Navigating the application of Modernisation Frameworks when using Commercial Of The Shelf products.
Change Required

- Statistical processes and systems within the ABS were poorly documented and inconsistent across all Statistical Programs.
- Systems siloed and inflexible to changing requirements, resulting in high maintenance and modification costs
- Staff required to move in and out of various tools and interfaces throughout production cycle
- Metadata describe inconsistently between different collections, requiring constant transformation
Automated, Metadata Driven Business Processes

- The Statistical Workflow Management System (SWMS) will support the introduction of automated, standard, reusable metadata driven business processes within the ABS.
- This will support standardised business processes within the ABS, with the differences between Statistical Programs being addressed through the configuration of metadata (and data) as input to those business processes.
- Configuration of these standard business processes will be achieved via the use of Parameter Sets registered and stored within the ABS Metadata Registry & Repository (MRR).
SWMS Benefits

SWMS will benefit the ABS by:

- Providing well documented, discoverable and accessible business processes, removing reliance on subject matter experts;
- Automating statistical business processes, removing menial manual tasks;
- Supporting the use of corporate infrastructure (MRR, SWMS, EDME), and reusable technical services, reducing (and eventfully eliminating) the need for bespoke, siloed local systems;
- Providing process metrics for standard business intelligence reporting and input into future business process improvements;
Use of Modernisation Frameworks

• The ABS developed its Enterprise Architecture to guide the Transformation Program which commenced in 2013.
• Key to the development of the Enterprise Architecture were the Modernisation Frameworks developed initially by the Statistical Network, and now owned and governed by the UNECE Statistics.
• These frameworks include:
  – The Generic Statistical Business Process Model (GSBPM)
  – The Generic Statistical Information Model (GSIM)
ABS variants to the Modernisation Frameworks - GSBPM & SPAM

Generic Statistical Business Process Model (GSBPM)
Version 5.0 - 2013

Statistical Production Activity Model (SPAM)
Version 1.1 - 2017
GSIM & AIM

Generic Statistical Information Model (GSIM)

ABS Information Model (AIM)
ABS Enterprise Architecture & Business Processes

Enterprise Architecture
Looks at the ABS as a whole

Business Architecture
Looks in detail at the business of the ABS

Identifies discrete, non-overlapping activities

Capability Architecture
Looks at the abilities required to enable each activity.

Identifies discrete, reusable, interchangeable capabilities

Capabilities can be grouped to higher, more operational levels

Capabilities are made up of 6 elements and we assess capability maturity against these elements

SPAM

Statistical Production Activity Model (SPAM)

1 Scope
- 1.1 Understand output activity needs
- 1.2 Design observation strategy
- 1.3 Define observation strategy

2 Design
- 2.1 Design observation strategy
- 2.2 Identify observation requirements
- 2.3 Design data acquisition

3 Collect
- 3.1 Prepare data collection
- 3.2 Collect data
- 3.3 Data quality and assurance

4 Compile
- 4.1 Prepare data compilation
- 4.2 Data quality assurance

5 Validate
- 5.1 Validate data

6 Analyze
- 6.1 Validate data

7 Disseminate
- 7.1 Disseminate data

8 Evaluate
- 8.1 Evaluate data

Manage production project
- 9.1 Prepare & execute project
- 9.2 Manage project planning & execution
- 9.3 Manage project risks

17/04/2018
Gartner defines business processes as:

The coordination of the behaviour of people, systems and things* to produce specific business outcomes.

A BPM platform minimally includes:

- a graphical business process and/or rule modelling capability,
- a process registry/repository to handle the modelling metadata,
- a process execution engine and a state management engine or rule engine (or both).

* "Things" in this context refers to devices that are part of the Internet of Things (IoT).
Business Process Standards

- **BPMN 2.0**
The Business Process Modelling Notation (BPMN) is a graphical notation that depicts the steps and the end-to-end flow of a business process. The notation has been specifically designed to coordinate the sequence of processes and the messages that flow between different process participants in a related set of activities.

