

EU Customs BPM Approach

TAXUD Unit A3 "Customs Processes and Project Management"





➤ Legal:

- provide analytical support and business process models in support of customs legislation and policies being prepared or revised;
- ensure better understanding and quality of the business processes embedded in the UCC and its Delegated and Implementing Acts and facilitate the discussions in the Customs Code Committee;
- check the business logic provided in the legal draft and identify opportunities for streamlining of the business processes;
- give guarantee to the EU Member States that the legal proposals are harmonised and applicable in practice and have added value.

➤ IT:

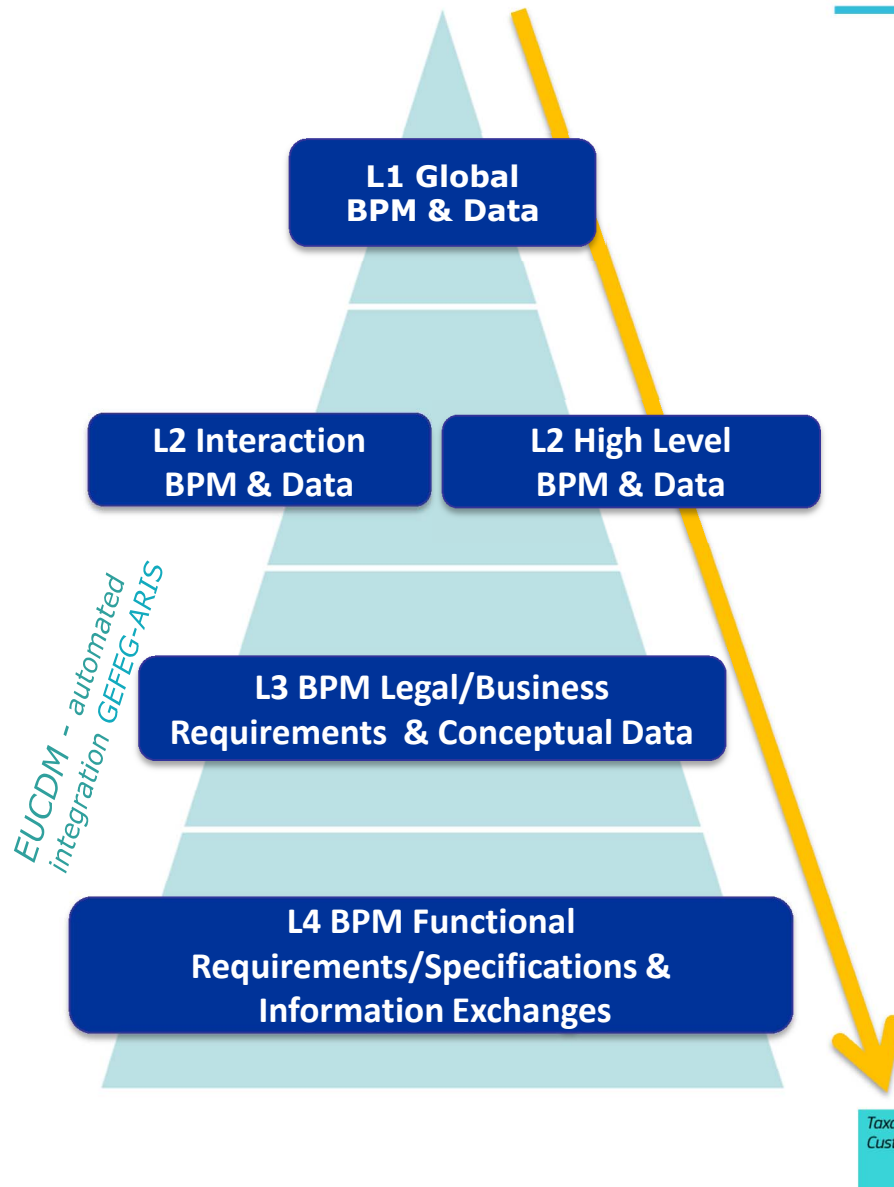
- ensure that the functional and non-functional requirements for development of new IT system or for enhancement of the existing IT systems are well specified and agreed with the EU Member States and Trade;
- achieve agreement on the functional structure of Information that is to be Exchanged between the all the actors involved in the Customs Business Processes.



- **Q2 2010: BPM Policy** introduced by TAXUD and agreed with the Member States to support the drafting of the Union Customs Code provisions (so called now UCC Level 3 Business requirements BPM);
- **2010-2011:** 18 UCC projects run in parallel; **18 UCC BPM** packages created and discussed with the Member States (BPMN models initially created in MS Visio with object description in MS Excel, then imported and maintained in ARIS);
- **Q3 2011: Level 1 UCC Global BPM and Level 2 Interaction BPMs** created to meet the identified need for higher level models that depicts the UCC packages and the dependencies between them;
- **Q3 2011:** "proof of concept" for **Level 4 Functional Requirements BPM** approved in order to elaborate further the BPM packages by specifying data and requirements for the envisaged IT Systems;
- **Q2 2012: EU Customs BPM Policy** expanded to be applied not only to the UCC projects, but to all the projects related to the eCustoms Business Processes incl. information exchange with partner countries and other Commission DGs (AEO Mutual Recognition Level 3 BPM accepted by Member States and Trade);



- **Q3 2012:** BPM levelling approach successfully introduced and used by the experts from DG TAXUD and DG SANCO in the Single Window – CVED project;
- **Q4 2012: EU Customs BPM Levelling Guidelines and BPM Methodology** established and shared with TAXUD, Member States and Traders;
- **Q1 2013: EU Customs Level 1 Global BPM** created; change in the ARIS folder structure and customised artifacts to support the UCC and e-customs BPM projects;
- **Q3 2015: EU Customs BPM Levelling Guidelines, BPM Methodology and User Guide** enhanced and updated;
- **Q4 2015: EU Customs BPM** migrated to ARIS 9;
- **Q2 2016:** UCC Level 1-3 BPM aligned to the adopted UCC Delegated and Implementing Acts; UCC and UCC IA/DA legal provisions available in the Level 3 BPM;
- **on-going:** development of **Level 4 Functional Requirements BPMs** in line with the UCC Work Programme and MASP.



