Integrated Statistical Systems: Data collection, Processing and Dissemination of Integrated Statistics

*An Integrated Statistics Approach*

United Nations Statistics Division

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**Challenges**

- Fast technological developments
- Sharp increase in rate of data availability
- Greater demand for more (& quicker) information
- Decreasing budgets and improving cost efficiency
- Demands to decrease response burden
Responds to challenges

- Through innovation and modernization programmes for integrated statistics.
- Characterized by:
  - technical and managerial specializations of staff
  - modernization of the IT-environment
  - harmonization/centralization of statistical production processes - GSBPM
  - repositioning the legal and regulatory environment of the statistical organizations.
- business as usual will not be enough.

Traditional approach

Statistical Domains
economic, environment and social statistics

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>Industry</th>
<th>Household Income and Expenditures</th>
<th>Education</th>
<th>Jobs</th>
<th>Environment</th>
<th>Etc.</th>
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<td>Meta data and standards</td>
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New Approach

Integrated statistics programme

Integrated business and international trade statistics programme (IBIS)

Integrated household and social statistics programme (IHSP)

Economic dimensions
Environment dimensions
Social dimensions
Economic dimensions
Environment dimensions
Social dimensions

Integrated Statistics Programme

- Meta data driven statistical production process
- Meta data catalogue of variables
- Survey repository
- Guidelines
  - GSBPM based register based survey design
  - Multi source and multi mode collections
  - Micro data linking
  - Dissemination and visualisation
- Software (micro data cataloguing, disclosure control)
### Integrated statistics approach

#### Statistical operations

- **Macroeconomic accounts**
  - Household and demographic statistics
  - Economic & environmental statistics

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<thead>
<tr>
<th>Outputs / Dissemination</th>
<th>Standards and methods</th>
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<tr>
<td>Data integration</td>
<td>Information, ICT</td>
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<td>Data processing</td>
<td>Management and policy</td>
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<td>Data collection</td>
<td>Institutional arrangements</td>
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<td>Registers and frames</td>
<td>Surveys/Admin data</td>
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#### Statistical infrastructure

<table>
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<th>Institutional setting</th>
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<td>Management and policy</td>
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### Benefits of integrated systems

- **Statistical business and information architecture** governs common statistical production process and centralized statistical services over time and across countries.
- Corporate, centralized services allow for **statistical professionalization, project management and coordination**.
- **Meet policy demands**: covering business and household statistics, labor statistics, short term statistics, national accounts and international statistics.
- **Cost effectiveness**.
- **Improved quality**: coordinated output; reduction of human factor; improved reproducibility.
- **Reduction of response burden** on business and household respondents.
- Offer **collaboration** in the development and application of common methods and IT tools.
- **Robust** and **flexible** and a **stable platform** for facing new developments.
Cost/Investments

- Expertise (subject-matter specialists, project managers, methodologists, IT specialists)
- Training (new) personnel in change/project management and integration methods and process management
- IT-environment using standards-based modules and dissemination platforms
- Reorganisations

General Organizational Principles

1. Use corporate business and information architecture—blue print for process development
2. Adopt legal mandates based on fundamental principles for official statistics
3. Mainstream standards and metadata
4. Optimize use of administrative data
5. Maximize multi-use of data
6. Top down editing and imputation
7. Develop modular IT applications across statistical domains
8. Initiate methodological innovation and modernization
9. Establish quality culture
10. Manage development and change
   I. Project portfolio and portfolio management
   II. Planning and prioritisation
   III. Centralization and chain management
Historically statistical organisations have produced specialised business processes and IT systems

How does Architecture help?

- Many statistical organisations are modernising and transforming using Enterprise Architecture
- Enterprise Architecture shows what the business needs are and where the organisation wants to be, then aligns efforts accordingly
- It can help to remove silos and improve collaboration across an organisation
Enterprise Architecture helps you get to this

Survey A
Survey B
Survey C

Collect → Process → Analyse → Disseminate

...but if each statistical organisation works by themselves.....
...we get this....

This makes it hard to share and reuse!
...but if statistical organisations work together?

This makes it easier to share and reuse!