- **BPEL**
BPEL is an XML-based language for describing a business process in which most of the tasks represent interactions between the process and external Web services. The BPEL process itself is represented as a Web service, and is realised by a BPEL engine which executes the process description.

- **WS-HumanTask**
WS-HumanTask enables the integration of tasks actioned by human beings in service-oriented applications. It provides a notation, state diagram and API for human tasks, as well as a coordination protocol that allows interaction with human tasks in a more service-oriented fashion and at the same time controls tasks autonomy.
Applying GSIM Business Process model with CotS Product

• The ABS acquired a Commercial of the Shelf Product for implementing and managing our automated business processes.

• **ActiveVOS** is a BPM product acquired in 2015 by [Informatica](https://www.informatica.com), which;
  
  – is a service orientated business process automation platform.
  
  
  – supports open standards such as BPMN 2.0, BPEL and WS-Human-Task.
Applying GSIM Business Process model with CotS Product

- The GSIM Business group models Business Processes down to a level which duplicates the open standards supported by ActiveVOS and other COTS BPM products.
- ABS did not want to replicate modelling in our ABS Information Model (AIM) that was natively supported by ActiveVOS.
- Key requirements for the modelling Business Processes in AIM were:
  - Registration of re-usable Business Processes (SPAM building blocks)
  - Registration of Workflows for Statistical Programs
  - Registration of executed Workflows for Statistical Programs
  - Registration & Storage of all Workflow configurations for Statistical Programs
  - Registration & Record of all Process Outputs from Workflows
GSIM Business group for Business Processes

Replaced with:
- Parameter Set Definition
- Parameter Set
Parameter Set Definitions

- **Parameter Set Definition** replaces the Process Input Specification and Process Output Specification in GSIM.

- The **Parameter Set Definition** specifies the **types** of Process Inputs and Process Outputs that the **Business Process** will either consume or produce (the configuration).

- The Relationship between the **Parameter Set Definition** and **Business Process** specifies its use for Process Input Specification or Process Output Specification.
Parameter Sets

- Parameter Sets replaces the Process Input and Process Output in GSIM.
- The Parameter Set is used to capture and store both the design time and run time Process Inputs for a Statistical Program’s re-use of the Business Process.
- A Parameter Set is described by the Parameter Set Definition related to the Business Process that is being re-used.
- The Relationship between the Parameter Set and Workflow/Workflow Instance specifies its use for Process Input (design or run time) or Process Output.
The **Business Process** is the registration of a standard, re-usable and *configurable* process supporting a defined business activity.

The **Parameter Set Definition** specifies the **types** of Process Inputs and Process Outputs that the Business Process will either consume or produce (the configuration).

The **Process Input Specification** and **Process Output Specification** are specified by the relationship name to the **Parameter Set Definition**.
A **Workflow** is the process for a Statistical Program which undertakes a higher level business function. Typically, **Workflows** will orchestrate together many reusable **Business Processes**.
The Process Step represents the re-use of a Business Process within a Statistical Program’s Workflow.

The Process Step binds the Parameter Set for the re-use of the Business Process.
The Parameter Set is used to capture and store the design time Process Inputs for a Statistical Program’s intended re-use of the Business Process.

This Parameter Set takes its content and typing from the Parameter Set Definition Which is related to the Business Process that the Process Step is calling.
The **Workflow Instance** is the registration in the MRR of the execution of a **Workflow** for a Statistical Program.
The **Process Step Instance** is the registration in the MRR of the execution of a **Process Step** for a Statistical Program.

The **Process Step Instance** binds the **Parameter Set** for the actual re-use of the related **Business Process**.
The Parameter Set is used to capture and store the Actual Process Inputs and the Actual Process Outputs for a Statistical Program’s executed re-use of the related Business Process.
The End.

Questions?