

Single Window Reference Model

National Workshop on Establishing
a Single Window in Mongolia
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1. Trade Facilitation Models – A Recap
2. Establishing the Single Window - What are the Costs?
3. Operating the Single Window - What's involved?
4. PPP Approach - Managing & Transferring Risk
5. Structuring the PPP – Establishing a “Special Purpose Vehicle
6. Mongolia Single Window - A Suggestion for the Way Forward



Introduction to Reference Model

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- Reference model
- Just as it is not possible to build a decent and secure house without a proper plan, which has been drawn up by a qualified architect, it is not possible to computerize a system without **first designing the necessary models**, outlining **all the elements and procedures** of which it consists.
- And just as the construction of a small garden shed does not require the same planning as the construction of a hundred storey high commercial building, different systems will require different modeling techniques, in function of their aim and complexity.

'Anchor' Concepts of Reference Model

- The main purpose of reference model is to generalize the processes for a specific sector
- Provides a **framework**
 - Make it easier for them to identify own processes
 - Find weaknesses in their own running processes easily
- Main 'anchor' concepts : Authority and Re-use
 - **Authority**: establishing a model as an authoritative reference
 - **Re-use**: Streamlining the design and development of particular models

'Anchor' Concepts of Reference Model

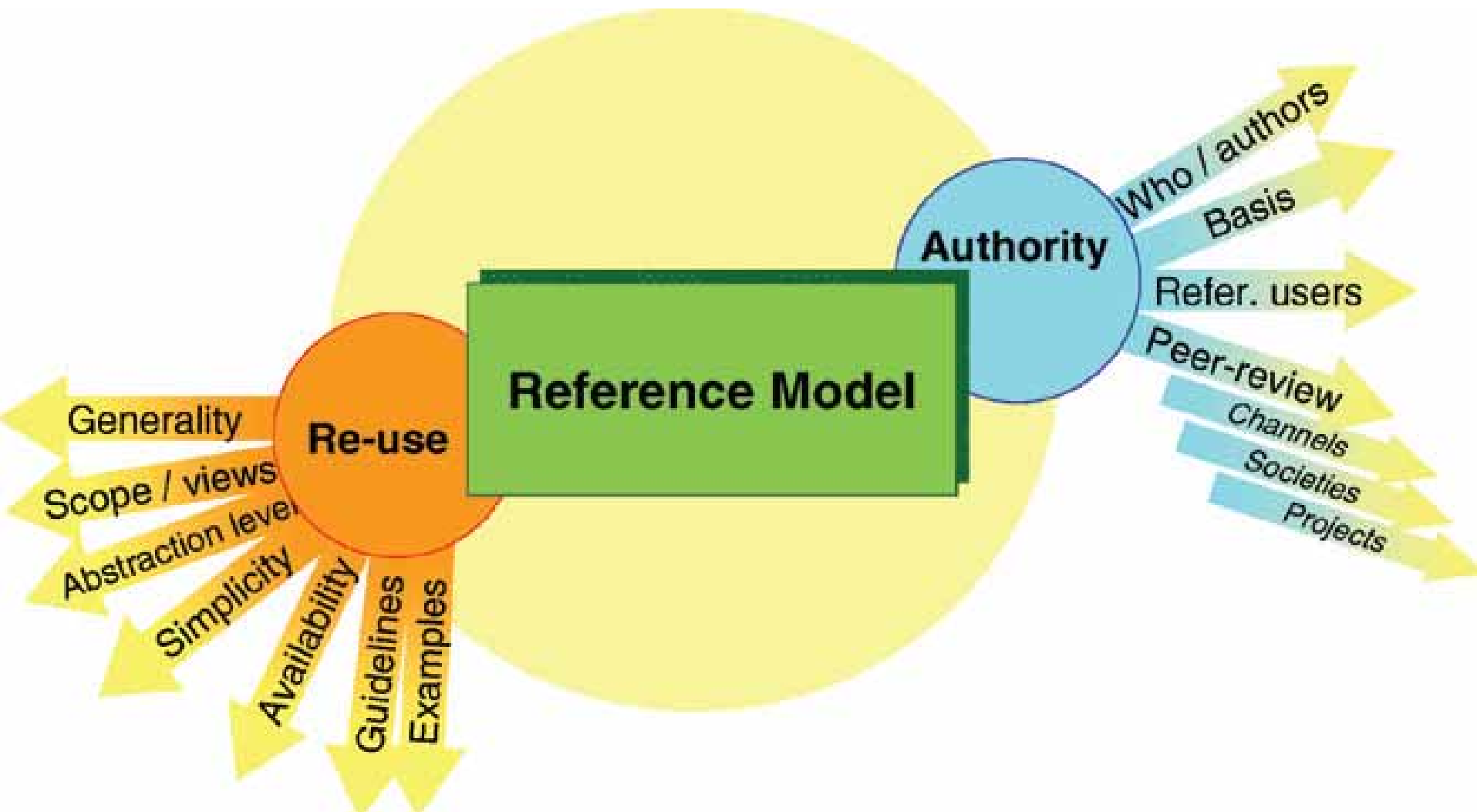
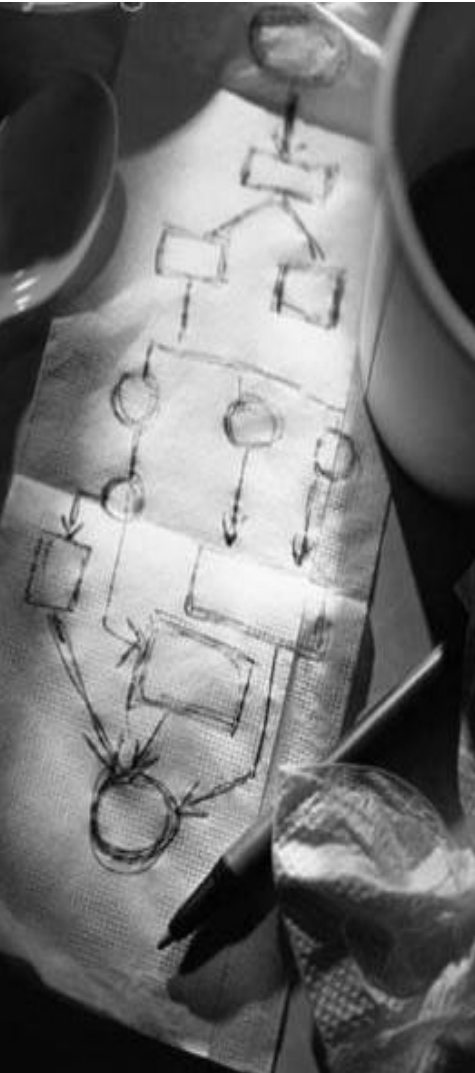



Figure 1.0 'Anchor' Concepts of Authority and Re-Use

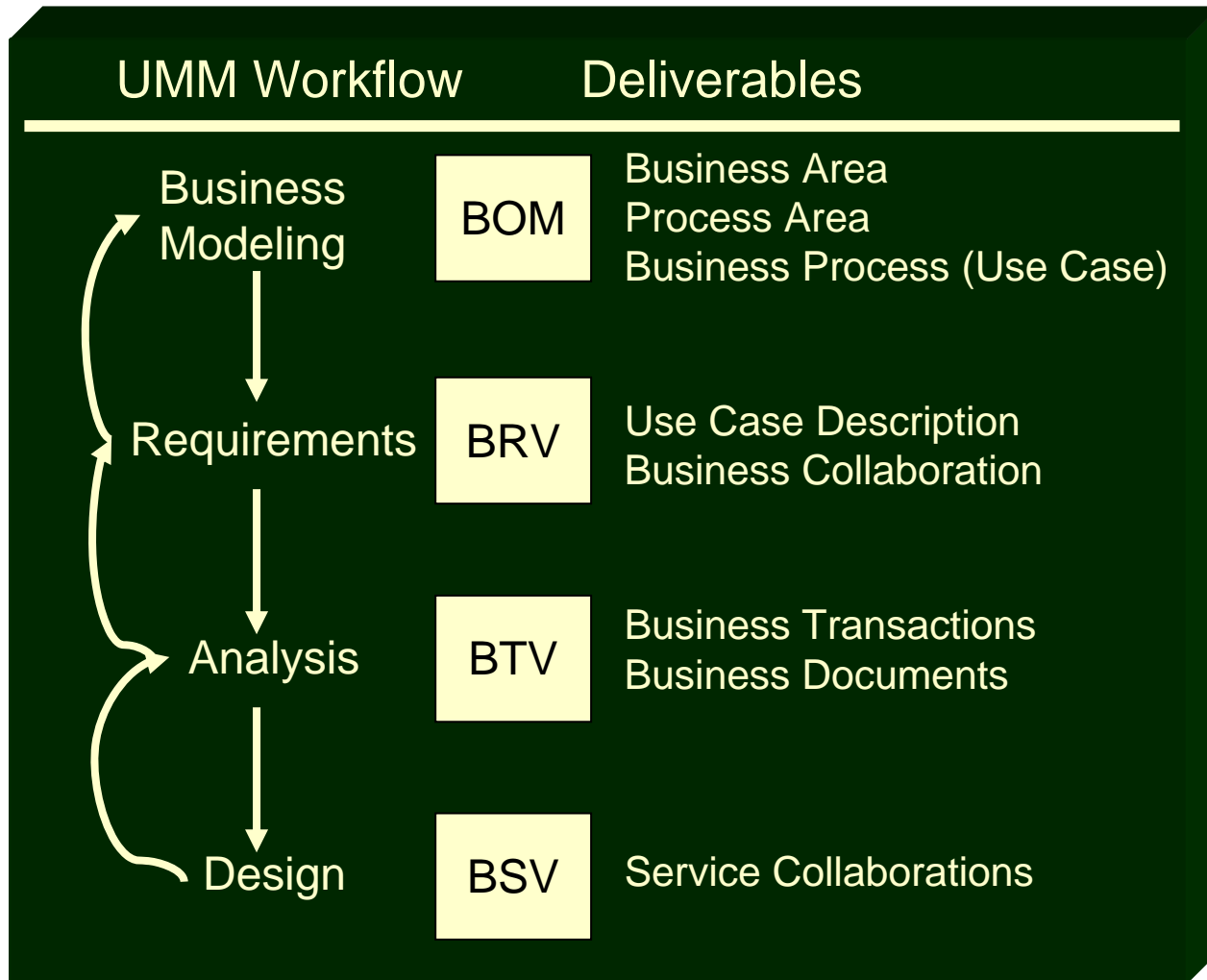
Taken from: 'On reference models for collaborative networked organizations'

Business Process Reference Model



- Business Process Reference Models (BPRM) are **frameworks** that depict the **relationship** of the **business processes** in an organization
- Business Process
 - Visualized with a flowchart (sequence of activities)
 -  Designed to add value and **should not** include unnecessary activities
 - Well designed increased effectiveness

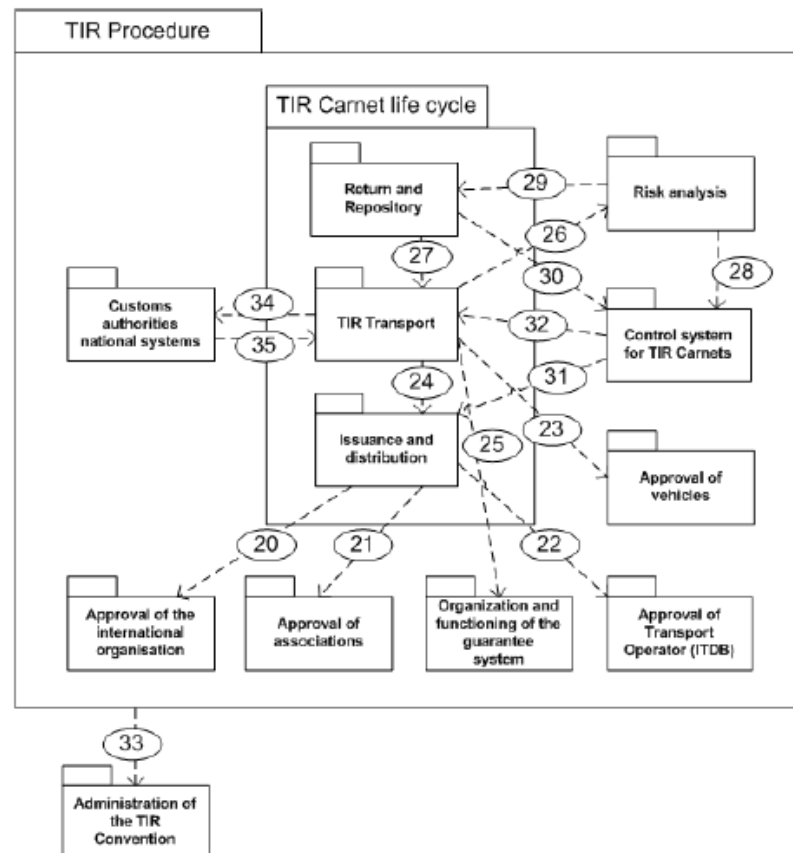
- Business reference models (BRM) concentrate on the **functional business processes** and **organizational** aspects of the **core business** of an enterprise
- Describe the business operations of an organization, independent of the organizational structure that performs them
- The business process modeling methodology for trade applied to draw up this document is based on the UN/CEFACT Modeling Methodology (UMM).
- UMM concentrates on workflows needed to understand the business needs to produce business scenarios, business objects and areas of business collaboration. They are:
 - Business Domain Modelling
 - e-Business requirements
 - Analysis
 - Design



