Modernisation at Istat: an operational model for both production process and organisational aspects

Valerio Florespino
Istat – Department for data collection and development of methods and technologies for the production and dissemination of statistical information
Outline

1. Background
2. Drivers of Istat’s Modernisation Programme
3. Objectives and instruments of the Modernisation Programme
4. Focus on the main instruments
5. Istat’s new organisation
6. Concluding remarks
Background

- In the last decade, official statistics has undergone a **dramatic shift**, both in the **production model** and in its **output**

- The **traditional chain**, based on the **vertical integration of different survey-specific tasks** carried out to collect, process, analyse and disseminate statistical data, has become outdated

- Since the **second half of 2014** Istat has implemented its internal **Modernisation Programme**, in accordance with both some actions supported by **UNECE - High-level Group on the Modernisation of Official Statistics** and the **European Statistical System** commitment to **Vision 2020**

- Istat’s **Modernisation Programme** was officially approved by the **Governing Board** on **January 28th, 2016**
Drivers of Istat’s Modernisation Programme: External environment

- International **best practices**
- Changes in the **demand** for statistical information
- Wealth of information, including **unstructured information** (innovative sources, e.g. **Big Data**)
- Presence of **competitors**
- Availability of **new** methodological and technological **tools**
- Drawbacks of **traditional data collection systems** (high costs, response burden, lower response rates)
Drivers of Istat’s Modernisation Programme: Internal environment

- Organisational silos:
  - Local or vertical *know-hows* which do not promote *reuse*;
  - Duplication and lack of *consistency of solutions*;
  - Limited *interoperability*;
  - Limited capacity to exploit methodological and technological *opportunities*;
  - Research and innovation at departmental rather than *corporate level*.

- Segmentation

- Weak governance system:
  - Difficult access to already available *general services*;
  - Huge efforts to obtain services at the local level, generating *redundancies and inefficiencies*. 
From the as is situation...
...to the to be situation
Objectives of the Modernisation Programme

Main Objectives

1. To enrich the **supply and quality** of **statistical information and services**
2. To develop a specific policy on **Corporate Social Responsibility**

Intermediate Objectives

- To encourage the **development and exploitation** of methodological, technological, and organisational **innovation**
- To increase and reorient the **skills of human resources**
- To reduce **respondent burdens**
- To further improve the **efficiency and quality** of **production processes**, while taking into account **budget constraints**
Convergences/divergences between objectives

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Intermediate objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>To encourage the development and exploitation of methodological, technological, and organisational innovation</td>
<td>To increase and reorient the skills of human resources ( + ) ( + ) ( - )</td>
</tr>
<tr>
<td>To develop a specific policy on Corporate Social Responsibility</td>
<td>To reduce respondent burdens ( - )</td>
</tr>
<tr>
<td>To further improve the efficiency and quality of production processes, while taking into account budget constraints</td>
<td></td>
</tr>
</tbody>
</table>

**Main objectives**

| To enrich the supply and quality of statistical information and services | \( + \) | \( + \) | \( - \) | \( - \) |
| To develop a specific policy on Corporate Social Responsibility | \( + \) | \( + \) |          |          |

**Intermediate Objectives**

| To encourage the development and exploitation of methodological, technological, and organisational innovation | \( + \) | \( + \) | \( + \) | \( + \) |
| To increase and reorient the skills of human resources | \( + \) | \( + \) |          |          |
| To reduce respondent burdens | \( - \) | \( + \) |          |          |
| To further improve the efficiency and quality of production processes, while taking into account budget constraints |          |          | \( + \) |          |
Main instruments of the Modernisation Programme

- **The Foundations: The Business Architecture Model**
  - It is an integrated model representing processes and activities, which constitutes a common framework necessary for undertaking consistent, shared paths of innovation;
  - It covers both statistical activities and strategic organisational tasks and capabilities;
  - It is composed by a generic Activity Model, a BA process flow, a set of Principles and common and shared Infrastructures.

- **Three main Pillars:**
  - Design of production processes through the System of Registers
  - Centralised Corporate Support Services (separated from production)
  - Sound and structured Governance
Additional instruments

- Design and development of an integrated system for managing human resource skills and expertise
- Redesign of the Institute’s organisation, in order to reduce internal fragmentation
- Systematisation of the specific actions on Corporate Social Responsibility
- Construction of a single office building so as to accommodate all Istat’s employees
## Relevance of the instruments

