Introduction to GSBPM

STATISTICS DENMARK

Introduction to GSBPM

- It provides a **standard framework** and **harmonized terminology**, by describing and defining a set of business processes needed to produce official statistics

- Template for **process documentation**, for harmonizing statistical computing infrastructures, and to provide a framework for process quality assessment and improvement

- The statistical business process model in Statistics Denmark is a Danish adoption of the joint UNECE, Eurostat and OECD **generic** statistical business process model (GSBPM) version 5.0

Why GSBPM?

We do it in Statistics Denmark because we want to:

1) improve the **quality** of statistics

2) make the statistical production process more **efficient**

3) create a frame for analysis and gradual **improvement**

1) Quality

- Quality of statistical output depends on two factors:
  1) the quality of the data we receive from data providers (we can influence)
  2) the quality of the processes by which we treat these data (in our control)

- Documenting processes is a cornerstone in the Eurostat Quality Assurance Framework (QAF) as an activity to facilitate the implementation of the European Statistical Code of Practice (CoP)

2) Efficiency

- There are major efficiency gains to be had by applying 'best practices' and using standardized datasets and uniform production procedures for similar tasks

- Questions related to efficiency:

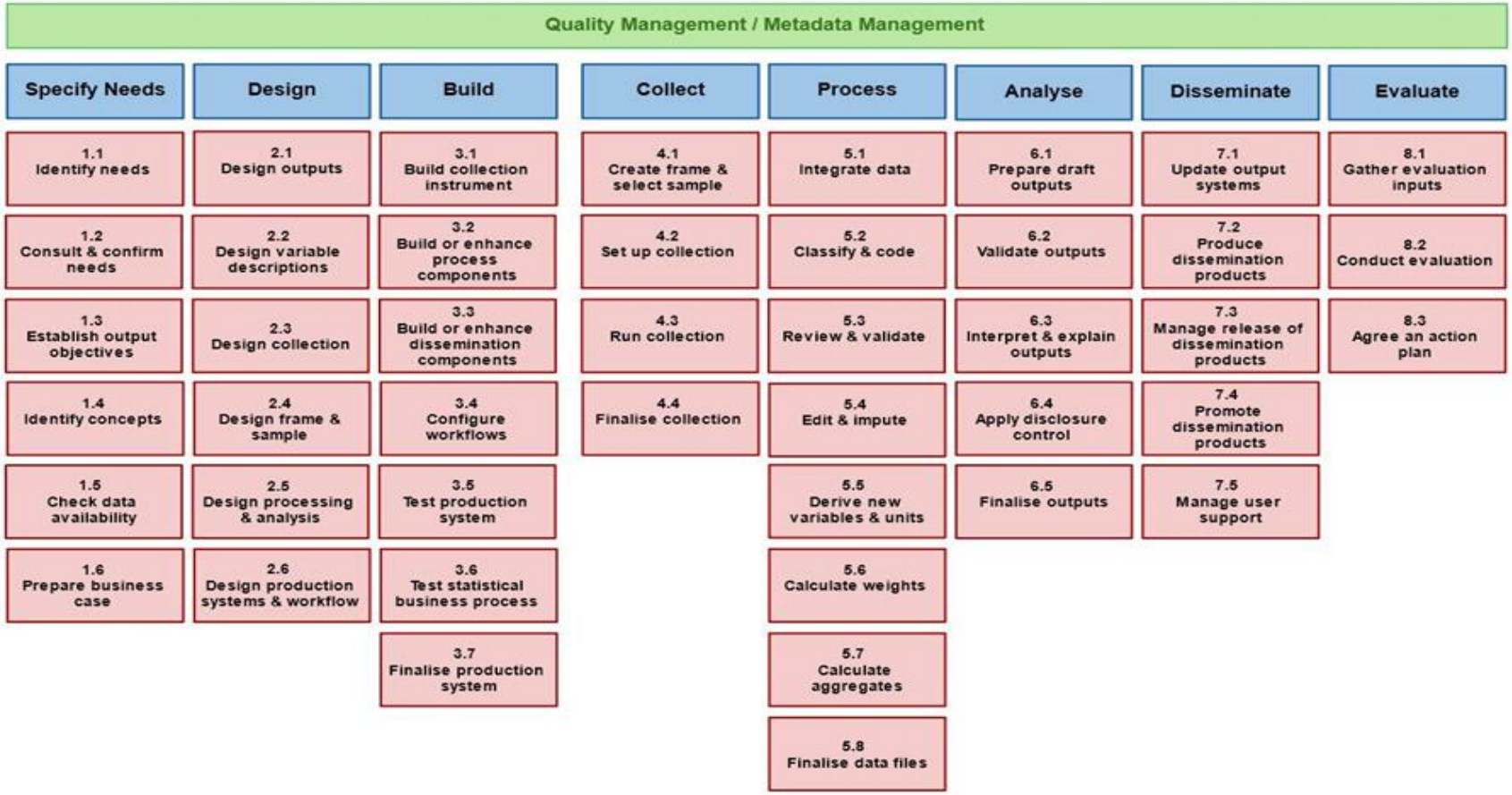
  - to what degree are tasks in one part of the organization dependent on the availability and quality of data from other parts of the organization?