- Reference Model of the TIR Procedure - UNECE



- Models the business processes for the whole TIR Carnet life cycle





Reference Model for Single Window Implementation

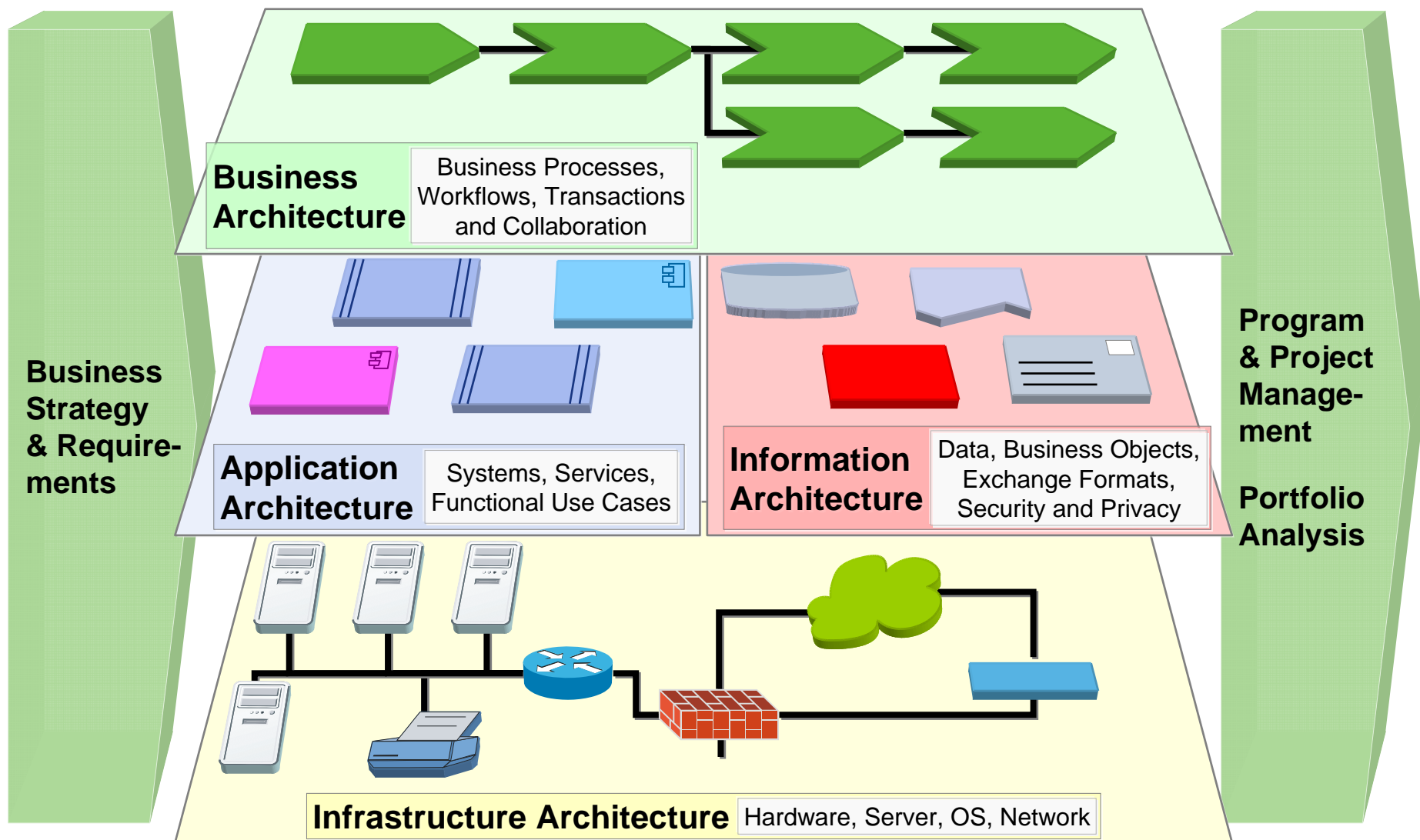
Reference Model for Single Window Domain

*What is a reference model?
Why develop a reference model for
Single Window / Customs ?*



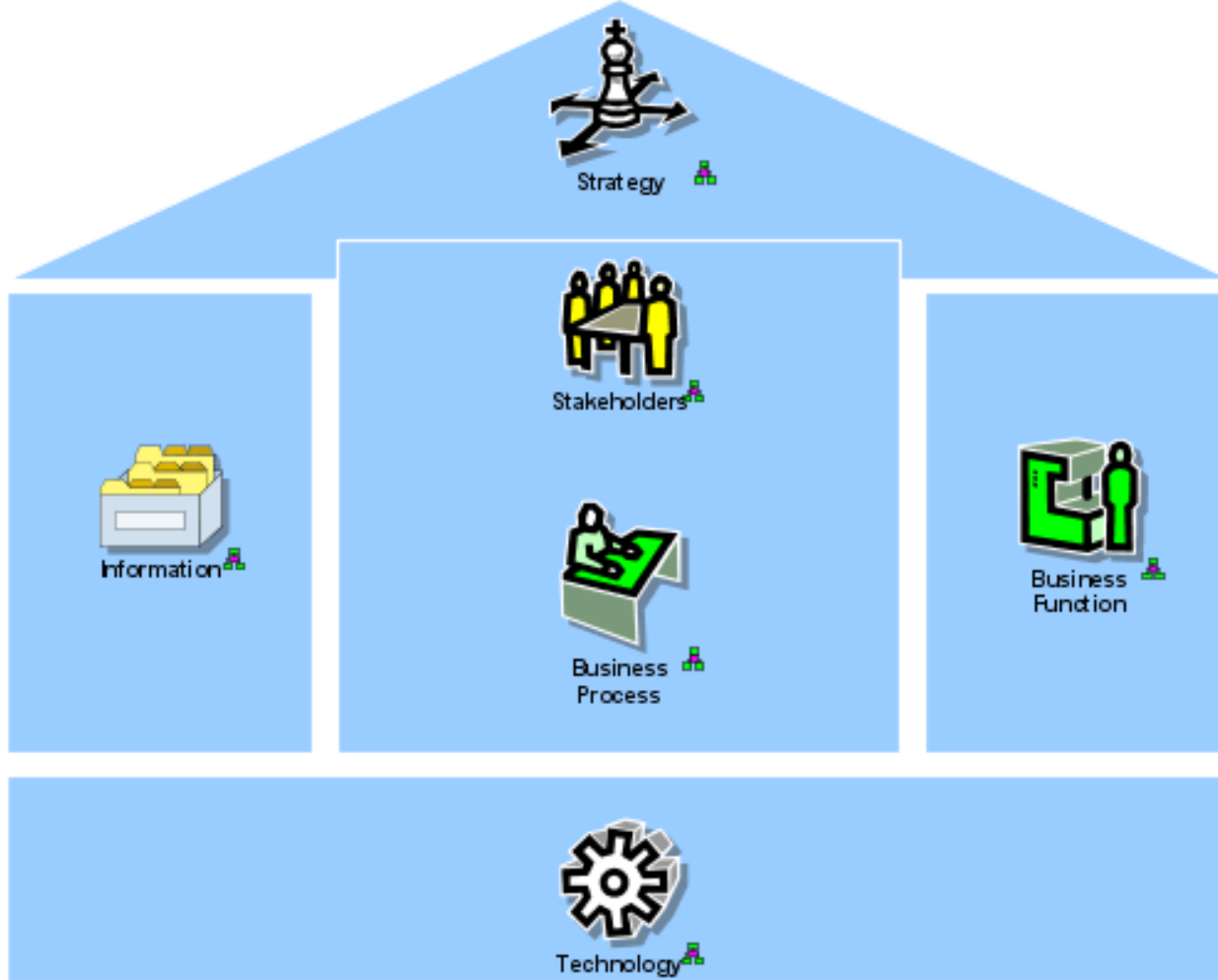
A reference model is a conceptual framework that essentially serves as a blueprint for business engineering.

- There is currently no industry reference model in the SW / Customs domain.
- Easy identification of gaps and overlaps between the current practices and the industry best practices.
- Process inefficiencies and bottlenecks prevalent in the on-going processes can be continually monitored and allows benchmarking against international standards.
- Enables continual examination and rationalisation of the business processes, its documentation and information requirements of other government agencies involved in the clearance of imported and exported goods.



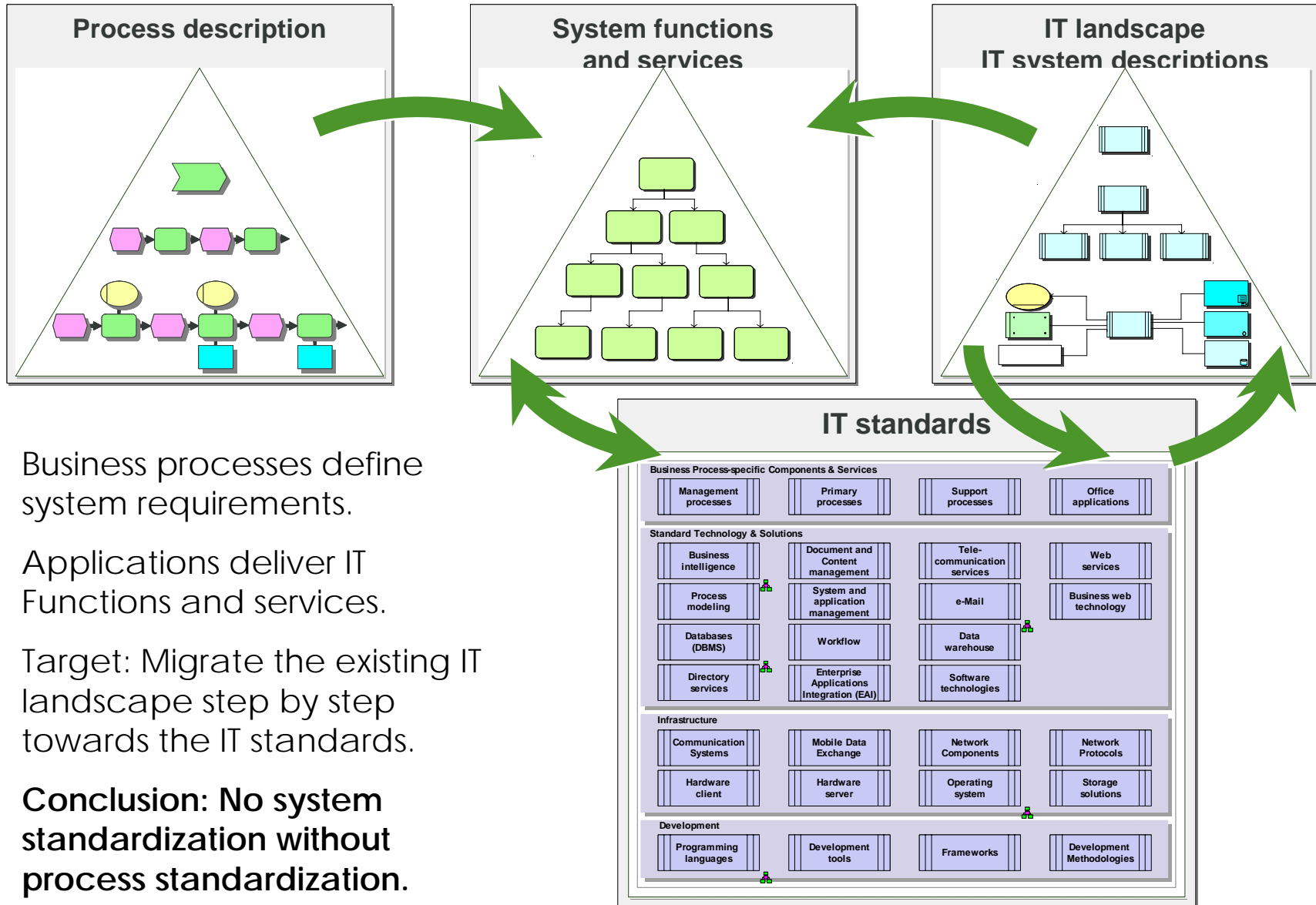
CrimsonLogic SW Reference Framework

Overview




- *Strategy*
- *Organization*
- *Business Function*
- *Business Process*
- *Information*
- *Technology*

