

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

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*#IstatWorkshop*

# This presentation

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- 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

Quality Management - Business Management							
Specify Needs	Design	Build	Collect	Process	Analyze	Distribute	Evaluate
1.1 Identify needs	2.1 Design process	3.1 Build resources	4.1 Collect data & assess quality	5.1 Process data	6.1 Analyze data	7.1 Distribute results	8.1 Evaluate process
1.2 Identify & analyze needs	2.2 Design process description	3.2 Build or enhance process description	4.2 Collect data	5.2 Process data	6.2 Analyze results	7.2 Distribute results	8.2 Evaluate outcomes
1.3 Identify output requirements	2.3 Design resources	3.3 Build or enhance process description	4.3 Collect data	5.3 Process data	6.3 Analyze results	7.3 Distribute results of measurement process	8.3 Agree on data plan
1.4 Identify resources	2.4 Design data & sample	3.4 Acquire resources	4.4 Process collection	5.4 Data capture	6.4 Apply statistical control	7.4 Distribute measurement process	
1.5 Check data availability	2.5 Design sampling & analysis	3.5 Test resources		5.5 Data capture	6.5 Process control	7.5 Distribute results	
1.6 Prepare business case	2.6 Design production methods & resources	3.6 Test statistical control of process		5.6 Distribute results	6.6 Process control	7.6 Distribute results	
		3.7 Prepare production tables		5.7 Distribute results	6.7 Control strategies		
				5.8 Prepare data plan			

GSBPM – Generic Statistical Business Process Model  
 International standard used to document any kind of statistical business process  
 already used in ISTAT modernization process



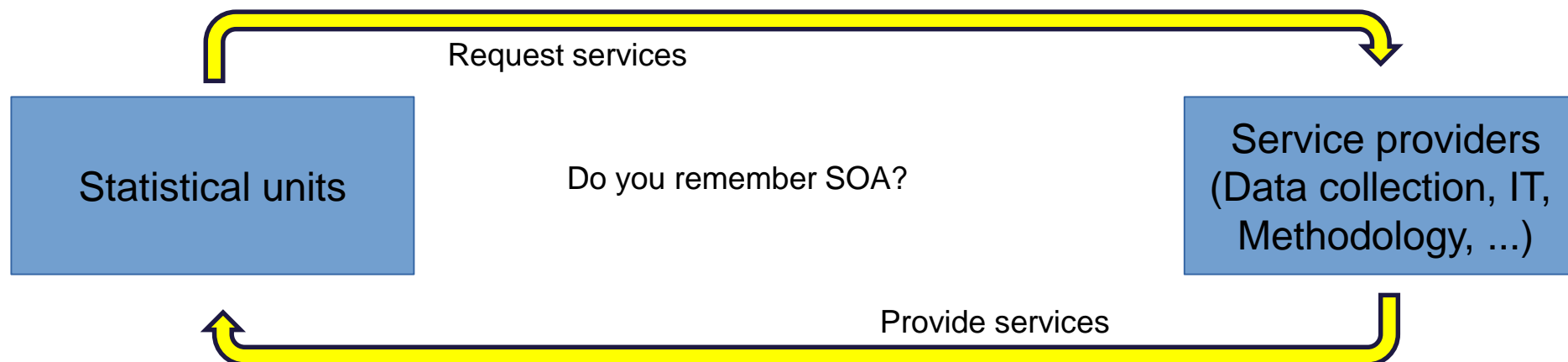
GSIM – Generic Statistical Information Model  
 reference framework of internationally agreed definitions:  
 information objects used in the production of official statistics  
 already used in ISTAT Metadata systems

