



# Transforming Data Acquisition

Statistical Business Transformation Program

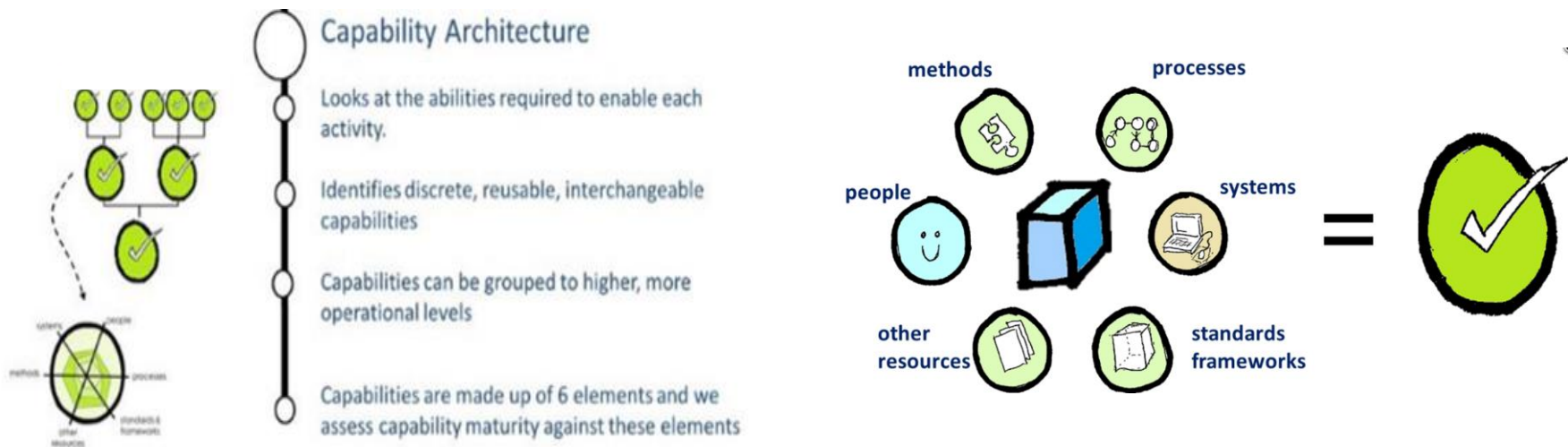
Presented by: Thérèse Lalor and Siri Vallurupalli



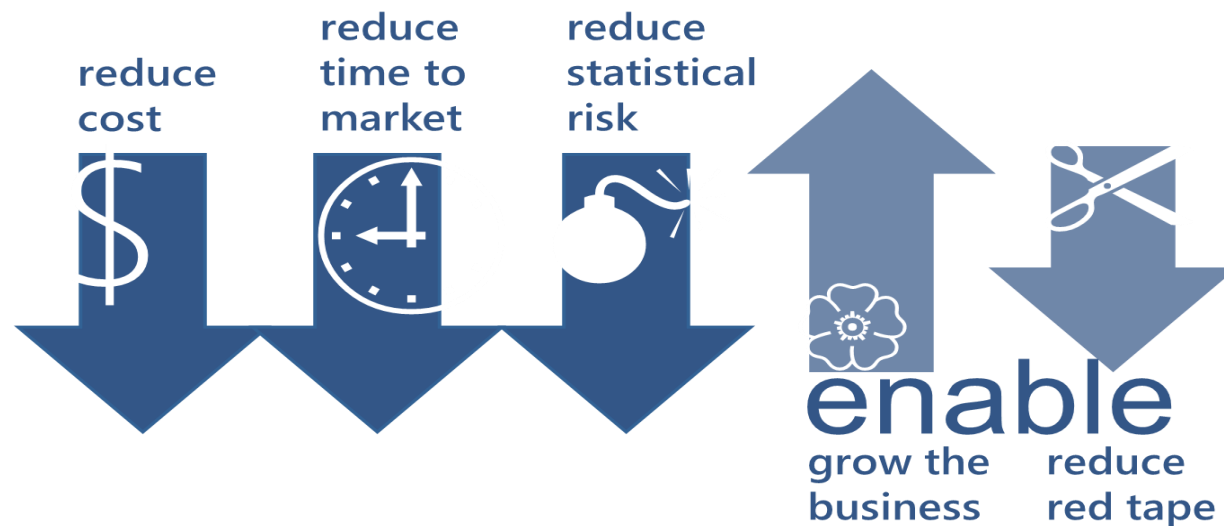
[www.abs.gov.au](http://www.abs.gov.au)

# Data Acquisition Capability

- The ABS transformation program is suite of projects to deliver enterprise wide capabilities.
- The Data Acquisition capability “supports the collection or acquisition of data via a range of secure data channels”