Level 1 Global BPM & Data

- Overview of EU Customs Business Domains and Global Business Data (starting point in ARIS BP for all specific BPMs).

Level 2 Interaction BPM & Data

- Interactions between EU Customs Business Domains incl. input and output High Level Data.

Level 2 High Level BPM & Data

- Decomposition of the Global Business Data into specific data clusters used per Business Domain
- Interactions between the main business processes within each EU Customs Business Domains.

Level 3 Business requirements BPM & Data

- Flow of the legal and business tasks within each main business process and the interactions between the involved actors.
- Data requirements defined in the legislation.

Level 4 BPM Functional req/specs & Data

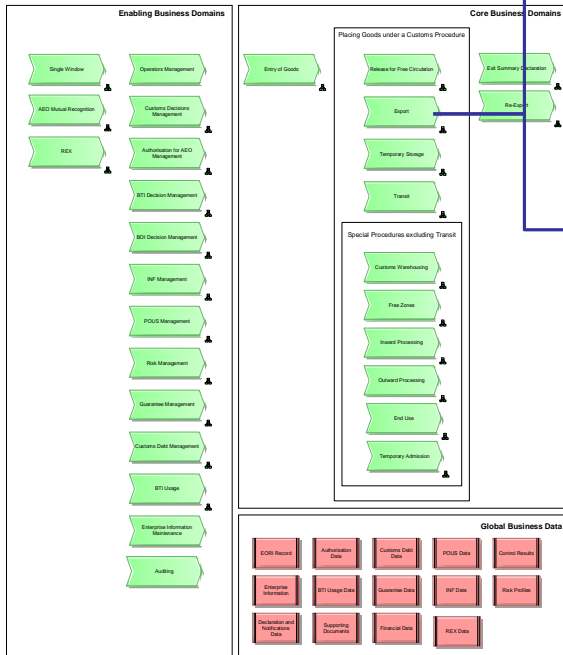
- Flow of the envisaged system; information exchanges; data rules and conditions; requirements trees; test cases and scenarios.

EU Customs BPM

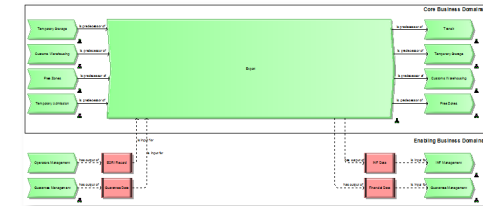


Levelling Example

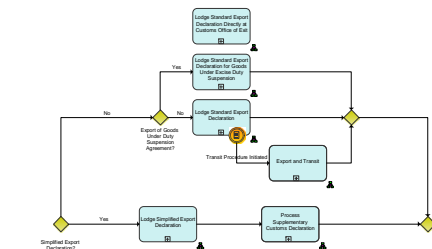
➤ **"Export"** is depicted on **Level 1 Global BPM** as one of the Core EU Customs Business Domains



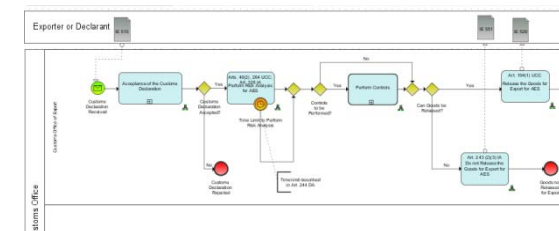
➤ **"Export" Level 2 Interaction BPM** describes that e.g. "Temporary Storage" Customs Business Domain could be a predecessor of "Export" business processes and "Economic Operator Data" is external input for the "Export" business processes.



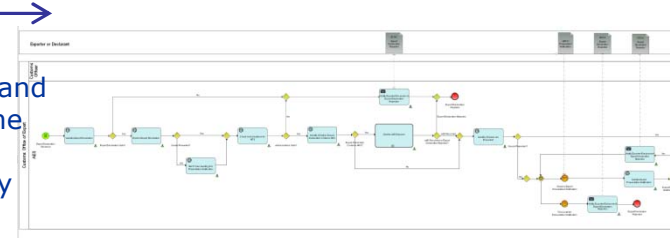
➤ **"Export" Level 2 High Level BPM** defines the main "Export" business processes e.g. "Lodge Export Declaration"; "Amend Export Declaration"; "Invalidate Export Declaration", etc.



➤ **"Export" Level 3 BPMN diagram** "Lodge Export Declaration" specifies the required business steps in accordance with the legislation e.g. "Accept Declaration"; "Perform Risk Analysis", "Determine Control Decision", etc. (aims to be IT agnostic)



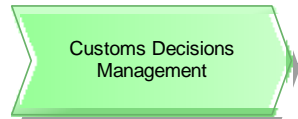
➤ **"Automated Export System" Level 4 BPMN diagram** "Lodge Export Declaration" specifies the user (manual) and the automated system tasks as well as the information exchanges e.g. IE "Export Declaration" is received and automatically validated by the system; the "Control Decision" is manually registered in the system, etc.





Level 1-2 Data

UCC DA/IA Annex A



Level 1 Business Domain

UCC Delegated Act

SUBSECTION 2

GENERAL RULES ON DECISIONS TAKEN UPON APPLICATION

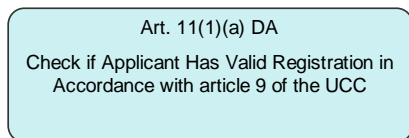


Level 2 Main Business Process

Article 11

Conditions for the acceptance of an application

(Article 22(2) of the Code)



Level 3 Legal Task

1. An application for a decision relating to the application of the customs legislation shall be accepted provided that the following conditions are met:
 - (a) where required under the procedure which the application concerns, the applicant is registered in accordance with Article 9 of the Code;
 - (b) where required under the procedure which the application concerns, the applicant is established in the customs territory of the Union;
 - (c) the application has been submitted to a customs authority designated to receive applications in the Member State of the competent customs authority referred to in the third subparagraph of Article 22(1) of the Code;



➤ Level 1 Global BPM & Data

- provides an overview of how Customs is structured;
- serves as a map and represent the EU Customs Business Domains and Global Business Data (linked to Level 2 BPMs);
- classifies the Customs Business Domains as "**Core**" directly related to the movement of goods or "**Enabling**" that facilitate the Core Business.