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

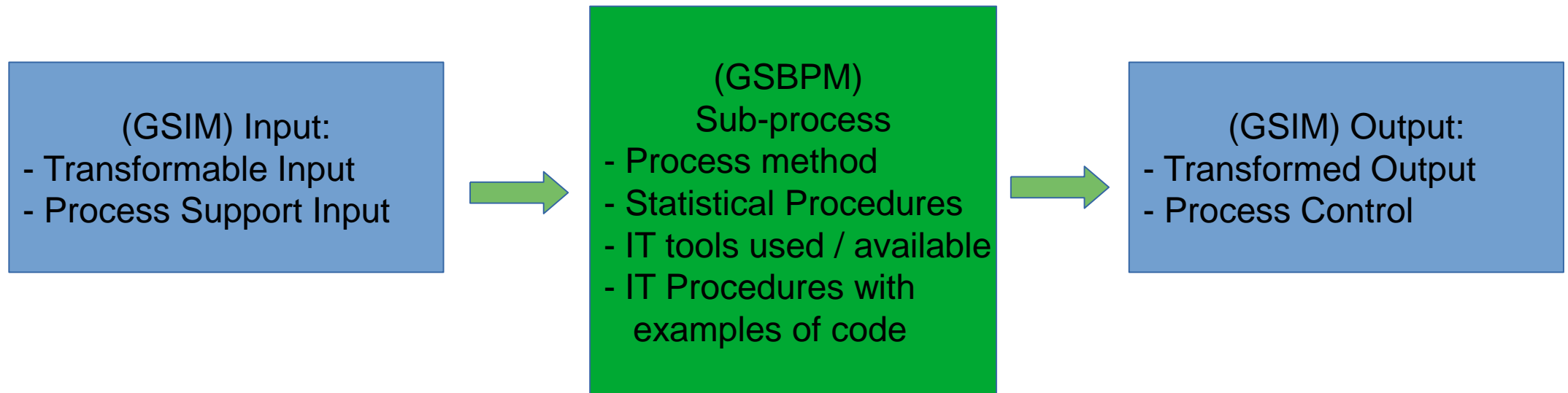
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- 2020 – 2022 Working Group on methods and standards internal to Istat Directorate for Methodology, to:
  - develop a catalog of methods, tools and statistical services
  - extend the set of standard methods and tools for statistical production
  - 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

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- 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)