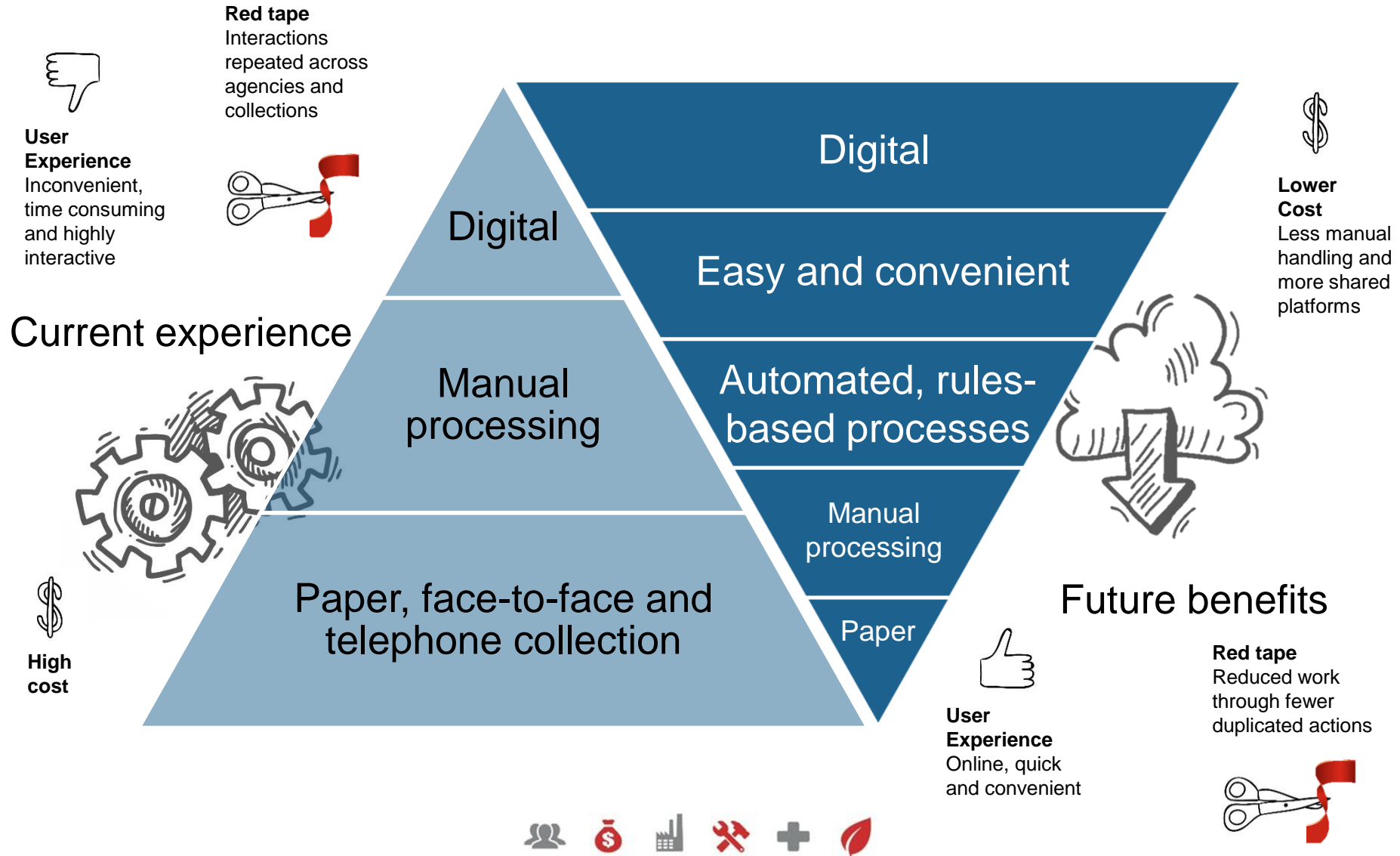


# Main benefits



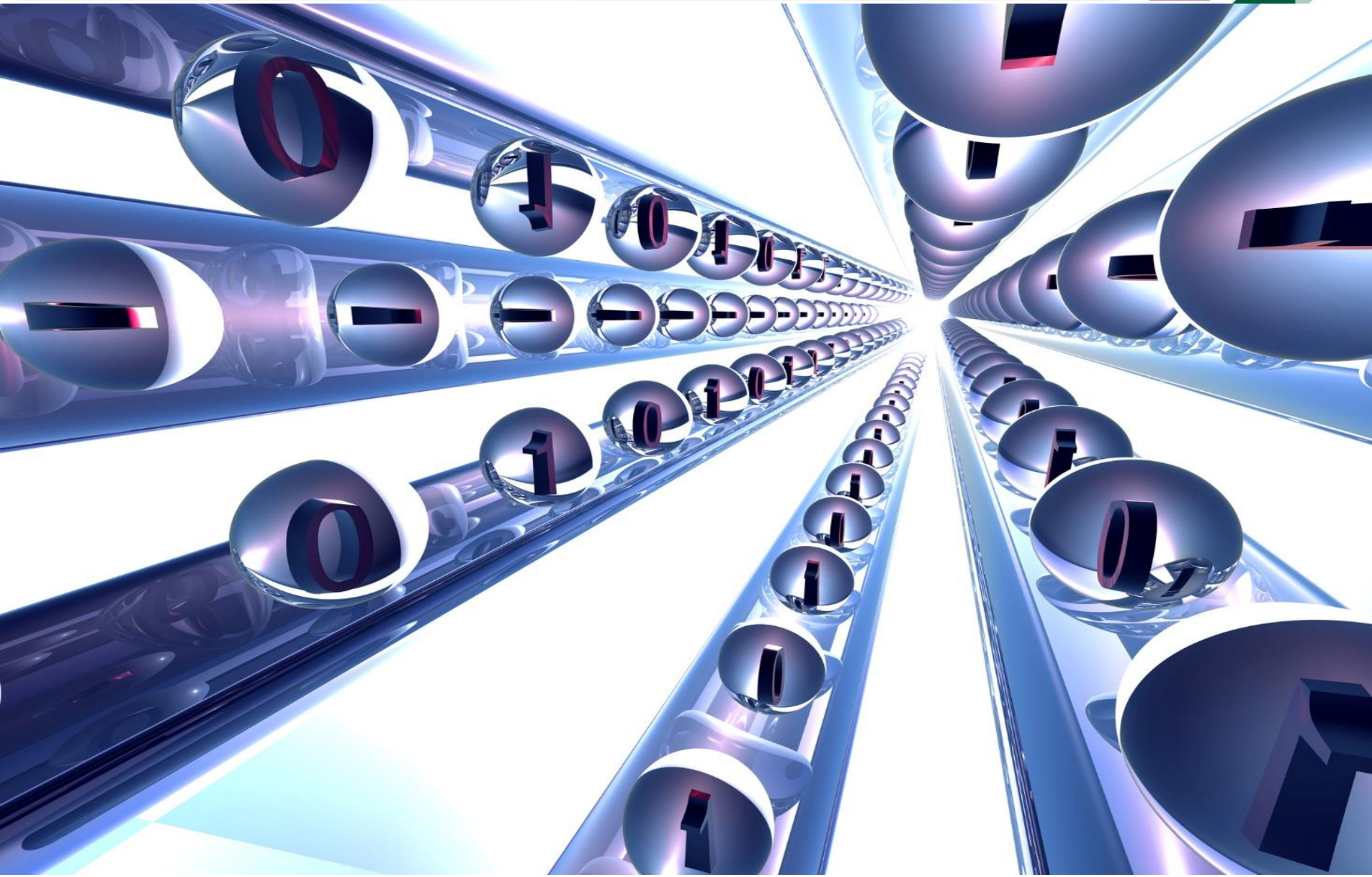
- Reduce costs
- New digital data channels
- Improved online service
- Reduce burden
- Better for ABS users and ABS staff

