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2016 E-CUSTOMS PROGRESS REPORT

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1 INTRODUCTION

The 2016 e-Customs annual progress report is the ninth report prepared pursuant to Article 12 of the e-Customs Decision[1] under which Member States are required to assess the progress made towards coordinating the implementation of the e-Customs initiative. The Commission consolidates the data gathered by the national customs authorities into a comprehensive report covering the annual operational and financial strategic goals of the Member States within the scope of the e-Customs projects.

This year the Commission received 25 national e-Customs progress reports.

2 BACKGROUND

2.1 E-Customs Initiative

In 2003, the Commission issued an e-Customs Communication[2] that contained proposals about a simple and paperless environment for customs and trade. The subsequent 2003 Council Resolution[3] endorsed the ideas raised in the e-Customs Communication, thus setting the framework for the e-Customs initiative. The e-Customs Communication carved out an important path towards radically simplifying customs regulations and procedures and integrating effective and uniform working methods within the EU Customs Union. Decision 70/2008/EC[4] on a paperless environment for customs and trade, also known as the e-Customs Decision, is the key piece of legislation related to the e-Customs initiative, promoting a shift to an interoperable electronic customs environment with a unified data system to facilitate communication between traders and customs.

2.2 Tasks and Coordination

Articles 5, 6 and 7 of the e-Customs Decision define the main components of the e-Customs systems and assign tasks to the Commission and Member States required for the development and implementation of IT projects.

2.3 Governance of the e-Customs Implementation

Article 8(2) of the e-Customs Decision provides that the Commission and the Member States should jointly establish a Multi-Annual Strategic Plan (MASP) to ensure the management and coordination of all activities and tasks related to e-Customs future projects. As an overall project management tool, the MASP lays out the strategic framework and milestones for the implementation of the e-Customs initiative. It is an essential instrument for ensuring operational planning and implementation of all IT projects. This implementation is based on a three-tier governance model, which consists of the Customs Policy Group (CPG) acting as a steering body at the policy level, the Electronic Customs Coordination Group (ECCG) at the coordination level and several groups consisting of specialists from Member State administrations at expertise level.

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[1] Decision No 70/2008/EC of the European Parliament and of the Council of 15/01/2008 on a paperless environment for customs and trade, OJ L 23, 26/01/2008, p. 21–26.

[2] Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee - A simple and paperless environment for customs and trade /COM/2003/0452 final.

[3] Council Resolution of 05/12/2003 on creating a simple and paperless environment for customs and trade, OJ C 305, 16/12/2003, p. 1–2.

[4] Decision No 70/2008/EC of the European Parliament and of the Council of 15/12/2008 on a paperless environment for customs and trade, OJ L 23, 26/01/2008, p. 21–26.

2.4 European Commission and Member States Tasks

The Commission and the Member States equally share the responsibility of facilitating customs communication and information exchange systems. They coordinate the setting-up, deployment and operation of the electronic systems at Union and national level.

3 SUMMARY OF E-CUSTOMS PROGRESS PERFORMANCE

3.1 E-Customs Key Milestones and Achievements in 2016

3.1.1 Core Legislative Framework

The modernisation of the EU customs law has been a priority in the evolution of the EU Customs Union. In this context, the Commission has made considerable progress towards reforming the legal framework for customs procedures. In its 2012 Communication on the State of the Customs Union[5], the Commission outlined a course of action for a more robust and unified EU Customs Union by 2020. In addition, a new legal framework was needed to reflect the impact stemming from the legal changes introduced by the 2010 Treaty on the Functioning of the European Union[6] ('The Lisbon Treaty'). Consequently, the Union Customs Code (UCC), adopted on 09/10/2013 as Regulation (EU) No 952/2013[7] of the European Parliament and of the Council, serves as the legal basis for the modern and electronic customs environment.

The Commission, national customs administrations and trade representatives have been engaged in lengthy discussions related to the development of the UCC Implementing Provisions which were adopted as the Delegated Act (DA) and the Implementing Act (IA) to the UCC. The UCC DA/IA came into force across all EU Member States as of 01/05/2016. It represents a package of legal measures for the development of new IT systems and enhancements to existing systems, including transitional arrangements for proper application of the UCC before the applicable IT systems become operational at the end of 2020. In collaboration with Member States, the Commission is coordinating the implementation of the UCC through the UCC Work Programme (UCC WP) and the MASP. The UCC WP lays down the IT architecture and technical IT implementation, as well as the harmonisation and standardisation of interfaces. The UCC WP is of pivotal importance for establishing the transitional measures related to the electronic systems and its content is closely linked to the MASP. On 11/04/2016, the Commission adopted a new version of the UCC WP which sets out the planning for the development and deployment of the 17 essential electronic systems. In accordance with Article 4(1) of the new Decision establishing the UCC WP, the Commission and Member States shall share information concerning the planning and progress of each of the systems contained in the UCC WP.

In order to support the functionality requirements of the electronic systems, in late 2016, the Commission started working towards a new draft Implementing Act to cover technical arrangements for developing, maintaining and employing electronic systems for the exchange of information with customs authorities. The original idea of drafting an Implementing Act for the UCC Customs Decisions System (CD) evolved into preparing one single Implementing Act for all systems. The Commission is discussing the applicable legislative provisions of this proposal, its

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[5] Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee on the State of the Customs Union /COM/2012/791 final.

[6] Treaty of Lisbon amending the Treaty on European Union and the Treaty Establishing the European Community, 2007 OJ C306/01.

[7] Regulation (EU) No 952/2013 of the European Parliament and of the Council of 09/10/2013 laying down the Union Customs Code, OJ L 269, 10/10/2013, p. 1–101.

structure and scope of application with the Customs Code Committee – General Customs Legislation section (CCC-GEN). The draft regulation is anticipated to be finalised in mid-2017.