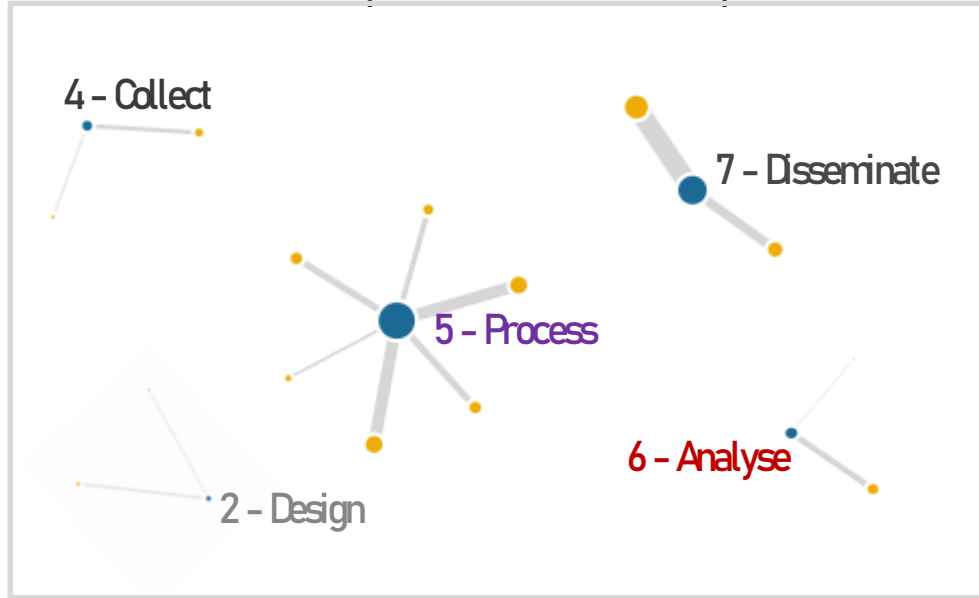
# Working method

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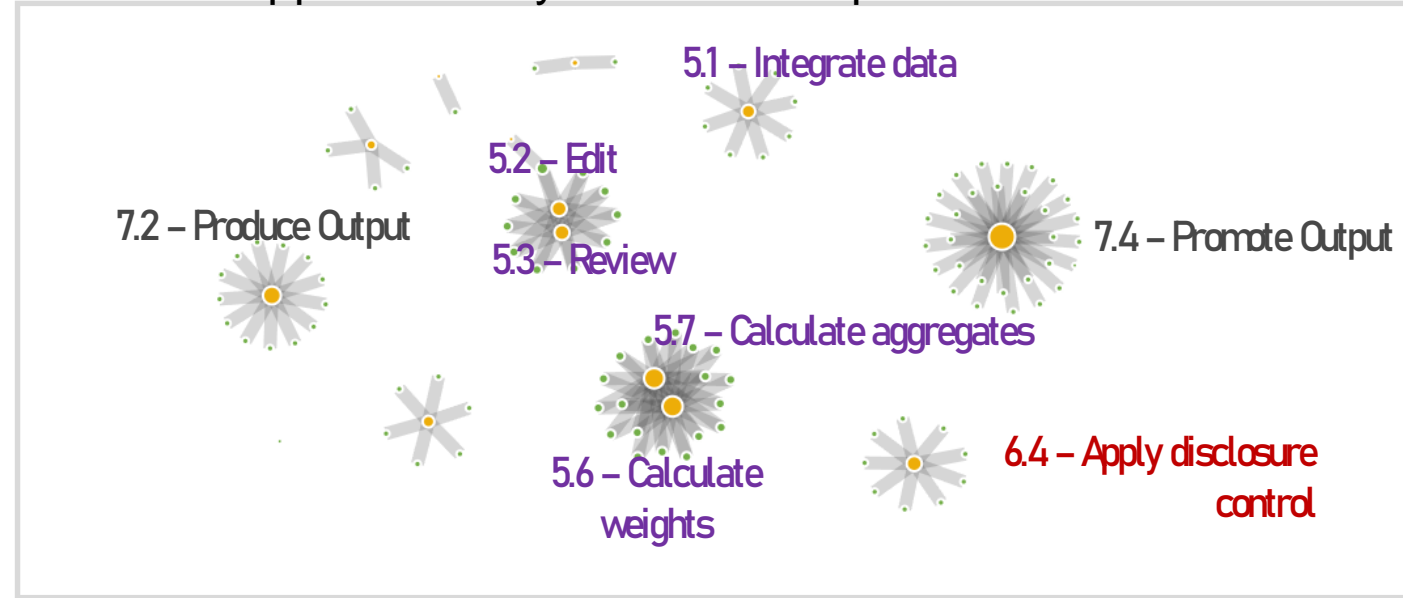
- The working group was divided into various subgroups and a group of coordinators: the working method favored discussion and comparison between groups of experts (IT and statisticians)
- Explicit and implicit questions that arose during the discussions:
  - What IT tools are currently suggested to carry 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