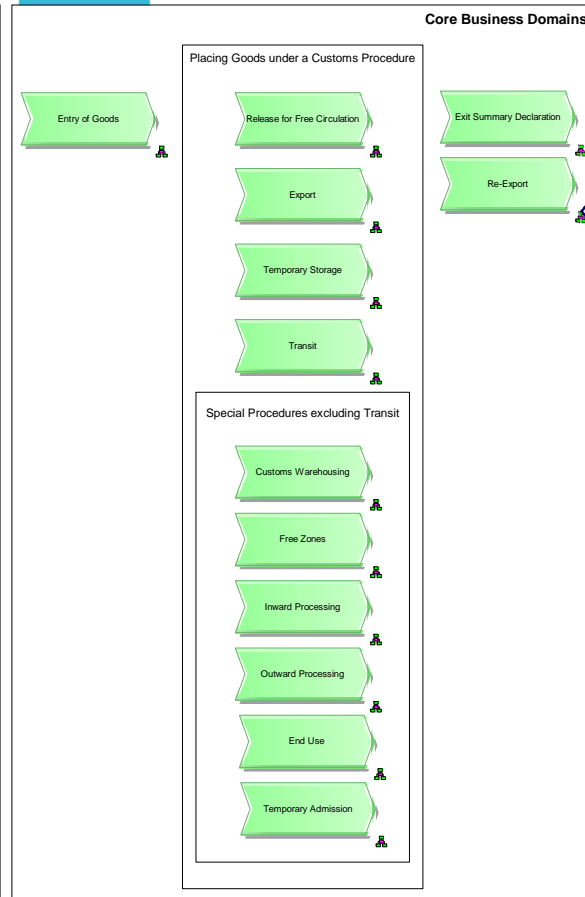
➤ Level 2 Interaction BPM & Data

- all interactions of an EU Customs Business Domain with other Business Domains:
 - ✓ interactions between a core business domain and its previous and subsequent core or enabling business domain;
 - ✓ interactions between an enabling business domain and its related core and enabling business domains.
- depicts the high level information flow throughout the EU Customs Business Domains;
- shows the input and output High Level Data.

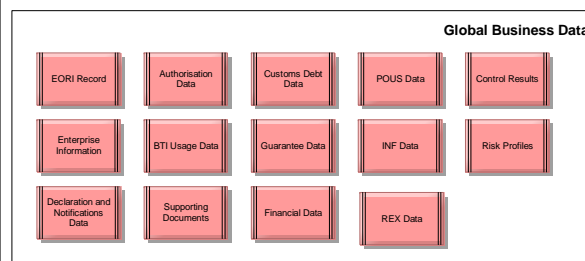


European Commission

Enabling Business Domains – the business domains which provide an amount of information (inputs) to facilitate the core processes or the other enabling processes



Core Business Domains – the main identified business domains which meet a specific EU Customs business objective(s)



Global Business Data – the main business data provided by the core and enabling processes