3.1.2 General Objectives and Instruments

The Customs 2020 programme maintains the support for coordination between the customs administrations of EU Member States by providing a platform for the electronic exchange of information, the development of common guidelines and IT systems. In 2016, the programme furthered its objectives of supporting the implementation of Union law and policy in the field of e-Customs by sharpening its focus on the UCC, the MASP, trade facilitation, customs governance and simplifications. Echoing this precedence, 91 e-Customs related meetings with a total of 892 participants were convened during 2016 under the auspices of the Customs 2020 programme.

The Commission has made considerable progress towards advancing the e-Customs IT strategy. The Multi-Annual Strategic Plan (MASP) Revision 2016 was accepted by the ECCG and subsequently endorsed by the CPG of 07-08/07/2016. The Member States expressed concerns about the voluminous scope of activities and projects to be completed by 2020, and called for a feasibility assessment during the next MASP and UCC WP revisions to ensure that planning is viable and realistic. During 2016, the Commission and Member States were engaged in a high-level discussion on redefining the IT landscape, mainly addressing the short-term (current 2020 deadline inscribed in the UCC for delivery) and the long-term (future financing and delivery instruments) solutions on the future of IT. In view of the short-term goal, the Commission launched a survey via the ECCG platform for Member States to provide their views on what is realistically achievable by 2020 and which projects should be scheduled to extend beyond 2020. On the longer-term, more substantial discussions on an overarching IT strategy were held at the CPG meeting in December 2016.

The end of 2016 marked the completion of development activities for CS/RD2, REX and CD projects. The CS/RD2 application entered in production on 01/12/2016. The purpose of the CS/RD2 application is to store, maintain and distribute reference data in the form of Code Lists and Authorities. CS/RD2 will replace the current CS/RD application. It will continue to provide the same functionalities and interfaces and will ensure backward compatibility with the integrated National Administrations (NA) and DG TAXUD systems. Retaining the CS/RD functionalities will allow NAs to plan the migration to the new functionalities and interfaces in order to benefit from the new features.

The new Registered Exporters IT system (REX) became operational on 01/01/2017, including cooperation with CH and NO. REX simplifies the certification of origin which takes the form of statements of origin made out by the registered exporters themselves, rather than a governmental authority. It also improves the effectiveness of the management and control of the originating status of products through an enhanced administrative cooperation with beneficiary countries in the verification of statements based on risk analysis. The EU's Generalised Scheme of Preferences (GSP) allows developing countries to pay less or no export duties to the EU. The benefits of the new system will extend beyond the strict context of the GSP countries. EU exporters working under this preferential scheme will use the IT system and exporting goods originating in the EU under some other preferential arrangements like the EU-Canada Comprehensive Economic and Trade Agreement (CETA).

As the earliest and biggest UCC project, a significant number of the activities were performed in relation to the UCC Customs Decisions. Customs Decisions Management System (CDMS), Customer Reference Services (CRS) and Trader Portal (TP) constitute the sub-projects of the UCC CD. Initially, a purely centralised architecture was proposed for all system functions. Some Member States expressed the wish to proceed with national developments in order to provide their traders with a single IT system for all decisions taken by the administration, whereas most indicated a preference for a hybrid solution. The central IT system will allow Member States without national systems to consolidate all customs decisions applications and authorisations in an electronic format and make them available to all involved Member States through publication in CRS. The construction phase activities of the CDMS, CRS and TP were in progress in 2016 with a view to initially put the CRS into production as of 01/01/2017 with the functionality required for the REX project.

Another important project elaborated during 2016 was the eManifest pilot project. The overall objective of the eManifest pilot project, formally managed by DG MOVE in association with the European Maritime Safety Agency (EMSA) with support from DG TAXUD, is to test procedures that could further lead to simplifying reporting formalities. In this respect, Directive 2010/65/EU on reporting formalities aims at simplifying the administrative procedures applied to maritime transport. It requires Member States to establish National Single Window services for receiving the ship port call notifications. This in turn would facilitate trade and reduce the administrative burden caused by multiple submission of identical information to different authorities. The eManifest pilot project foresees that data elements submitted by economic operators in the maritime sector could be reported through a single submission (where possible) to the maritime Single Window (EU or National) and subsequently distributed to the competent national authorities.

In order to further simplify customs procedures and anchor a paperless environment of customs and trade, DG TAXUD in cooperation with other DGs has continued its work towards the deployment of the EU Customs Single Window – Common Veterinary Entry Document (EU SW-CVED), the first operational project of the EU Customs SW programme. The "EU Customs Single Window: Certificates exchange" ensures automated verification of three sanitary certificates (CVEDA, CVEDP and CED), managed by the TRACES system and administered by DG SANTE. A close cooperation was established with the DGs responsible for the certificates that were identified as candidates for inclusion into the EU Customs SW.

The Commission performs an organizing and facilitating role to ensure the proper functioning of the Customs 2020 programme by linking its activities with the overall e-Customs objectives. One of the assets of Customs 2020 is making full use of the knowledge of experts from EU Member States who collaborate in project groups to analyse national customs practices in order to identify challenges in the correct implementation of EU customs legislation. In this context, various project groups were established to address specific concerns and to render reports with recommendations on IT system implementation. Chaired by DG TAXUD, these project groups held several sessions in 2016.

In the framework of the evolution of the EU Customs SW project, an EU Customs SW Project Group was set up in 2016 to assess the legal instruments suitable for the EU Customs SW initiative with the aim of going beyond the integration of certificates and the Government to Government (G2G) exchange. The legal support required for some aspects of the EU Customs SW initiative will be tackled in these series of meetings with the intention to prepare a possible legal initiative to support the development of the SW environment in the EU. The first meeting of the SW project group was held in December 2016 with the participation of 19 Member States and 6 trade associations. The Member States have expressed clear interest in the progress of the EU Customs SW initiative, as they need to align their national plans with the overall SW approach, while seeing a large potential in the automatic exchange of certificates data.

