Workshop on Transparency and Reproducibility in Federal Statistics Workshop (June 21-22, 2017)

Generic Statistical Business Process Model (GSBPM)

How this model could contribute to transparency and reproducibility

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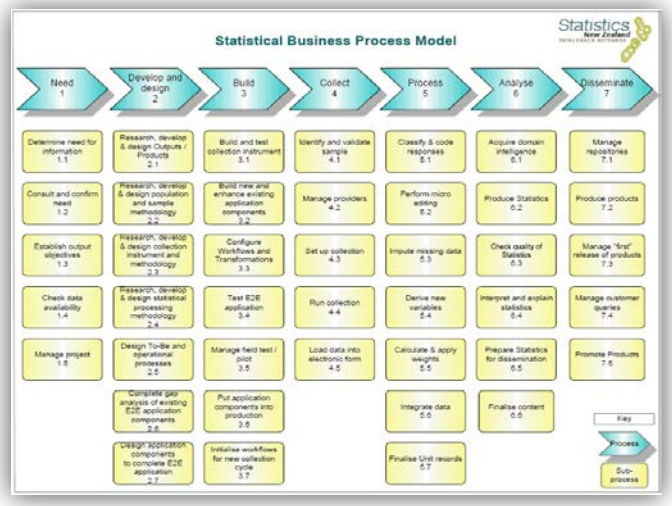
Generic Statistical Business Process Model (GSBPM)

Is a reference model that describes and defines the set of business processes needed to produce official statistics.

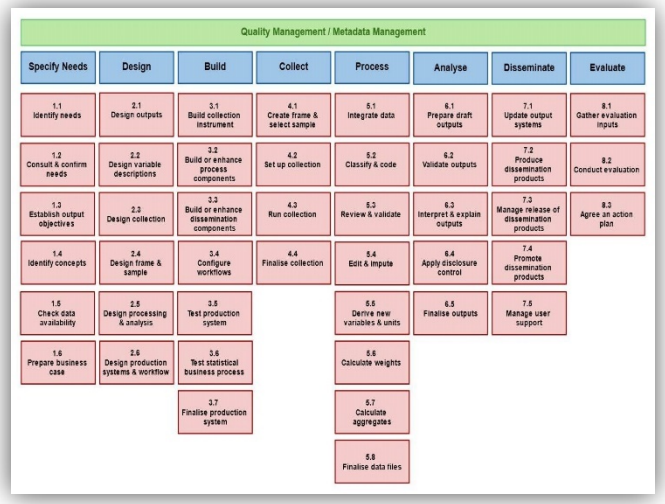
Provides a standard framework and harmonized terminology to help statistical organizations to modernize their statistical production processes, as well as to share methods and components.

It is intended to provide a tool to help addressing the following needs:

- Defining and describing statistical processes in a coherent way
- Comparing and benchmarking processes within and between organizations
- Improving decisions on production systems and organization of resources



New Zealand



Conference of European Statisticians Steering Group on Statistical Metadata (METIS)

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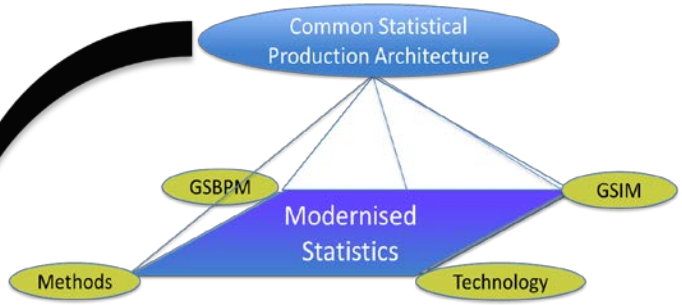
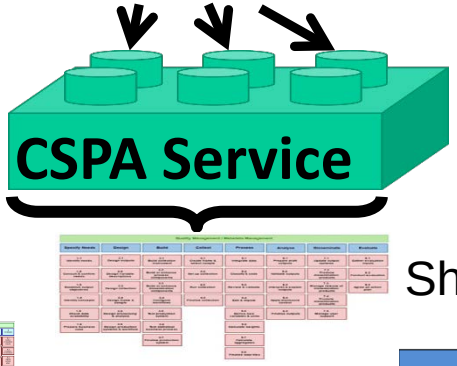
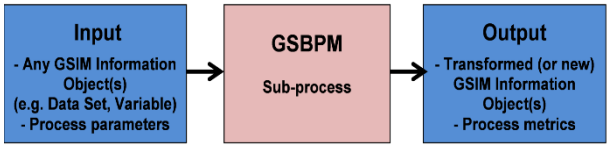
GSBPM Shares an Environment With Other Modernization Standards