EU Customs BPM

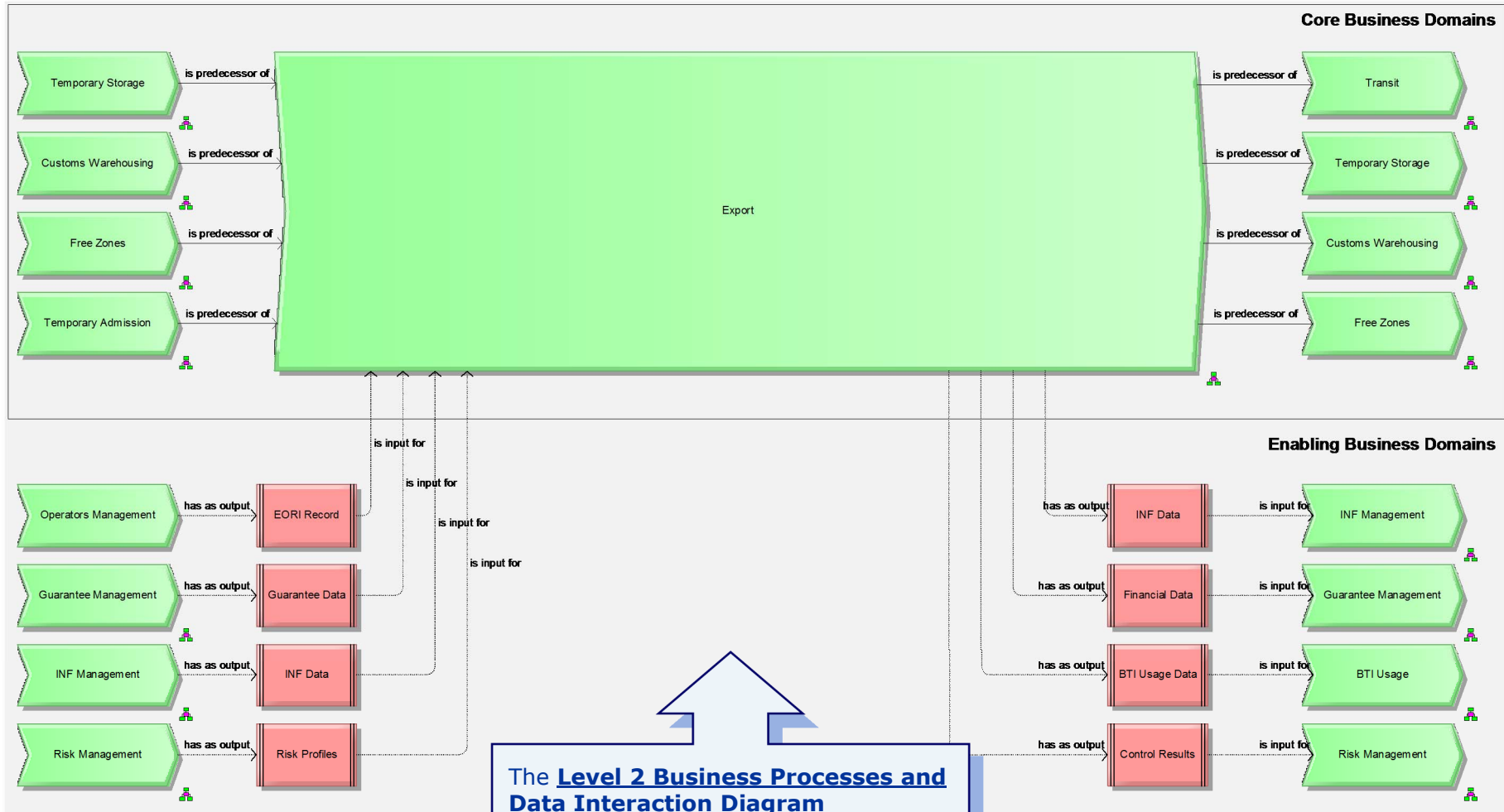


Level 1 Mapping Matrix Processes & Data

European Commission

Processes \ Data	Authorisation for Temporary Storage	Authorisation for the Simplification to Cus...	Authorisation for Transport Operator	Authorisation for Weighing of Fresh Banan...	BTI Usage Data	Control Results	Customs Debt Data	Declaration and Notifications Data	CVED	Enterprise Information	FORI Record	Financial Data	Guarantee Data	INF Data	POUS Data	Re-Export Advice	Revoked Authorisation Notification	Risk Profiles	Safety & Security Data	Supplying Documents	
Entry of Goods																					
Release for Free Circulation																					
Export																					
Temporary Storage																					
Transit																					
Customs Warehousing																					
Free Zones																					
Inward Processing																					
Outward Processing																					
End Use																					
Temporary Admission																					
Exit Summary Declaration																					
Re-Export																					
Operators Management																					
Authorisation for AEO Management																					
BTI Decision Management																					
BOI Decision Management																					
Customs Decisions Management																					
INF Management																					
POUS Management																					
Risk Management																					
Guarantee Management																					

The **Level 1 Global BPM Matrix** is created to provide a summary of the input and output global business data for core and enabling business domains.



The **Level 2 Business Processes and Data Interaction Diagram** represents the link between the core and enabling processes for each EU Customs Business Domain identified in the Level 1 EU Customs Global BPM



➤ **Level 2 High Level BPM & Data**

- outlines the scope of each Customs Business Domain;
- defines the Main Business Processes within one EU Customs Business Domain and its interactions;
- defines how each Global Business Data collection from Level 1 is decomposed into data clusters;
- provides links to Level 3 BPMN diagrams which describe each Main Business Process in detail.

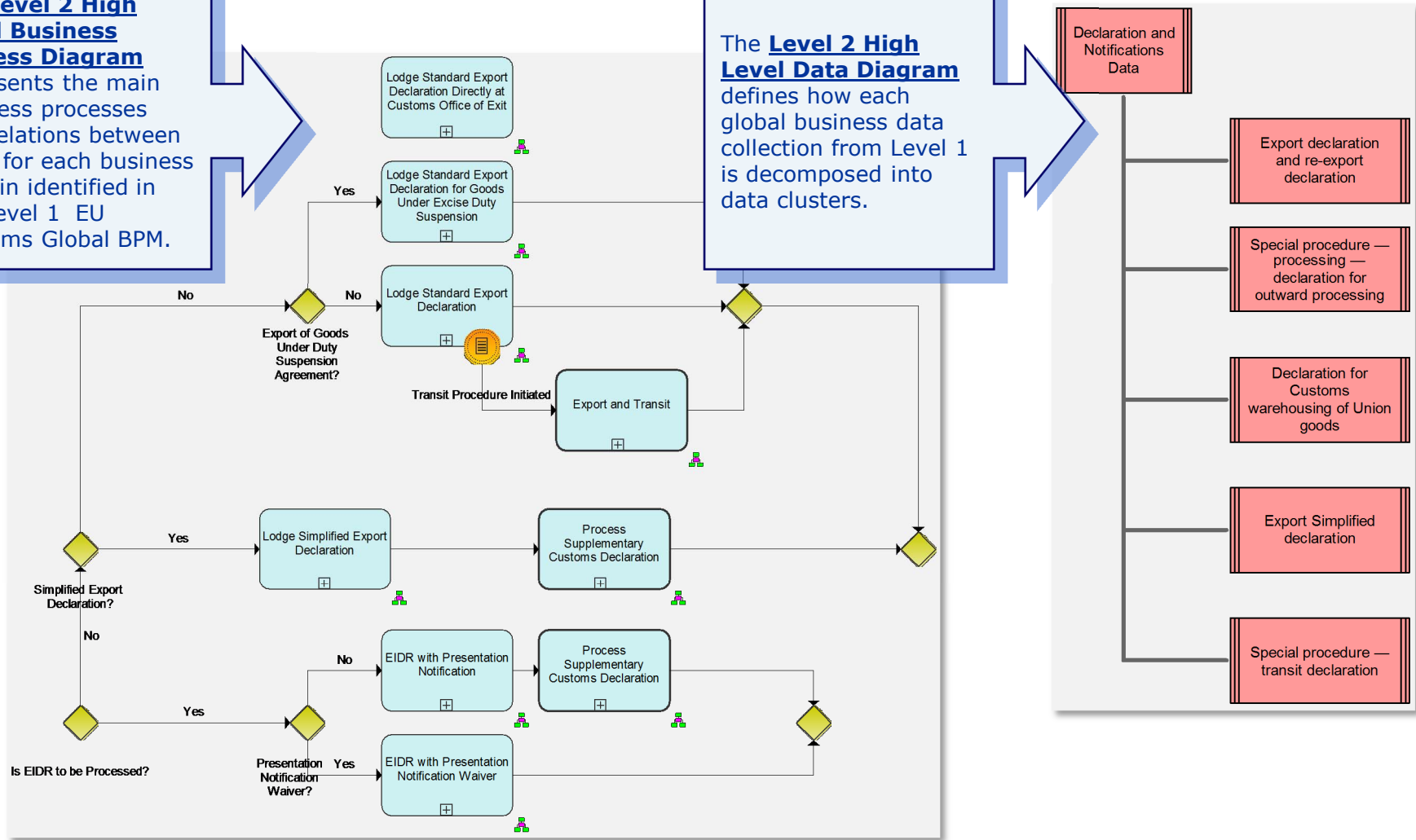
➤ **Level 3 BPM Legal & Business Requirements & Data**