# Transforming data acquisition





# Enhanced Digital Channels





Australian Bureau of Statistics

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Log in to access your survey form

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User Identifier

Password

Log in

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A Survey Account allows you to access and complete any ABS survey form

Need help with logging in?

If you cannot log in to your survey form, you can find helpful information via the [Help](#) link.

If you still cannot log in, please telephone the ABS. Contact details for each survey can be found via the [Contact Us](#) link.

Provider Portal

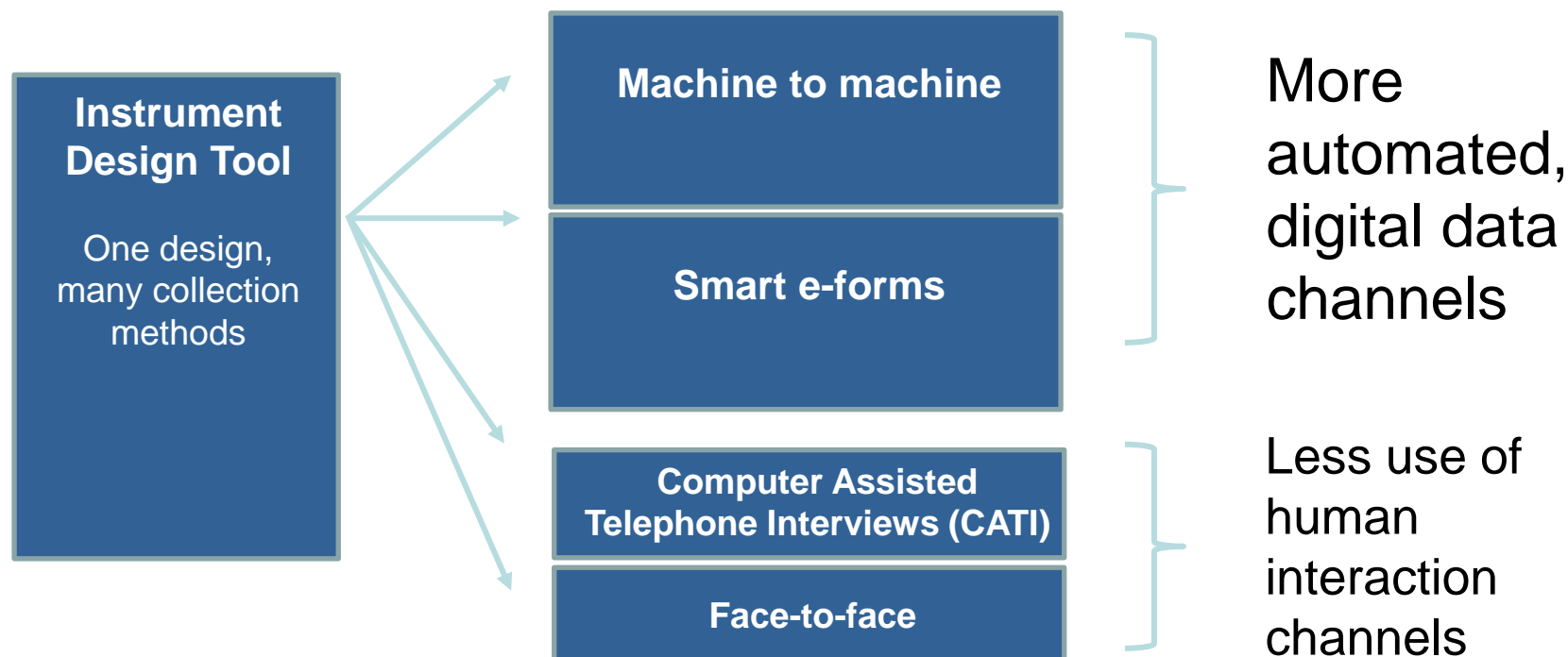
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CUSTOMER  
RELATIONSHIP  
MANAGEMENT