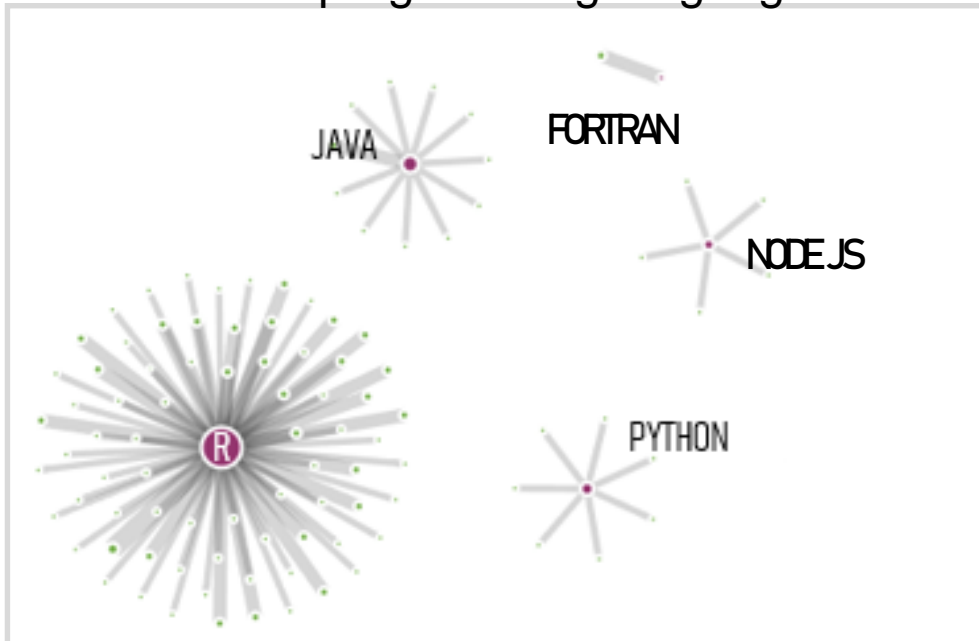
## GSBPM phases and sub-processes



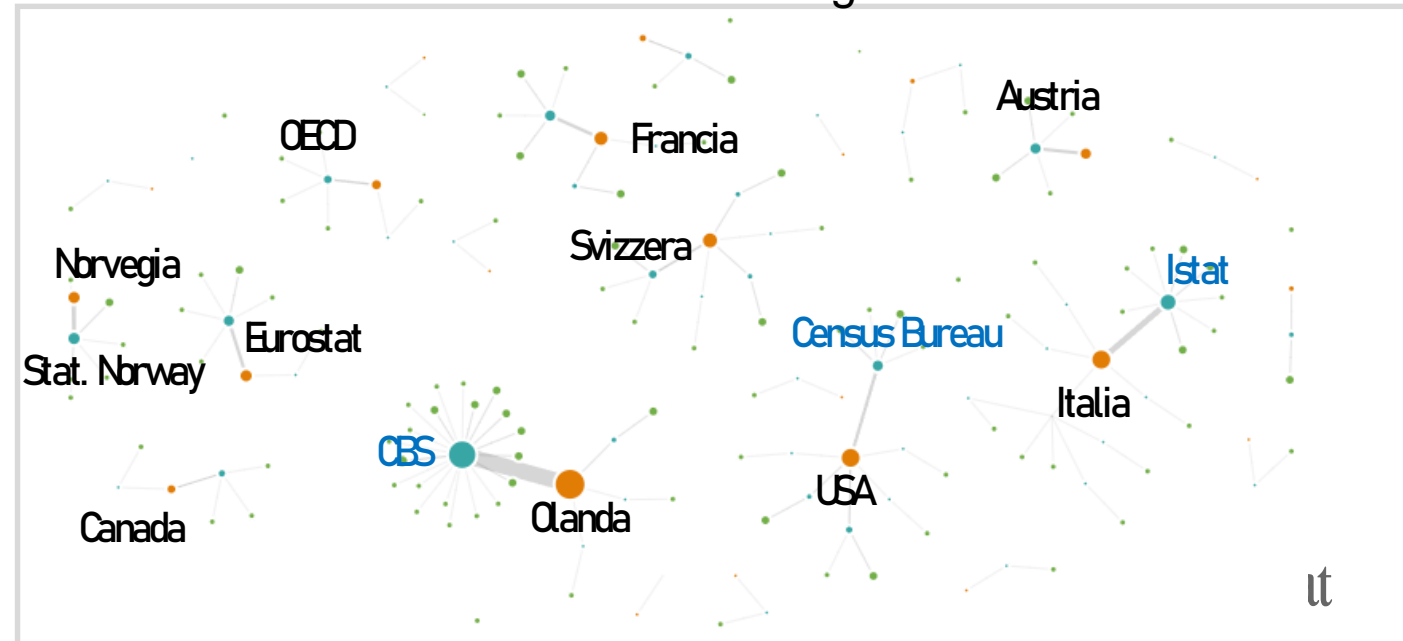