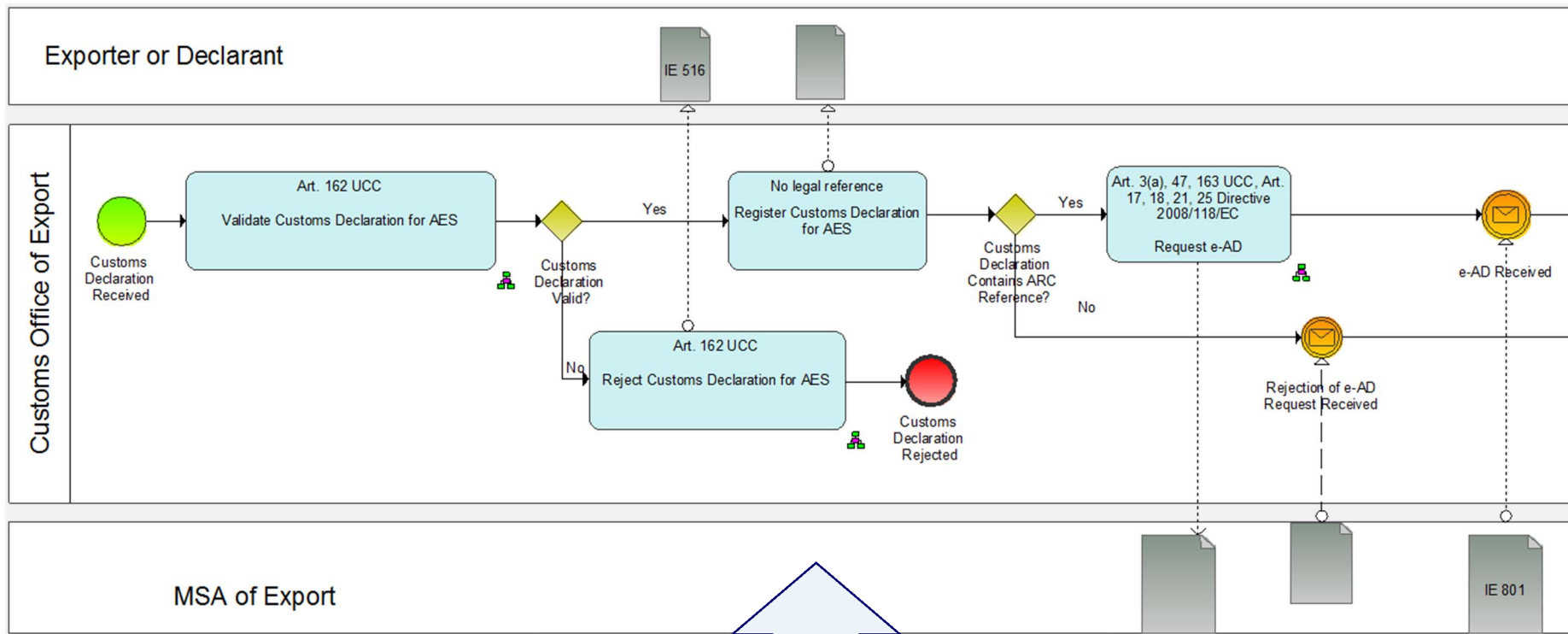
- interprets and visualizes the To-Be scenarios as inscribed in the customs legislation and international agreements;
- specifies the legal and business steps of the process;
- represents the legally defined data requirements;
- verifies the validity and the harmonisation of the business processes in order to avoid implementation problems;
- provides information to update the EU Customs MASP.



The **Level 2 High Level Business Process Diagram** represents the main business processes and relations between them for each business domain identified in the Level 1 EU Customs Global BPM.

The **Level 2 High Level Data Diagram** defines how each global business data collection from Level 1 is decomposed into data clusters.





The **Level 3 Business Requirements Diagram** describes in detail the main business processes identified at Level 2. It specifies the legal and business steps of the Main Business Process and represents the To-Be scenarios as inscribed in the customs legislation and international agreements.



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Object: Art. 341 IA About | Contact | Help

Home Contents Search Favorites Evaluations Matrix Navigation tree Model overview Details Views

Navigation tree

- Customs Business Processes
 - 01_CBP L1-L2 Global and
 - 02_CBP L2-L3 HL and Bu
 - Core Business Domain
 - Entry of Goods
 - Export and Exit
 - 01_Processes
 - L2-EXP-01-00
 - L3-EXP-01-01
 - L3-EXP-01-02
 - L3-EXP-01-03
 - L3-EXP-01-04
 - L3-EXP-01-05
 - L3-EXP-01-06
 - L3-EXP-01-07
 - L3-EXP-01-08
 - L3-EXP-01-09
 - L3-EXP-01-10
 - L3-EXP-01-11
 - L3-EXP-01-12
 - L3-EXP-01-13
 - L3-EXP-01-14
 - L3-EXP-01-15
 - L3-EXP-01-15

```

graph TD
    A[Art. 341 IA] --> B[Register Exit Summary Declaration]
    B --> C[Manage Lodgement of EXS]
    style C stroke:#f00,stroke-width:2px
    
```

Details

Model Object

Art. 341 IA

▼ Description

Measures to be taken upon receipt of an exit summary declaration (Article 271 of the Code)

The customs office where the exit summary declaration is lodged in accordance with Article 271(1) of the Code shall:

(a) register the exit summary declaration immediately upon its receipt;

(b) provide a MRN to the declarant;

(c) where appropriate, release the goods for exit from the customs territory of the Union.

▼ Characteristics

Name	Art. 341 IA
Identifier	MCC.805160
Type	Information carrier
Time of generation	Apr 15, 2016 9:13:56 AM
Creator	sioridi
Last change	Apr 15, 2016 9:14:25 AM
Last user	sioridi

▼ Enter feedback

The **Level 3 Tasks** usually have a legal reference.