The UCC and its delegated and implementing acts called for significant changes to the Export Control System Phase 2 (ECSP2) which will be replaced by the Automated Export System (AES). The Customs 2020 Project Group dedicated to the UCC Automated Export System (AES) was established to develop recommendations concerning the processes and data requirements (as part of functional requirements) for the new AES project in order to align it with the UCC DA/IA. The work of the project group was mainly focused on updating the Level 4 (L4) BPM Functional System Specifications package (FSS), identifying possible arrangements for the migration from ECSP2 to AES and addressing requirements for business statistics at export. The project group lasted from January to June 2016, driven by a collaboration of 11 Member States. The final report, assessing the most appropriate approach for fine-tuning AES system solutions in line with the UCC requirements, was published at the end of November 2016.

In light of the UCC DA/IA adoption, the New Computerised Transit System (NCTS) had to undergo changes predominantly related to new business processes and data alignment. To support this initiative, the Customs 2020 Project Group on the UCC New Computerised Transit System was established with the objective of identifying and developing proposals for changes to the NCTS functional requirements by creating and updating L4 BPMs/FTSS package in alignment with UCC requirements. The project group met from January to June and consisted of 12 delegates, including

representatives from CH and TR. The final report was published at the end of November 2016 outlining the scope of the UCC NCTS Phase 5 update and the new L4 BPMs.

Union customs legislation requires a guarantee to cover an existing or potential customs debt for a large variety of customs procedures and formalities. Pursuant to Article 89 (2) (b) of the UCC, such guarantees must be valid for the purposes for which they were provided and established throughout the customs territory of the Union. To this end, the Customs 2020 Project Group dedicated to EU Guarantee Management system (GUM) was set up in 2016 to carry out a first analysis pertaining to the requirements for a guarantee management system in order to support the UCC legal requirements after their full applicability. The project group, composed of 22 experts from 15 Member States, held its activities from November 2015 until June 2016. Its members prepared a final report containing recommendations which will serve as an input for the development of the Business Case and the Vision Document in view of launching the initiation phase of the project.

The scope of activities on the EU Guarantee Management System Design (GUMD) expanded into a new project group appointed to determine the best implementation option for this project by drafting a Business Case. This project group was initiated in October 2016 with the participation of 35 national experts from 20 Member States. Along the same lines, the Commission prepared calls for interest for several other project groups in view of addressing developments to the UCC systems. The Customs 2020 Project Group on the UCC Centralised Clearance Import Design (CCID) started its activities in November 2016 with the participation of 12 Member States and 5 trade associations. Its primary objectives are to analyse and define the project scope and implementation options applicable to CCID as well as to draft the Business Case. The Business Case will serve as the baseline against which the Member States and the Commission will assess IT implementation options and as such support the initiation of the CCI IT project within the timeframe specified in the UCC WP.

In addition to the operational activities for the aforementioned projects, the Import Control System (ICS 2.0) Trans-European System underwent further development. Composed of 8 Member States and 5 trader associations, this project group re-started its activities in November 2016. The objectives of this project group are to assist with the development of functional requirements and specifications, the ICS 1 / ICS 2 Transition Feasibility document and L4 BPMs for the first phase as defined in the 2016 CPG note 3660984.

One of the essential instruments supporting the EU Customs Union in its efforts to modernise customs procedures and systems is the EU customs Business Process Modelling (BPM) Policy. Given the complex business environment of EU customs, the BPMs aim to ensure a more holistic view of the customs organisation and to promote a common understanding of customs process flows and the practical implications of their implementation. As such, the enhancement of the BPM policy remains a paramount objective for the e-Customs architecture. Following the adoption of the UCC DA/IA, the update of Level 1 (L1) EU customs Global BPM, Level 2 (L2) UCC Interaction BPMs and Level 3 (L3) UCC Business Requirements BPMs in line with the latest legislation was completed by July 2016 for various UCC projects. The relevant updates will be elaborated in detail under Section 4.1.1 of the report. A final EU customs BPM publication[8] supporting the UCC provisions is now available for public consultation and information.

The BPMs are facilitated by ARIS, a software tool which enables the reusability and continuous improvement of business processes and data. All ARIS environments were updated in Q4 2016 to version 9.8.4, offering improvements in modelling and analysis functionalities which accelerated the performance of BPM releases. This process is consistently contributing to the refinement of the EU customs modelling approach. Currently, there are more than 846 users utilising BPMs/ARIS. In addition to the ARIS updates, a new version of the Change Management document for the EU customs BPM and EIS (European Information Systems) Functional Specifications was verified in

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[8] https://itsmtaxud.europa.eu/businesspublisher/login.do?login=anonymous&password=anonymous

2016. An electronic ticketing tool called RTC (Rational Team Concert) was introduced to manage changes and their implementation for various business domains in a single repository.

Equally important, data exchange is indispensable to the efficient functioning of the e-Customs architecture. For this reason, the new IT systems will be based on the EU Customs Data Model (EUCDM) which is composed of EU customs legislation data and is built upon the World Customs Organisation Data Model. EUCDM serves as a technical instrument that models the data requirements laid down in EU customs legislation by presenting a single and genuine source of information for the technical developments of different IT systems used by EU customs for data processing. The new EUCDM version 1.1 of the HTML publication offers an improved presentation of the UCC Annex B datasets by replacing the differentiation between shipment and consignment view by the unique dataset view. This new representation enhances the readability of the content without any impact on the mapping itself. In addition to Annex B presentation improvements, EUCDM v1.1 incorporates the UCC DA/IA Annex A datasets, formats, codes and cardinalities, as well as the content of UCC DA/IA Annex 12-01 on Economic Operators Registration and Identification (EORI) records. The Commission is looking at possible solutions to extend the scope of EUCDM by integrating data elements used for the purpose of response messages and those used for the exchange of data between customs authorities.

Furthermore, the Commission supported the electronic exchange of information through the Common Communication Network /Common System Interface (CCN/CSI) as well as the CCN product services with an availability above 99,74% during 2016. All specifications of the new CCN/CSI GW Release 7.4.0 whose main purpose is to improve the BCP/DRP tests and to refine future integration with CCN2 were completed at the end of August 2016. The CCN2 project has been divided into three releases. CCN2 Release 1 (R1) will implement the key points for the first project that will use CCN2, such as Customs Decisions. CCN2 Release 1 PROD (R1.5) includes all features which are required to start CCN2 production. The scope of the CCN2 Release 2 (R2) is the integration of legacy CCN/CSI interfaces in order to phase out exiting CCN/CSI Gateways. The BPMs, functional specifications, user interface specifications, Master Test plans and most of the IRDs were completed during 2016. In addition, the CCN2 Reference Application which acts as a blue print for future business application developments using CCN2 was delivered and tested during 2016. The CCN2 system is not yet in production.