Methodical Approach for Gathering Functional IT Requirements



Business Modeling Tool - ARIS



ARIS Business Designer

ARIS Business Architect

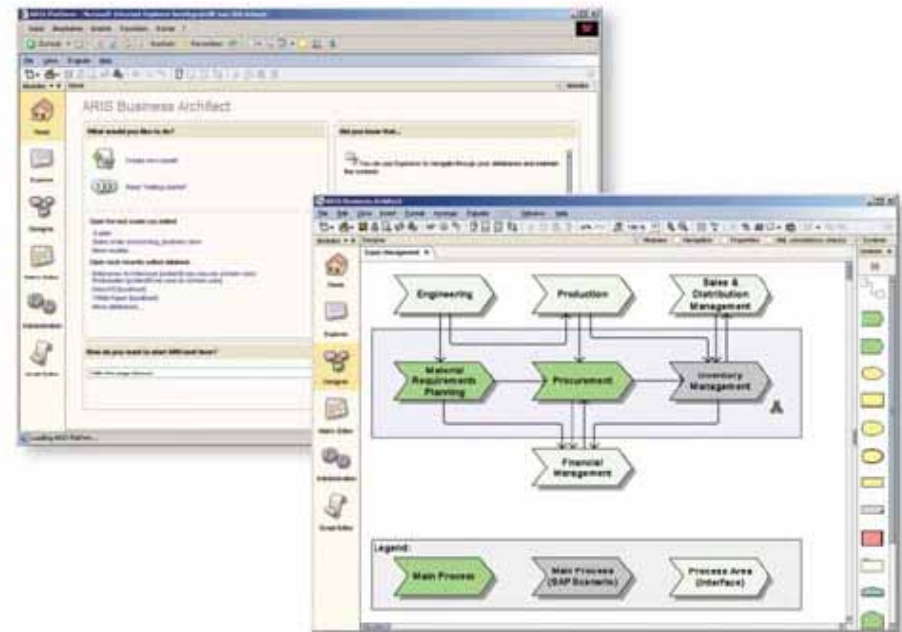
ARIS Business Optimizer

ARIS PPM

- ▶ Unified user experience
- ▶ Role based UI
- ▶ Easy to use
- ▶ 90% top ratings from end user tests in structural clearness and visual design

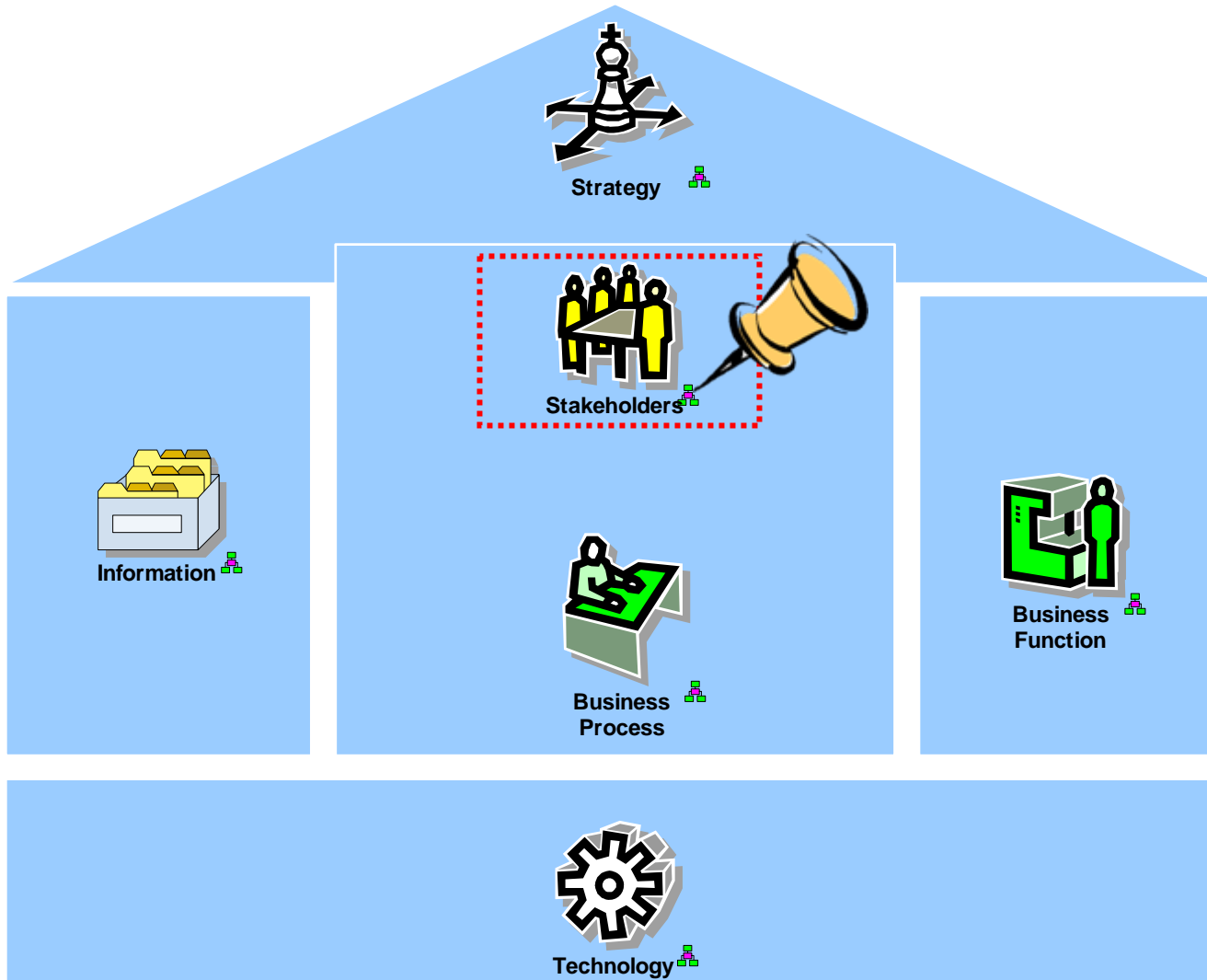
Structure

Design



CrimsonLogic SW Reference Framework

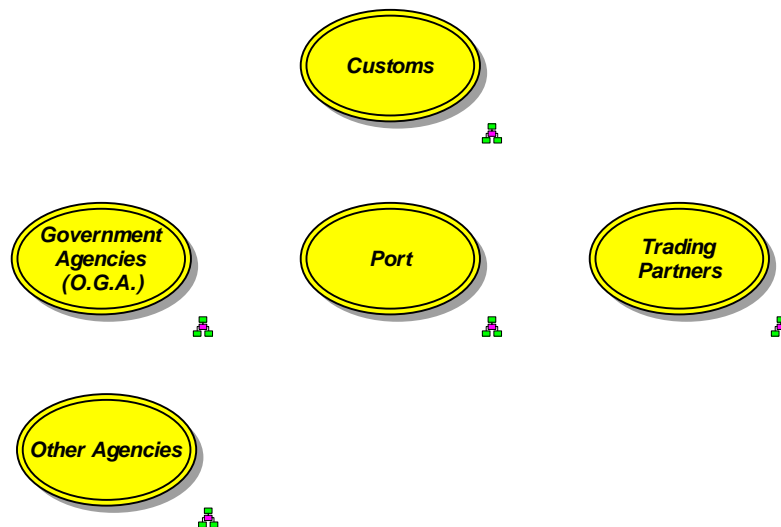
Overview



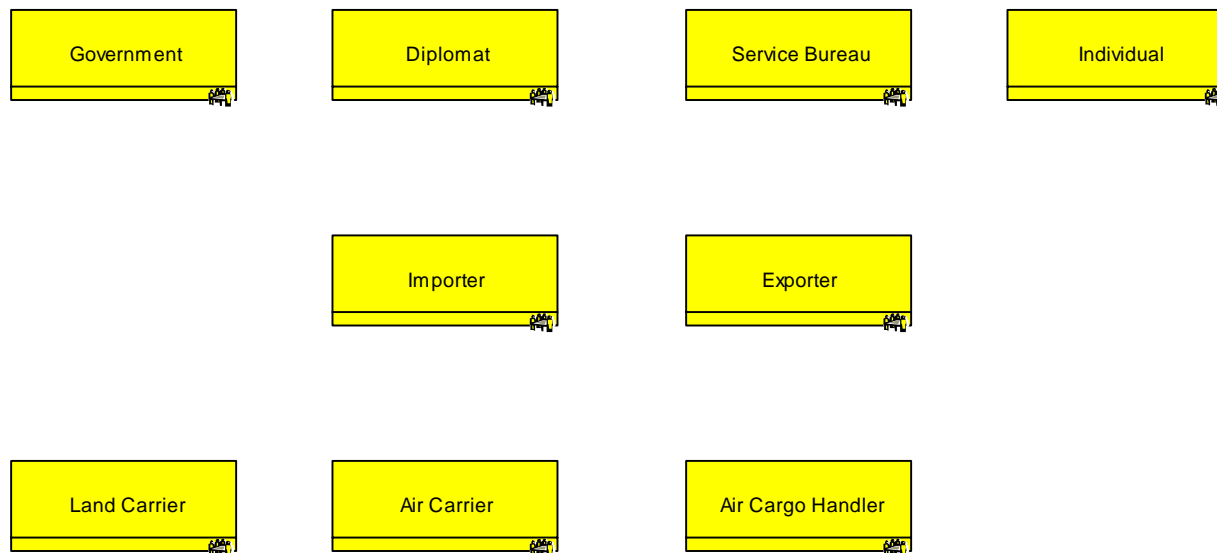
- *Strategy*
- *Organization*
- *Business Function*
- *Business Process*
- *Information*
- *Technology*