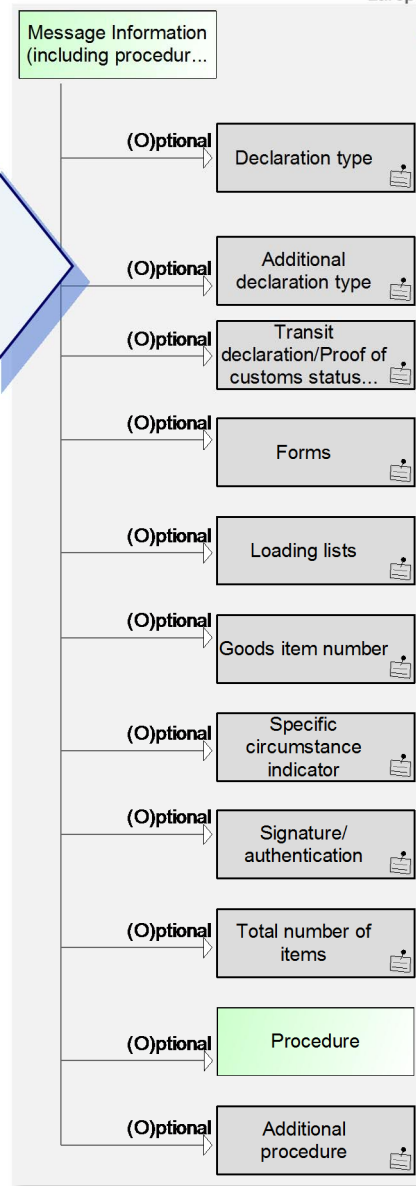
The **UCC and UCC IA/DA legal provisions** corresponding to the legal task can be consulted directly in ARIS BP by clicking on the "article" object.

The **Level 3 Functional Allocation Diagrams** are assigned to the Level 3 tasks and refine those tasks by defining requirements. The Business Requirements highlight the business actions that must be performed to successfully complete a task.



The **Level 3 Legal Data** are the data defined in the UCC DA/IA Annexes and EUCDM.

The data elements specified at Level 3 are reused in the Level 4 Information exchange models in order to ensure the data consistency and the alignment with the legal requirements.

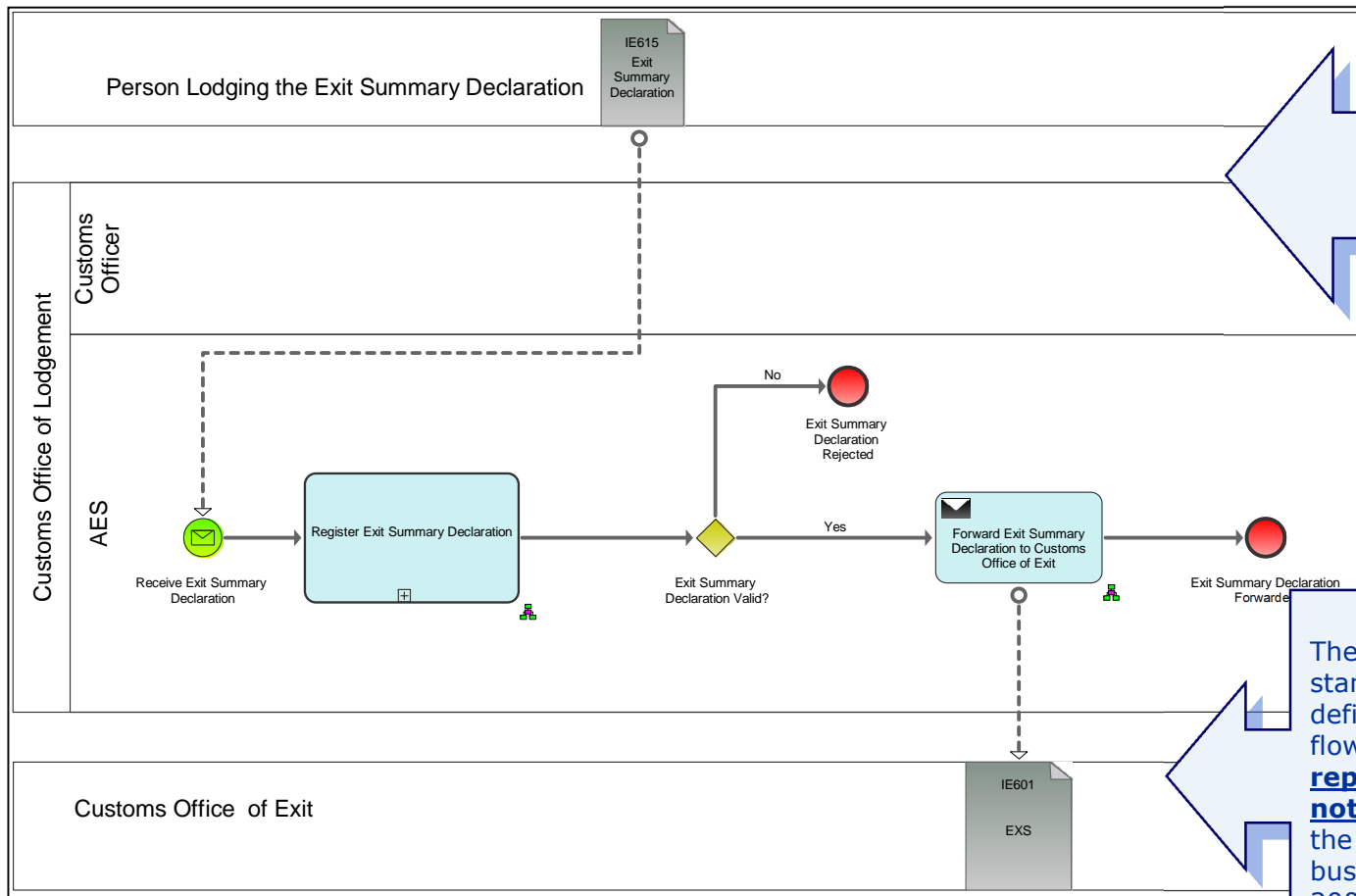


Declarations / Notifications / Proof of the Customs Status of Union Goods					
Data Elements		Exit summary declaration	Exit summary declaration — Express co..	Re-export notification	Export declaration and re-export declar...
▼	Message Information (including procedure codes)				
	Declaration type				↙
	Additional declaration type				↙
	Transit declaration/Proof of customs status type				
	Forms				
	Loading lists				
	Goods item number	↙	↙	↙	↙
	Specific circumstance indicator		↙		
	Signature/ authentication	↙	↙	↙	↙
	Total number of items				
	Procedure				↙
	Additional procedure				↙
▼	References of messages, documents, certificates, authorisations				
	Simplified declaration/ Previous documents	↙	↙	↙	↙
	Additional information	↙	↙	↙	↙
	Documents produced, certificates and authorisations, additional references	↙	↙	↙	↙
	Reference number/UCR	↙	↙	↙	↙
	LRH	↙	↙	↙	↙
	Deferred payment				↙