  - if we are many who perform similar tasks, why do we all do it differently?

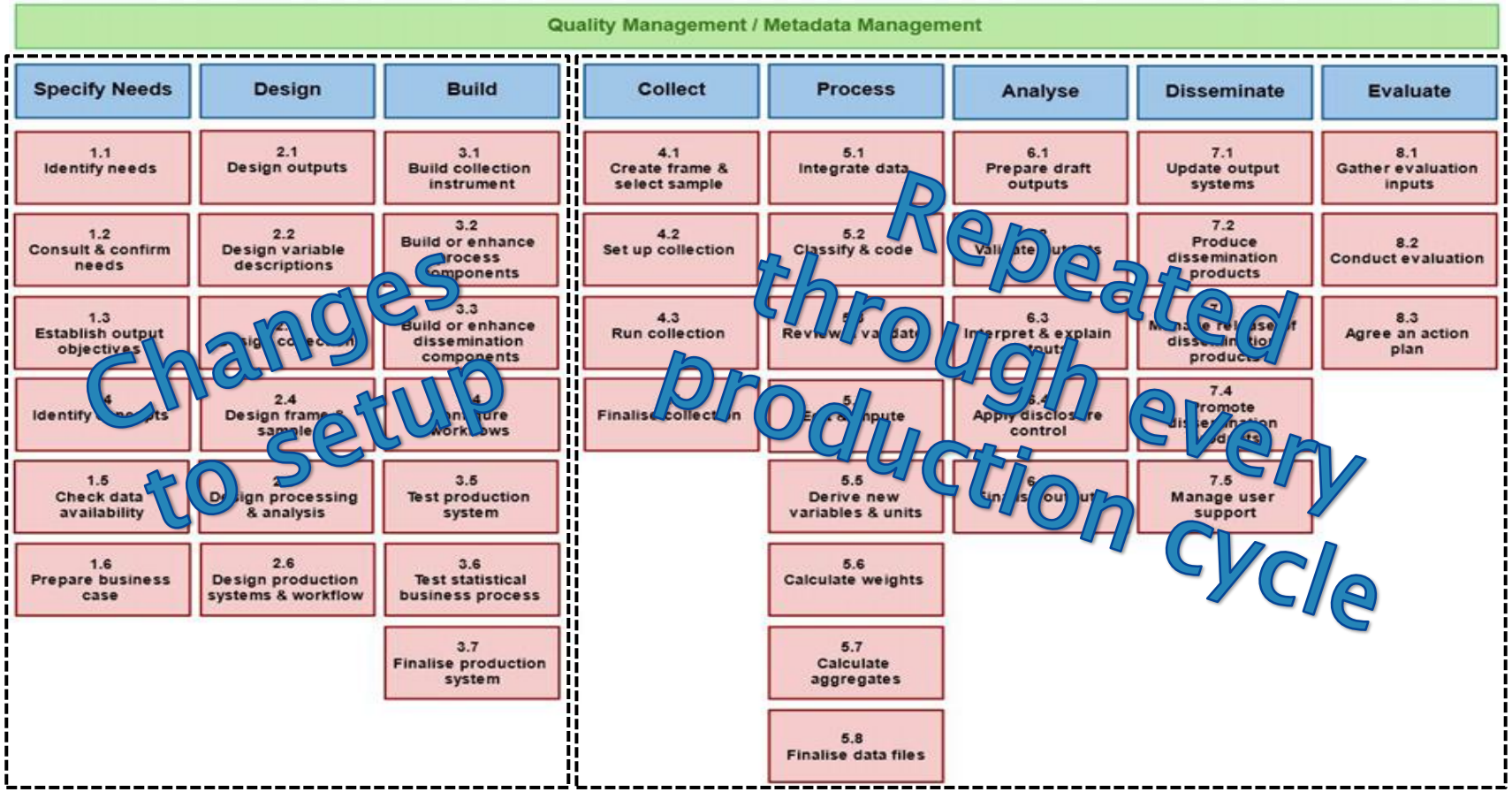
3) A frame for analysis and gradual improvement