## Workload Management



# Designing data acquisition instruments



# How to begin?





# ABS Enterprise Architecture



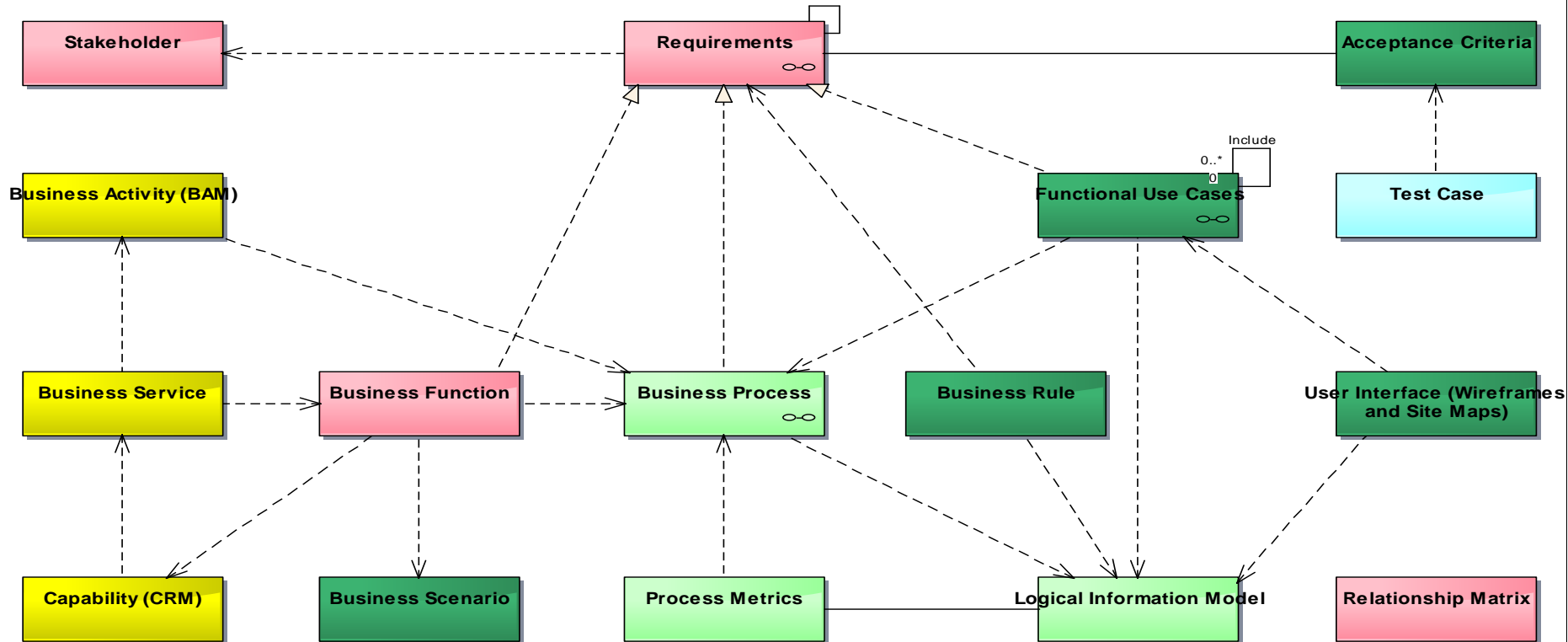
The ABS is supporting the Common Statistical Production Architecture and all statistical services will need to comply with its concepts. As such:

- The ABS solution architecture is service oriented and modular.
- The Generic Statistical Business Process Model (GSBPM) is driving our reengineering conversations.
- All statistical services must utilise the ABS Information Architecture underpinned by the Generic Statistical Information Model when describing statistical business objects in their service contracts.

# ABS Functional meta model



class 1. Functional View Element Class Diagram, Version August 2016



## Legend

- ABS Architecture
- Analyse Phase
- Design Phase - Reengineering
- Design Phase - Business Analysis
- Implement Phase

**IMPORTANT NOTE:** Artefacts produced in one phase can be extended/refined/detailed in later phases.

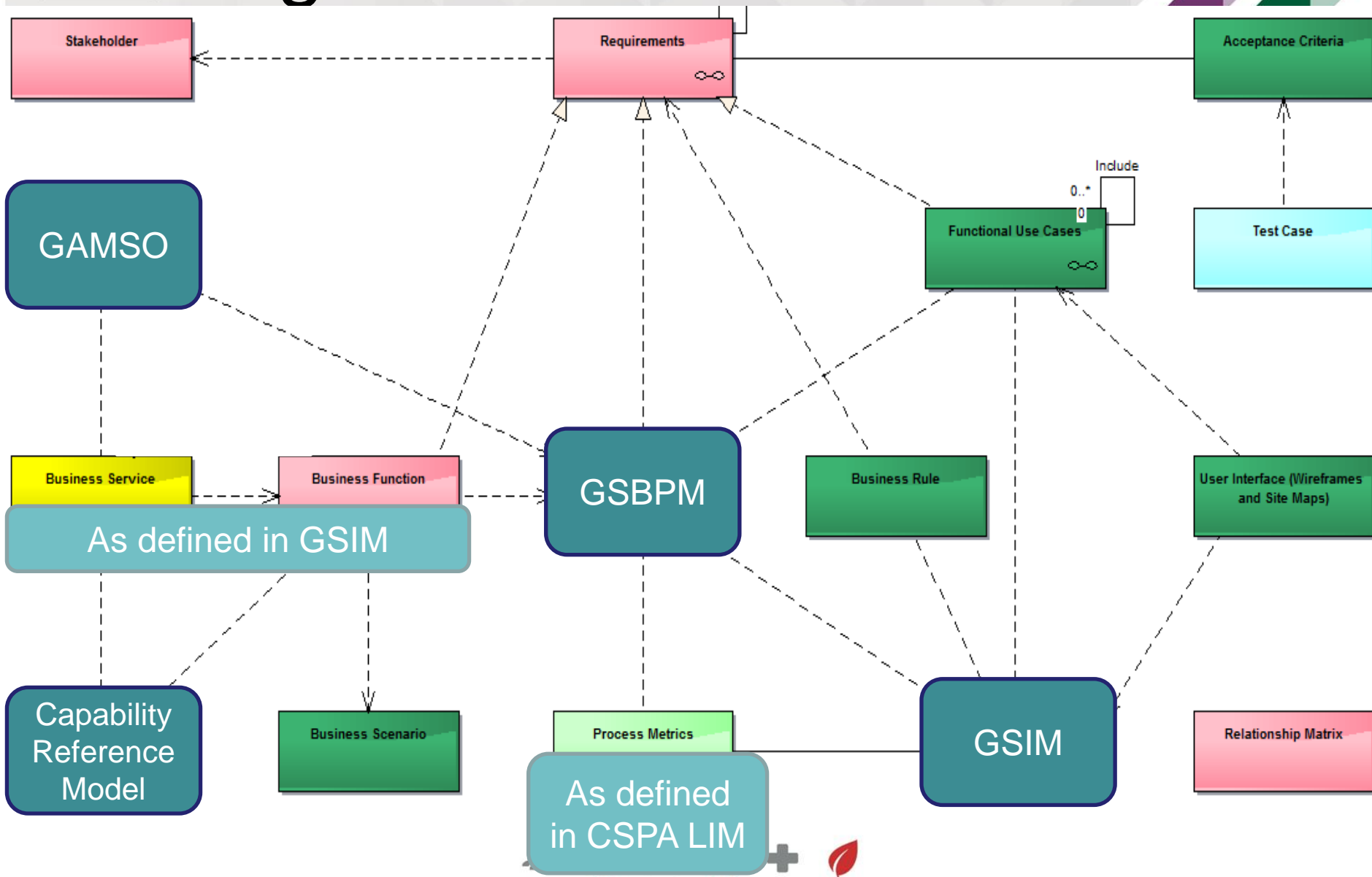
## Diagram Notes:

Draft high level view of artefacts to be produced/referenced during analysis.

The infinity symbol means there is more detail at the next level. Click on the element to access the lower level detail.

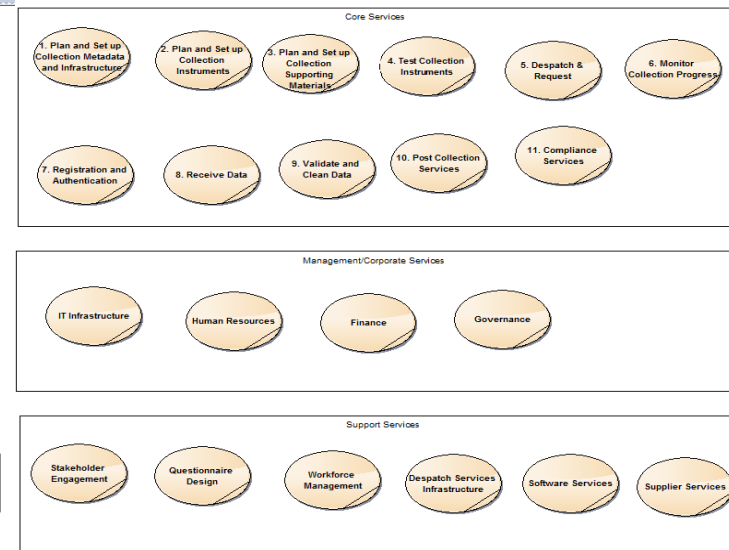
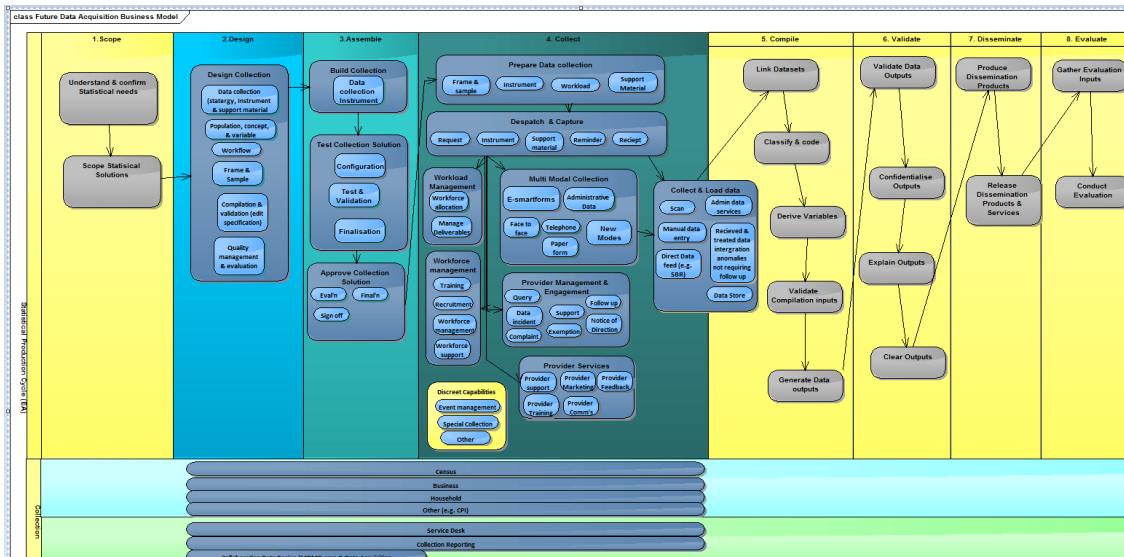


