Standardization of methods and processes: overview of the Istat activities and open problems

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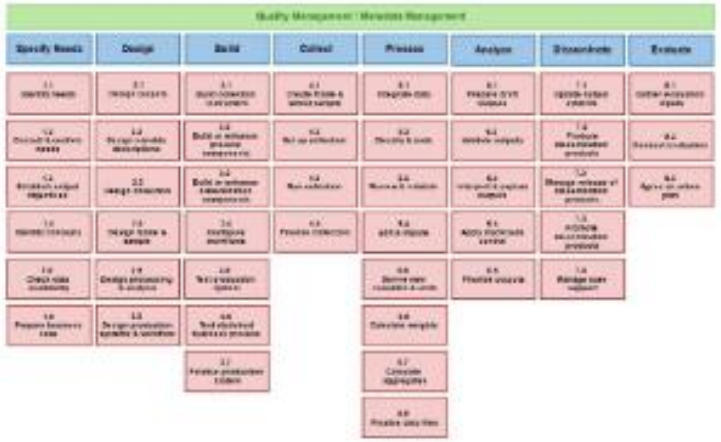
#IstatWorkshop

This presentation

- The standards: GSBPM and GSIM
- ISTAT modernization and service organization
- The Working group on standards: activities and methods
- IT tools and methodologies
- Outcomes and future activities

Standards used: GSBPM and GSIM



GSBPM – Generic Statistical Business Process Model

International standard used to document any kind of statistical business process

already used in ISTAT modernization process

GSIM – Generic Statistical Information Model

reference framework of internationally agreed definitions: information objects used in the production of official statistics

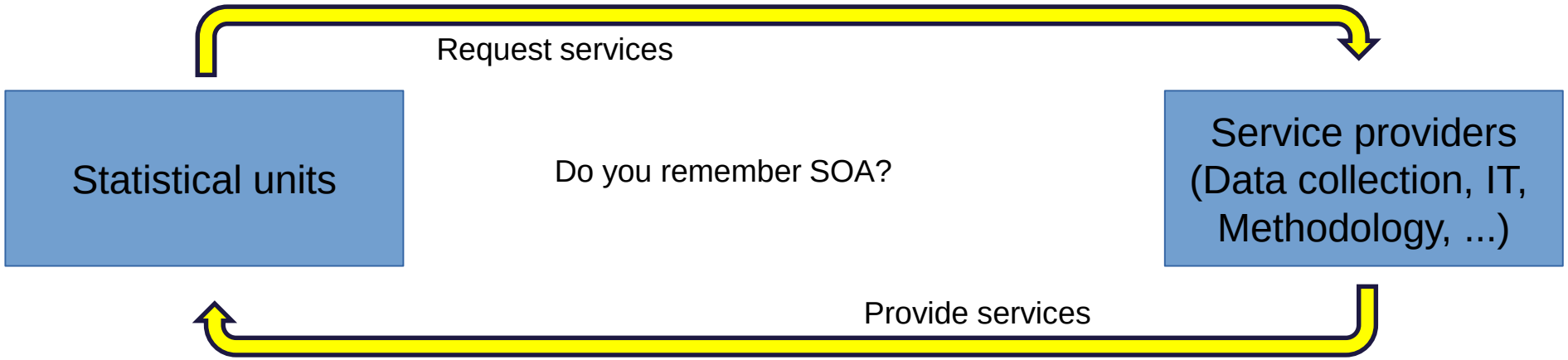
already used in ISTAT Metadata systems

Standards managed by UNECE HLG-MOS (see link)

ISTAT modernization and services

ISTAT modernization process: unify the activities shared between the surveys – these units provide “services” to the statistical units - to support standardization and sharing:

- Data Collection (GSBPM phase)
- Data Dissemination (GSBPM phase)
- Methodology (GAMSO-GSBPM activity)
- ICT (GAMSO-GSBPM activity)