The harmonisation of e-Customs relies on active collaboration between the Commission and Member State authorities. Although Member States make progress at different speeds and according to different national priorities, the Commission has taken action to maximise business continuity with existing systems.

3.1.3 Challenges to Successful e-Customs Implementation

The e-Customs reform remained a priority for the proper functioning of the EU Customs Union throughout 2016. Its agenda included further improvements to the legal, IT and operational aspects, culminating in the adoption of the UCC DA/IA on 01/05/2016.

The manifold activities performed in the context of e-Customs implementation, ranging from highly specialised project groups to online trainings tailored to meet the specific needs of customs officials from different EU Member States, are a clear indication of the dynamic and successful partnership between the Commission and the national customs authorities of the Member States. In this light, the Commission has served as a catalyst in fostering open communication and cooperation amongst national customs administrations, as well as between the national and EU level. In a similar vein, the Member States showed both leadership and significant commitment in sharing the same objectives and moving forward with the e-Customs reform.

In 2016, the Commission put considerable effort into the management and implementation of electronic systems and the coordination of MASP projects. The end of 2016 marked the completion of development activities for CS/RD2, REX and the UCC CD projects. The CS/RD2 application entered in production on 01/12/2016 followed by REX on 01/01/2017. A significant number of activities are still ongoing to consolidate deployment preparations for all customs decisions applications which are scheduled to be implemented in 2017. In addition, an important priority for national customs administrations throughout 2016 was the alignment of IT systems with the UCC

data requirements stemming from the adoption of the UCC DA/IA. It should nevertheless be recognised that several MASP projects have been delayed due to the fine-tuning of the existing legislation. However, considering the pattern of progress made towards the coordination and implementation of the IT projects in 2016, it can be assumed that if delays arise, timely implementation of the projects is still feasible.

As demonstrated in this progress report, a number of Member States displayed a notable tendency to concentrate their budget mainly on system preparation and the impact analysis phase in preference to the maintenance of operational customs IT systems. According to the analysis provided, a cost decrease of 50% was noticed in certain Member States in comparison to the 2015 overall expenditure. From a financial perspective, this observed decrease can be interpreted to imply that a number of Member States were operating under budgetary constraints or experienced difficulties in allocating funds for 2016. On that premise, this could also be a reflection of the Member States' current financial situation in view of the projected resources associated with the entry into force of the UCC DA/IA.

Despite all the challenges posed over the period covered in this report, the Commission and Member States made considerable progress towards the implementation of e-Customs IT projects. A leading factor to this success was the hard work and dedication contributed towards the adoption of the UCC DA/IA. An important milestone during 2016 was the High Level Project Group Meeting on the implementation of the Union Customs Code (UCC) and e-Customs, which focused on the debate surrounding the issues of redefining the IT landscape, its related governance and financing models. The Member States endorsed the Commission's proposed approach to start substantive discussions on a strategic framework for e-Customs generated on the basis of collaboration. The importance of this meeting lied in the fact that its outcome would contribute to the creation of a strategic implementation policy which could be considered as the architectural design behind the future landscape of customs IT. This continued development in the area of e-Customs is framing the terrain upon which an electronic, paperless environment for customs and trade will be attainable by the end of 2020.

4   IT SYSTEMS PROGRESS ACTIVITIES

4.1   Purpose of this Section

This section summarizes the contribution made by the Commission and the Member States in 2016 towards the overall IT systems' achievements pertaining to MASP projects.

4.1.1   High level and Business Requirements (L1-L2-L3)

Following the publication of the adopted UCC DA and IA in December 2015, the UCC Level 1 (L1) - Level 3 (L3) BPMs representing the high level and business requirements of the UCC domains (AEO, CD, BOI, BTI, Customs Debt, Customs Valuation, Guarantee, Entry of Goods, Release for Free Circulation, Temporary Storage, INF, Special Procedures, Export and Exit, Transit, PoUS) have been updated in accordance with the change management procedure and reviewed by the Member States and trade associations.

4.1.2   MASP Group 1 – Customs European Information Systems

Group 1 incorporates the operational MASP projects at different stages of development whose objectives, scope and timeline for implementation are defined by common agreement between the Commission and the Member States.

4.1.2.1   *UCC Customs Decisions (1.2)*

The UCC Customs Decisions is one of the earliest and biggest UCC projects aiming at standardizing electronic customs data across the EU. As such, a significant number of activities were performed during the course of 2016. The construction, testing and acceptance activities progressed towards putting into production the CRS on 01/01/2017 to support the REX system. The

beginning of the year marked the review completion of new versions of IT specifications which are compliant with the L4 BPMs of April 2015.

During the UCC CD elaboration phase, further changes were made to L4 BPMs, deriving from the adopted version of the UCC DA/IA. The changes have been identified and incorporated into the Request for Changes (RfC) pursuant to the change management procedure. The RfC list has been reviewed and agreed by the Member States ant trade. The L4 BPMs were updated and published based on the agreed RfC list. In addition, the UCC Customs Decisions *Master Plan* document will be instrumental in providing traceability for all deliverables, change and release management elements, including project communication planning and training activities.

DG TAXUD launched a survey with the purpose of clarifying possible options that would be implemented in Member States and to collect information regarding possible future requirements for the IT systems. A business agreement has been reached to allow all Member States to implement their own Trader Portal for the CD in addition to the EU harmonised Trader Portal.

In 2016, the Italian delegation presented a proposal regarding the use of the national versus central Customs Decisions Management System at the ECCG meeting which triggered further discussion. In response to this, the Commission issued the information paper entitled *"Information on the structure of the Customs Decisions System,"* which reflected on the different possibilities regarding system functionalities.