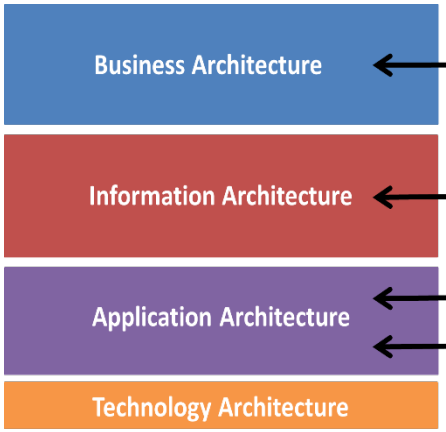


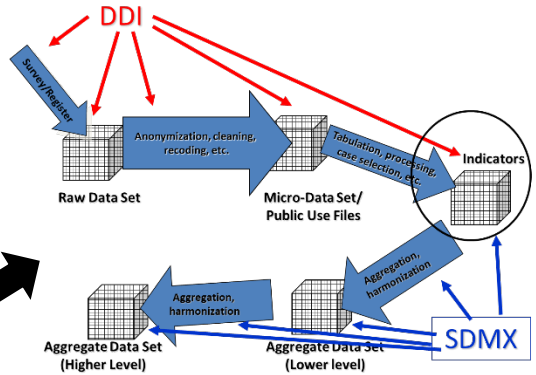
Interfaces



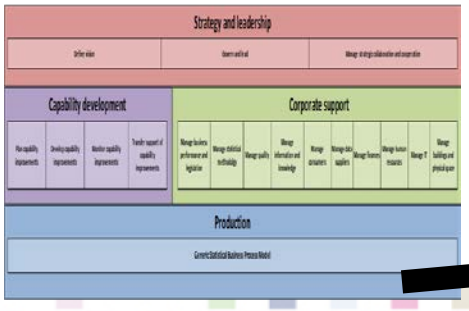
Shape

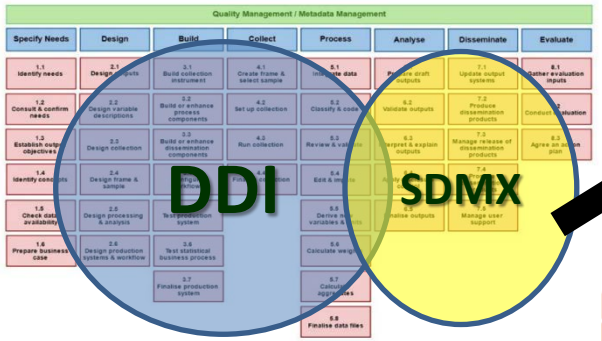






GAMSO





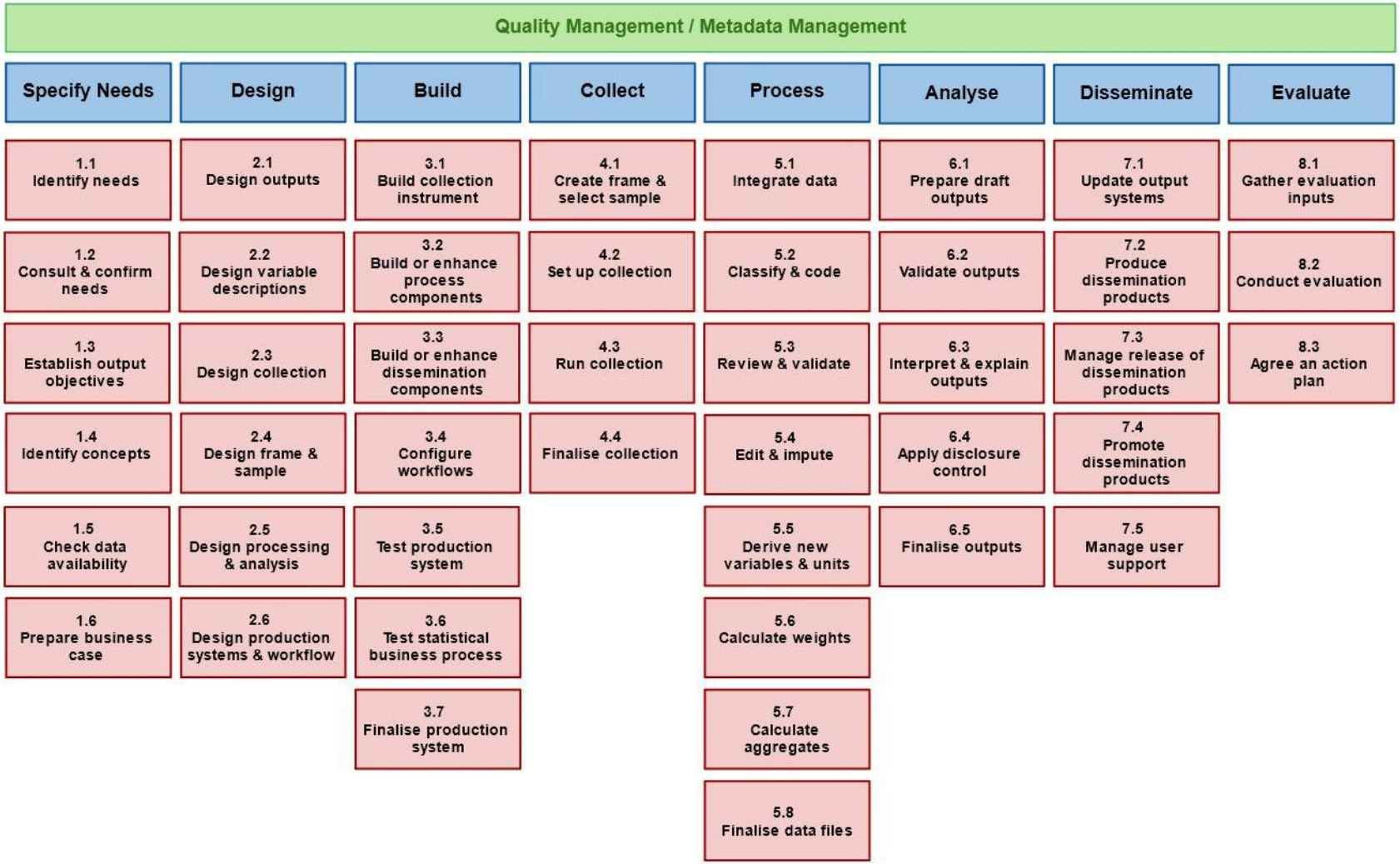
Modernization Standards and Their Main Object

Standard	Object
 GAMSO Generic Activity Model for Statistical Organisations	Statistical Activities in a NSO
 GSBPM Generic Statistical Business Process Model	Statistical Processes
GSIM Generic Statistical Information Model	Information Objects
CSPA Common Statistical Production Architecture	Industrial Architecture