# Alignment to standards

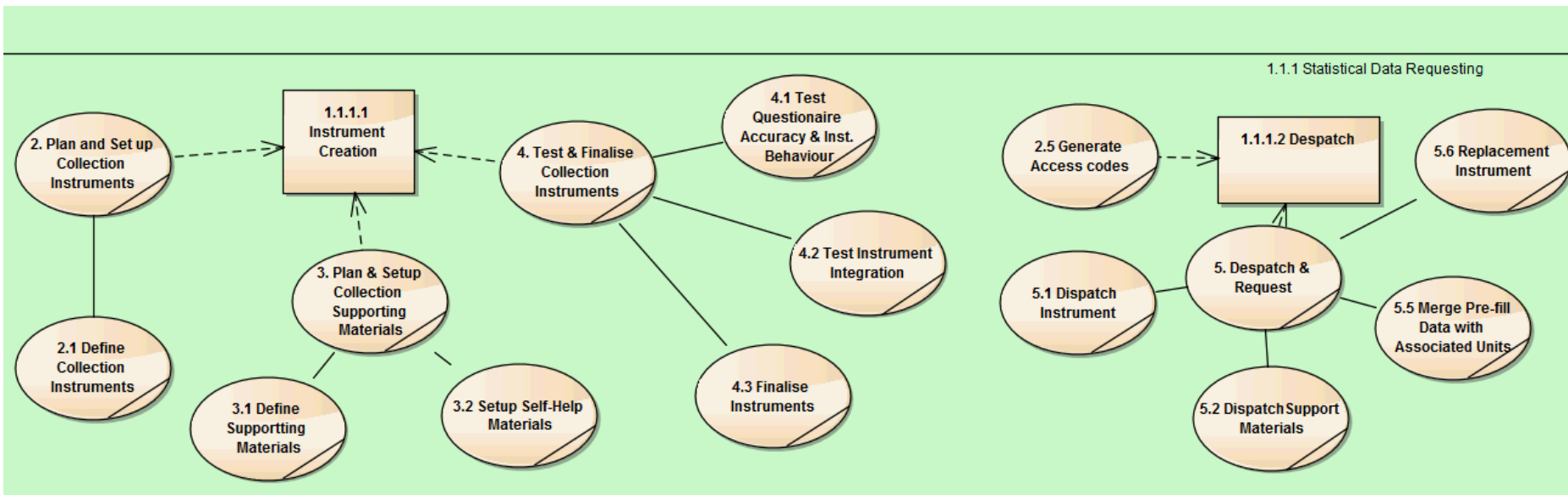


# Business Layer Models

- The Data Acquisition Business Model is a functional model of Data Acquisition in ABS.
- The Standard Services Model was created in conjunction with Statistics New Zealand.
- These models are the Business layer models defining everything the project requires.