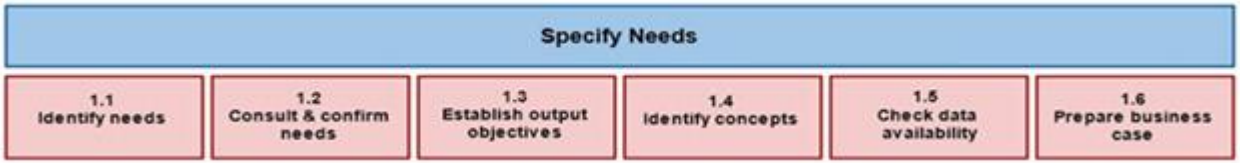
- "it is difficult to improve something which is not described"
- A process model can assist us with a common conceptual, methodological and organizational reference for describing, analysing and disseminating our statistical products.
- It provides a tool to ease and facilitate the training of new employees and at the same time to extract knowledge from experienced experts before it's too late

The Generic Statistical Business Process Model



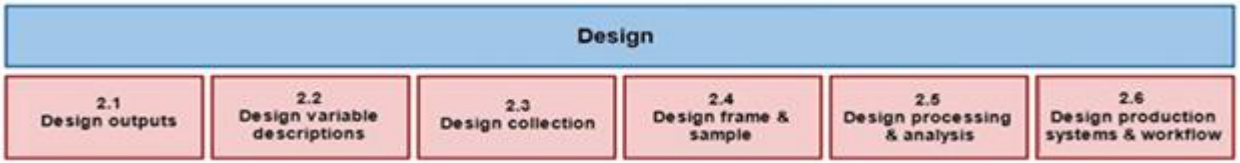
Understanding the model





- This phase is triggered when;
  - a need for new statistics is identified
  - feedback about current statistics initiates a review

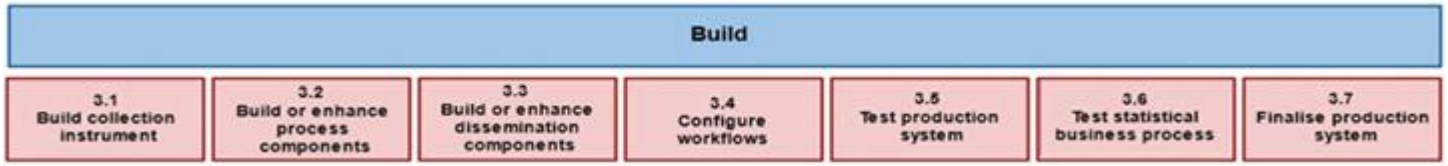
- It includes all activities associated with engaging customers to identify their detailed statistical needs, proposing high level solution options and preparing business cases to meet these needs