DDI Data Documentation Initiative	Microdata and process metadata Internal
SDMX Statistical Data and Metadata Exchange	Aggregated data and flows metadata Exchange

Benefits of using GSBPM

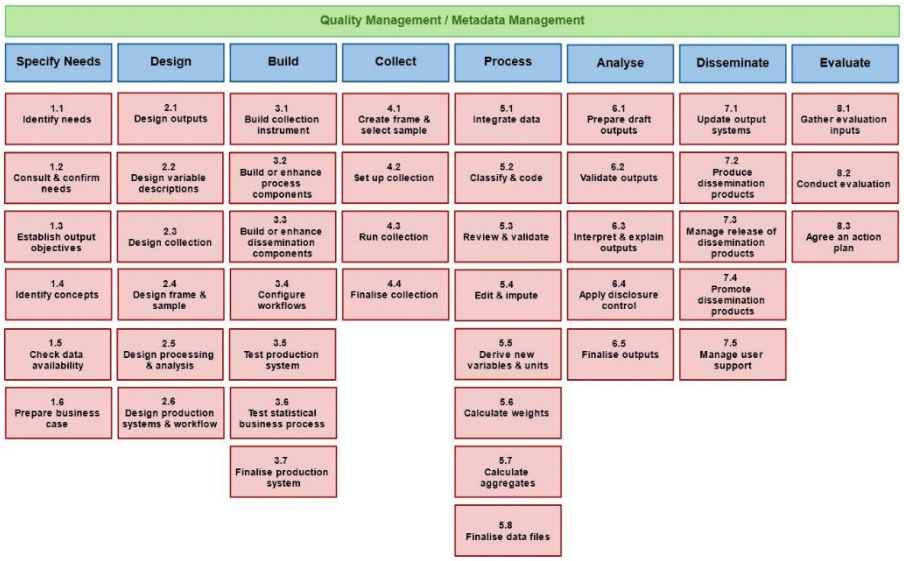
- Standardization of terminology
- Structure for organizing documentation, promoting standardization and identification of good practices
- Instrument to share knowledge, methods and tools (first step towards common solutions for similar processes)
- Facilitates use of common tools / methods (efficiency savings)
- Standard framework for benchmarking
- Tool for managing process quality