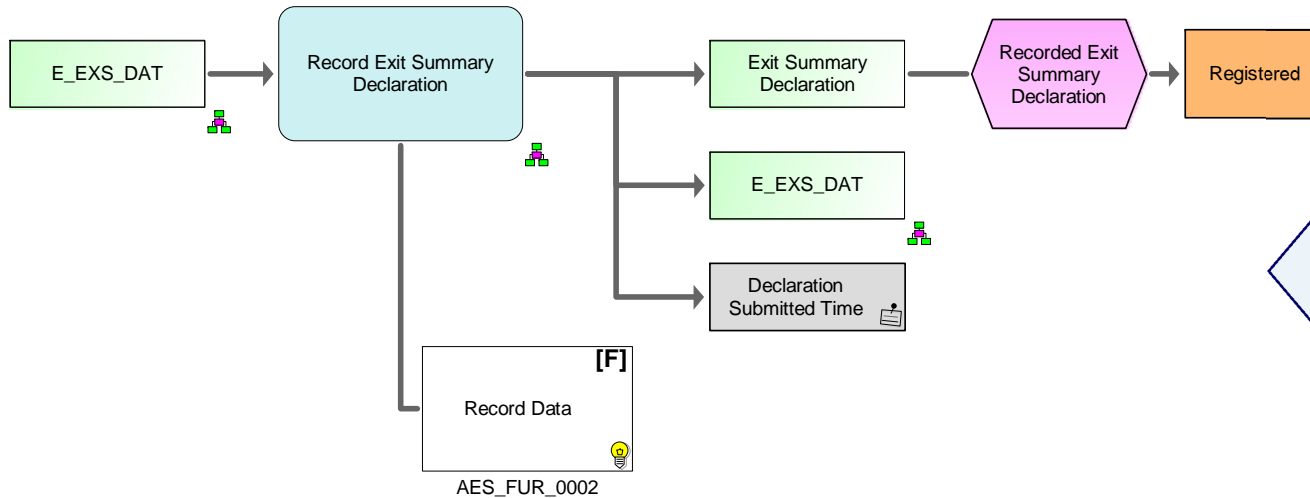
➤ **Level 4 BPM Functional Requirements & Data**

- describes business process from a system point of view by decomposing and refining the legal business task identified at level 3;
- indicates the user and the fully automated system tasks;
- represents all the information exchanges and involved actors;
- explores exception handling;
- specifies the functional structure of the Information Exchanges by reusing the legally defined data (Level 3 Conceptual Data) and completing the data requirements for the end-to-end process;
- defines business code lists;
- specify business rules and conditions;
- identifies functional and non-functional requirements to initiate IT development;
- defines Business Acceptance Scenarios.



The **Level 4 Business Process BPMN Diagram** refines the process identified at Level 3 BPM from system point of view. The pools that define the Level 3 actors are split into lanes to differentiate between the physical user and the system. The Level 4 business tasks are grouped in business sub-processes to improve the readability of the model.

The BPMN 2.0 modelling standard is used to better define the business process flow. The **BPMN notation replaces the FTSS notation** used to represent the NCTS, ICS and ECS business processes until 2009.

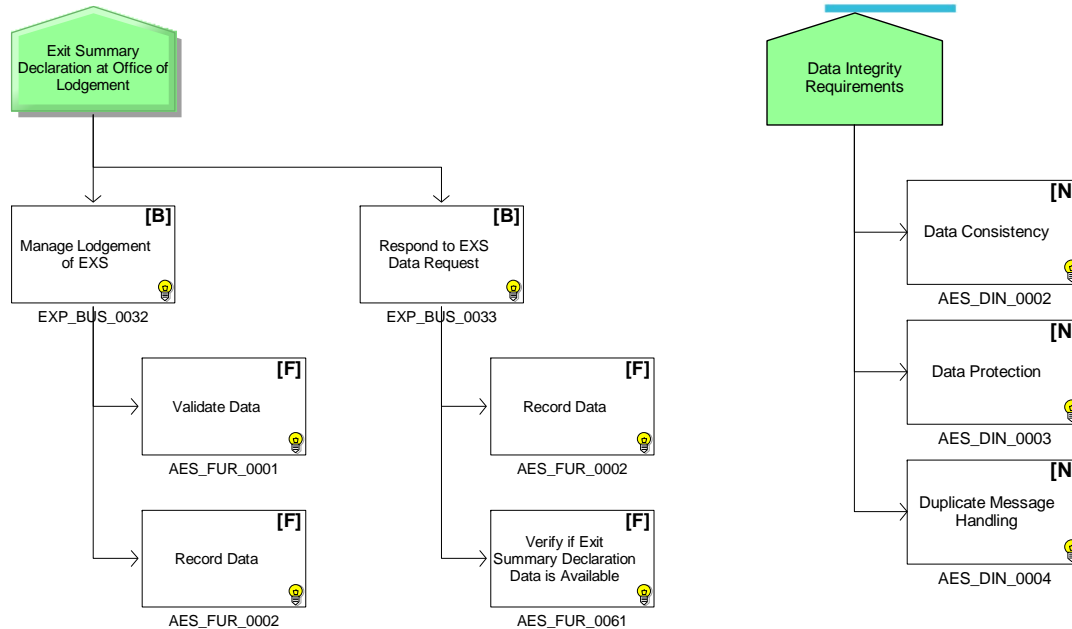


The **Level 4 Function Allocation Diagrams (FADs)** are assigned to the Level 4 business tasks and refine those tasks by defining functional requirements, input and output data, events and state transitions.