In 2016, several Member States (AT, CZ, FR, HU, IE, SE, UK) continued to implement design activities, user requirements (HR, LT) and technical (AT, CZ, EE, RO, SI) or functional specifications (BE, PL, RO) of the national systems. Entrusted with the task of choosing a course of action for their system implementation strategies, a major part of Member States (AT, BE, BG, CZ, EE, ES, FI, FR, HR, HU, IE, LT, PL, RO, SE, SI, UK) carried out the preparatory work for project development. LT established a dedicated project group to identify legislative changes and analyse system related specifications. PL also reported about working meetings arranged to describe requirements for the future hybrid system.

During 2016, BG improved its national import application that was using the relevant services provided by CRS 1.1. CZ reported about their decision to use the central CDMS CDCO system for multiple decisions and national system for national decisions. FI informed that two national systems were aligned with the UCC CD: the authorisation management system was amended to comply with the UCC BPM processes, whilst another system was deployed to store and produce the authorisation data. FR carried out the internal development of CDMS.

In summary, the Member States played an active role in preparing and planning system deployment and operation in order to meet the necessary requirements throughout all phases of the project lifecycle.

4.1.2.2 *UCC Proof of Union Status (PoUS) (1.3)*

The project underwent further development activities pertaining to its scope. Given that the project was put on hold following a number of pending legal clarifications, a UCC IA/DA amendment has been prepared to add additional functionalities to the system. As a result, the approval of the updated Business Case, Vision Document and Level 4 BPMs will take place in 2017.

Although some of the Member States (DE, EE, IE, PT, SI and UK) reported the project status as "on hold", several analysis activities pertaining to the national user requirements were undertaken by DE, FR. In addition, with regard to national acceptance testing, PL observed that the Proof of Union status of goods could be lodged electronically within the framework of the AES system.

4.1.2.3 *UCC Binding Tariff Information (1.4)*

The changes to the adopted UCC DA/IA triggered the integration of the UCC BTI Phase 1 and Surveillance3 projects. Due to time constraints and cost considerations, a decision was taken to immediately implement the UCC BTI usage control reporting in the Surveillance3 project[9].

Taking into the consideration the changes introduced by the newly adopted legislation, the Business Case document (for Phases 1 and 2) was approved and published, whereas the UCC BTI Vision Document for Phase 1 (Steps 1 and 2) was updated and published for acceptance. In addition, the inception activities for UCC BTI Phase 2 have started and the updated Vision Document for Phase 2 was submitted for Member State review.

The development work surrounding IT activities was carried out on the functional and technical message exchange specifications (FMES/TMES) for the new Surveillance Reception Application[9](SURV-RECAPP) and EBTI-3 which have been made available to the Member States.

A number of Member States (BG, CY, EE, ES, FR, HU, PL and UK) reported their activities in progress. CY and EE put emphasis on analysing and modelling national functional specifications, whereas AT finalised activities related to the latter. RO informed about the development of functional and technical system specifications. FI reported on the completion of national user requirements, while ES performed conformance tests (CT). UK carried out activities related to the design of the national system.

BE and FR reported on the progress made with regard to the current operational status of the UCC BTI Phase 1 system, whereas PL executed system upgrade and maintenance. In addition to all national developments pertaining to the project, the Member States reviewed the above-mentioned deliverables prepared by the Commission.

4.1.2.4 *UCC AEO Updates and impact of MRA (1.5)*

The Commission performed IT implementation activities pertaining to the UCC AEO project Minor Enhancement. The Technical System Specifications for the UCC AEO Major Enhancement were reviewed by Member States and accepted by ECCG, which advanced the elaboration of the project.

The Commission further cooperated with partner countries regarding the AEO Mutual Recognition Agreement (MRA). In this context, the MRA was reached with Japan in Q1 2016. Discussions have been initiated with relevant specialists in Norway concerning the analysis of the Interface Control Document template. Norway announced its readiness to start the IT implementation of the agreement, whilst negotiations with Canada are still ongoing.

Several Member States (AT, BE, CZ, FR, HU and UK) reported on progress in their respective system activities. AT carried out analysis and modelling activities in view of national user requirements and arranged a workshop within this framework. HU handled activities pertaining to design of national system. ES performed a system upgrade putting in place all minor changes. PL and CZ dedicated considerable efforts towards system development. In addition, PL reported about the completion of national system SZPROT deployment, which is compliant with AEO related process. CZ developed and put into production a new national AEO system. BE, FR and SI performed operational system maintenance.

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[9] Please refer to section 4.1.3.4 of the current report.

4.1.2.5 *UCC Automated Export System (AES) (1.6)*

In order to facilitate a smooth migration process from ECS Phase 2 to AES, project development continued throughout 2016 with the fine-tuning of AES L4 BPMs/FSS package in line with the adopted UCC DA/IA. The external reviews for these BPMs were split in two waves per each domain. The first wave addressed the processes and functional requirements, whereas the second wave focused on the alignment to the EU CDM. In addition, different activities pertaining to project implementation were carried out during 2016. A steering committee meeting driven by the cooperation of various DG TAXUD units was arranged to discuss and find a solution for the best way forward. Relevant discussions between the Members States and the Commission regarding the migration strategy took place at the dedicated Customs Business Group (CBG) meetings. The status of the project was periodically reported at the ECCG meetings.

In 2016, CY, FI and SE reported about the analysis and modelling activities related to national user requirements, while HR and FI carried out a system upgrade. In relation to system deployment, HU and PL performed certain activities, such as implementation of legal requirements and new validation rules. In addition, PL reported about the updates of interface with a new risk analysis, tariff and excise systems.

Few Member States (BE, CZ, DE and PT) conducted operational system maintenance at national level, whereas DE informed about the completion of preparations for national AES operations. More information on the operational system maintenance is indicated under section 4.1.5.8 "Maintenance and updates of operational IT systems".

In addition, the Member States were actively engaged in the preparation of the L4 BPMs/FSS documentation.