- This phase describes the development and design activities, and any associated practical research work needed to define the statistical outputs, concepts, methodologies, collection instruments and operational processes

- It includes all the design elements needed to define or refine the statistical products or services identified in the business case

- This phase also specifies all relevant metadata,
  ready for use later in the statistical business process,
  as well as quality assurance procedures



- This phase builds and tests the production solution to the point where it is ready for use in the "live" environment

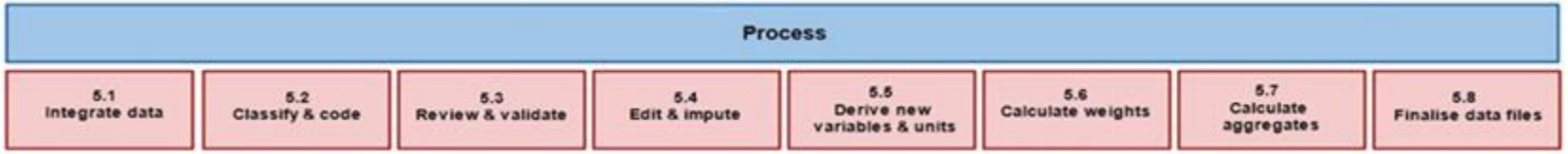
- The outputs of the "Design" phase direct the selection of reusable processes, instruments, information, and services that are assembled and configured in this phase to create the complete operational environment to run the process

- New services are built by exception, created in response to gaps in the existing catalogue of services sourced from within the organisation and externally.
  These new services are constructed to be broadly reusable within the statistical production architecture

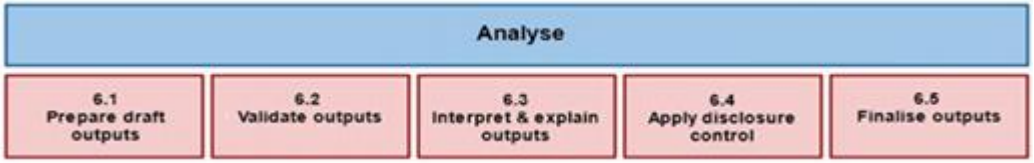
- This phase collects or gathers all necessary information (data and metadata), using different collection modes (including extractions from statistical, administrative and other non-statistical registers and databases), and loads them into the appropriate environment for further processing

- Whilst it can include validation of data set formats, it does not include any transformations of the data themselves, as these are all done in the "Process" phase

- For statistical outputs produced regularly, this phase occurs in each iteration



- This phase describes the cleaning of data and their preparation for analysis
- It is made up of sub-processes that check, clean, and transform input data, so that they can be analysed and disseminated as statistical outputs
- It may be repeated several times if necessary. For statistical outputs produced regularly, this phase occurs in each iteration
- The sub-processes in this phase can apply to data from both statistical and non-statistical sources (with the possible exception of sub-process 5.6 (Calculate weights), which is usually specific to survey data)



- In this phase, statistical outputs are produced, examined in detail and made ready for dissemination.

- It includes preparing statistical content (including commentary, technical notes, etc.), and ensuring outputs are “fit for purpose” prior to dissemination to customers

- This phase also includes the sub-processes and activities that enable statistical analysts to understand the statistics produced

