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EU CUSTOMS BUSINESS PROCESS MODELLING POLICY

1. INTRODUCTION

The development of the EU Customs Business Process Models (BPM¹) started in 2010 when Member States asked DG TAXUD to prepare High Level and Business Requirements BPMs allowing them to understand and agree on the customs processes and procedures to be inscribed in the Modernised Customs Code Implementing Provisions (MCCIP). In view of the Union Customs Code (MCC Recast), this work will continue as a supporting instrument for the transfer into the appropriate UCC related Commission acts (Delegated Acts and Implementing Acts (DA/IA)).

On the ground of the positive experience and feedback on the business process modelling activities carried out over the past three years, the BPM policy, initially meant to cover only the new data and legal requirements defined in the MCC and its implementing provisions, was **expanded in 2012**.

1/ to include a common **EU customs BPM methodology** based upon a structured hierarchical, levelling approach reflecting the complex business environment of EU customs (leading to the development of new types of models such as the EU Customs Global BPM, the EU Customs Interaction BPMs and the Functional Requirements BPMs); and

2/ to be applied to **all the EU customs projects**, meaning CC/MCC/UCC & other customs and customs related initiatives and projects requiring business analysis and modelling support (including cross-linking projects for the information exchange with third countries and with other Commission DGs or other public authorities).

As such, BPM and its related business analysis activities have been evaluated as important instruments to support the EU Customs Union in its efforts to modernise, harmonise and streamline its customs procedures and systems.

The BPM provide the Member States and Trade with:

- business analysis tools in order to ensure better understanding of the customs legislation and policies being prepared or revised, and of the impact on the overall business architecture and the specific processes;
- business models and interaction models allowing the necessary assurance regarding coherence between the EU Customs business processes and procedures and the draft legal provisions before being voted;
- visual representation of business processes and detailed functional requirements to guarantee that the envisaged operational IT systems will function as foreseen in the legislation, international agreements or other instruments such as guidelines and specifications.

Therefore the BPM serve several purposes:

- to depict and render understandable the business domains and processes foreseen in the customs and customs related legislation (current Customs Code and its implementing provisions, UCC Delegated Act and Implementing Act (DA/IA), agreements with partner countries, etc.;
- to check the business logic provided in the legal draft for amendments to current customs legislation or for new customs legislation and to provide comments on the proposed business processes;
- to check the soundness of the business process and identify opportunities for streamlining. The purpose being to identify possible economic gains and possible quality improvements in the business case;
- to perform a quality control on the legal text and provide comments on the legal draft;
- to assist in the overall project definition and in the IT scoping² exercise and therefore in defining *firstly*, which business scenarios are responding in the most appropriate way to the strategic goals and commercial reality, *secondly*, which (steps in the) processes require automation and, *thirdly*, which business and IT architecture and solutions can be considered for the implementation and what is the business case for the identified IT project;
- to 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 Member States and Trade;

¹ Business Process Modelling (BPM) is the activity of representing processes of an enterprise, so that the current process may be analysed and improved. BPM is typically performed by business analysts and managers who are seeking to improve process efficiency and quality.

² Defining the scope of a project develops a common understanding of what is included in and excluded from the project. Defining a project's scope helps establish a common understanding for all project stakeholders. www.pma.doit.wisc.edu/initiate/1/what.html

- to ensure a common understanding and a harmonised, effective and efficient implementation of the EU customs business processes defined.

2. EU CUSTOMS BPM METHODOLOGY - BPM LEVELLING DEFINITIONS

Levelling refers to different levels / layers of abstraction where business processes are provided in a hierarchical format. Hierarchical modelling will enable the development of a holistic view of the Customs organisation that can be presented to and understood by a wider audience. It is necessary to define the level of detail for this hierarchy, regarding what to model and from whose perspective in order to assist the modeller in providing the right level of detail, and to ensure that the levels are linked. It is also essential to adapt the level of detail in a model depending on who the intended audience is, and based on the purpose of the model. Each level should be linked and have a common thread running through the hierarchy.

2.1. Level 1 – Global BPM

This model builds on the EU customs business domains and presents the highest aggregation level for the representation of DG TAXUDs business processes. The main EU Customs business domains are classified as enabling and core:

- Enabling – the business domains which provide an amount of information (inputs) to facilitate the core business or the other enabling domains;
- Core – the business domains that are directly related to the movement of goods;
- Global Business Data– the main business data provided by the core and enabling processes.

The main goal of this level is to serve as a map providing the highest aggregation level for the representation EU Customs business processes and to facilitate the linking and traceability with lower levels BPMs.

