Generic Statistical Business Process Model (GSBPM) and its contribution to modelling business processes

Experiences from the Australian Bureau of Statistics (ABS)

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Outline

• “Industrialisation” and the need for a strategic focus on statistical business processes
• Introduction to GSBPM as a reference model
• Recent developments related to the GSBPM
• Practical ABS experiences in applying the GSBPM
• Some other high level considerations when modelling business processes
• Questions
Strategic Context

• HLG-BAS Strategic Vision
  – We have to re-invent our products and processes and adapt to a changed world

• Industrialisation includes:
  – Common processes
  – Common methodologies
  – Common tools
  – Facilitating commonality through agreeing and applying “industry” frameworks and standards
  – Recognizing all statistics are produced in similar ways
Implications in regard to process

• We must be able to review our **statistical business processes** (SBPs) at a strategic level in order to
  – determine their fitness for purpose & value add
  – improve, integrate, reuse, transform, industrialise, standardise, harmonise

• Each SBP must be described (including modelled) in a manner which facilitates comparison with other SBPs (locally and internationally)

• In order to facilitate standardisation and reuse, SBPs should be described independently of the statistical methods and IT tools currently used to perform them
Harmonised Statistical Business Processes

- GSBPM
- GSIM
- Methods
- Technology

Conceptual

Practical
Provides a common categorisation and set of terminology for describing/defining statistical business processes.
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Drive consistent business requirements for industrialised methods and technologies.
Introducing GSBPM

• Originally based on the business process model developed by Statistics New Zealand
• Three rounds of international consultation led by CES Steering Group on Statistical Metadata (also known at the METIS Steering Group)
  – Added Archive and Evaluate phases
  – Terminology and descriptions made more generic
• Currently Version 4.0
• The one page diagram is most often used but complete documentation (in three languages) and other resources are available on the web.
Why do we need GSBPM?

• To define, describe and map statistical processes in a coherent way
• To standardize process terminology
• To compare / benchmark processes within and between organisations
  – This facilitates collaboration.
• To identify synergies between processes
• To inform decisions on systems architectures and organisation of resources
Structure of the Model

Process
(statistical business process)

Phases

Sub-processes
(Descriptions)
Applicability

• All activities undertaken by producers of official statistics which result in data outputs
  – Producing statistics from raw data (micro or macro-data)
  – Revision of existing data / re-calculation of time-series
  – Development and maintenance of statistical registers

• A set of activities that fulfills these conditions is termed a statistical business process
Not a linear model
Recent Developments: Modelling business processes beyond the scope of GSBPM

1. KSBPM (Korea Statistical Business Process Model)

- Statistical Policy Management
  - Demand Management
  - Coordination
  - Quality Control
  - Policy Supports by Statistics

- Quality Assessment at Each Phase

- Support Statistical Production
  - Population Data
  - Sampling Data
  - Enumeration districts Data

- Statistical Production Process Pool
  - Plan
  - Collect
  - Disseminate
  - Design
  - Process
  - Archive
  - Build
  - Analyze
  - Evaluate

- Information Sharing Service
  - Statistical Knowledge Management
  - Metadata Reference
  - Service Helpdesk
Outcomes from METIS Workshop

• Held 5 – 7 October 2011
• The GSBPM will not be revised in the short term
• Future work will focus on work on data and metadata flows in GSBPM
Applying GSBPM to an NSI

• GSBPM is a reference model, which has been be used in a number of ways:
  – Agency adopts it “as is”
  – Agency adopts a version of it
  – Agency maps existing process model to it

• For more information see National Implementations of GSBPM
Applying GSBPM in ABS

- ABS sees the GSBPM as a cornerstone for a more generic reference architecture.
- It can be utilised to facilitate and enhance communication and understanding, and ultimately, sharing and collaboration across agencies.
Applying GSBPM in ABS (2)

- GSBPM was formally adopted by the ABS in 2010.
- It is our primary reference model for statistical business processes.
- It is used in corporate planning and as a cornerstone of ABS Enterprise Architecture.
Applying GSBPM in ABS (3)

- Early adopter of GSBPM in ABS was the Prices System Improvement Project.
- Project aims to design an end-to-end system for 5 Price Indexes.
- GSBPM was used as a guide to harmonise processes across the 5 Price Indexes.
• In February 2010, the ABS announced the Information Management Transformation Program.

• A key element of this Program is business process transformation. The approach is to have workshops:
  – to analyse and map a range of current collection processes
  – to develop aspects of the "to be" environment from a functional, end to end perspective

• These activities will utilise GSBPM as a reference model.
Applying GSBPM in ABS (5)

MRR Proof of Concept 2010/11
Core case study was elements of statistical business process for Quarterly Business Indicators Survey (QBIS)
Summary of experiences

• Very valuable as a common reference model facilitating comparability within & across NSIs
  – Use as a consistent high level reference model for statistical business process, eg
    • framework & context when presenting training about statistical production processes
    • tracking resources (eg staff effort and other costs) directly related to statistical production
    • useful when designing quality management for the statistical production process (eg positioning quality gates)
    • useful point of reference when cataloguing, assessing and managing various methods and IT systems available to support statistical production
Summary of experiences (2)

• Staff can be unsure about intent
  – Not a template for designing statistical business processes
    • Details of processes and workflows as implemented in practice are less generic
    – Not a blueprint for the “ideal” statistical business process
  - It provides some value as a reference model for all statistical business processes, but value tends to be greater for some types than others
    – eg a better (and more obvious) fit for “traditional” business and household surveys vs compilations (eg National Accounts) and processes using administrative sources

• Need to keep its scope in mind
  – Don’t try to use it as a reference for business processes that don’t fit the criteria
    • Eg when modelling the process an NSI uses to determine human resource needs and recruit/train staff accordingly
Other high level considerations when modelling business processes

• Ensure the roles of GSBPM as a reference model are understood.
  • Actual business processes often do not map simply to the GSBPM.
    – In these cases, document relationships between the process as modelled and the GSBPM
    – Do not simplify modelling of business processes simply to better align them with the GSBPM

• The best approach is a partnership between business staff and staff expert at analysing and modelling business processes (a centre of excellence).
  – Don’t expect statistical business staff to produce consistent, high quality models on their own (but must include them)
  – Don’t rely only on IT modelling skills

• Must clearly separate “As Is” and “To Be” modelling of business processes
  – both are usually important
  – there may be changes to process (eg to move to a process that current methods and/or IT cannot support)
  – there are very likely to be changes to methods and/or technology used to implement processes
Other considerations (2)

• Ensure practical benefits of investing in modelling is apparent to business areas
  – Start with well defined plans for using and maintaining the information, not just for gathering it
  – The case is strong where modelling inputs directly to business process re-engineering which delivers greater levels of automation and reliability and simplifies change

• Carefully select methods and tools used for modelling.
  – Consider factors such as
    • ease of use
    • integration with software used for related purposes
    • the simplest solution which is fit for purpose
  – “powerful” & “advanced” is not always best!
Questions?