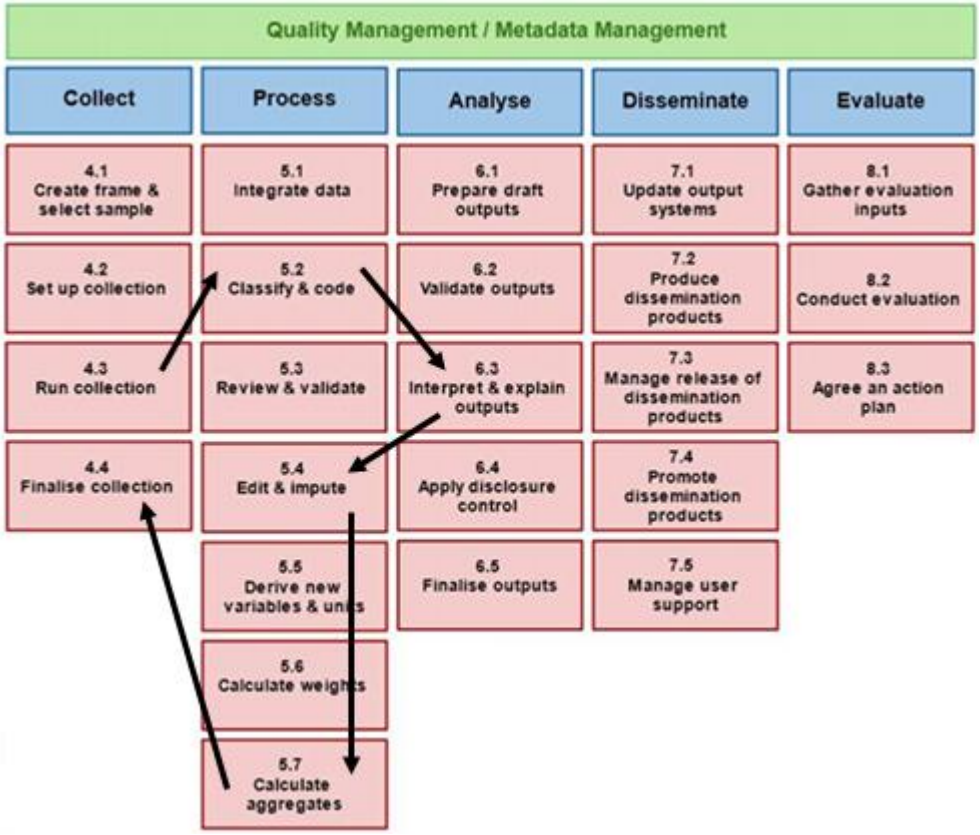
- The "Analyse" phase and sub-processes are generic for all statistical outputs, regardless of how the data were sourced.

- This phase manages the release of the statistical products to customers
- It includes all activities associated with assembling and releasing a range of static and dynamic products via a range of channels
- These activities support customers to access and use the outputs released by the statistical organisation

- This phase manages the evaluation of a specific instance of a single process, as opposed to the more general over-arching process of statistical quality management
- It logically takes place at the end of the instance of the process, but relies on inputs gathered throughout the different phases
- It includes evaluating the success of a specific instance of the process, drawing on a range of quantitative and qualitative inputs, and identifying improvements
- For statistical outputs produced regularly, evaluation should, at least in theory occur for each iteration, determining whether future iterations should take place, and if so, whether any improvements should be implemented

Not a linear process

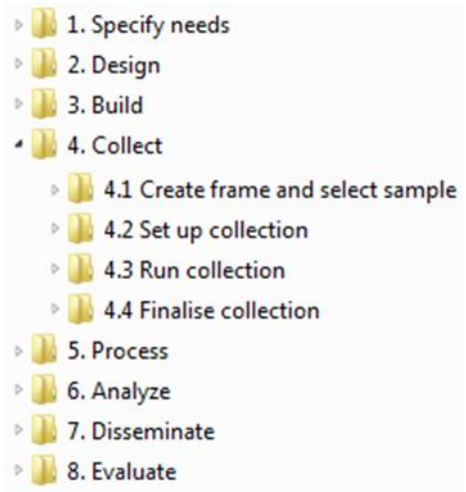
- GSBPM is not a rigid framework in which all steps must be followed in a strict order
- Some sub processes will be revisited a number of times forming iterative loops, particularly within the 'Process' and 'Analyse' phases



How GSBPM?

- The first thing we've done is ask our statisticians to organize their working documents and files etc. in a folder structure similar to the process model

- This way we create a common foothold for where what is allocated. Also, it makes it much more intuitive for employees to find data and other relevant material



How GSBPM?

- Dynamic documentation as HTML work as a local point-and-click website for the individual statistic