4.1.2.6 *UCC Transit System including NCTS (1.7)*

The NCTS Phase 5 project activities were carried out along with the AES development. The Customs 2020 Project Group on the UCC New Computerised Transit System put effort into updating the L4 BPMs/FTSS package in line with the UCC requirements. A review cycle with the Member States was also established in two waves. In addition, the CBG and the ECCG were used as platforms for the exchange of views among Member States, trade representatives and the Commission concerning the NCTS and AES projects.

The Member States continued analysing necessary changes arising from the UCC. For such purpose, the Member States actively provided feedback on L4 BPM/FSS documentation. In addition, BG reported about their participation in monthly webinars on NCTS operations and technical specifications arranged by DG TAXUD. CY and FI carried out the analysis and modelling activities pertaining to national user requirements, likewise FR focused on user requirements and national functional and technical specifications. Moreover, FR informed that maintenance and development activities were carried out during 2016 on two national projects related to the transit application. HR executed a national system upgrade including some new functionalities, carried out the maintenance of the system, while HU finalised the deployment, where all developments were implemented in production environment without any difficulties. CZ, DE, PL, PT reported about their activities pertaining to system operation. More information on the operational system maintenance is indicated under section 4.1.5.8 "Maintenance and updates of operational IT systems".

4.1.2.7 *Registered Exporters System (REX) (1.11)*

The Registered Exporters System (REX) is listed in the UCC WP as the first system to be deployed. Given that the deployment date for this project was set for 01/01/2017, the Commission and Member States invested considerable effort to meet the project milestones. The Commission set up a pilot group whose main focus was to involve the GSP beneficiary countries in the process of system implementation in order to receive feedback on system requirements and identify possible gaps. The Commission and involved customs and government authorities from beneficiary countries from Asia, Latin America and Africa, along with respective authorities from partner countries, participated in workshops on the REX system throughout 2016. In addition, the

Commission organised various training sessions for the e-learning module upon request from several beneficiary countries. During the second half of 2016, REX trainings were arranged for all Member States and beneficiary countries. Furthermore, the CBG held a special session dedicated to REX where the Member States participated actively.

As regards IT implementation activities, the REX CT started in Q3 2016 with two Member States (FR, ES) and partner countries (CH and NO). Provided that no major issues were identified, the successful finalisation of the preparatory work culminated in system operability. In this regard, the Member States performed various activities to be ready for operations. Thus, a part of the Member States (AT, BE, CZ, DE, FR, HR, IE, LV) reported on completion of work to reach the operational status of the system, while some Member States (BG, EE, ES) informed about their activities being in progress. Few Member States (LT, PT, SI) performed CT. FI, SE and UK focused on the deployment stage. In addition, FI reported on the execution of necessary configurations to current import declaration system. CY and PL carried out activities related to national user requirements. PL also informed that REX system will act as one of the components of the national SZPROT system, whereas FI declared that REX will be integrated to their national declaration system. CZ expounded that their customs administration put into production a new version of national Import Control System which controls the REX number using message exchange between Single Window and Import Control System.

In light of system development activities, DK and RO carried out activities pertaining to national technical specifications. In addition, RO informed about the progress made for functional specifications, whilst HU focused on national system design.

4.1.2.8 *Anti-Counterfeiting and Anti-Piracy System (COPIS) (1.12)*

The COPIS project encompasses the following three systems:

- COPIS 1.2.0 (operational)
- COPIS Interface with Anti-Fraud Information System (AFIS) (inception phase in 2015)
- COPIS implementation of electronic Application for Action (AFA)

The inception activities for the COPIS-AFIS link were finalised in 2016, resulting in the production of the Vision Document. Further activities involved the preparation of the Interface Control Document. The new production date for COPIS-AFIS is planned for 2017.

The COPIS implementation of electronic AFA will enable traders to submit the application for action electronically to the competent customs department. The Business Case and strategy for COPIS – AFA (Phase 2) were produced in 2016 and underwent internal review by DG TAXUD.

AT reported on analysis and modelling activities, while IE focused on national user requirements. BE and CY reported about using the central CDCO system, whilst CZ continued with system development and improvement. ES carried out maintenance to adapt the national IT application to COPIS. Several Member States (DE, ES, FR, HU, PL and SI) indicated that maintenance and upgrade activities were performed during the operational phase of the project.

4.1.2.9 *EU Single Window Programme (1.13)*

In 2016, the Commission took significant steps towards the certificates exchange solution. EU SW-CVED Release 1.3.0 & 1.3.1 combined with an upgrade of the SPEED2 platform offered increased functionalities during Q3 2016. A total of seven Member States were in production (CZ, IE, SI, LV, BG, PL and CY) while LT performed successful CT. The fact-finding missions on the implementation of the EU SW-CVED pilot project in the Member States continued in LV and SI. As a follow-up to these missions, DG TAXUD drafted a guideline document in cooperation with counterparts from DG SANTE on the end-to-end business process of the EU SW-CVED interface.

The Commission further worked on technical specifications for Release 1.4.0 while the Member States, trade representatives shared their views and expectations related to the EU Single Window project at the CBG and ECCG meetings during 2016. The Business Case for the EU Customs SW: CERTEX was approved by the ECCG in November 2016. The Commission has expressed the

intention of increasing the EU Single Window scope to other EU-wide certificates, which should be implemented during Phase 2 of the project.

In 2016, BG, CY, CZ, IE, PL and SI performed several upgrades as part of operational system maintenance. BG and CZ aligned national Single Window platforms to the EU SW CVED Release 1.3.0. In addition, CY and CZ reported on the Known Error List (KELs) activities, whereas DE and EE focused on the analysis of national user requirements. EE informed about several meetings arranged with national authorities related to CVED certificate exchange activities. PL and RO prepared national functional specifications, whereas RO developed technical system specifications.

4.1.3 MASP Group 2 - Customs European initiatives needing further study and agreement

Group 2 contains projects that require further review and discussions before being mapped on the IT planning chart.