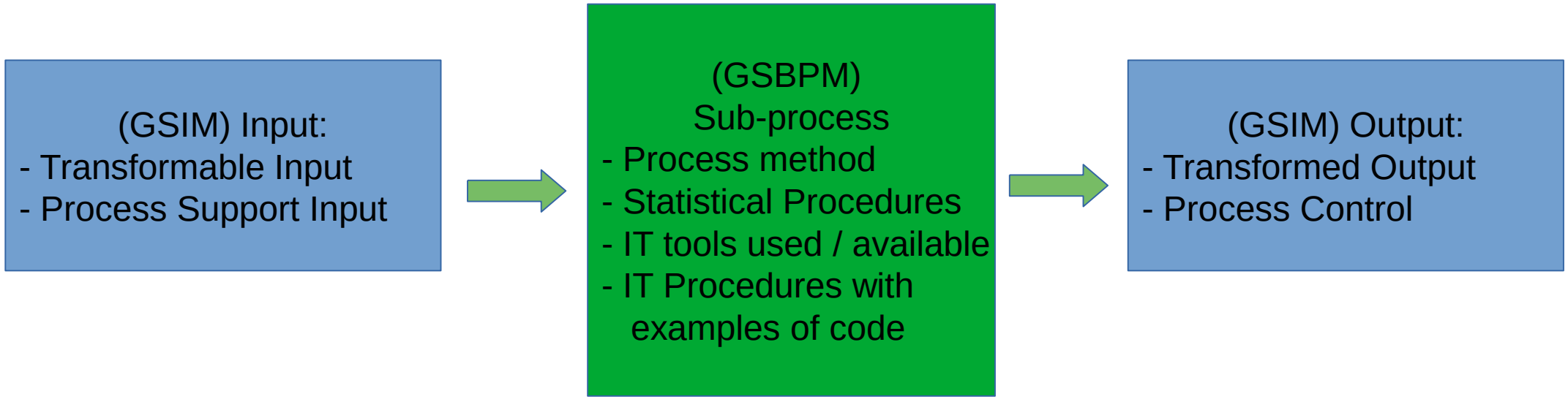


The Working Group

- 2020 – 2022 Working Group on methods and standards internal to Istat Directorate for Methodology, to:
  - develop a catalog of methods, tools and statistical services
  - extend the set of standard methods and tools for statistical production
  - implement statistical services according to the CSPA architecture
  - offer a user-friendly catalog of such services made available to the production sector
- Documentation: first step toward Sharing and Standardization

Process documentation

- Focus on main methodological activities
- Step-by-step description of the process activities with issues:
  - Terminology (sectorial jargon to be standardized)
  - Granularity (detail level of the description, to be homogenized)



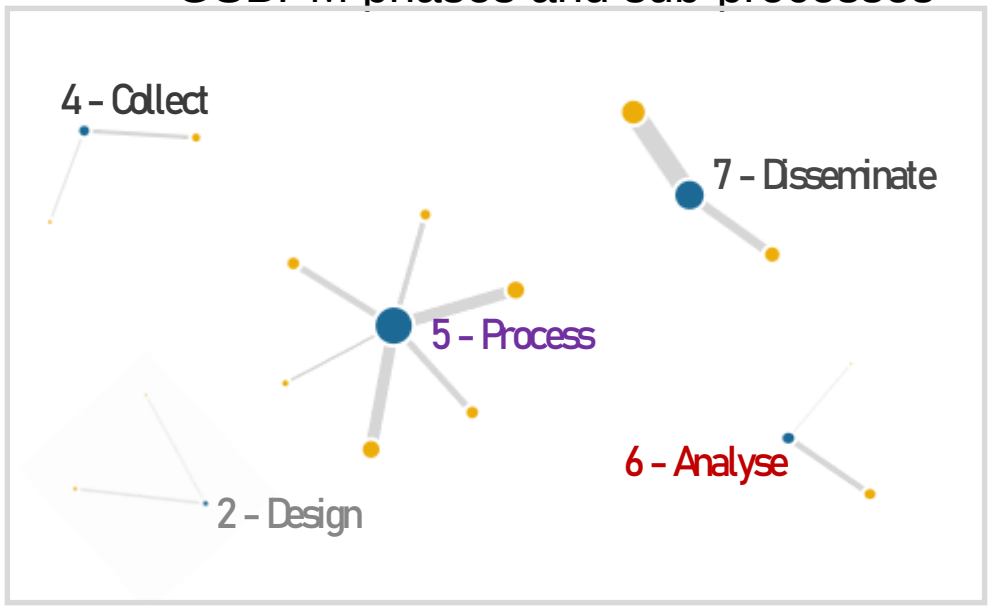
Working method

- The working group was divided into various subgroups and a group of coordinators: the working method favored discussion and comparison between groups of experts (IT and statisticians)