Organization Framework - SW Stakeholders

Level 1

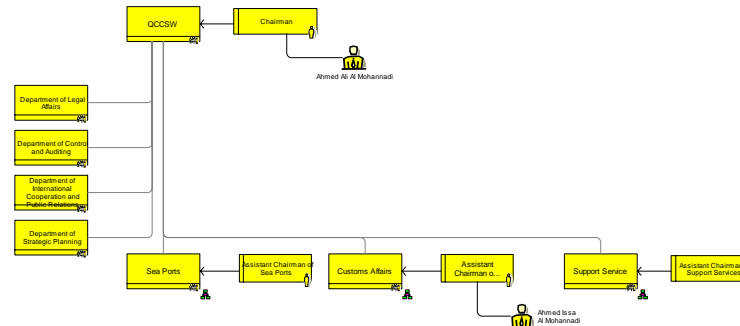


Level 2



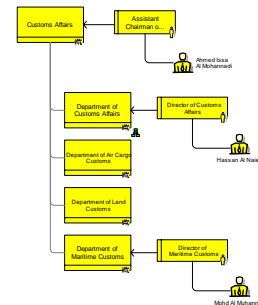
Organization Framework Overview

Corporate Organizational Chart



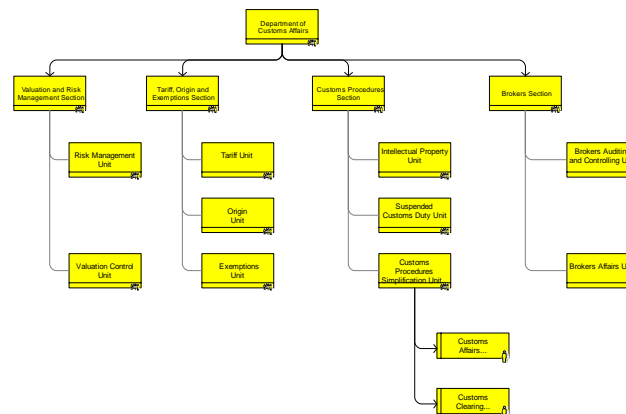
Level 0

Division Organizational Chart



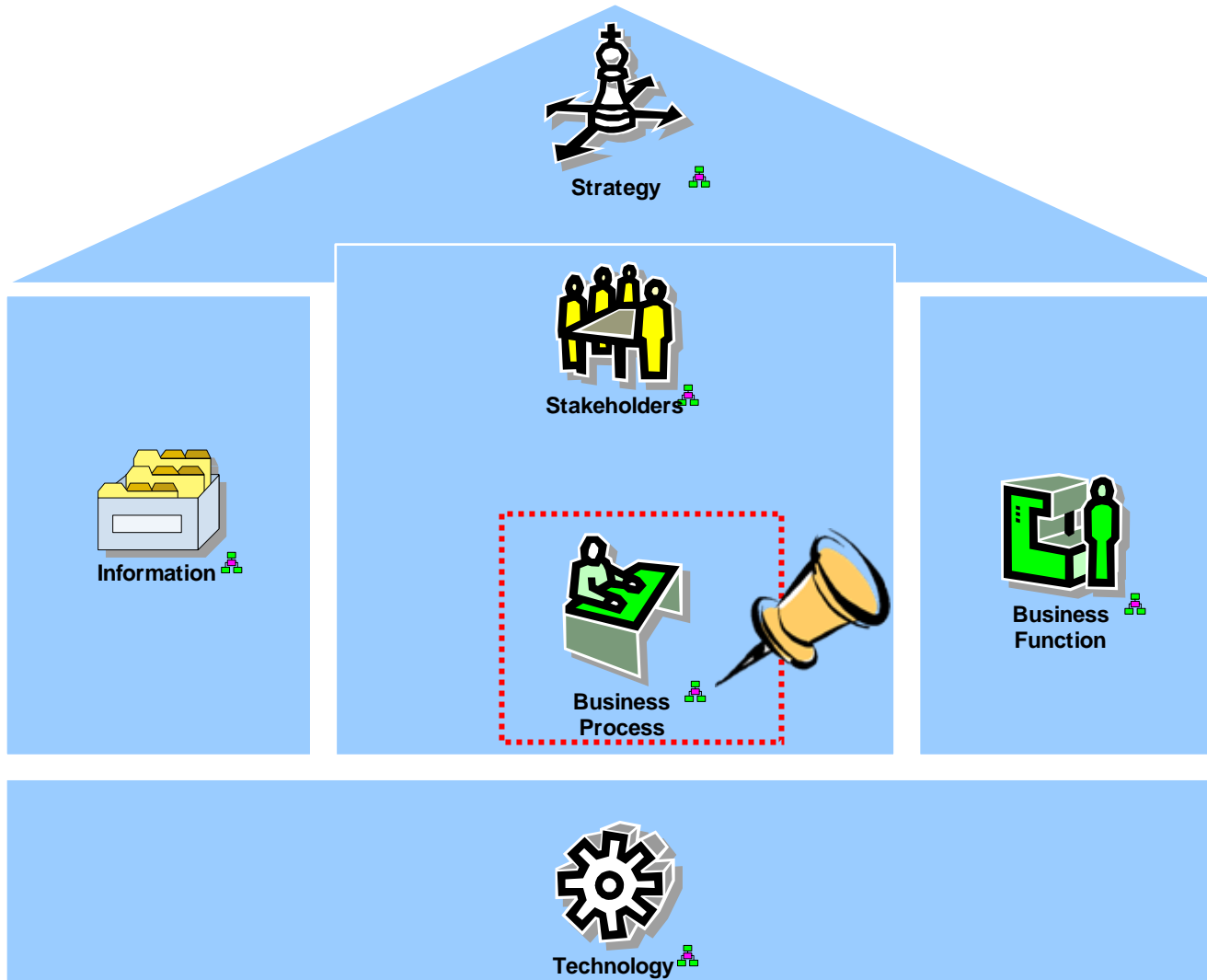
Level 1

Department Organizational Chart



Level 2 & 3

SW Reference Framework Overview

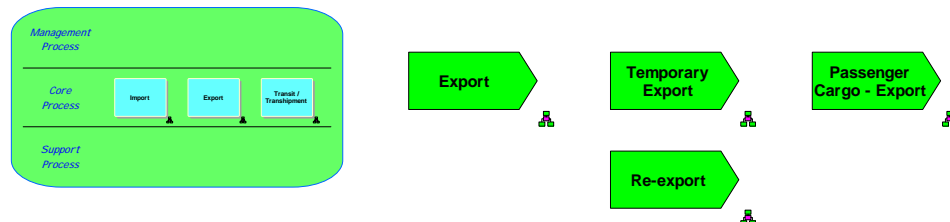


- *Strategy*
- *Organization*
- *Business Function*
- *Business Process*
- *Information*
- *Technology*

SW Reference Model Framework Overview

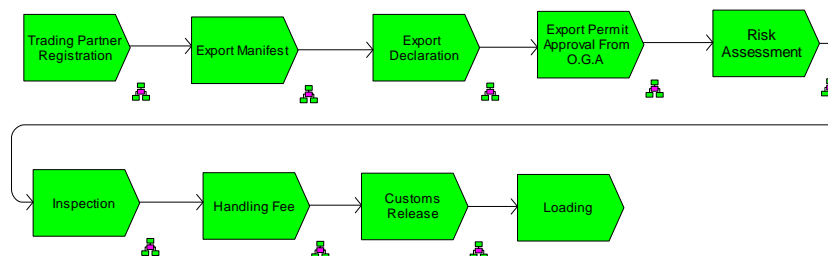
Level 1

Business Areas



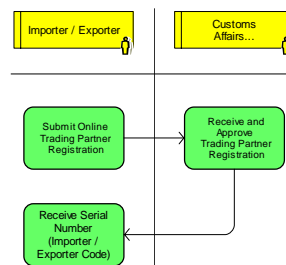
Level 2

Business Activities – Value Chain



Level 3

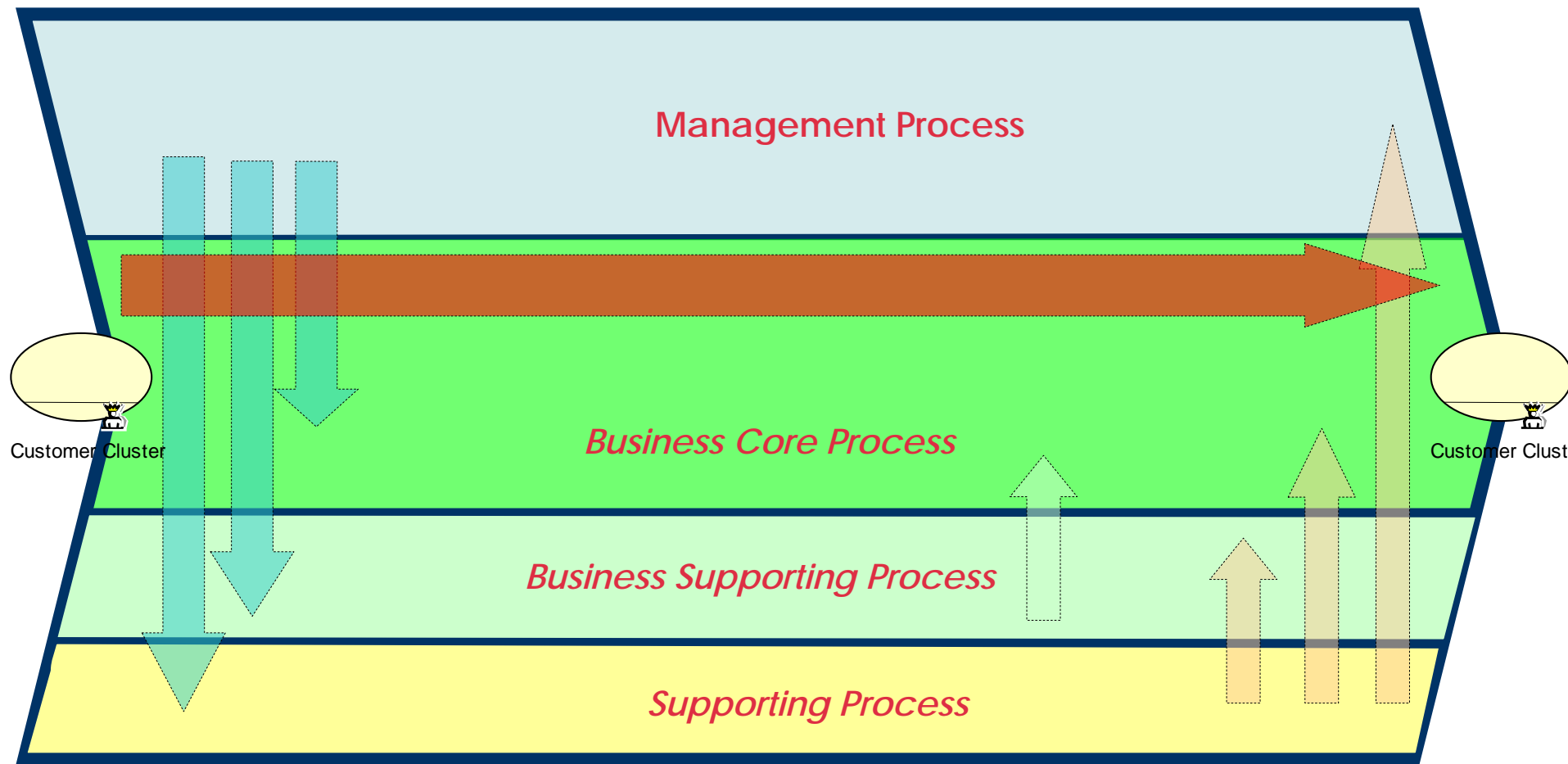
Business Processes



Domain : **Process Level Definition**

Model Name	Description	Level
Business Process Map	It represents service oriented view of SWB's core business processes, those services could be provided to external customers or internal staff. It contains a few business process areas. For example, Asset Enhancement, Collection, etc.	0
Business Process Area	It focus on an business process area within the business process map, represent one major service provided to internal employee or external customers. A business process area contains a few main business processes.	1
Business Main Process Flow	<p>Each main process flow describe an end to end thread of processes which start from and end at customer, deliver the service to internal or external customers.</p> <p>A business main process flow contains a few business process flow which work together to deliver the service.</p>	2
Vertical Swim lane	Business process flow describe how different process activities work together (Sequence and roles) to perform a defined task required by the process.	3

Model Name : **Business Process Map**

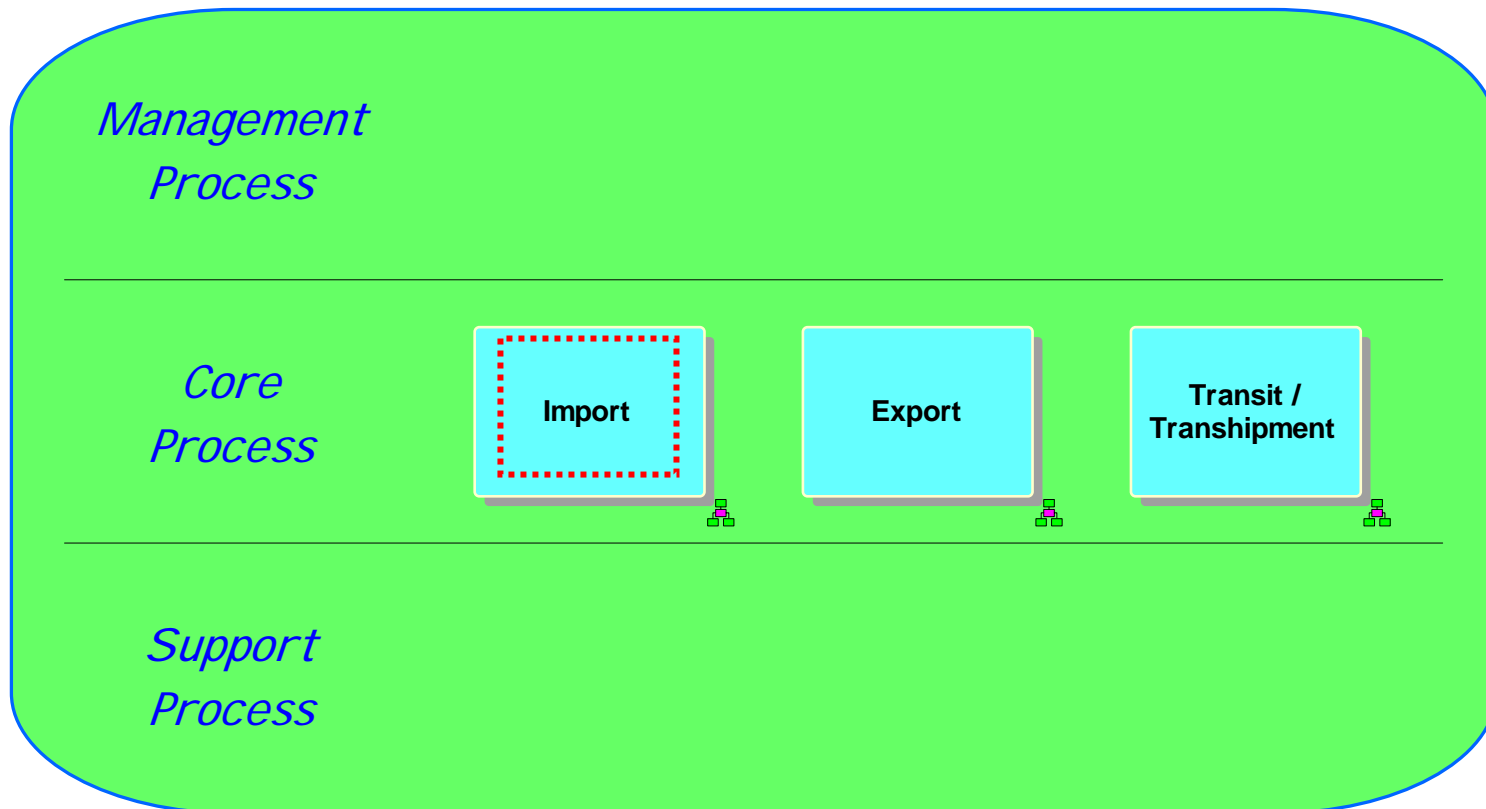


Domain : **Business Process**
Level : **0**
Model Name : **Business process Map**

Specification:

It describes the overall services provided to internal /external customers, such as :