The FADs are used to visualize and better describe the user and system business tasks.

Task Name	Record Exit Summary Declaration
Task Type	Service task
Description	AES records the Exit Summary Declaration received from the Trader.
Actor	AES
Input Data	E_EXS_DAT
Output Data	E_EXS_DAT Exit Summary Declaration
Information Exchange	N/A
Requirements	AES_FUR_0002
Data Set	Exit Summary Declaration
Events	Recorded Exit Summary Declaration
State	Registered

The functional task details are extracted in the Functional Requirements BPM .pdf Report.



The **Level 4 Requirements tree** provides link between the business requirements identified in the Level 3 BPM and the functional requirements defined in the Level 4 BPM.

The non-functional system requirements are also depicted in the Requirements tree.

The Level 3 (business) and Level 4 (functional and non-functional) requirements are extracted in the Annex of the Functional Requirements BPM Report.

ANNEX 3: REQUIREMENTS

1. Functional Requirements

FUNCTIONAL REQUIREMENT ID	FUNCTIONAL REQUIREMENT NAME	FUNCTIONAL REQUIREMENT DESCRIPTION	FUNCTIONAL REQUIREMENT RELATED TEST	RELATED BUSINESS REQUIREMENT ID	RELATED BUSINESS REQUIREMENT NAME	RELATED BUSINESS REQUIREMENT DESCRIPTION
AES_FUR_0001	Validate Data	The AES must validate data against its associated Rules & Conditions, formats and required fields.	AES-TC-0101 AES-TC-0103 AES-TC-0111 AES-TC-0116 AES-TC-0118	EXP_BUS_0001	Receive Export Declaration	The rec

The business and functional requirements are extracted in the Annex of the Functional Requirements BPM .pdf Report.

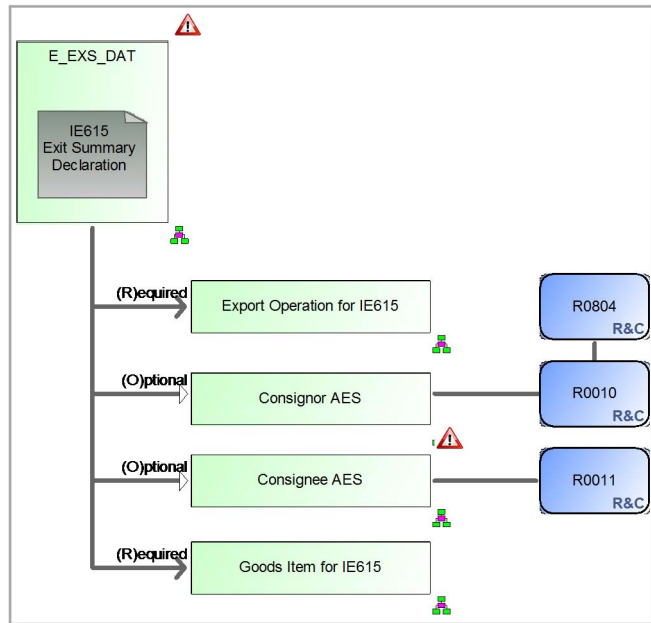
2. Non-Functional Requirements

2.1. Access Control and Connectivity Requirements

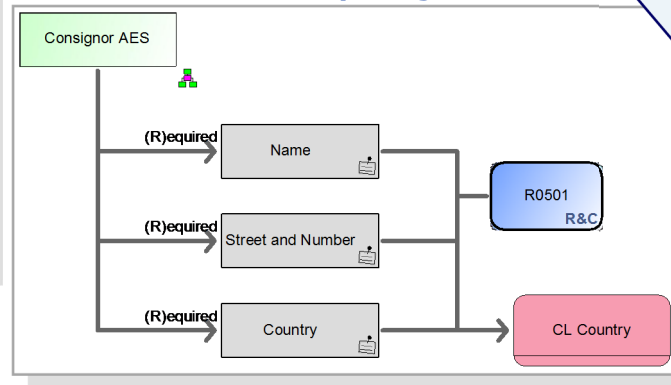
REQUIREMENT ID	REQUIREMENT NAME	REQUIREMENT DESCRIPTION
AES_ACC_0001	Access Authentication	Every interaction with AES, must be under identification, authentication and authorisation control. - The identification establishes the user or IT system identity; - The authentication validates the user credentials; - The authorisation determines:



Message Allocation Diagram for IE



Data Group Diagram



The **Level 4 Message Allocation Diagrams (MADs)** are assigned to the Information Exchanges (IEs) indicated in the Level 4 BPMN diagrams.

The MADs in ARIS are used to visualize the functional structure of the Information Exchanges. The MADs define the data groups, data elements, business code lists, rules and condition for the IEs.

38 IE615 Exit Summary Declaration E_EXS_DAT

EXPORT OPERATION FOR IE615	1x	R	
CONSIGNOR AES	1x	D	R0010 R0804
CONSIGNEE AES	1x	D	R0011
GOODS ITEM FOR IE615	999x	R	
-GOODS ITEM NUMBER	1x	R	
-DOCUMENTS PRODUCED,	1x	D	C0059

The IE structure is extracted in the Annex of the Functional Requirements BPM .pdf Report.



- **EU Customs BPM provides different views dependent on level of detail that is relevant for the reader (legal, business, IT)**
 - Level 1 and Level 2 BPM give an overview of all Customs Business Domains and Global Business Data and define the interaction between them;
 - Level 2 and Level 3 BPM are linked to the legal text and support the revision of the customs legislation;
 - Level 4 BPM translates the business requirements into system requirements and specifications needed to start an IT system development (based upon the legal tasks and data requirements and the information exchanges identified in order to ensure compliance between EU legislation and EU systems); supported by the automated integration of GEFEG and ARIS.
- **The Level 4 BPM implements the new TEMPO requirements for the development of system specifications and respects the as much as possible the "old" FSS approach.**
- **ARIS is used as a collective tool by TAXUD and its contractors, Member States and Trade for modelling and reviewing of the customs business processes.**