

“Strengthening the capacity of Jordan’s Department of Statistics”

Activity 1.3.6: Standardized production process and the role of metadata

Role and task of the Quality Unit at Istat

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Delegation of the European
Union to Jordan



Official corporate system for Quality Documentation

SIDI/SIQual is the official system devoted to Istat quality monitoring and assessment: SIDI «input» platform, SIQual for consultation (since 2006). It is the backbone for Istat quality activities.

The Istat business process model is coherent with GSBPM and can be mapped to GSBPM items at any level (Case study).

Systematic approach to quality: reference metadata (including standard quality indicators) are stored and continuously updated. All defined metadata items are characterised by a “validity period” i.e., the time reference in which that piece of information is indeed valid.

Documentation is highly structured via controlled vocabularies, restricted lists of terms used for categorizing the content of information resources.

They help ensure consistency and avoid ambiguity in the description of data.

They are also subject to specific policies that determine who may add terms to the list, when and how.

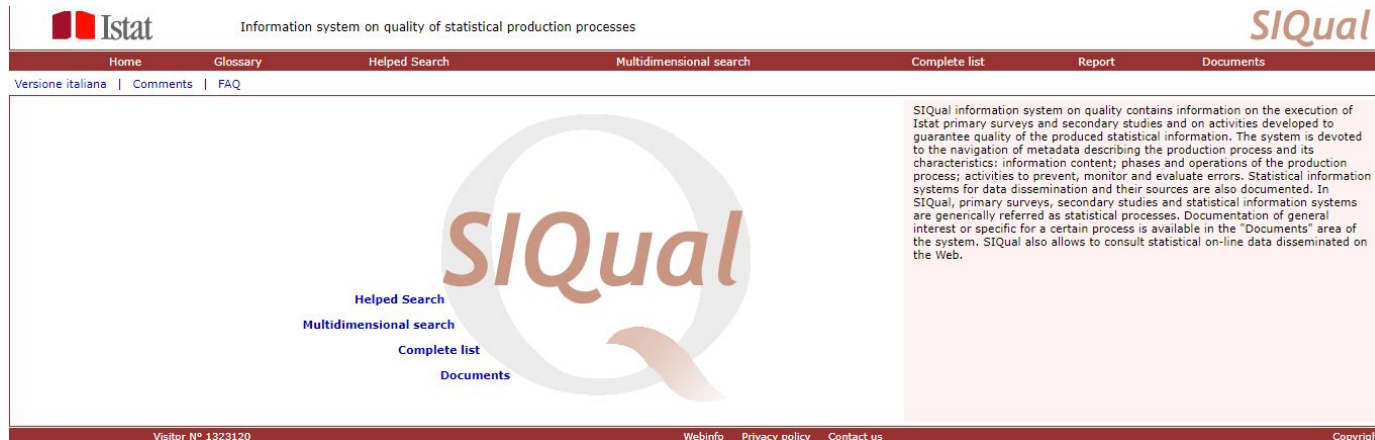
Main uses of SIDI/SIQual

- process and quality monitoring
- Standardization of concepts and terminology (and storage, and re-use)
- support for statistical auditing and self-assessment procedures
- targeted analyses e.g., evaluations of innovation effects, quality comparisons among processes sharing similar characteristics, ...
- shared services (since Data collection, Methodologies, Dissemination and IT functions have been centralized within the 2016 Istat modernization)



How to browse the system

Documentation of processes and quality <http://siqua.istat.it>



The screenshot shows the SIQual website interface. At the top left is the Istat logo and the text "Information system on quality of statistical production processes". At the top right is the "SIQual" logo. Below the header is a navigation bar with links: Home, Glossary, Helped Search, Multidimensional search, Complete list, Report, and Documents. Below the navigation bar is a sub-navigation bar with links: Versione italiana, Comments, and FAQ. The main content area features a large "SIQual" logo in the center. To the left of the logo are four links: Helped Search, Multidimensional search, Complete list, and Documents. To the right of the logo is a text box containing a detailed description of the SIQual system. At the bottom of the page is a footer with links: Webinfo, Privacy policy, Contact us, and Copyright.