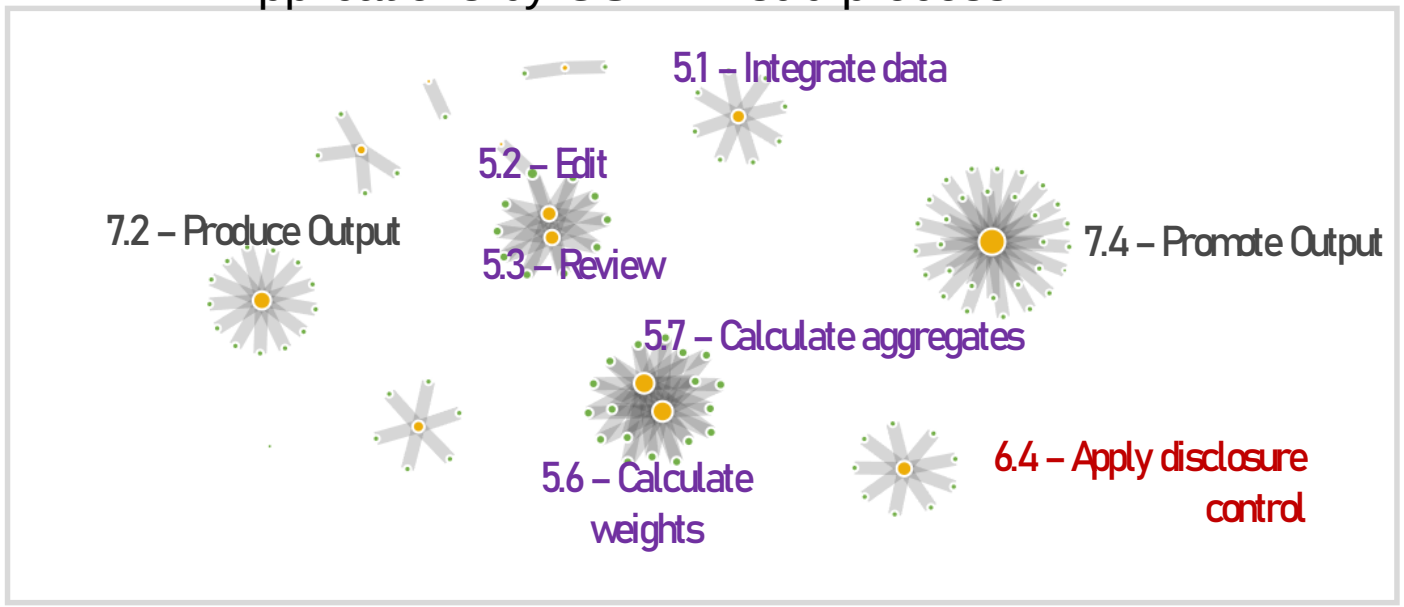
- Explicit and implicit questions that arose during the discussions:
  - What IT tools are currently suggested to carry out the analyzed sub-process?
  - What meta information needs to be made available for a sub-process step?
  - Which statistical methodologies are still "ghettoized" in some sub-processes?
  - What is the "natural" flow of a sub-process?
  - What are the skills needed to carry out a sub-process?
  - What IT tools need to be developed or prioritized?
  - What standardization is needed to set up an "ordered" flow between sub-processes?