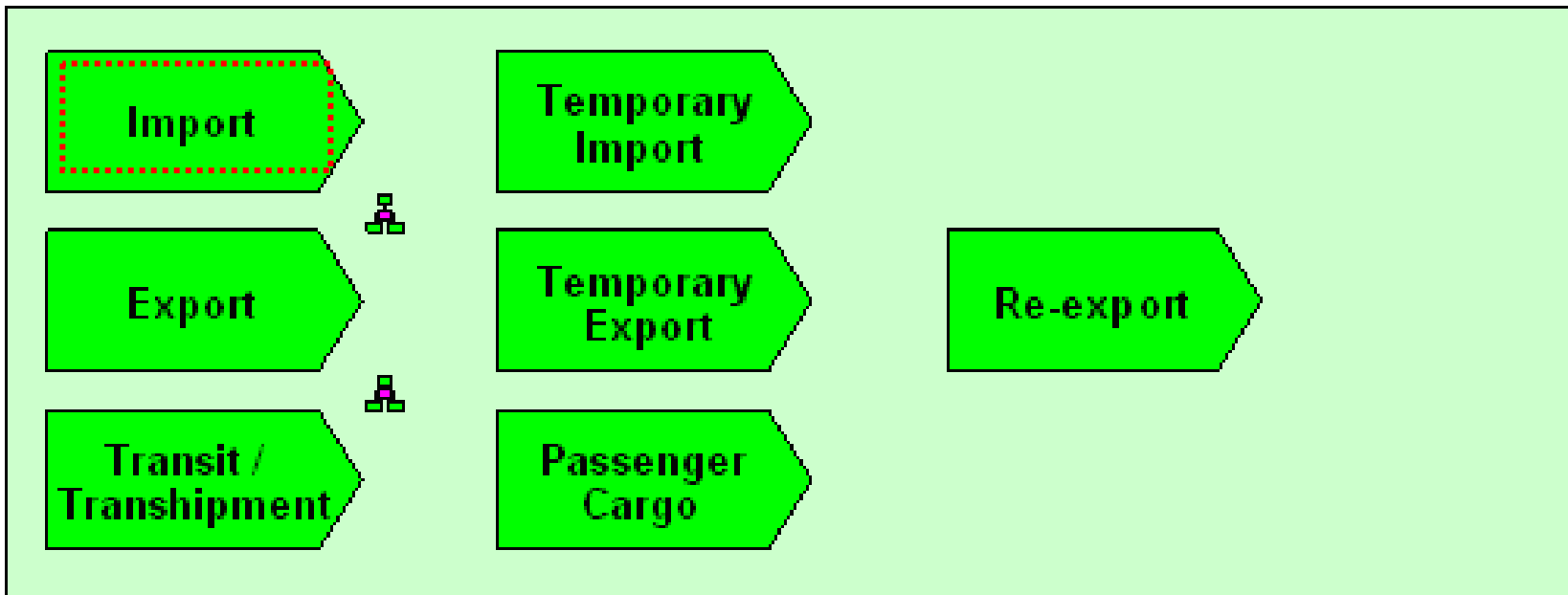
- Import
- Export
- Transit
- Transshipment



Domain : **Business Process**
 Level : **1**
 Model Name : **Business Process Area**

Specification:

Each 'business process area' contains a collection of end to end process flow, which provide similar services to the one or a few 'customer cluster'. All these 'end to end' process flow are list out in a 'Business Process Area' diagram, each of 'end to end' process flow is referred as 'business main process'



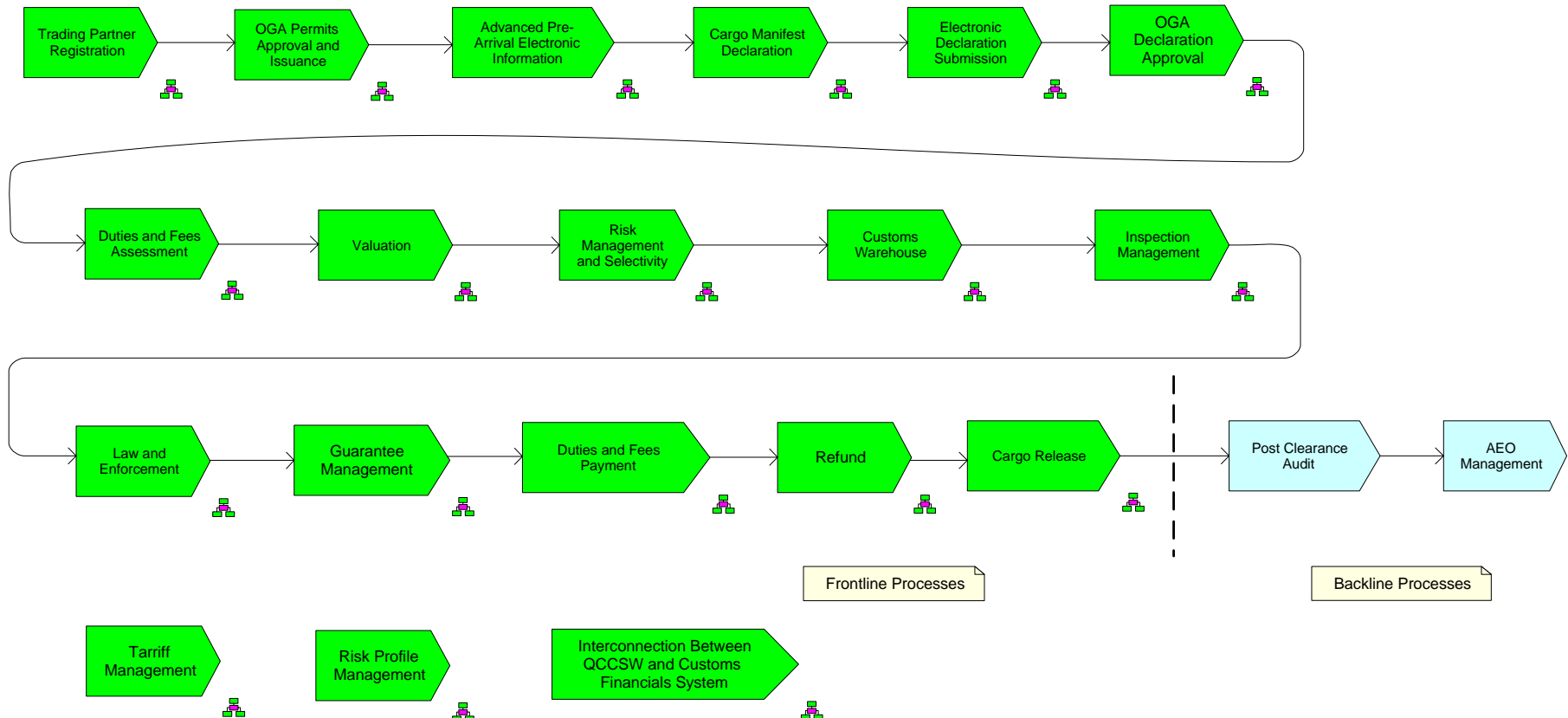
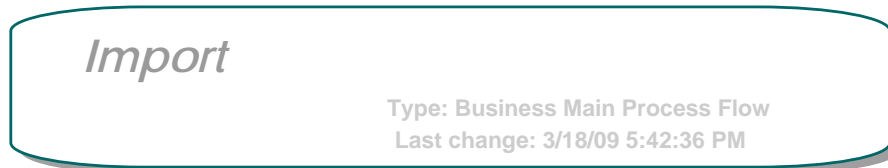
Business Process Models

Domain : **Business Process**
 Level : **2**
 Model Name : **Business Main Process Flow**

Specification:

Each 'business Main Process' could be described by some business process', which work together to deliver the service to the customer in different scenario (Variant).

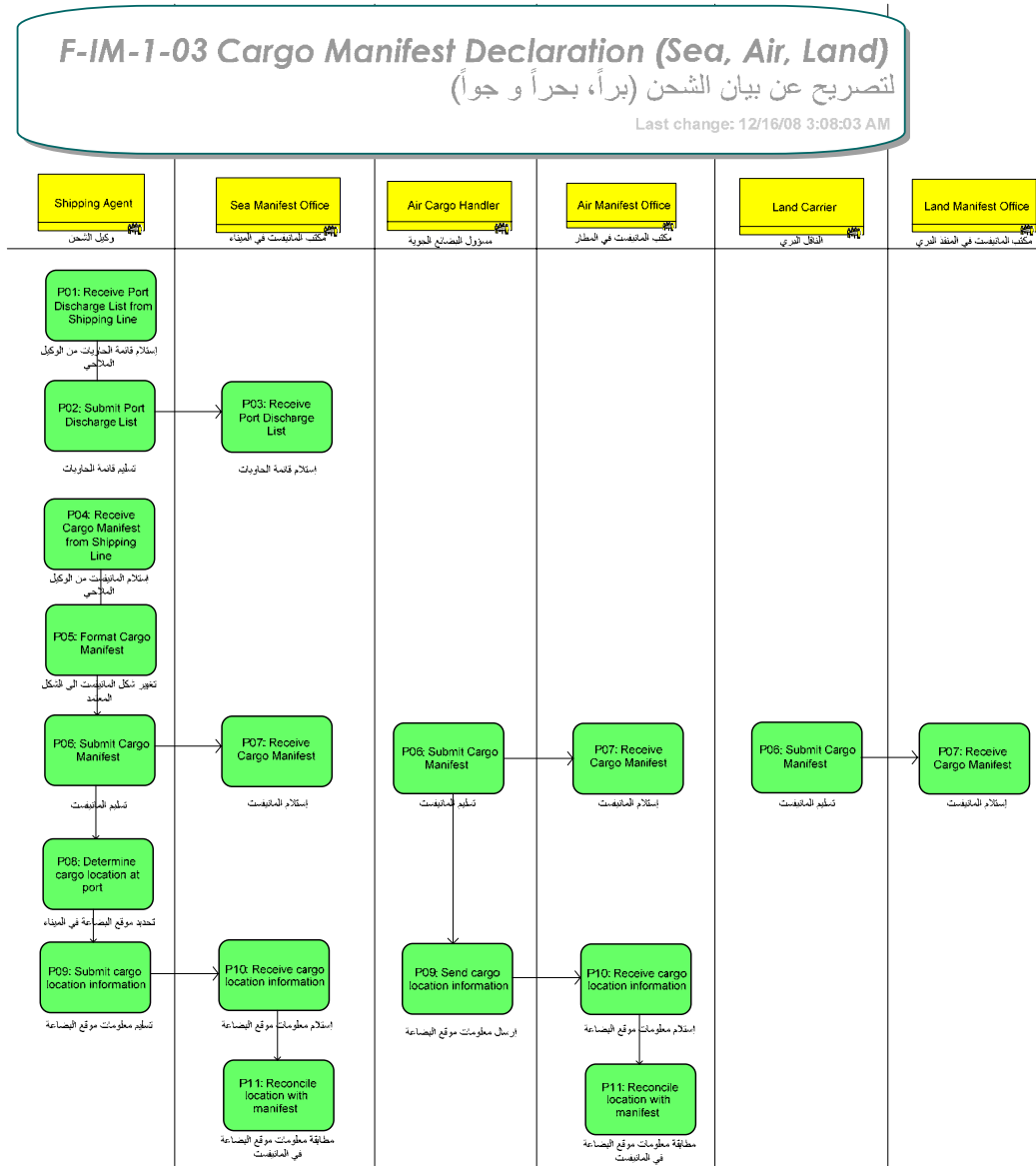
This diagram provides an overview picture for the owner and user of this 'business main process' and it serves as basis for business model change or process improvement.



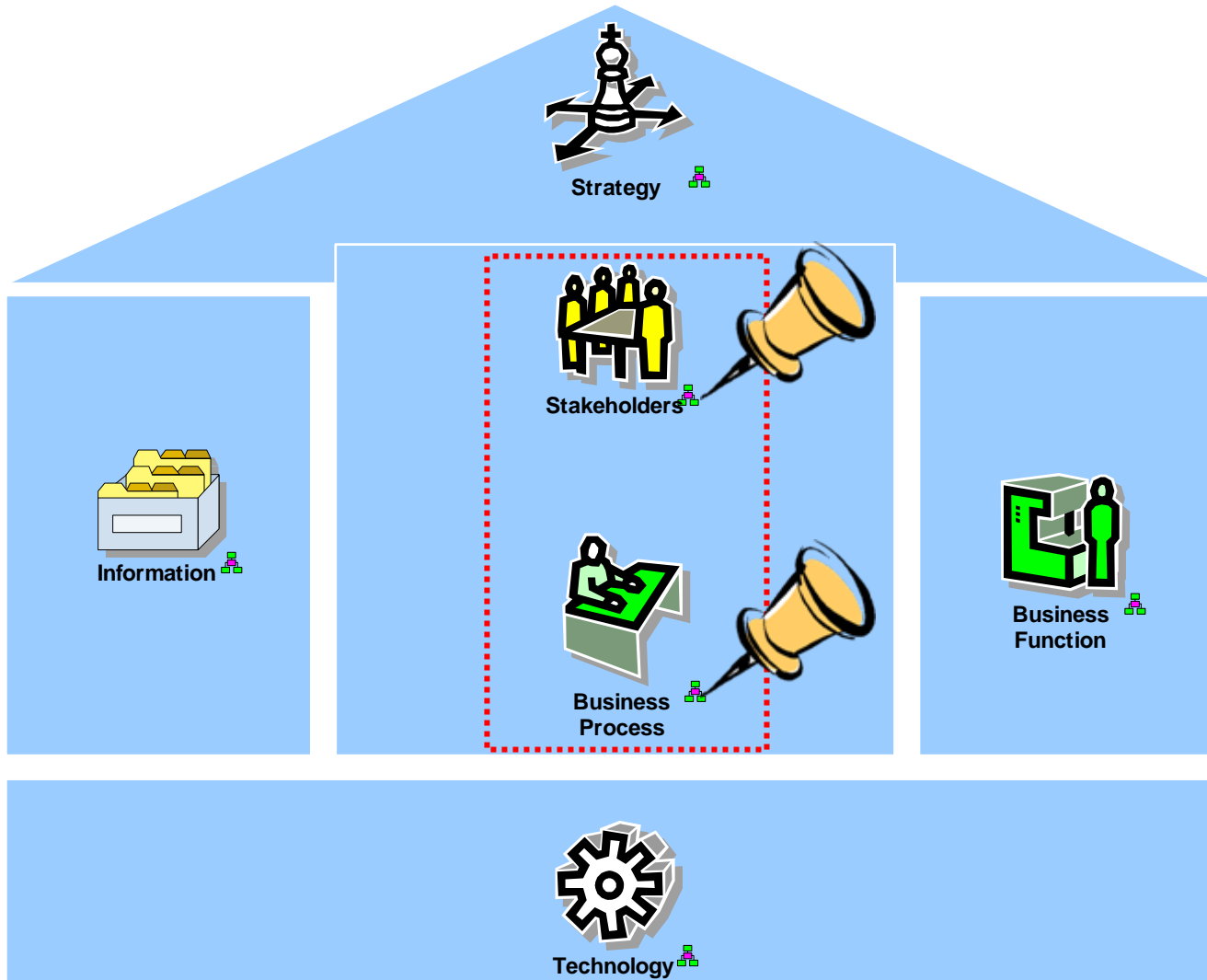
Domain : **Business Process**
Level : **3**
Model Name : **Vertical Swimlane**