## Applications by GSBPM sub-process



## Used programming languages



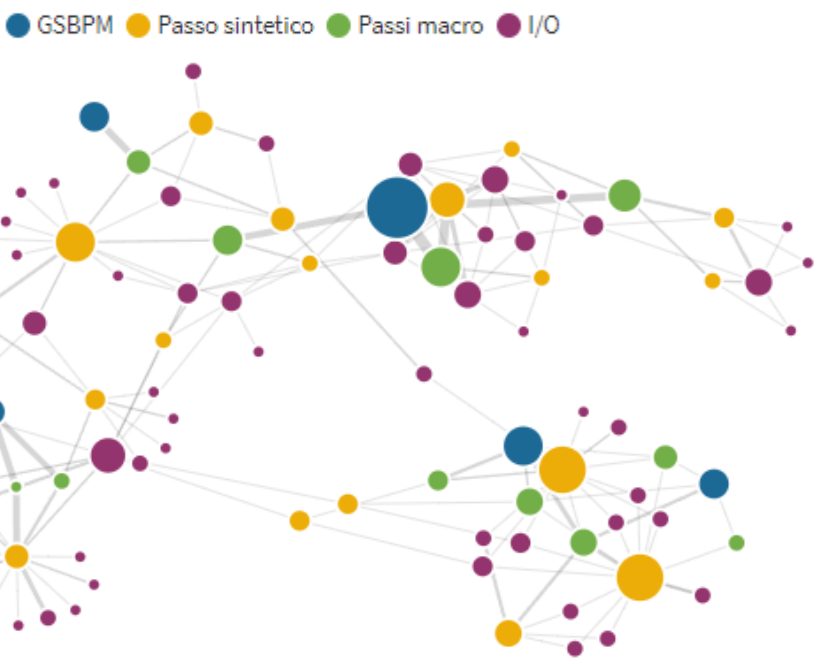
## Most active countries and organizations