Tools and visualizations used to activate group discussions

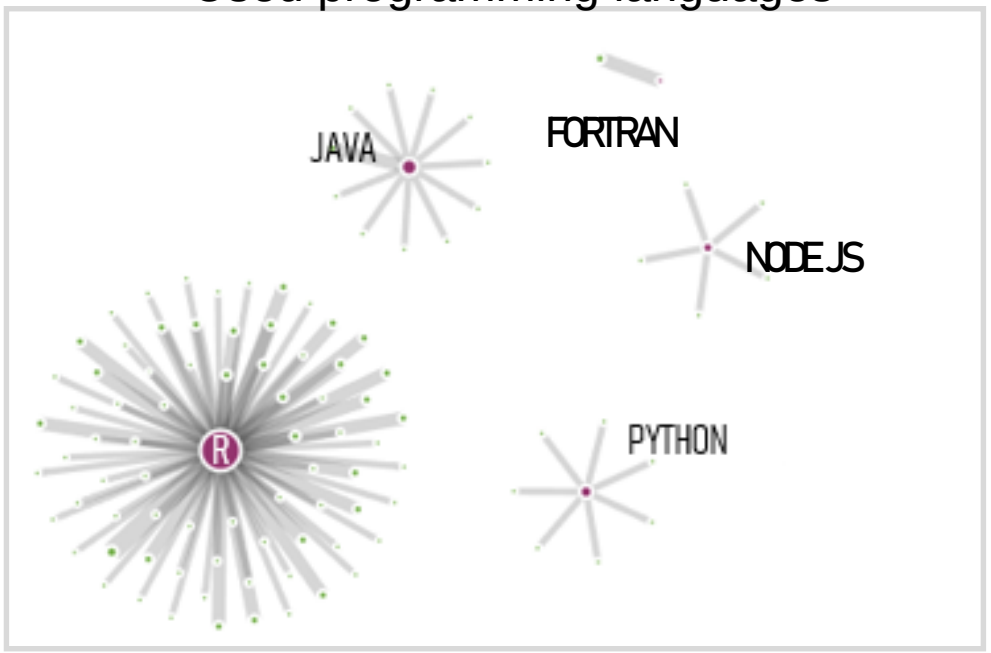
GSBPM phases and sub-processes



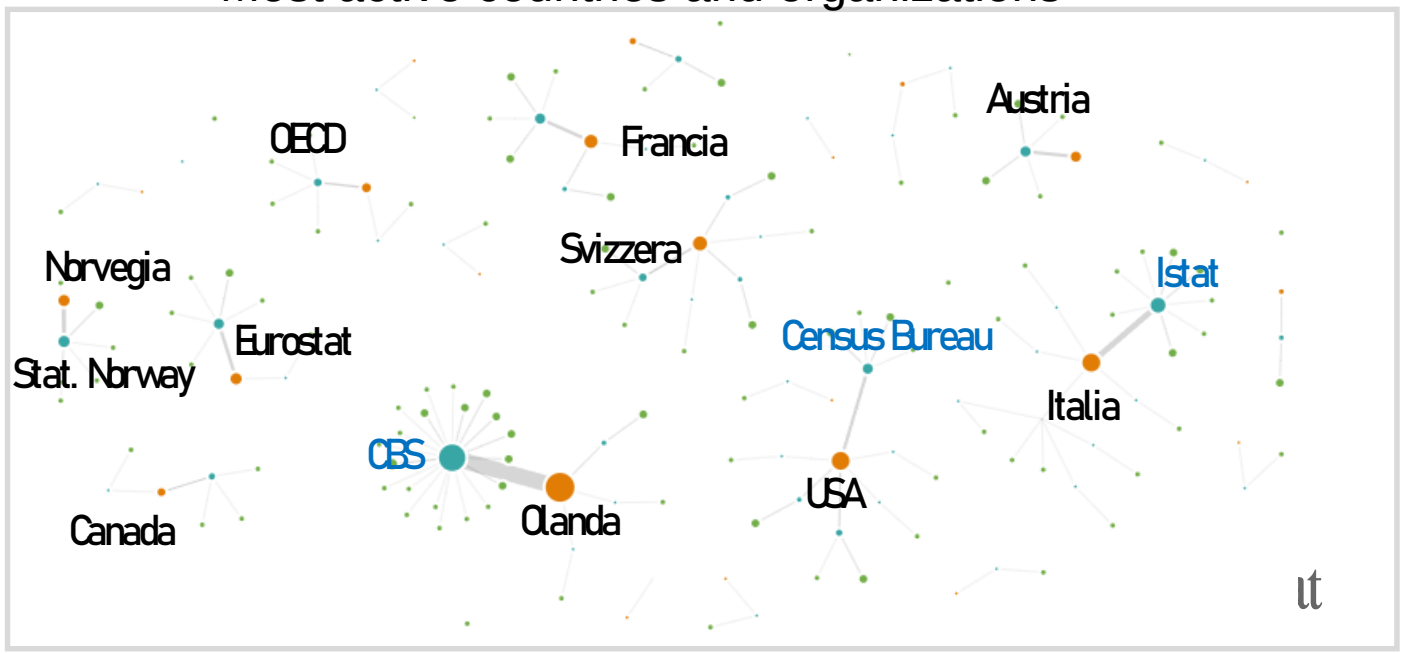
Applications by GSBPM sub-process



Used programming languages

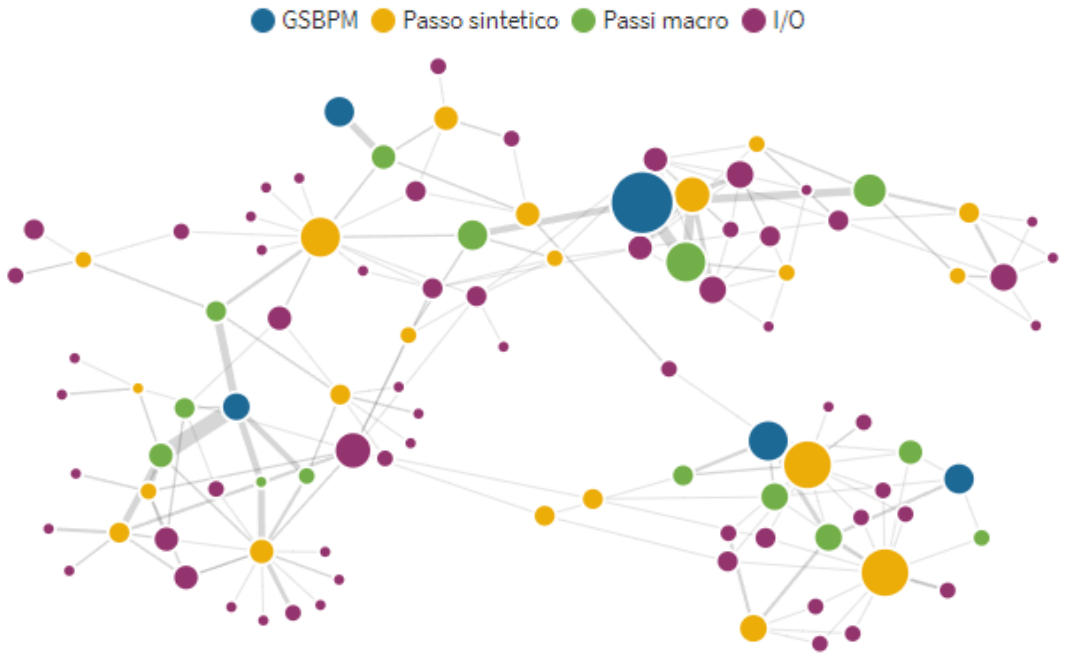


Most active countries and organizations

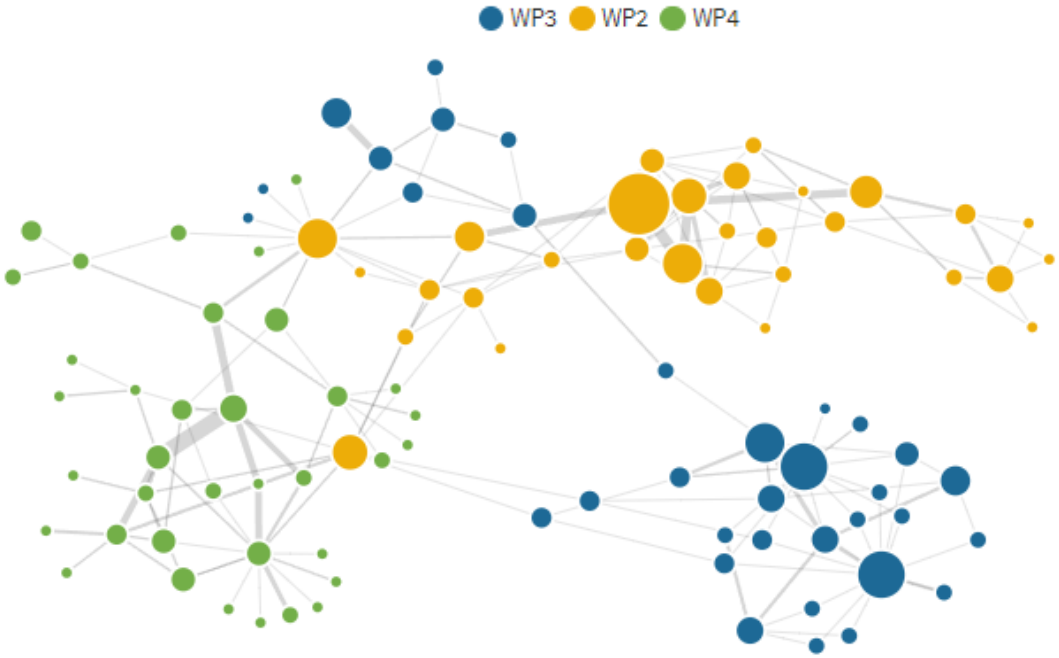


The outputs: views by process, WP, statistical methods and flows

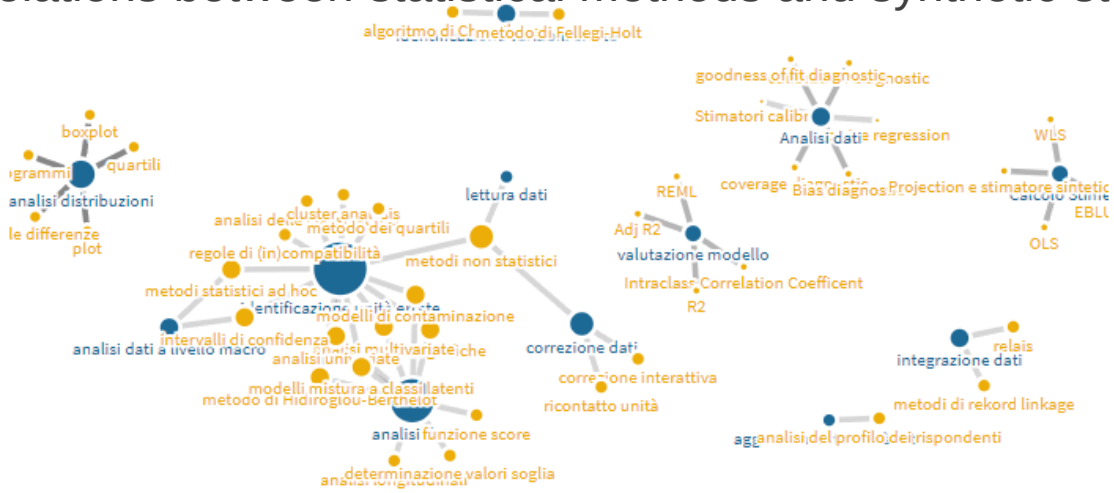