Specification:

To describe business process flow in a swim lane style, so that the responsibility of process activities and the place of the handle over are clear defined



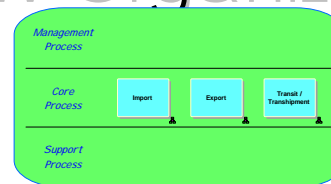
SW Reference Framework Overview



- *Strategy*
- *Organization*
- *Business Function*
- *Business Process*
- *Information*
- *Technology*

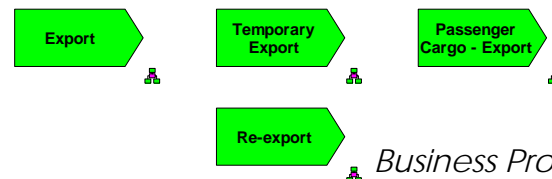
SW Organization & Process Relationship

Level 0



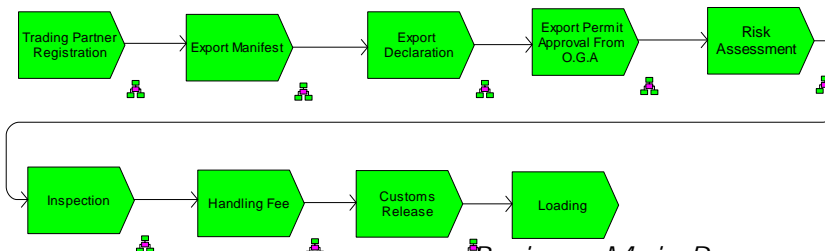
Business Process Map

Level 1



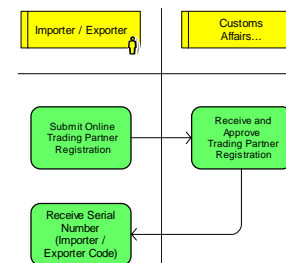
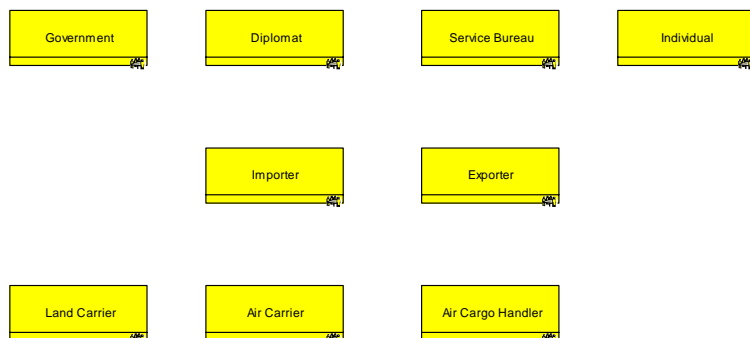
Business Process Area

Level 2



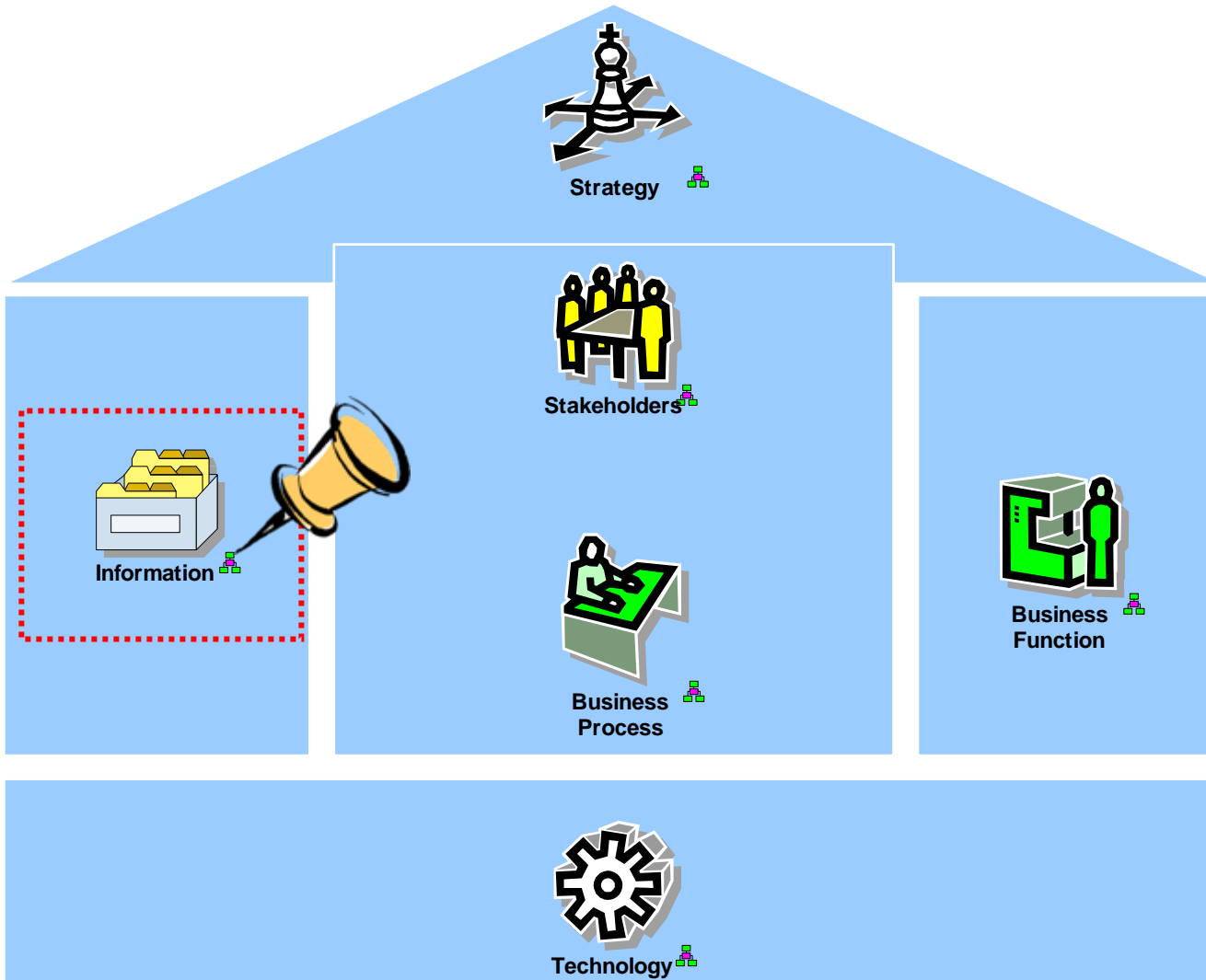
Business Main Process Flow

Level 3



Vertical Swimlane

SW Reference Framework Overview

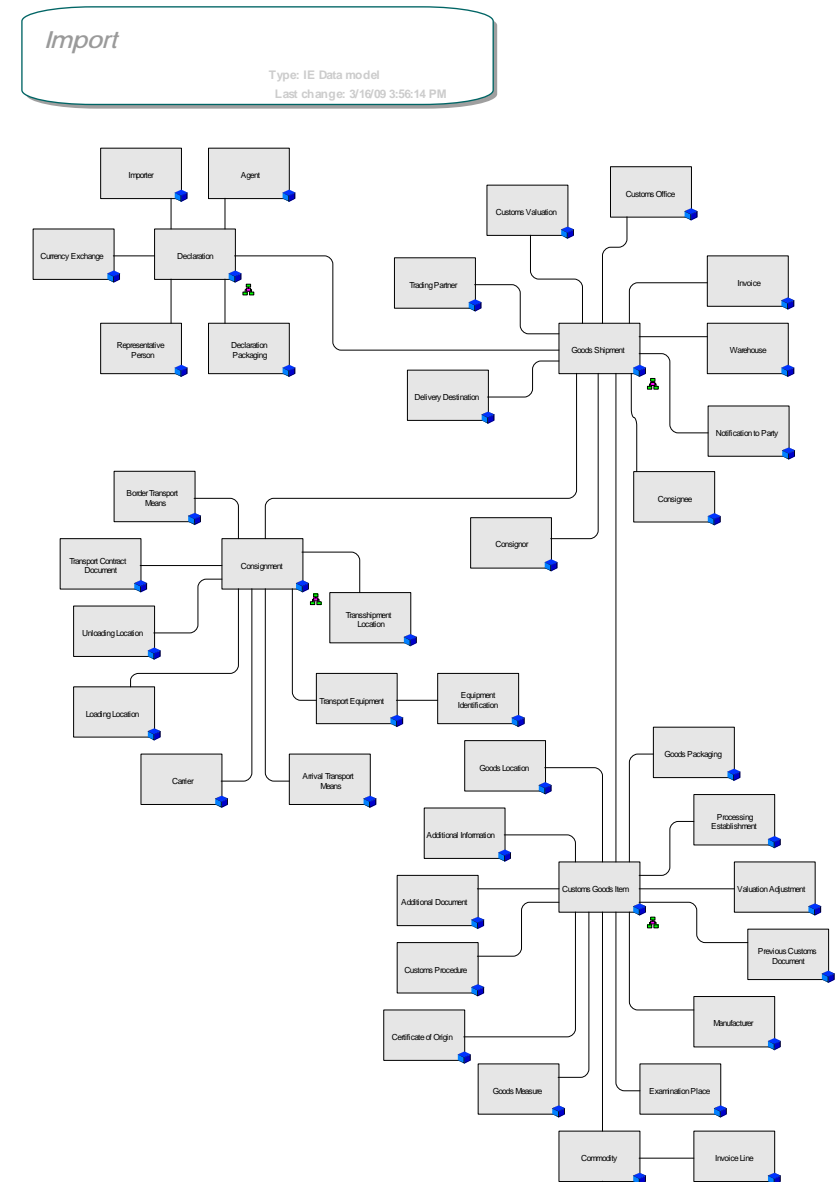


- *Strategy*
- *Organization*
- *Business Function*
- *Business Process*
- *Information*
- *Technology*

Domain : **Information Architecture (IA)**
Sub Domain : **Data**
Level : **2**
Model Name : **Entity Relationship Diagram**

Specification:

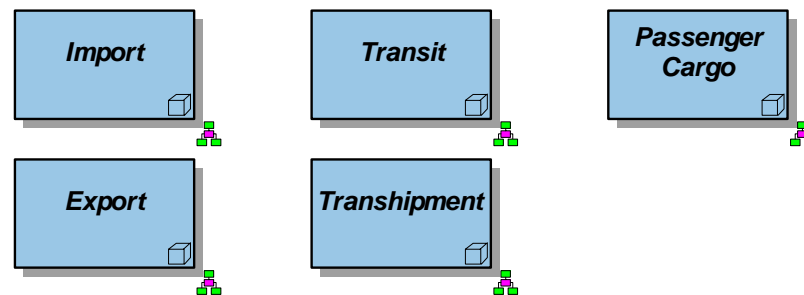
Entity Relationship Diagram (ERD) is traditional method to describe the relationship for the entities used by a specific business domain or sub domain. Here, attributes to describe an entity is hidden with a lower level model ('Entity Description Diagram (Logical)')