Information system on quality of statistical production processes

SIQual

Home Glossary Helped Search Multidimensional search Complete list Report Documents

Versione italiana | Comments | FAQ

Helped Search
Multidimensional search
Complete list
Documents

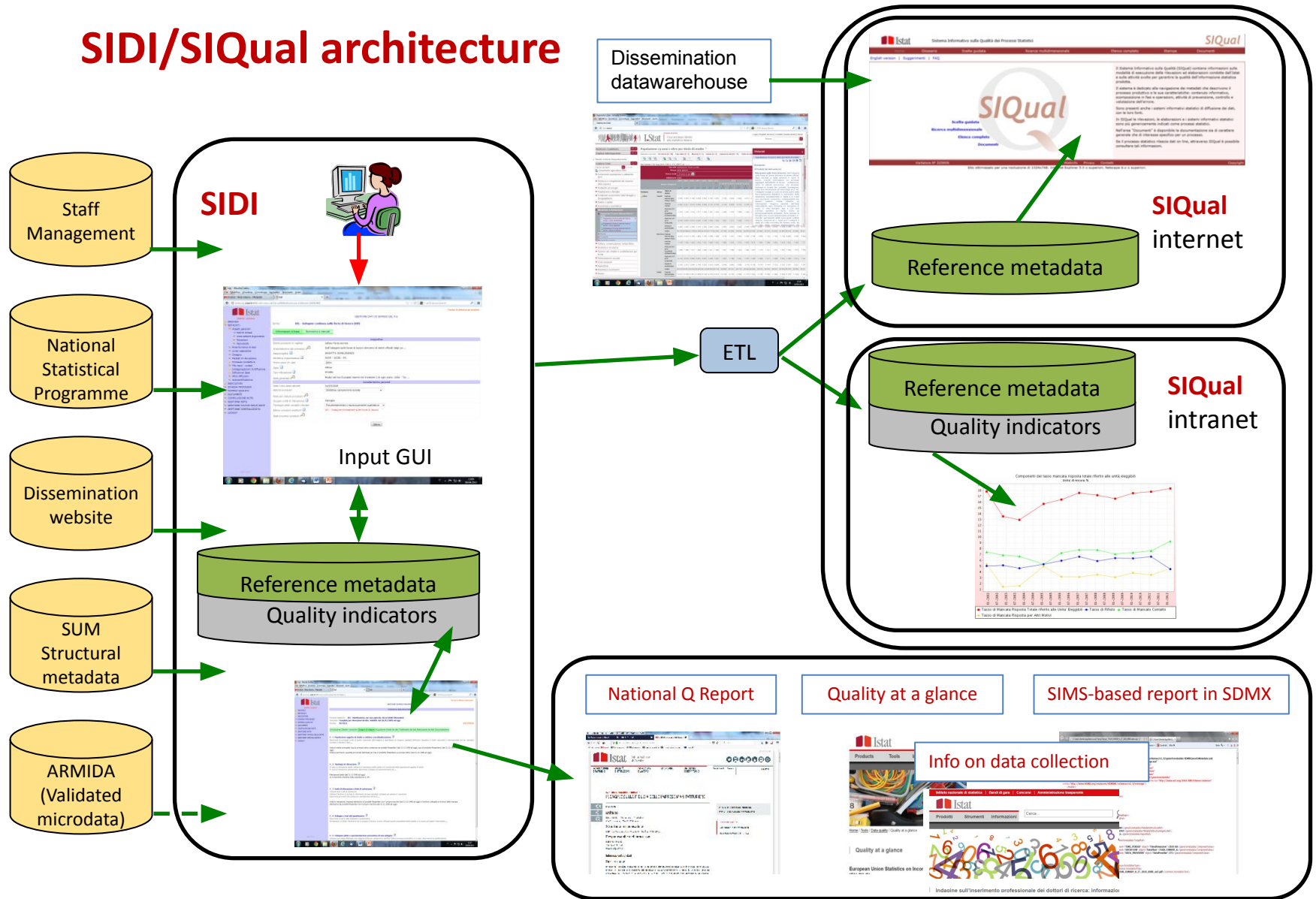
SIQual information system on quality contains information on the execution of Istat primary surveys and secondary studies and on activities developed to guarantee quality of the produced statistical information. The system is devoted to the navigation of metadata describing the production process and its characteristics: information content; phases and operations of the production process; activities to prevent, monitor and evaluate errors. Statistical information systems for data dissemination and their sources are also documented. In SIQual, primary surveys, secondary studies and statistical information systems are generically referred as statistical processes. Documentation of general interest or specific for a certain process is available in the "Documents" area of the system. SIQual also allows to consult statistical on-line data disseminated on the Web.