4.1.3.1 *UCC Notification of Arrival, Presentation Notification and Temporary Storage (2.1)*

The goal of this project is to define processes for the Notification of Arrival of the means of transport, presentation of goods (Presentation Notification (PN) and Declaration for Temporary Storage (TS) as described in the UCC as well as to support harmonisation across Member States for data exchange between trade and customs. With respect to the automation of processes at national level, Member States reported on various activities during 2016.

BG finalised working group activities and prepared a proposal regarding the scope and requirements for the national Notification of Arrival, PN and TS projects. CY focused on the analysis and modelling of user requirements and CZ reported progress in the area of functional specifications. In relation to system developments, ES informed about activities pertaining to system design, whereas DE, HU and PL reported on the current operational status of the system. In addition to these activities, DE also performed system maintenance, upgrades and other services. PL put effort towards the implementation of new software infrastructure whereby the new import system is enhanced with the TS functionality. BE, SE and SI reported progress during 2016 on other system-related activities. In addition, SI and LT performed regular system upgrades, whilst SE carried out analysis or modelling activities in parallel with system maintenance checks.

4.1.3.2 *UCC Guarantee Management (GUM) (2.5)*

The UCC provisions stipulate that the guarantee may be used in more than one Member State. To further address this matter, two Customs 2020 project groups related to the EU Guarantee Management System have been established as described in section 3.1.2 of this report. The Commission launched two questionnaires in relation to these project groups' activities to obtain Member State and trade feedback on the implementation options for system architecture and the outlook on multi-Member States guarantees respectively. The survey results and the project groups' recommendations will be used to develop the Business Case, which will in turn address the best implementation scenario for future system architecture.

Few Member States (DE, EE, FI) reported on their activities pertaining to the analysis and modelling of national user requirements. Similar activities were also reported by BG and SI in view of the preparation of national technical specifications. In addition, EE reported that a questionnaire was addressed to economic operators and banks to find out the way how to improve the existing national guarantee management system. CZ and ES put effort into upgrading national guarantee management system, whereas PL reported about the implementation of the UCC related changes made in their national GUM system.

4.1.3.3 *UCC Special procedures (2.6)*

There are two aspects to the practical implementation of this project:

- Harmonization of UCC Special Procedures: national IT developments for the harmonization of special procedures and alignment with the legal provisions defined in the UCC DA/IA.

- UCC INF for Special Procedures: central services provided for the management of standardized information. Currently, there is no system for Special Procedures at the EU level, except for Information Sheets (INF).

In 2016, the Customs 2020 Project Group on Special Procedures other than Transit continued its activities aimed at drafting the UCC-related guidance document to reflect the outcome of discussions between Member States and trade. The primary focus of the project group was to ensure a common understanding of the uniform and correct application of customs rules.

In light of project development, the preparation of L4 BPMs for INF was successfully finalised over the course of the year. Further development activities involved the production and acceptance of the Vision Document by ECCG. This meeting concluded that the first release of the INF SP system will consist of a pilot phase where Member States and trade were invited to contribute information concerning customs declarations with INF data. The elaboration phase for the pilot implementation started at the end of 2016.

With regard to national developments related to the Special Procedures, FI and FR reported that relevant analysis was carried out in view of national user requirements. BG informed about their activities pertaining to national technical specifications, whereas ES reported their progress on design of national system. CY and PL conducted analysis and modelling activities related to national system development, whereas SE put effort on CT. DE informed that national SP EXP implementation is already covered within the national AES system to provide required national electronic solutions for export-related special procedure declarations.

4.1.3.4 *Surveillance3 (2.7)*

In 2016, the UCC BTI and Surveillance3 projects were merged following the changes introduced by the adoption of the UCC DA/IA. In this context, the Commission decided to bypass the development of Surveillance2+ in order to implement UCC BTI usage control reporting in the Surveillance3 project[10]. The Surveillance2 data elements reception functionality was transferred to the new Surveillance Reception Application (SURV-RECAPP) which will serve as a database for the collection of all relevant additional data elements. 2016 marked the completion of development activities for SURV-RECAPP (UCC BTI Step 1) and the beginning of the construction phase of the project, which will be ready for production in 2017.

In 2016, the Commission presented the UCC BTI – Surveillance3 Transition Strategy which offers the advantage of a phased approach. As such, the Member States will start sending the UCC data elements at different times, whilst the systems will support both lists of 14 and 40 data elements and formats[11] during the transition period. In addition, the Commission launched a survey for the Member States to assess the prospects for national transition strategies related to Surveillance3 and EBTI. The results of the survey were compiled and presented at the ECCG in November 2016.

In view of the publication of the UCC DA/IA and project implementation changes, the Business Case document was submitted for Member State approval in early 2016. Following the approval of the revised Business Case, the Vision Document was updated accordingly and accepted by the ECCG.

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[10] Please refer to section 4.1.2.3 of the current report

[11] Please refer to section 4.1.1.3 of the 2015 e-Customs Progress Report.

A number of Member States (BE, BG, CY, EE, ES, FR, HU, PL, PT and SI) reported their activities in progress. AT, EE, FR and SI carried out activities related to national user requirements, whereas AT arranged a workshop in this regard. PT performed CT and informed that full data sets will be available when the SAD system will be able to provide them, whereas ES reported progress in system deployment. RO has meanwhile advanced towards developing functional and technical specifications.

4.1.3.5 *UCC related changes to ICS for strengthening the Security of the Supply Chain at Entry (Objectives 1 and 2 of customs risk management strategy – data quality and availability) (2.8)*

Taking into consideration the need to further clarify latest developments concerning the ICS 2.0 project, DG TAXUD presented a staged project implementation strategy to the CPG meeting held in July 2016. This approach is based on workable blocks in order to address the budgetary and IT capacity constraints associated with this project. The Member States reacted positively, recognising that further reflection is necessary in terms of the impact on the Member States and the trade community. The Commission reached a decision to modify the Business Case by reflecting the staged approach and to prepare a Vision Document focusing on the Common Repository. Consequently, the updated documents were presented to the CPG for discussion at the end of 2016 where it was decided to postpone the formal approval until 2017. In addition, the ICS 2.0 Project Group[12]continued its activities on project development and a number of ICS 2.0 Steering Committee meetings were arranged with a focus on delivering the functional and technical specifications and defining the transition strategy.