SW Information Framework

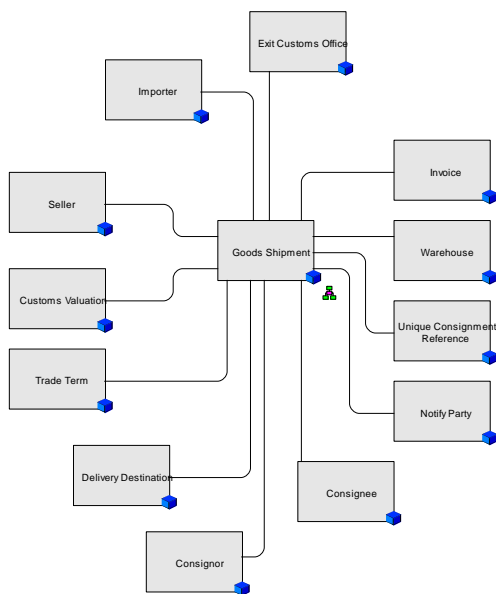
Overview

DW Structure



Level 1

Level 2

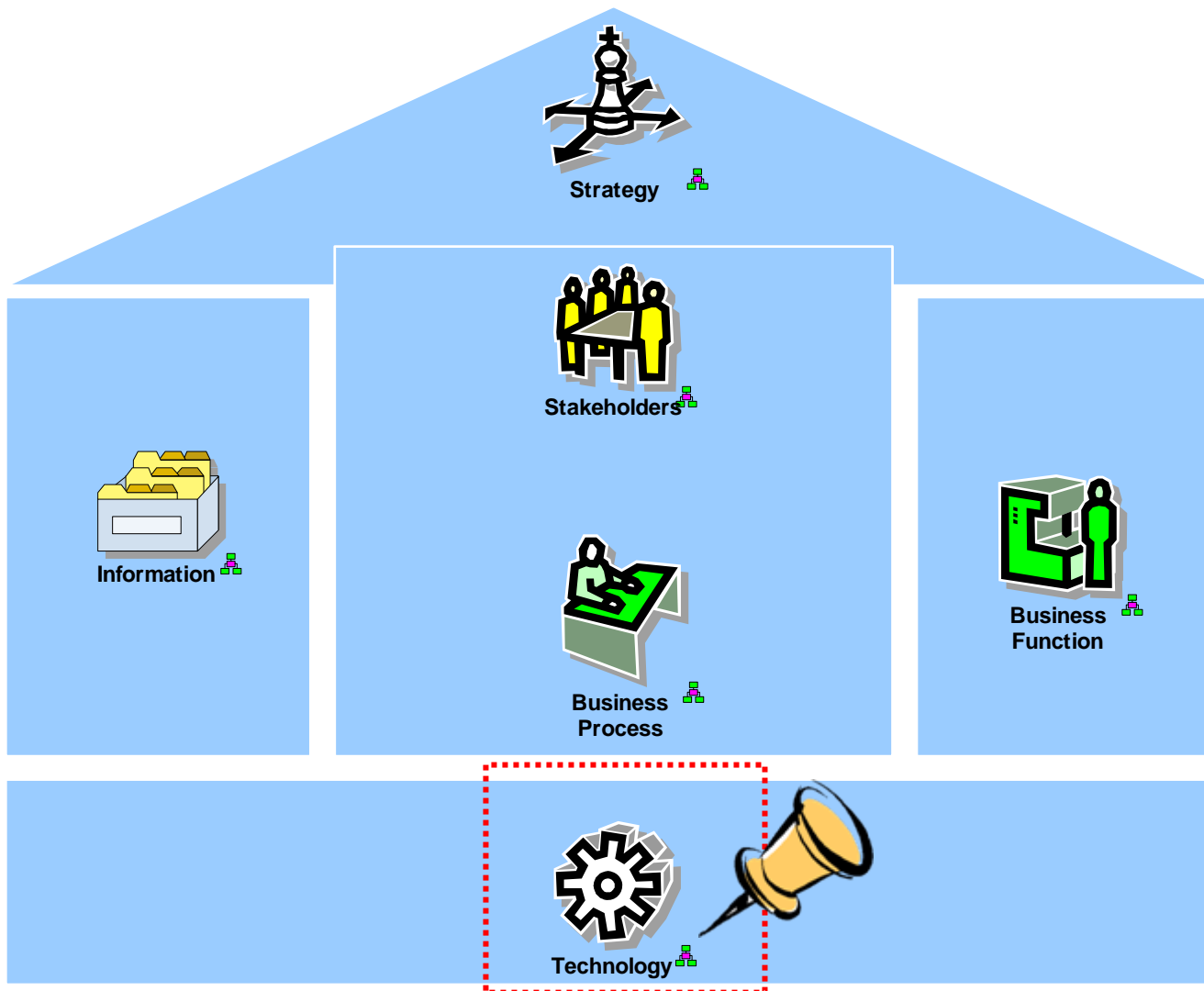


Entity Relationship Diagram

Domain : **Information Architecture (IA)**
Sub Domain : **LDM**

Model Name	Description	Level
DW Structure	DW Structure provide entry point to list a group of Logical Data Model by business area.	1
Entity Relationship diagram	An entity-relationship model (ERM) is an abstract conceptual representation of structured data	2
Entity Description Diagram	To describe the attributes belong to an entity, and how them help to identify an entity and help to link one entity to another	3

SW Reference Framework Overview

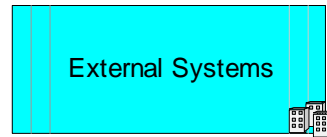
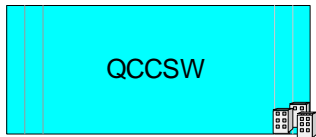


- *Strategy*
- *Organization*
- *Business Function*
- *Business Process*
- *Information*
- *Technology*

Domain : **Technology Model**
Sub Domain : **Technology**
Level : **1**
Model Name : **Application System Diagram**

Definition :

Provide an entry model for technology and applications.



Specification:

The reference model is going to have IT support, and this diagram to provides an IT landscape to list all the required applications system function for both SW and external parties.

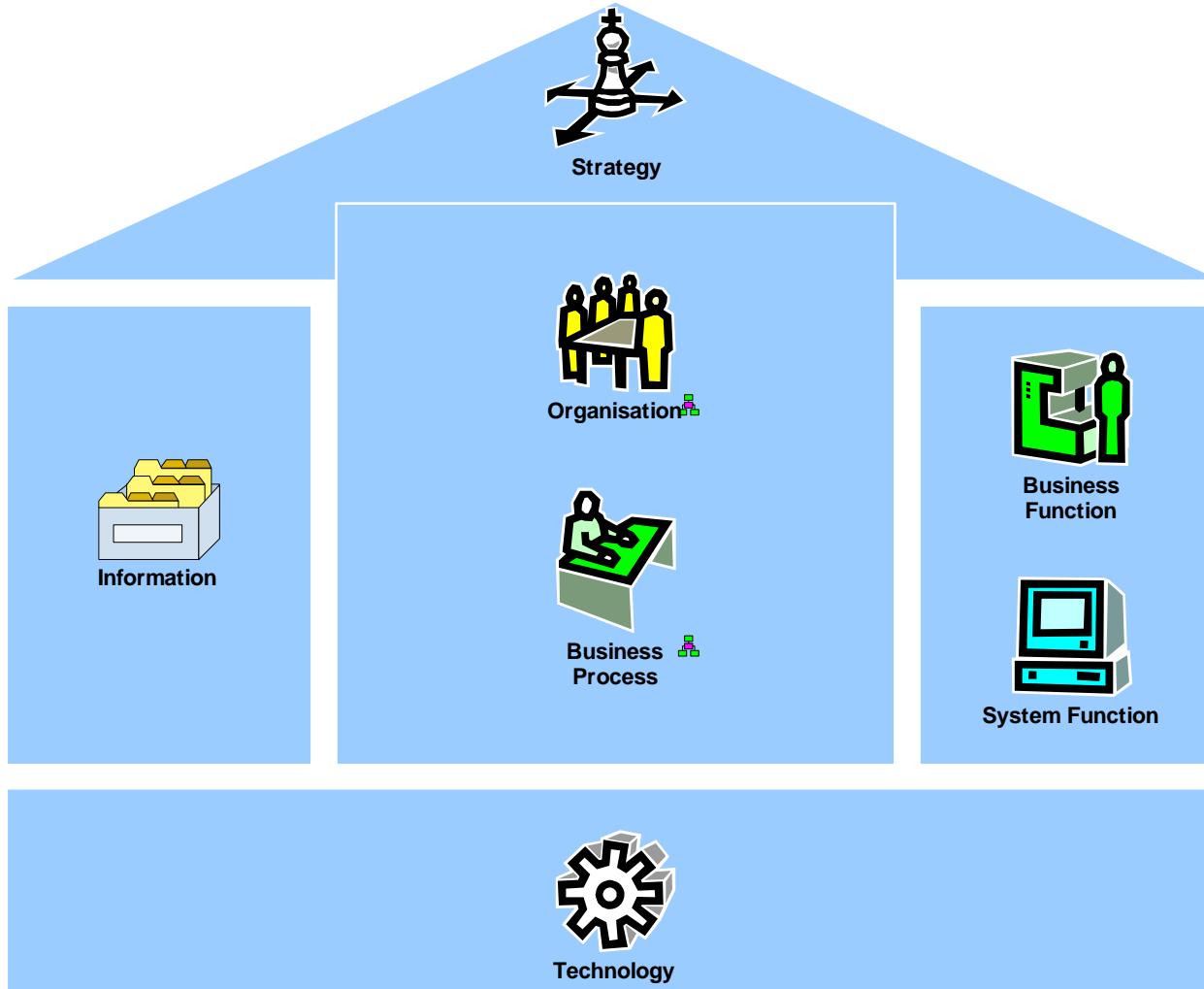


Desired Output

Reference Model
for
Single Window
Implementation

CrimsonLogic SW Reference Framework

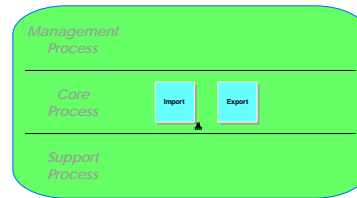
- Putting It Together



- *Strategy*
- *Organization*
- *Business Process*
- *Information*
- *Business Function*
- *System Function*
- *Technology*