Ideally, the EU Customs business domains depicted on level 1 should be scoped around end-to-end business processes.

2.2. Level 2 - High Level BPMs

This high level BPM consists of two model types that are linked via a level 1 model. The two model types are:

- Interaction BPM – this model defines the relationships/connections between the EU Customs business domains and highlights the global business data dependencies. This model has no link to current level 3 models;
- High level BPM – these models define the main business processes within each EU Customs business domain. This model will be linked to level 3 models that provide more details describing each main business process depicted on level 2.

The main goal of the Interaction BPM is to provide models that show the interfaces between EU Customs Business Domains.

The main goal of the high level BPM is to present the high level end to end scenarios relevant for a specific EU Customs business domain and to illustrate what main processes are needed to achieve business goals and objectives. The high level BPM also facilitates the decomposition to the level 3 BPM (each main business process potentially have a level 3 BPM attached to it in order specify the business tasks).

2.3. Level 3 - Business Requirements BPM

This level begins to provide more detailed tasks/steps looking at how to achieve a specific business objective, via a detailed business process model. It examines the steps taken and the interaction between actors in a process.

The main goals of this level are:

- to give guarantee that the legal proposals are harmonised and applicable in practice and will have added value;
- to illustrate the involved business organisations and responsibilities through a series of process models which include actors, their roles and associated activities;
- to show all information exchanges and involved actors on the model;
- to clearly and logically provide the steps to achieve a defined business objective(s). It should be clear what the trigger for the process is (i.e. why do it?) and what the outcomes are (i.e. what are the intended results);
- in some circumstance to provide a business data model and link the processes and tasks to this business data model;

The ultimate goal of the model is to specify the legal and business steps and to evaluate which tasks or steps can be automated. In case of envisaged IT System the business requirements identified at this stage are refined and linked to the Level 4 functional requirements and to the test scenarios specified in the Business Acceptance Criteria Document.

2.4. Level 4 - Functional Requirements BPM

This level provides more detailed steps looking at how to achieve a specific business objective from a system point of view. Therefore, level 4 Functional requirements BPM are considered an evolution of level 3 BPM and will focus on specifying the required functional and non-functional elements of the system. Level 4 BPM may be reused and a particular model may relate to more than one level 3 BPM, and also more than one business objective.

The main goals of this level are:

- a decomposition of tasks, as identified on a level 3 model(s), to illustrate how a business objective might be achieved by a human or system interaction;
- to fully explore exceptions and how to handle them. If an exception has a business impact then it should be propagated up to the level 3 models and handled accordingly.
- to show on the BPM diagrams all the electronic information exchanges and corresponding involved actors;

- to further explore the business data model and to complete the requirements for information exchanges for a complete end-to-end process;
- to specify the information exchanges structures, business code lists and their (re-) usage and to define rules and conditions for the data elements;
- to identify potential business services;
- to clearly identify user, semi-automated and fully automated tasks;
- to defines business acceptance criteria for the envisaged IT System(s)

3. BPM ACTIVITIES

All EU Customs business domains are subject to analysis and modelling activities in order to build up the overall picture of EU Customs. For each EU customs business domain a BPM with different level of detail are being produced depending on the degree of harmonisation and automation required. The BPM activities will be produced in accordance with the delivery plan (as reported to ECG and TCG) and in accordance with the objectives and priorities inscribed in the MASP (Annex II) and/or UCC work programme.

In this way it is known from the outset which BPM can be expected, what the coverage of each BPM and at what time it will become available for review and acceptance. The **EU Customs BPM register** lists all BPMs created and published, and their status (information, review, acceptance). This register is updated with each new publication and made available on CIRCABC.

The EU Customs Global BPM and the created Level 2-3 BPMs (as listed in the EU Customs BPM Register) including cross references to the legislation should allow for identifying gaps in the legislation and/or modelling activities and as such ensure that all customs business processes are covered..

Each BPM can be composed of several diagrams (e.g. BPMN diagrams, function allocation diagrams, message allocation diagrams, etc.) which cover different aspects of the same BPM (e.g. normal procedure flow, simplified procedure flow, information exchange structure, business and functional requirements links, etc.). These different aspects when combined form together a single BPM at a given level of detail and for specific EU Customs business domain.

A **software tool ARIS³** is used to assist in business process modelling and enable the reusability and the continuous improvement of business processes and business data. Member States and Trade have access to all the EU Customs BPMs via the ARIS Business Publisher.