Visitor N° 1323120 Webinfo Privacy policy Contact us Copyright

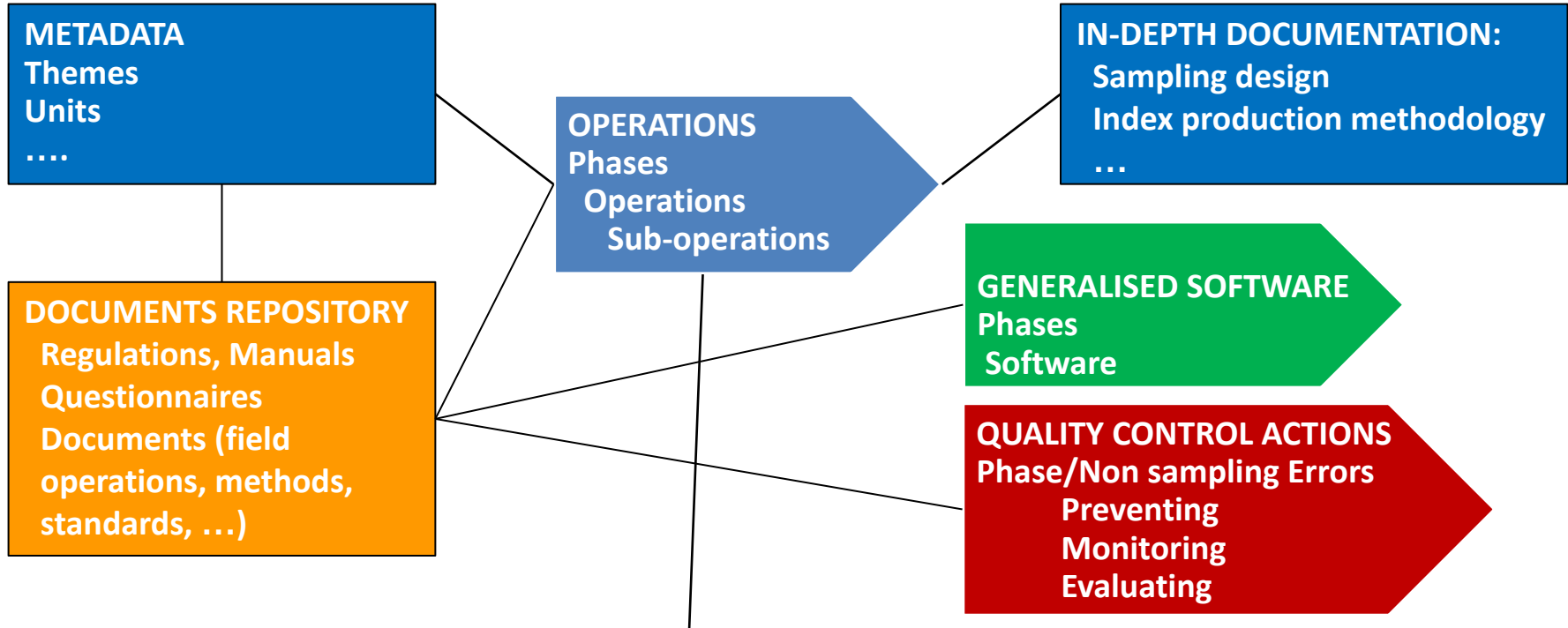
SIQual has 2 versions: one for external users, one for internal users.
The main difference is that the first one does not include quality indicators