GSBPM (Version 5.0, December 2013)



Structure

Level 0, Statistical Business Process



Over-Arching Processes

Level 1, Phases (8)

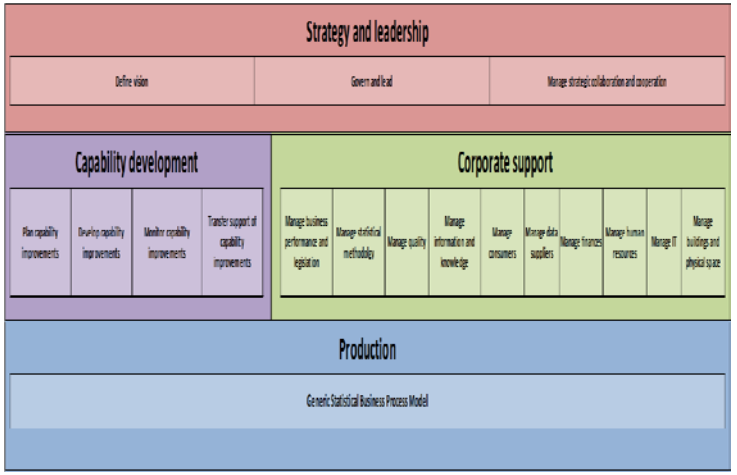
Level 2, Sub-Processes (44)

Over-Arching Processes

- With Statistical Component:
  - Quality Management
  - Metadata Management
  - Data Management
  - Process Data Management
  - Knowledge Management
  - Statistical Framework Management
  - Statistical Program Management
  - Customer Management
- More General:
  - Human Resource Management
  - Financial Management
  - Project Management
  - Legal Framework Management
  - Organisational Framework Management
  - Strategic Plannning

Closely Related to the Model

GSBPM



Generic Activity Model for Statistical Organisations GAMSO 1.1

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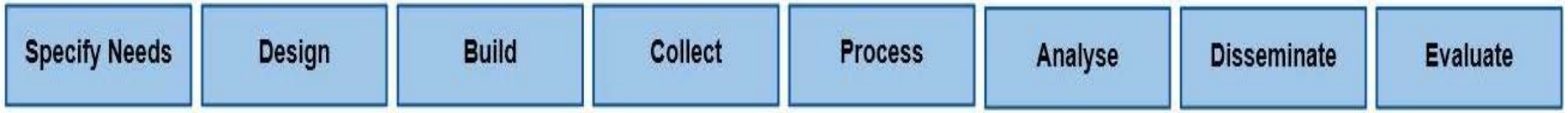
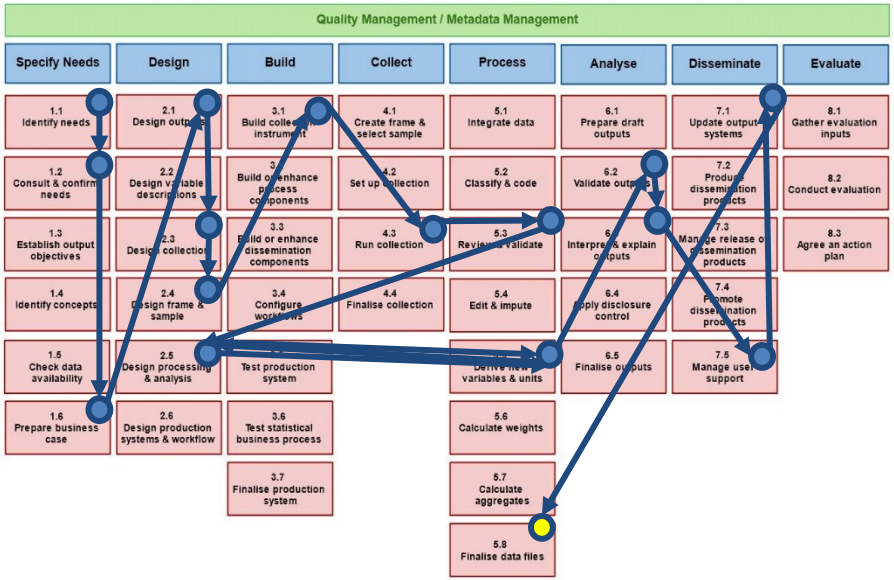
Phases



Specify needs. Identifies what the statistical activity is going to produce and the data required to produce the expected output to satisfy the users' requirements.
Design. Describes the development and design of the statistical outputs, methodology, and later phases of the GSBPM for the statistical activity.
Build. Concerns the construction and deployment of the ready-to-use production system, based on results from the Design phase.
Collect. Is about the selection of units from which to obtain data and the collection or extraction of that data and related metadata.
Process. Input data are transformed to produce the target outputs.
Analyse. Data are carefully examined before dissemination to users.
Disseminate. Is about making statistical products available to customers by assembling and releasing a range of static and dynamic products through various channels.
Evaluate. Concerns the review and assessment of the experiences gained from the specific instance of a statistical business process.