The main BPM deliverables are ARIS publications sent for review or information to the Member States and Trade. The BPM supporting documents are published on CIRCABC (e.g. BPM delivery note, review supporting information, .pdf reports with the BPM content extracted from the ARIS database, etc.) together with each ARIS publication.

3.1. Level 1 and 2 Global and Interaction BPM

3.1.1. ARIS BPM Publications

The Level 1 EU Customs BPM and Level 2 Interaction BPMs are revised regularly under the BPM maintenance activities. The latest versions of those models are included in each ARIS Publication and can be consulted for information on the interfaces between the customs business domains (ref. EU_Customs/Customs Business Processes/01_CBP L1-L2 Global and Interaction BPM).

At the start of each new BPM project the related business domain is to be classified and depicted on the EU Customs Global BPM and the relationships between this business domain and the rest of the EU customs business domains are to be explored and depicted in an Interaction BPM. The updated EU Customs BPM and the new Interaction BPM are to be included in an ARIS publication and reviewed by Member States and Trade.

A dedicated publication "EU Customs Global and Interaction BPMs" also could be made and reviewed by Member States and Trade.

3.1.2. BPM Supporting Documents published on CIRCABC

- BPM Delivery Note;
- Review Supporting Information and Guidelines;
- EU Customs Global and Interaction BPM Report.

3.2. Level 2 and 3 High Level and Business Requirement BPM

3.2.1. ARIS BPM Publications

The Level 2 High Level and Level 2 Business Requirement BPMs are created as a result of the analysis of the requirements defined in the (draft) customs legislation. The models are updated as a result of the changes in the legal provisions, the comments received during the review of the BPMs and the discussions during the ECG BPM workshops (ref. EU_Customs/Customs Business Processes/02_CBP L2-L3 HL and Business Requirement BPM);

³ DG TAXUD has chosen ARIS produced by IDS-Scheer as a technical supporting tool for the business process modelling in 2010 following the Commission overall policy of using ARIS software platform.

The ARIS publication of the new and updated High Level and Business Requirement BPMs are usually made per customs business domain and reviewed by Member States and Trade.

3.2.2. CIRCABC BPM Supporting Documents

- BPM Delivery Note;
- Review Supporting Information and Guidelines;
- EU Customs High Level and Business Requirements BPM Reports per customs business domain;
- The following documents can be also created as a result of the business analysis:
 - **Business Case⁴**: a high-level document describing the main changes in a business domain and providing basic information on the expected business use and utility, volumes to be handled, expected costs and benefits, expected evolutions or extensions, etc.;
 - **Suggestions to the Customs Code Committee (CCC): A list of findings** as a result of the quality checks of the legal text and;
 - **Business optimisation proposals: A list of recommendations and suggestions** with a purpose to improve the underlying business processes.

3.3. Level 4 Functional Requirement BPM

3.3.1. ARIS BPM Publications

The Level 4 Functional Requirement BPM is developed after the verification of the Level 3 Business Requirements BPM in order to provide clear requirements for the implementation of the envisaged EU Customs IT Systems and to guarantee that the IT systems will function as described in the legal provisions. (ref. EU_Customs/Customs Business Processes/03_CBP L4 Functional Requirement BPM);

The ARIS publication of the new and updated Functional Requirement BPM are usually made per IT System and reviewed by Member States and Trade.

3.3.2. CIRCABC BPM Supporting Documents

- BPM Delivery Note;
- Review Supporting Information and Guidelines;
- Functional Requirement BPM Report per IT System;
- Business Acceptance Criteria (BAC) - test cases and scenarios that define how the implementation of the business and functional requirements will be validated before the deployment of an IT system.

3.4. EU Customs BPM Guidelines

The EU Customs BPM guidelines are created to support the BPM modellers and reviewers and to ensure common understanding of the EU Customs BPM. The following documents are available on CIRCABC:

- (1) EU Customs BPM Levelling Guidelines;
- (2) EU Customs BPM Methodology Document;
- (3) User Guide for Customs Business Processes (in ARIS Business Publisher);
- (4) EU Customs BPM Change Management Document;
- (5) EU Customs BPMN Guidelines.

4. BPM GOVERNANCE

DG TAXUD is responsible for the production of the BPM and requests its contractors to support this task. In order to ensure an adequate level of quality, DG TAXUD closely associates the Member States and Trade representatives as experts during this activity.

The ECG/TCG and CCC are the main reviewers of the BPMs. CCC receives the feedback from the BPM reviews and will need to decide whether comments lead to an update of the legal text.

Whilst recognising that the ECG is responsible for reviewing and accepting the BPM, it is clear that the formal acceptance would only occur at the moment the related legislation is approved and adopted.