It is "old" and should be renovated.
The design and implementation of a new system will take some three years

SIDI/SIQual architecture



Inside SIDI-SIQual



| | |
|--|--|
| <p>Standard quality indicators</p> <p>Process oriented</p> <ul style="list-style-type: none"> Coverage Unit non response Coding Editing and imputation Costs | <p>Product oriented</p> <ul style="list-style-type: none"> Revision analysis Timeliness and punctuality Coherence preliminar/final results Coherence with other sources Length of comparable time series |
|--|--|

Access to SIQual and SIDI

System for the input of metadata and quality indicators (management environment)

SIDI Internal users (quality pilots) holding a user account in the application (ID and password required to login).

Navigation system

SIQual (internet) All users (external and internal)

SIQual (intranet) All internal users

Centralized management

Centralized SIDI/SIQual group

check completeness and correctness of the metadata and quality indicators

validation procedures (wording and English translation)

identification of new processes to be documented

identification of new quality pilots to be trained and corresponding capacity building actions

content maintenance & enhancements
(e.g., definition and update of controlled vocabularies)

Actors involved



Net of colleagues within the NSI

1. The **quality pilots**: one (at least) person is associated to each Istat statistical process. They (≈ 160 active colleagues) obtain a formal appointment after following the SIDI-SIQual training course.
Aim: maintaining the system with updated documentation of the statistical processes.
2. **Data collection managers**: In charge of providing quality indicators related to data collection
3. The contact **persons for quality reporting**, in charge of producing the ESS standard-based quality reports, usually different from the people appointed as quality pilots

Annual management cycle

1st step (March)

- All Directorates provide the list of the new process (and corresponding new quality pilots) to be documented in SIDI

2nd step (June)

- Training course for new quality pilots

3rd step (October)

- Deadline for:
 - pre-existing processes: metadata updating
 - new processes: first documentation

4th step (December)

- Deadline for pre-existing processes: quality indicators update

5th step (March +1)

- Deadline for new processes: first calculation of quality indicators

Summing up the experience

- It created a common language, increased the quality culture, increased the awareness on quality control and monitoring
- Each process is unique from the survey manager perspective
- Especially at the beginning, it represented an additional task for survey managers, perceived as scarcely useful for the single survey manager
- European work on quality indicators represented both a stimulus and a constraint
- **Highly appreciated when information started to be re-used**
- *Demanding to keep the pace of technological evolutions*
- *Demanding to be flexible to changing production environment*



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The subsystem for quality reporting

SIDI/SIQual was born several years before SIMS. However, most of information required by SIMS was already available in SIDI/SIQual

- reducing reporting burden on production units who have to fulfil both internal and external demands in terms of metadata and quality indicators

Grant (Eurostat funding) in 2012.

| | | |
|---|---|---|
|  | Horizontal and vertical integration: Implementing technical and statistical standards in the European Statistical System |  |
|---|---|---|

One of the actions was:

Development of a SIDI/SIQual subsystem for quality reporting

Financing the implementation

One of the main objective of the 2012 Grant was to support the implementation of ESS metadata standard at national level.

Istat took the opportunity to enhance SIDI/SIQual for kickstarting the production of SDMX compliant metadata files (SDMX-ML format), harmonized with the ESS standard structures.