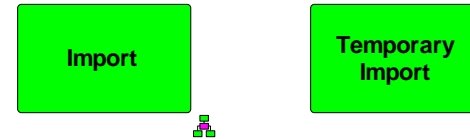
SW Reference Model Framework

Business Process Map

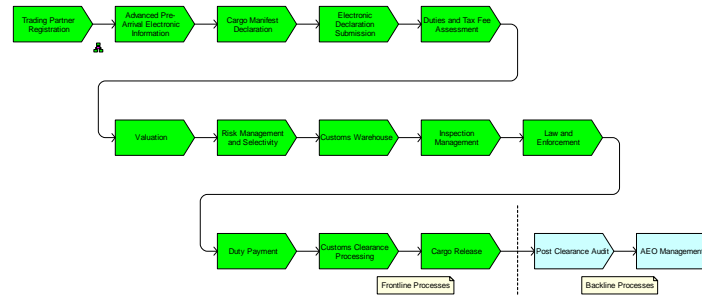


Level 0

Business Process Area

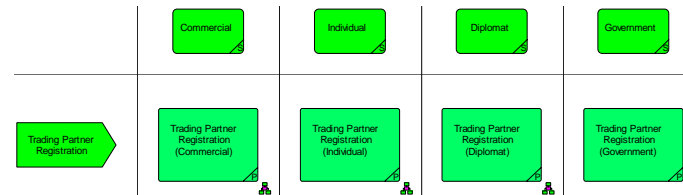


Business Main Process Flow



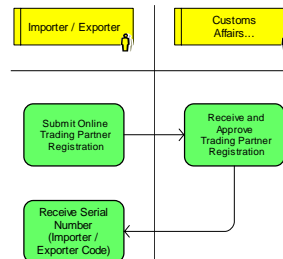
Level 1

Scenario Selection Matrix



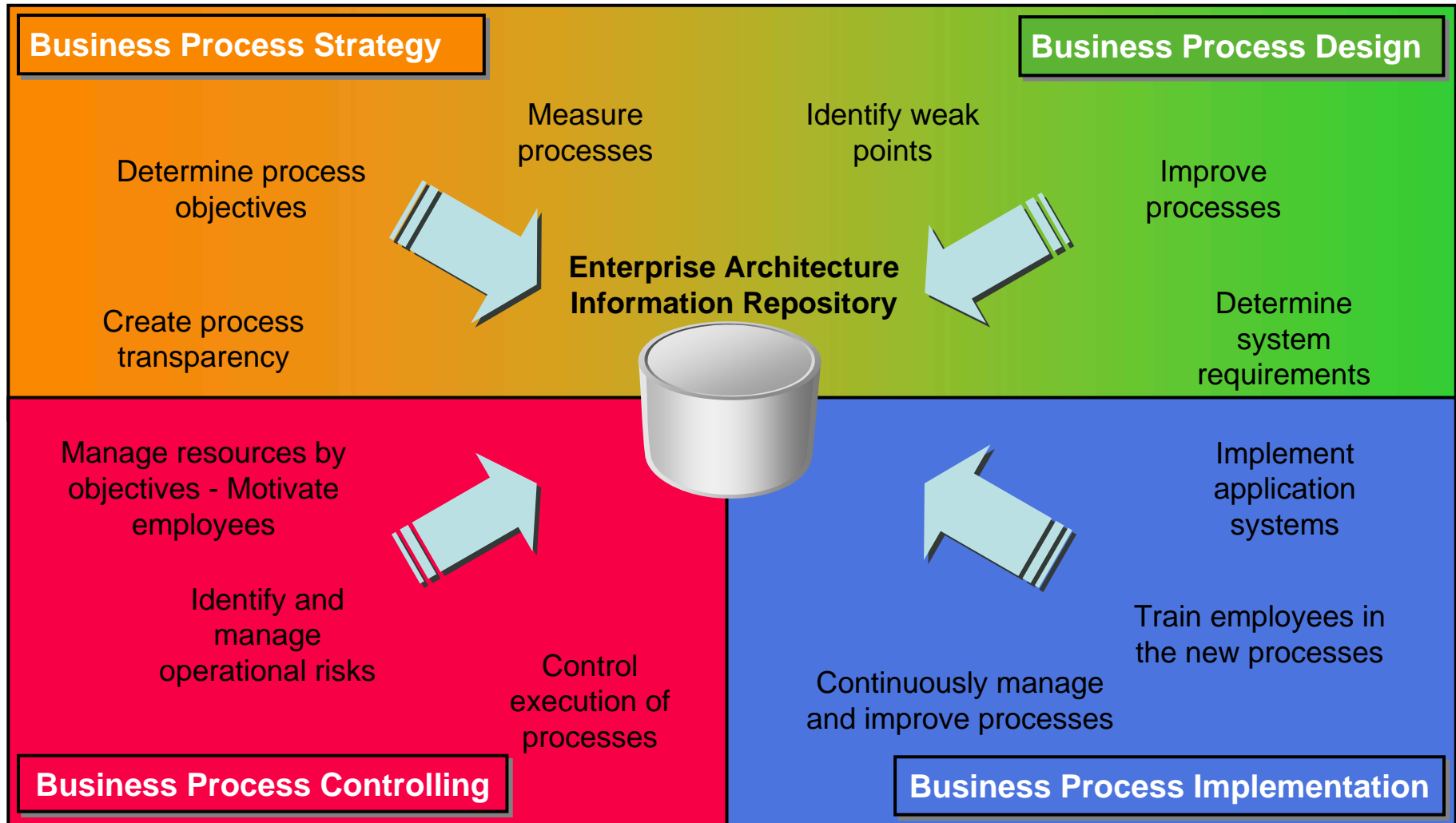
Level 2

Vertical Swimlane

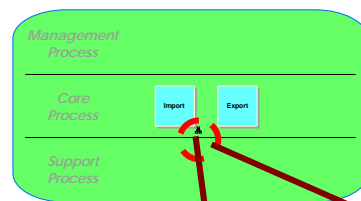
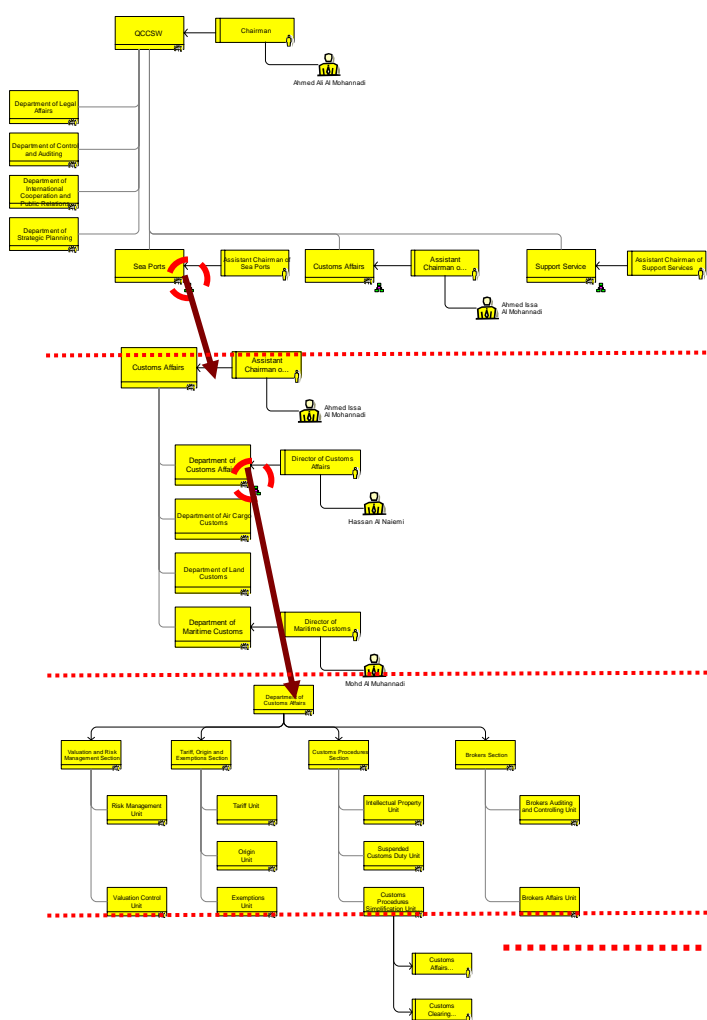


Level 3

SW Reference Model Framework



Process & Organ Framework Relationship

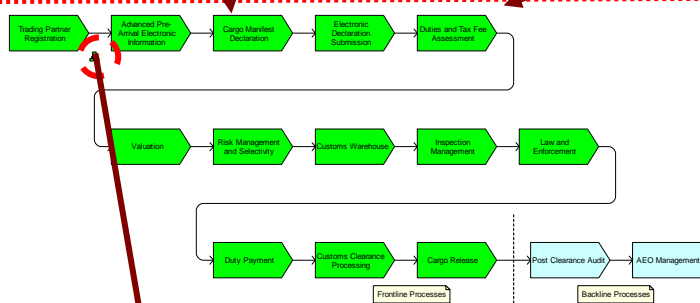


Level 0

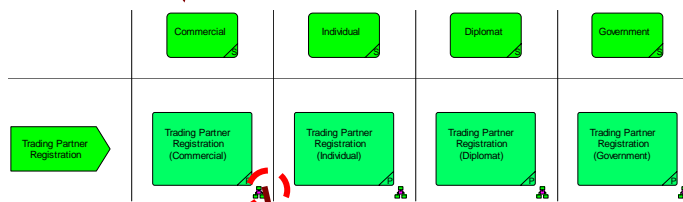


Temporary Import

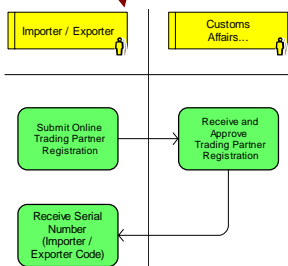
Level 1



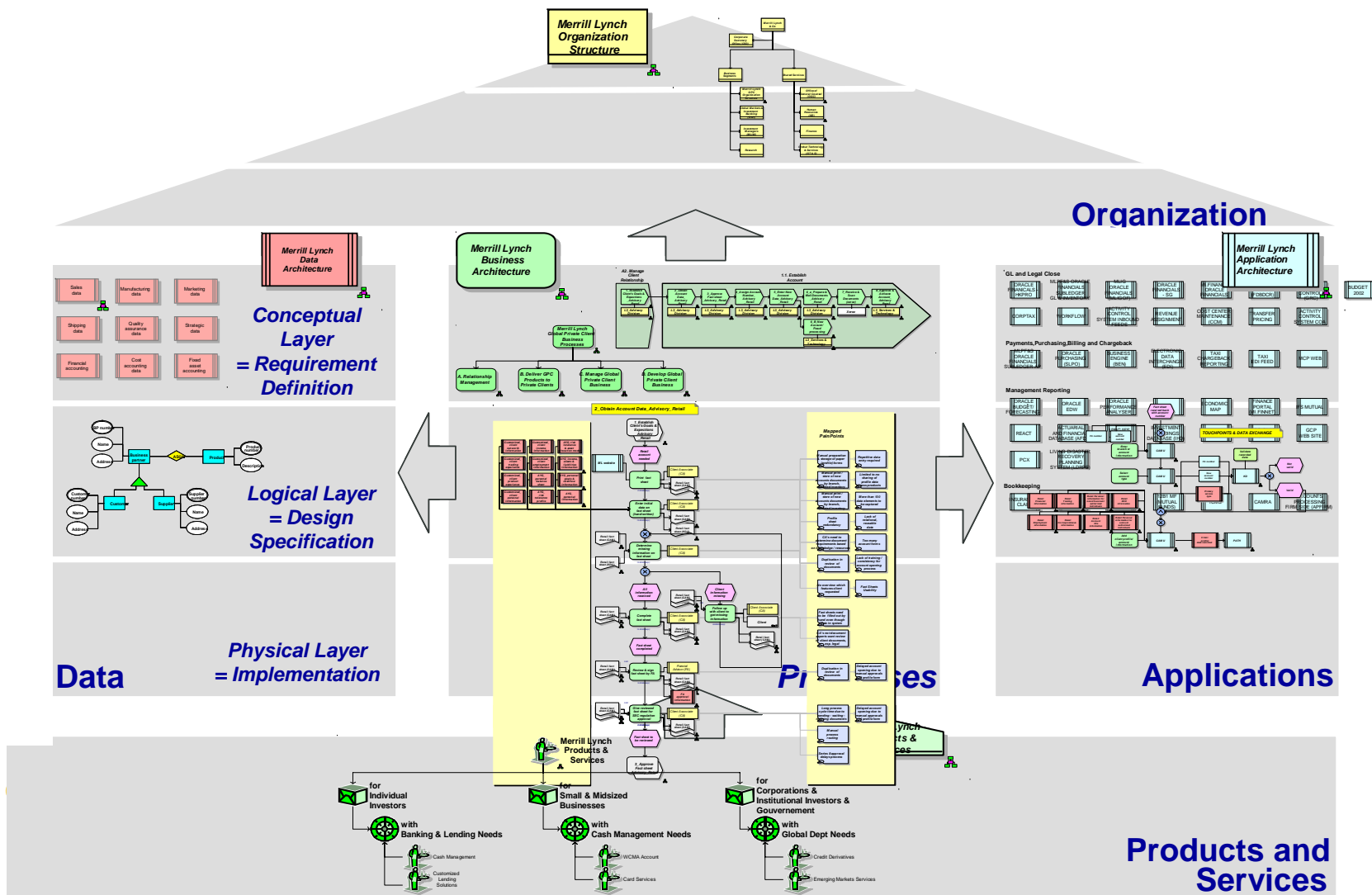
Level 2



Level 3

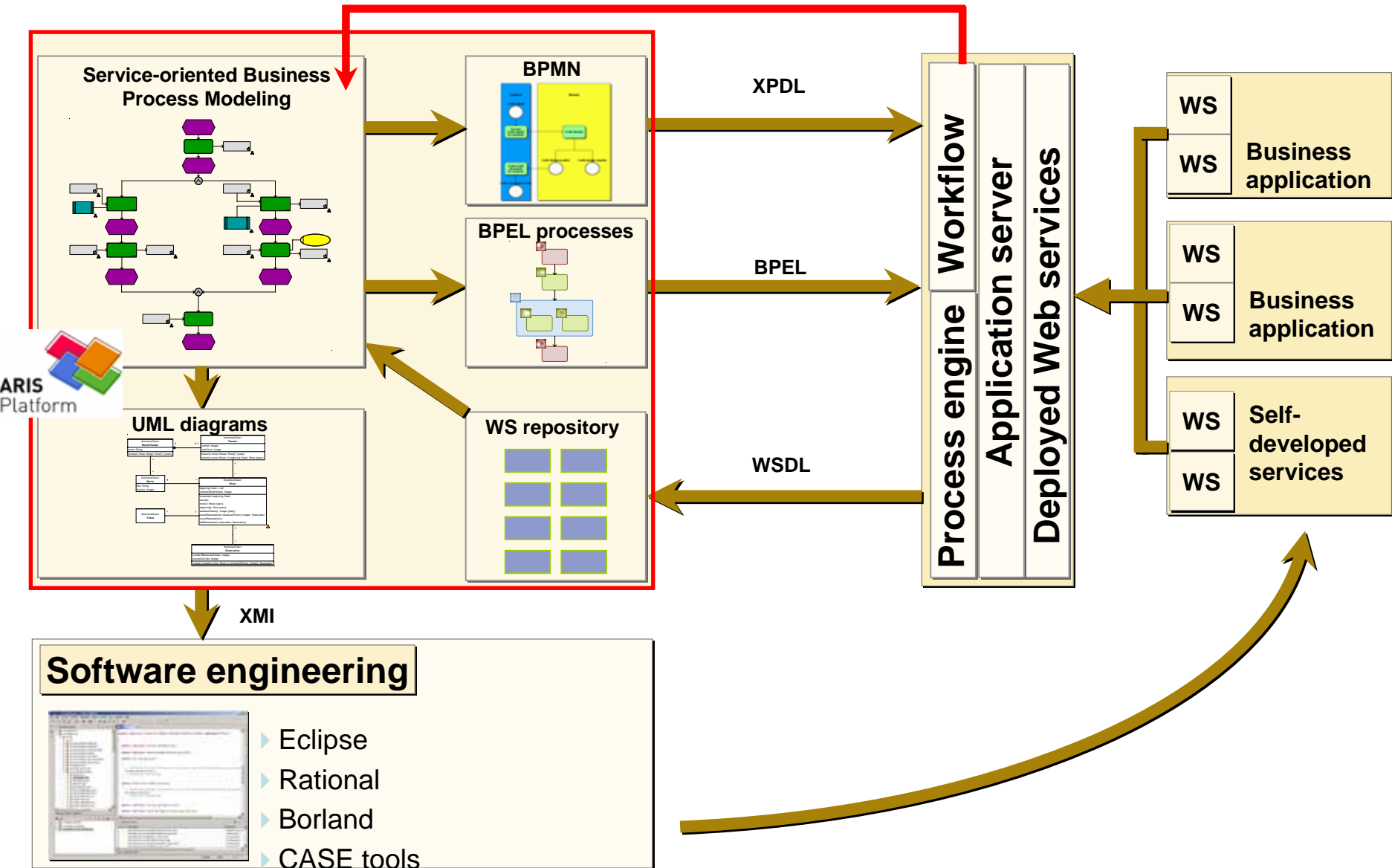


Single Window Reference Model Repository



Single Window Repository Framework for Service Oriented Architecture

ARIS Process Performance Manager



A Trusted Partner to Governments Worldwide



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