⁴ The business case document as defined in this context refers to the existing business case documents prepared for the MCC business domains. However, it should be noted that the concept has been subject to evolution in view of divergent views and needs. To this end, more specific IT business case documents are now also being produced by the system owners during the inception phase of the IT project – see definition and references in the MASP- annex 1-2.

4.1. The CPG and Ad Hoc High Level Steering Group are kept informed of progress and are invited to decide on possible issues of importance. If need be, it will issue a recommendation to solve outstanding issues. BPM alignment with the legal draft

In view of the fact that work is progressing in parallel in the area of legal drafting and BPM production, it is necessary to install a mechanism that will ensure the alignment of both tasks.

The BPM will be produced in line with an agreed baseline composed of the legal text and BPM's currently available as prepared by DG TAXUD and Member States. This information has been published on CIRCABC in a shared directory available to members of the Customs Policy Group and the ad-hoc High Level Steering Group and the ECG delegates (under the CIRCABC groups 'eCustoms' and 'eCustoms IT aspects').

The draft legal text used as baseline must be agreed at the start of the BPM activity and is used as such to produce the BPM - this 'frozen' baseline documentation is therefore a package composed of different draft legal text working documents and BPM schemas produced so far by DG TAXUD. For the activities that are scheduled to start later, the baseline documentation can be updated at the start of the activities, on the condition that this is well documented and available on CIRCABC to all concerned.

The importance of the principle that synchronisation at given (but agreed) points in time is crucial, whilst in between these synchronisation points the legal text may evolve. The BPM drafting exercise will consider the agreed baseline only. It will only take into consideration updates at the next agreed synchronisation point.

The synchronisation is a continuous process but with some milestones. The next moment to synchronise will be at the time consultation meetings take place as part of the BPM drafting process. In other words internal consultations with the legal experts will take place on the basis of a first preliminary draft and on that occasion the legal experts can inform the BPM experts of possible new versions of the baseline documentation. Such updates will be added and recorded in the baseline documentation, which forms then the updated basis of the BPM. Once the internal consultation process is finalised no more legal updates are taken into account and the BPM will then be finalised and submitted for review to the Member States.

4.2. Cooperation with Member States and Trade representatives

Effective cooperation with Member States has been established by means of discussions at the level of ECG or specialised workshops. However the need for quick progress, imposed by the legal deadlines to be respected, forced the Commission to seek for new methods in order to speed up the production of BPMs.

Whilst it is clear that optimised working methods, additional resources provided by outside consultants working for the Commission and the use of a new powerful software tool (ARIS) will result in economies of time, this approach should not lead to throwing overboard the results achieved so far, nor putting aside the valuable expertise offered by the Member States.

It is proposed that Member States will remain closely associated to this exercise. This means that MS will receive drafts for information as soon as the internal Commission review has been finalised. Member States will also be consulted which happens as part of the drafting, reviewing and acceptance process.

For the consultation process direct contacts (meetings or if need be phone conferences) are preferred to the use of collaboration tool, which may only have a secondary role. It is also planned that experts provided by the European trade associations will be involved in the consultations whilst drafting and will be associated to the review via their participation in ECG.

4.3. Review mechanism of BPM's produced

It is planned that as part of the drafting exercise DG TAXUD will consult internally all units concerned and will consult with experts from the MS (delegates of the ECG or its appropriate subgroup) and trade associations (put forward by TCG members). In any case the Commission will make available an electronic copy (review form) on which comments can be provided.

Once the BPMs are agreed within DG TAXUD they will be published to the ECG/TCG and the appropriate Customs Code Committee (CCC) section for review. Author positions will be prepared on the comments and published on CIRCABC. If needed, a review meeting will be held bilaterally or with ECG and/or CCC to agree on the follow up to the comments. The BPM package (including all associated documents) and the associated author positions will then be made available, as well as the recommendations for the legal experts. The outcome of the BPM external reviews are to be considered as supporting information for the discussions and finalisation of the legal text in the concerned CCC.

5. BPM PLANNING

A BPM planning will be kept updated and made available to the ECG for review and agreement and to CPG and/or HLSG for endorsement. A BPM reference and BPM milestones are defined for each project described in Annex II of MASP.

It is proposed that the Ad Hoc High Level Steering Group will monitor the implementation, review progress against the plan and advice in case of issues arising.

The Members of the Ad Hoc High Level Steering Group have agreed the implementation the BPM policy in follow-up as from the first meeting of the Group. This group will ensure high level monitoring at their meetings.