobile, electricity data) are part of official statistics.
Data access maturity levels:
three considerations for legal access at medium levels

1. Access to all administrative data
2. Access to limited private data (e.g. price data)
3. Access to privately held big data (e.g. mobile, electricity data, etc.)

Traditional data gathering (incl. surveys)
Consideration 1: Obligation to use administrative data

Defined by the Official Statistics Act

• … a producer of official statistics shall primarily use data collected in administrative records …, if such data allow the production of official statistics complying with the quality criteria of official statistics. (OSA § 29(1))

• A producer of official statistics has the right to make proposals for amending the composition of data and the classifications used in the administrative records and databases … (OSA § 29(2))

• A producer of official statistics has the right to link micro-data collected from respondents and administrative records and databases by using characteristics that allow direct or indirect identification of statistical units. (OSA § 30(3))

Supported by the Public Information Act

• Before the establishment of a database or changing the composition of the data collected in a database, introducing a database or terminating a database, the technical documentation of the database shall be approved by the Estonian Information System Authority, the Data Protection Inspectorate and Statistics Estonia. (§ 433(3))

• Administration system for the state information system (RIHA) serves as a catalogue for the state’s information system https://www.ria.ee/administration-system-of-the-state-information-system

Defined by the Official Statistics Act

Supported by the Public Information Act
Consideration 1 (example):
State Information System management (RIHA)

<table>
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<th>THE OWNER</th>
<th>SHORT NAME</th>
<th>INFORMATION SYSTEM NAME</th>
<th>STATUS</th>
<th>COORDINATION</th>
<th>KEYWORDS</th>
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<td>SOCIAL EDUCATION</td>
<td>Saaremaa Rural Education Register</td>
<td>when establishing</td>
<td>establishment of the coordinated</td>
<td>HOBBY EDUCATION, PRE-SCHOOL EDUCATION, GENERAL EDUCATION</td>
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<td>73024613-data-file services</td>
<td>Data Services Services</td>
<td>when establishing</td>
<td>not coordinated</td>
<td>X-ROAD SUBSYSTEM</td>
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<td>Estonian Student Union Association</td>
<td>xna</td>
<td>My School card management system</td>
<td>when establishing</td>
<td>not coordinated</td>
<td>EDUCATION, TRAINING, YOUTH WORK</td>
</tr>
</tbody>
</table>
Consideraton 2: Microdata sharing based on ontology

Project Reporting 3.0, which derives from the zero-bureaucracy initiative, is co-operation with business software developers and entrepreneurs to work out a technological solution for the movement of data from the respondents’ accounts to data users.

Lowest-level data without any aggregation (will be on the public side) are transferred on voluntary basis via the X-Road which provides secure interoperability.

Voluntary

Based on XBRL data exchange

Based on taxonomy

Personal income data for Statistics Estonia and Estonian Tax and Customs Board
Consideration 3:
Co-operation with sensitive data holders

Estonia has developed mobility analysis based on mobile and geospatial data to follow up and support decision-making on the lock-down rules during the COVID-19 pandemic. Integrating such data is highly beneficial for sustainable development, disaster, tourism, migration, mobility, etc. statistics.

Due to extraordinary speed (14 days from need to dissemination), new methodology was created jointly by all operators, Positium and Statistics Estonia using privacy-by-design principles.

% of sedentary mobile phones (lighter is more sedentary), polygon level
Thank you!

Any questions?