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>Main objectives</th>
<th>Intermediate objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IMPLEMENTATION OF THE BUSINESS ARCHITECTURE MODEL</strong></td>
<td>To enrich the supply and quality of statistical information and services</td>
<td>To develop a specific policy on Corporate Social Responsibility</td>
</tr>
<tr>
<td><strong>DESIGN OF PRODUCTION PROCESSES THROUGH THE SYSTEM OF REGISTERS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CENTRALISED CORPORATE SUPPORT SERVICES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SOUND AND STRUCTURED GOVERNANCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DESIGN AND DEVELOPMENT OF AN INTEGRATED SYSTEM FOR MANAGING HUMAN RESOURCE SKILLS AND EXPERTISE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REDISIGN OF THE INSTITUTE’S ORGANISATION, IN ORDER TO REDUCE INTERNAL FRAGMENTATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SYSTEMATISATION OF THE SPECIFIC ACTIONS ON CORPORATE SOCIAL RESPONSIBILITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONSTRUCTION OF A SINGLE OFFICE BUILDING SO AS TO ACCOMMODATE ALL ISTAT’S EMPLOYEES</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Business Architecture Process Flow

- Each BA activity leads to Modernisation and Standardisation, both from an organisational and a production-related point of view.
- Each BA activity naturally points to standards which should be used to facilitate the process of transition to Modernisation.
- Analyses of each BA activity are strongly recommended and should represent the basis to identify standards (existing ones and areas where new standards need to be developed).
The Business Architecture Principles

- **Decision principles** to guide the activities of strategic planning (Portfolio and Project Management)

- **Design principles** to guide the design of production processes

- Particularly important aspects:
  - **Output** and **metadata** drive the entire process that is defined starting from the required product and goes backwards;
  - **Reuse** of data, metadata, methods, tools and applications. Interoperability and **Service Oriented Architecture – SOA**;
  - **Industrialisation** of statistical processes ensures independence between design and implementation.
The System of Registers

- Notable advantage in terms of reduced costs and response burden, while ensuring quality, timeliness and completeness.
- Large potential because different registers can be linked together on the basis of clearly defined keys.
- Organised governance mechanism to define clearly responsible persons.
- Base registers contain the identifier of the statistical unit.
- Satellite registers contain thematic variables derived from administrative sources or surveys.
The Integrated System of Statistical Registers

Relationships

Social topics
- Persons/households
- Education
- Population size estimation

Economic topics
- Economic units
- Balance Sheets
- Coherence
- Places
- Labour
- Demand and Supply of labour
- Territorial
- Agriculture

Coherence in units and variables
- Labour cost
- Income vs profits

Demand and Supply of labour
- Education vs work
- Coherence
The Integrated System of Statistical Registers

For each statistical unit **different registers can be linked together** not only across domains but also **over time** on the basis of identification keys.

The identification of the unit over time is easy for **elementary** statistical units, but can be more complex for **composite** units (family, enterprise, enterprise group...).
Centralised Corporate Support Services

- Consolidation of the Institute’s **cross-cutting Support Services**
  
  *technical, scientific and administrative - methodology, information technology, data collection and dissemination, human resources, legal affairs, asset management, accounting* 
  
  to enhance:

  ✓ effectiveness/quality, as a result of a **standardisation of processes and solutions**;

  ✓ efficiency, as an effect of **overcoming stovepipes in conducting processes**, so as to facilitate reuse

  ✓ productivity;

  ✓ the integrated **System of Statistical Registers** enriched with single, controlled, and standardised information;

  ✓ innovative activities with the **saving of resources** obtained.
Sound and structured Governance

**Strategic Planning**
*decisions taken within the President’s Steering Committee*

- Proposals to the Governing Board:
  - Strategic objectives
  - Resource macro allocation
  - Incentive policies

- Decisions on:
  - Innovative projects
  - Current projects
  - Risk management
  - Use of resources (economic, human)
  - Policies for the acquisition of goods and resources

**Operational programming**
*decisions taken within the Committee for Operational Programming*

- Monthly activities:
  - Monitoring report analysis
  - Decision on possible escalation to the President’s Steering Committee (in case of emergency)

**Supported by**

**Service for planning and strategic coordination**

**Supported by**

**Service for the coordination of corporate support services**

**Quarterly activities**

**Current activities**

**Support to strategic planning:**
- Definition of strategic objectives
- Definition of the portfolio
- Definition of derived plans
- (performance, risks, etc.)
- Definition of macro economic-financial coverage
- Policies for the acquisition of goods and resources

**Support to operational programming:**
- Requirement collection
- Definition and negotiation of Service Level Agreements
- Resource micro allocation
- Production of reports
- Risk management

Valerio Fiorespino – Istat - Italy
Istat’s new organisation
Concluding remarks

- Modernisation is an ineluctable process: it needs a holistic view, a strong internal consensus and a change management to facilitate the transition steps.

- It is necessary to continue ensuring high data quality together with integrity and suitability of statistical methods, while investing in human resources.

- A good staff training is one of the most relevant factor to put in place Modernisation Programmes and should build human resources and strategy managers together.

- A cultural change is also a crucial point.
Thank you

valerio.fiorespino@istat.it