Sub-Processes



- Are the components of the phases representing a set of related activities to develop an specific task
- Is not a linear model
  - Sub-processes do not have to be followed in a strict order
  - The user can configure different paths to represent an specific instance of the process
  - Sub-processes can be skipped, repeated, revisited…

Support of UNECE's Fundamental Principles of Official Statistics (1992)

1. Relevance, impartiality and equal access
2. Professional standards and Ethics
3. Accountability and transparency
4. Prevention of misuse
5. Sources of official statistics
6. Confidentiality
7. Legislation
8. National coordination
9. Use of international standards
10. International cooperation

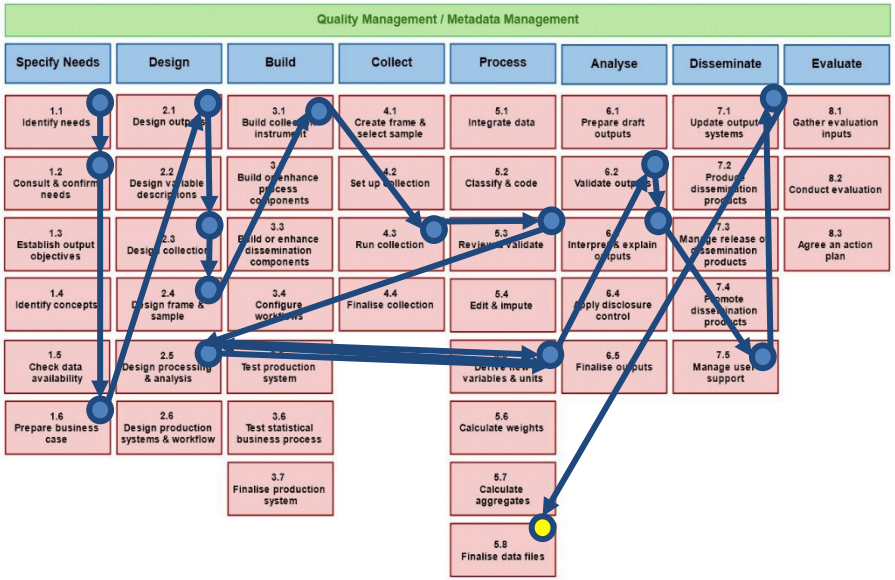
GSBPM Phases

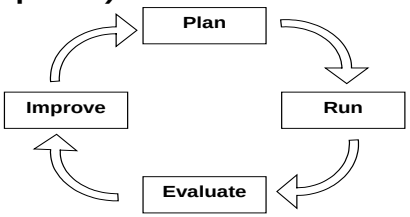
Fundamental Principles	Specify Needs	Design	Build	Collect	Process	Analyse	Disseminate	Evaluate
1	x	x			X		X	X
2		X		X	X		X	
3							X	
4							X	
5		x		X				
6						X		
7							X	
8	x	X						
9		X						
10		x						

Key: **X** = Strong mapping
x = Weaker mapping

Benefits for Transparency and Reproducibility

- Provides a way to diagram/trace the way in which an entity produces statistics
- It is possible to compare processes made by different entities
- Standardization of production processes for certain kinds of studies can be described
- In combination with other standards like GSIM, DDI and SDMX; statistical information (and their quality) can be examined and understood in a better way
- Provides tools to improve the statistical production process (and its outputs)





Some FAQs about GSBPM

- Can only be used to describe statistical process based on surveys?
  - No, GSBPM can be used to describe processes based on censuses, surveys, statistical/business registers and also emergent sources of data (like Big Data).
- Is it just a theoretical model?
  - No, it's a practical model that is being applied by many National Statistical Offices from different continents (not only Europe) in different ways
- An entity must have a reorganization of its areas in order to use GSBPM?
  - No, as you have seen you can use GSBPM in other several ways which don't imply a reorganization: documentation, guide to develop modular systems, benchmarking of processes, etc.

Questions?