The main purpose of the project is twofold:

- to exploit the available information, reducing reporting burden for survey managers that have to fulfil both internal and external demands in terms of reference metadata and quality indicators, and also avoiding potential inconsistencies among information presented on SIDI/SIQual and provided directly to Eurostat;
- to maintain such information at a centralised level within the Institute, organised according to internationally accepted conceptual and technical standards, thus improving the overall Istat metadata asset and facilitating a possible next re-use.

Subsystem main advantages

Exploit the already available information, by facilitating re-use

Reduce reporting burden for survey managers: highly appreciated!!!

Improve internal coordination, centralised monitoring

Avoid inconsistencies in metadata and quality reporting

Seek compliance to international technical standards

New menu item

COMPILAZIONE QUALITY REPORT

Impostazioni Quality Report

Gestione Compilazione Quality Report - Dettaglio

1.Contact

2.Metadata update

3.Statistical presentation

4.Unit of measure

5.Reference Period

6.Institutional Mandate

7.Confidentiality

8.Release policy

9.Frequency of dissemination

10.Accessibility and clarity

11.Quality management

12.Relevance

13.Accuracy

14.Timeliness and punctuality

15.Coherence and comparability

16.Cost and Burden

17.Data revision

18.Statistical processing

19.Comment

Allegati

Prodotto: Air transport measurement - passengers, freight and mail, airport traffic and regional statistics
Metadataset: AIR_AVNES_A_IT_2020_0000

3. Statistical presentation

Statistical presentation

Da non pubblicare

3.1 Data description *

Main characteristics of the data set described in an easily understandable manner, referring to the data and indicators disseminated.

The new statistical survey on air transport is a total survey collection information on the carriage of passengers, freight and mail by air, flight stages, available seats for passengers on aircraft and aircraft movements. The reporting units are the airports and the data are provided by their management companies.

The main topics observed are: Carriage of passengers, freight and mail by air

Da non pubblicare

3.2 Classification system *

Arrangement or division of objects into groups based on characteristics which the objects have in common.

Airports are classified according to ICAO (International Civil Aviation Organization) airport coded as listed in ICAO document 7910.

Aircrafts are classified according to aggregated aircraft categories based on the ICAO aircraft codes as listed in ICAO document 8643.

Airlines are classified according to the ICAO airline codes as listed in the ICAO document 8585. When providing the data to Eurostat, the region where they are licensed is coded accordingly either as European Union (EU) or outside the European Union (non-EU).

Da non pubblicare

3.3 Coverage - sector *

Main economic or other sectors covered by the statistics.

National metadata system is used to produce the metadata file and then it is manually imported in ESS-MH

Facilitating implementation of quality reporting

The subsystem is highly «generalised»: when (if) a new standard template is defined by Eurostat, it could be easily and quickly adapted

Apart from the production of the ESS quality reports, disseminated also through SIQual, the subsystem has already been reused twice:

- to produce the «information on data collection» pages addressed to respondents to surveys; in Italian only
- to produce national quality reports according to a template that is a subset of SIMS, updated annually.

Burden zero: produced totally re-using the metadata and quality indicators already documented; in Italian only

Data quality tools

In English language, a section makes available a number of short reports, intended for basic users.

Each report contains information on survey general characteristics, such as design, data collection technique, total number of units and respondents, quality assurance measures, dissemination methods and timeliness.

HOME > METHODS AND TOOLS > DATA QUALITY TOOLS > QUALITY AT A GLANCE

QUALITY AT A GLANCE

- + Agriculture
- + Citizens' opinions and satisfaction with life
- + Communication, culture, leisure and time use
- + Education and training
- + Enterprises
- + Environment and energy
- + Health statistics
- + Households economic conditions and disparities
- + Industry and construction
- + Justice and security
- + Labour and wages
- + Population and households
- + Prices
- + Public administrations and private institutions
- + Services
- + Social participation
- + Social security and welfare

For further investigation on the purposes, execution and control of Istat surveys and more detailed metadata, please consult the [SIQual](#) documentation system.



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