# Mapping functions to the Capability



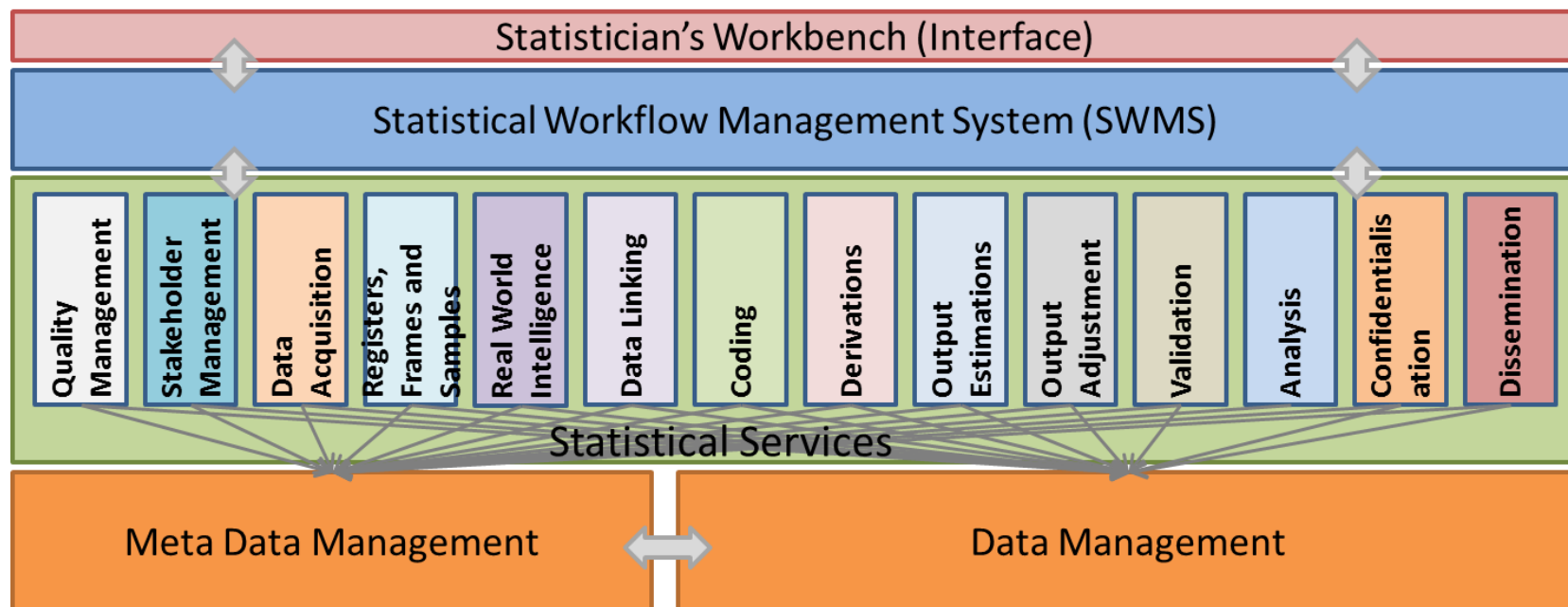


# Seeking a commercial product



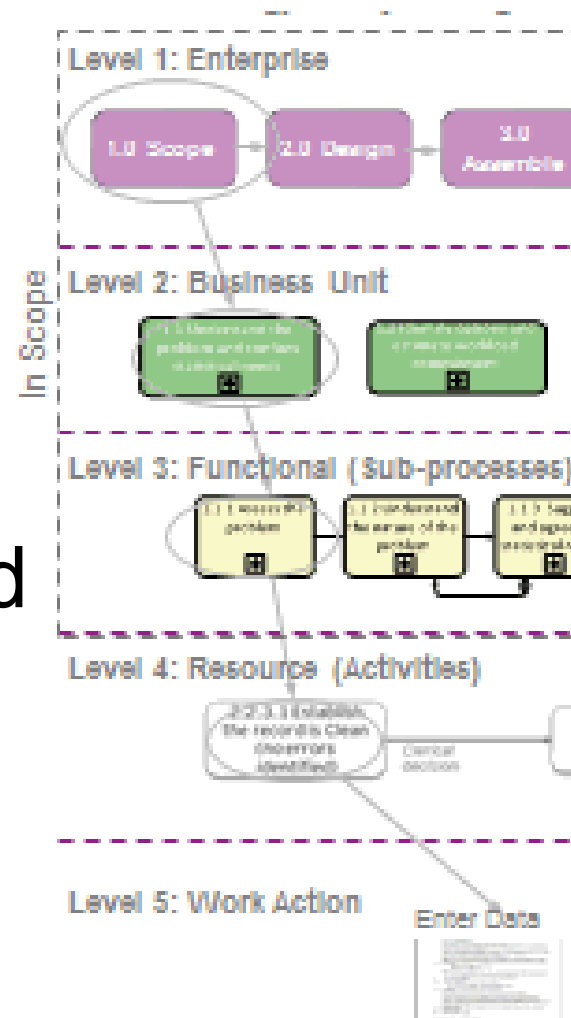
- This work all led to a set of requirements for the three streams.
- The ABS released a Request for Tender in December 2015.
- While the evaluation, work continued!

# Service Oriented Architecture



# Business Processes

- The ABS has a national implementation of GSBPM called the Statistical Process Activity Model (SPAM).
- Extensive work was undertaken to map “as-is” and “to-be” business process for the ABS.
- This work is ongoing



# Output for process reengineering

## Collection Instrument Design

(1.1.1.1 Instrument Creation)

### INPUTS

- ▶ Proposed modes of collection
- ▶ Underlying concepts and collection objectives
- ▶ Target response burden
- ▶ Instrument quality expectations
- ▶ Test plan & cases

*Designing, building, testing and approving data collection instruments, including variants of questions for specific channels or respondent type. Questions will be selected from reusable questions and modules stored in the metadata repository; the question and its variants, interviewer guidance and clarification text are linked as a reusable package. Testing includes testing of concepts, pathway, features, usability, & field operations.*

#### Metadata & Paradata Requirements

- Standard reusable instrument questions, modules & supporting material
- Editing, coding and derivation rules
- Test status
- Design Standards

#### Roles

- Instrument designer
- Instrument tester
- Testing participants
- Approver

- ▶ Approved collection instrument variants
- ▶ Supporting materials
- ▶ Derivations & edits to be applied
- ▶ Estimated instrument completion time

### OUTPUTS

### Process

Select existing questions & modules, create new questions or tailor variants

Design and build instrument layout, sequencing & editing rules

Test collection instrument in all channel variants & measure response burden

Approve collection instrument package

#### Benefit of automation

○ ○ ○

● ● ●

● ● ○

○ ○ ○

#### Ease of Implementation

○ ○ ○

● ○ ○

● ○ ○

○ ○ ○

### Business Services

Instrument module discovery

Instrument module retrieval

Design Questions

Cognitive Testing

Define Collection Instruments

Design Metadata

Design Layouts

Build instrument

Test instrument accuracy & behaviour

Instrument integration

Define supporting materials

Finalise Instruments

# Understanding the information



- The ABS has an implementation of GSIM called the ABS Information Model. This model underlies the Metadata Registry Repository (MRR).
- All new systems must interact with the MRR.



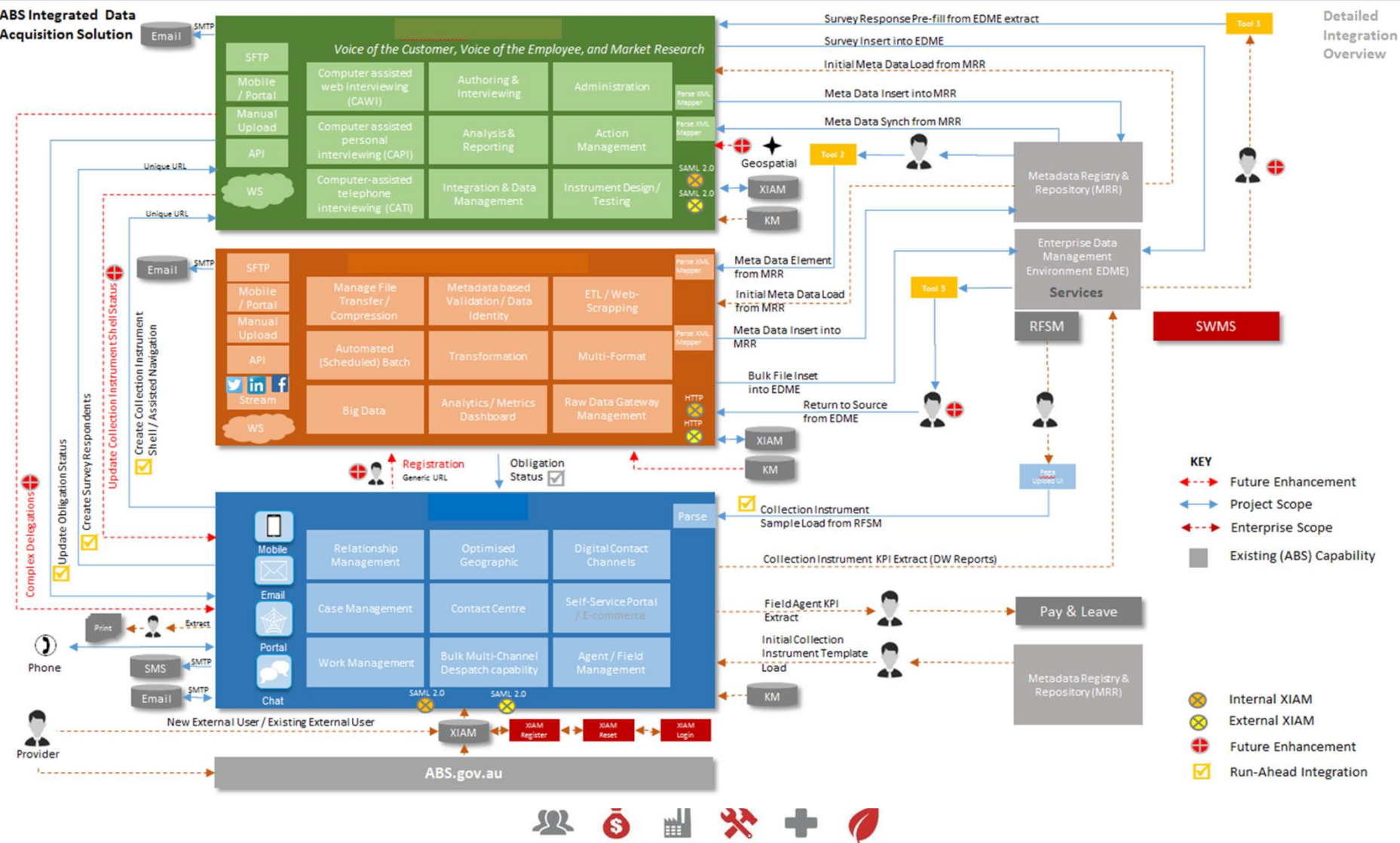
- The Functional User Stories were examined to understand the information inputs and outputs.
- A logical information model was derived and aligned with the ABS Information Model
- A number of gaps were found in relation to Collection Operations