View by process level



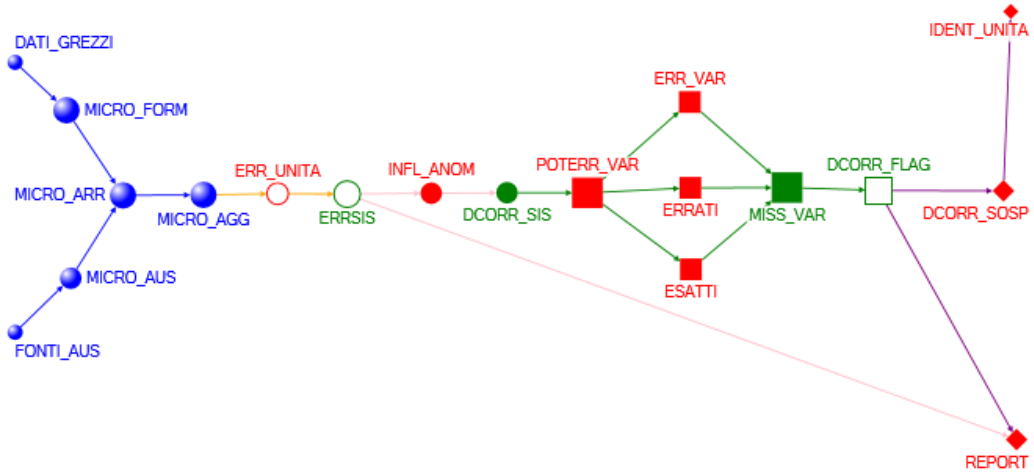
View by sub-process (WorkPackage)



Relations between statistical methods and synthetic steps



WP3 Process flow



Outcomes and future

- Common description between processes → standardization and best-practices
- Spreadsheets filled for many processes → tbc for missing GSBPM phases
- Better knowledge of national and international available tools
- Wiki with web access for ISTAT users → spreading knowledge inside and (in the future) outside
- (In progress) Catalog containing the whole methodological offer available to the production sectors of the Institute
- (Future) Repository containing the IT tools and the methodologies available for researchers in a protected and standardized IT environment. Researchers will be able to search and compare the methods and the tools, and to execute them (statistics-as-a-service)

Thank you

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