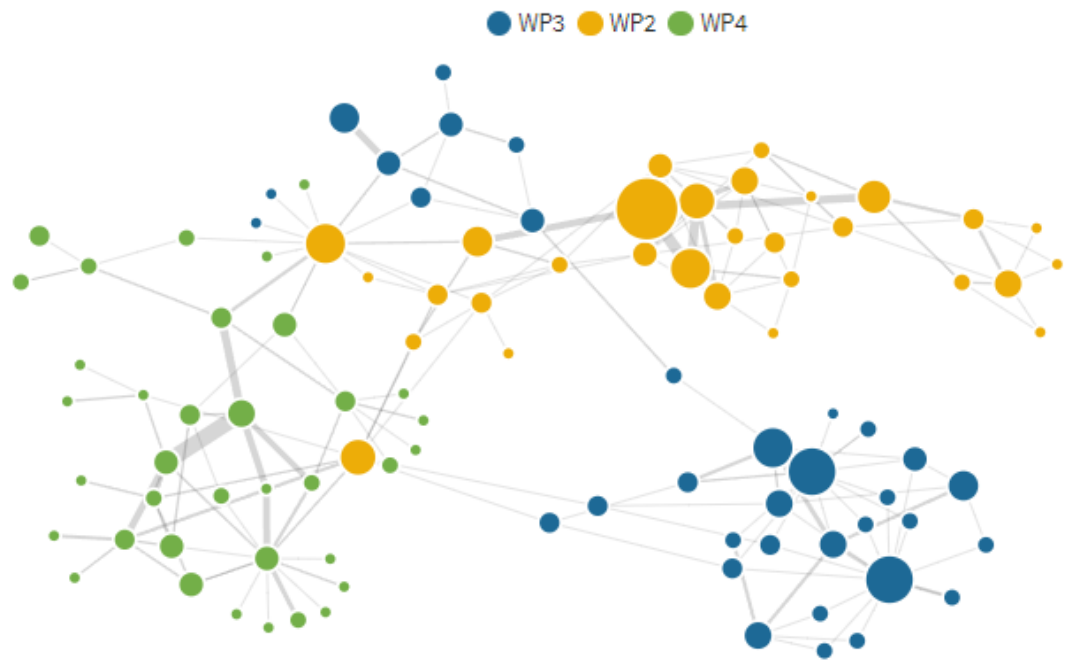


# The outputs: views by process, WP, statistical methods and flows

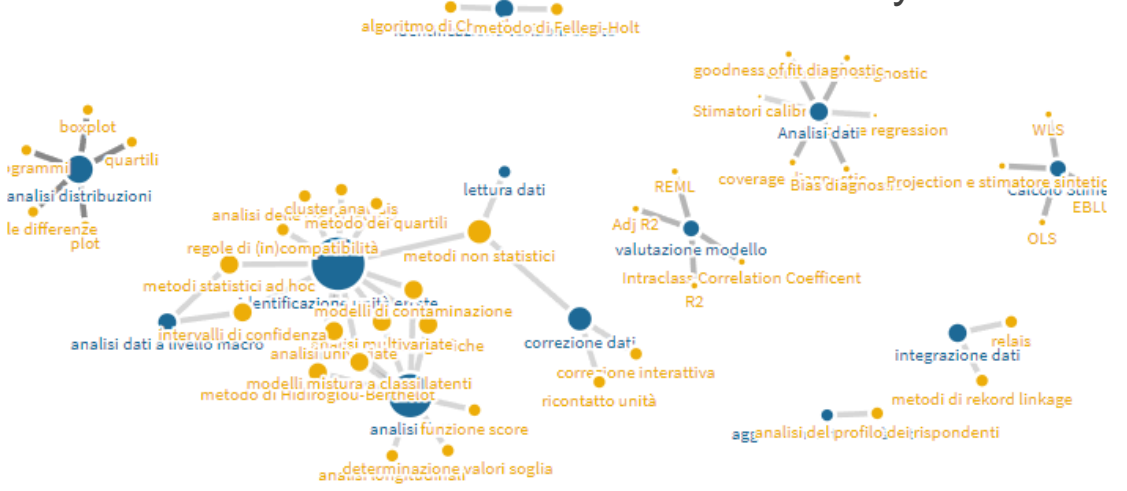
### View by process level



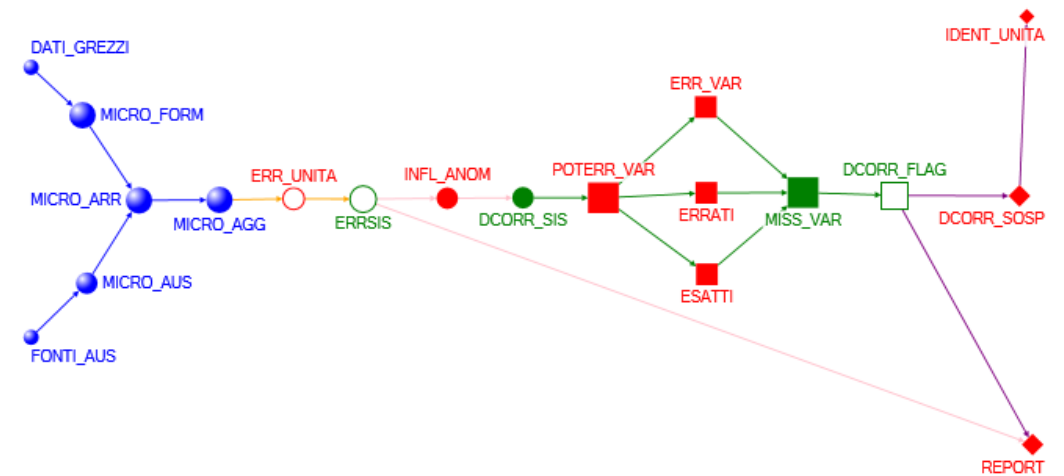
### View by sub-process (WorkPackage)



### Relations between statistical methods and synthetic steps



### WP3 Process flow



# Outcomes and future

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- 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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