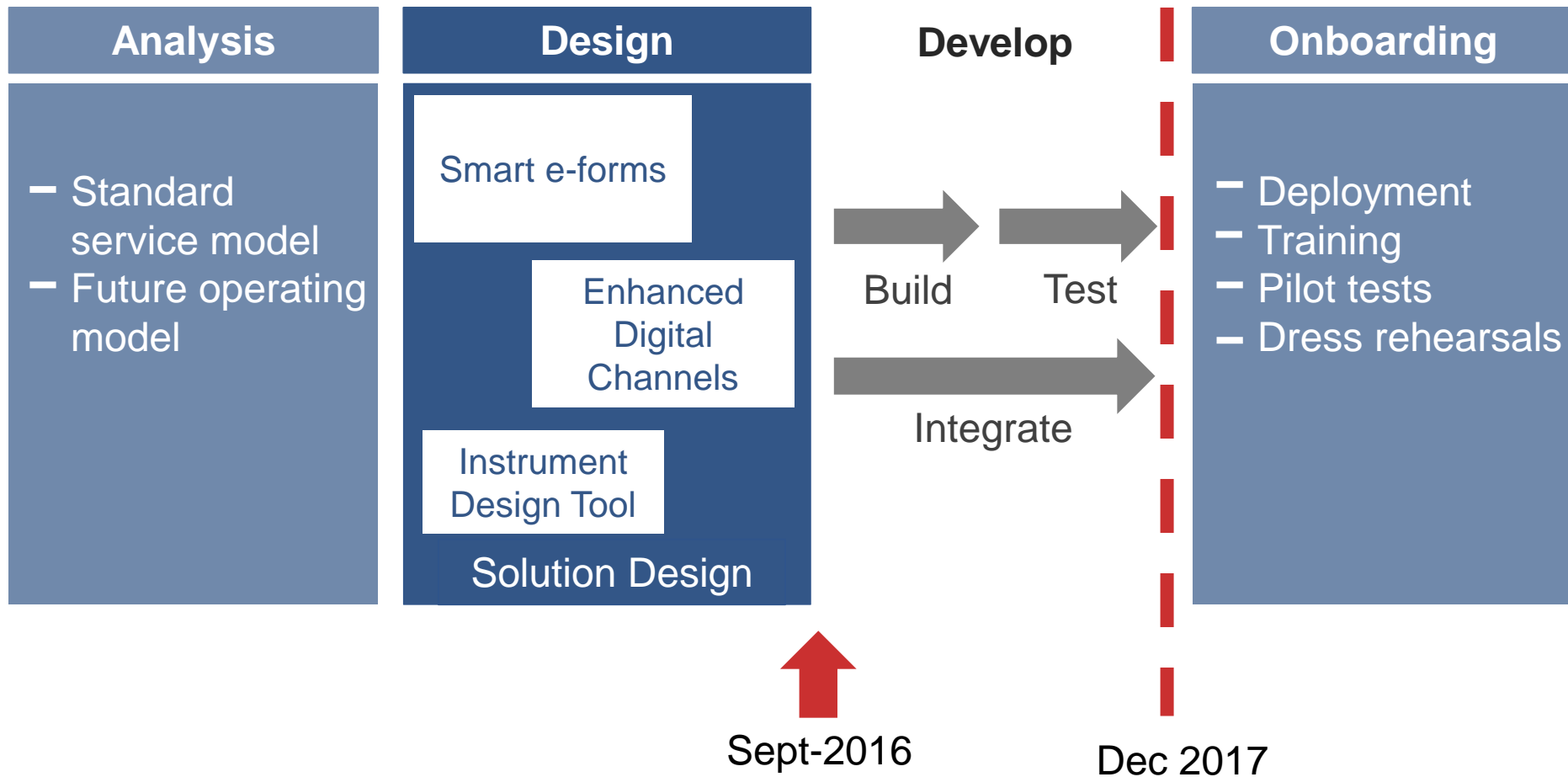
# Buying a commercial product



- The ABS is now working with a vendor.
- The work done by ABS to align with CSPA was given to the vendor during initial design phase and is being discussed in design workshops.



# Where we are now



# Thanks!

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