The Member States actively provided their advice at the ECCG regarding the development of the ICS 2.0 system. In addition, the Member States carried out activities pertaining to national adaptations required by the UCC. Several Member States (CZ, FI, SI) implemented further developments concerning national user requirements. HU performed national acceptance testing and had plans in place to develop security checking according to national requirements. ES and FR focused on system upgrade, whereas PL and PT reported about activities related to the operational status of the system. Several Member States (BE, BG, CY, DE, EE and IE) carried out other activities relevant in view of ICS 2.0 implementation.

4.1.3.6 *Classification Information System CLASS (2.9)*

Project development activities were ongoing in 2016. The Member States finalised and accepted the review of the Vision Document. Elaboration activities concerning IT implementation were extended due to system architecture and service changes, resulting in the decision to submit service specifications for Member State review in 2017. In 2016, FR was the only Member State that requested to implement a system-to-system interface with the CLASS publication service in order to enable the integration of national functionalities via CLASS. Further system development focused on the contractual activities launched at the end of 2016.

Several Member States (ES, FR and IE) reported progress on system activities. In addition, the majority of Member States informed about conducting project-related follow-up activities. Updates on the project progress were presented at the ECCG throughout 2016.

4.1.3.7 *Adjustments of the existing import applications under the UCC (2.10)*

The EU Centralised Clearance for Import (CCI) is important for trade as the declarant can lodge all declarations at a single point in the EU whilst goods are being presented in other Member States.

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[12] Please refer to section 3.1.2 of the current report

The Centralised Clearance concept will allow economic operators to centralise and integrate accounting, logistics and distribution functions and reduce the interaction with customs by using the customs office of supervision as the main contact partner.

The inception phase of this project has been closely linked to the progress made by the Customs 2020 project group[12] dedicated to CCI. During CCI Phase 1, the project scope was limited to non-specific goods, excluding procedures, such as inward/outward processing, combinations with other simplifications like the Entry into Declarant's Records (EIDR) and excise goods. Given their complicated nature, these issues will be addressed during CCI Phase 2. The outcome of the project group discussions should feed into the MASP update by reflecting a more realistic planning for IT system development.

Formalities concerning import-related customs procedures are currently managed through national customs IT systems. The application of currently existing import processes will be maintained under the UCC. Thus, this will not lead to major change requirements for the core of existing IT-systems. Nevertheless, the legal evolution will have an impact on the national systems and will eventually require organisational and technical modifications. In 2016, the Member States reported on their activities pertaining to the required system adaptations.

CY, CZ and FI reported progress in defining user requirements. ES focused on national system design, whilst PL performed national acceptance testing in parallel with analysis, modelling, upgrade and maintenance activities. In addition, PL implemented a partial adaptation of the import system to the UCC requirements, whilst ES carried out the necessary changes to meet the UCC requirements during the transitional period. RO developed the functional and technical specifications to align the national import application with the UCC data requirements. PL highlighted that new software infrastructure for customs systems is under development. BG finalised working group activities, which resulted in the preparation of a proposal outlining the scope and requirements for system adjustment. LT upgraded the national Customs Decisions Processing System with the Centralised Clearance functionality. SK developed the system for the automation of import procedures in a paperless environment. This system is operational for standard procedures, while the integration of simplified procedures is ongoing.

Several Member States (DE, EE, IE and PT) reported on activities pertaining to the operational status of the system. Other Member States (BE, BG, RO and SI) informed about the progress on various activities.

4.1.3.8 *Customs Union Performance – Management Information System (CUP-MIS) (2.11)*

Customs Union Performance – Management Information System (CUP-MIS is a performance measuring tool set up to analyse customs activities. Its objectives are in line with the crucial initiatives and documents composed by experts in the field of customs policy.

The inception phase of CUP-MIS started in 2014, resulting in the preparation of the Business Case in 2015. The approval of the Business Case was still pending in 2016. The project status was reported as "frozen" at the ECCG meeting in November 2016.

No activities were reported by the Member States on this project during 2016. However, a few Member States had a dedicated budget to conduct analysis and modelling for future system implementation.

4.1.4 MASP Group 3 - Customs International Information Systems

The third group consists of projects managed by international organisations. The EU and its Member States play an active role in the development of these projects.

4.1.4.1 *Implementation of UNECE eTIR System (3.1)*

The scope of the "eTIR international system" implementation in the EU is twofold: the adaptation of the NCTS to handle TIR operations as defined in the eTIR Reference Model Document[13] and the adaptation of SPEED to enable the exchange of data between the NCTS and eTIR system.

In general, the project is governed by UNECE (United Nations Economic Commission for Europe) and the information on its progress will be updated at Commission level when the tasks are delegated to the contracting parties[14]. In 2016, neither the European Commission nor the Member States initiated any project activities.

4.1.4.2 *EU Implementation of the eATA Carnet Project (3.2)*

The objective of the project is the development of a new European electronic information and communication system called "eATA Carnet System" under the Union law, taking into account the Utility Block for eATA carnet in the framework of the Globally Networked Customs (GNC). The external review of the EU eATA Carnet BPMs has been completed and L3 BPMs were accepted in 2016. During the WCO eATA Carnet Working Group meeting on 04/02/2016, a new alternative was presented by the representatives of the International Chambers of Commerce (ICC). More specifically, a worldwide centralised eATA Carnet system will be developed in order to replace the current WCO concept. ICC is expected to submit a proposal to the contracting parties of the Istanbul Convention, which should decide whether this proposal will be accepted to proceed with Phase 2 (pilot project) of the WCO eATA Carnet project. The project and the Business Case document have been put on hold until a decision is reached. In 2016, neither the Commission nor the Member States initiated any IT activities, with the exception of FR which reported progress on the development of national user requirements.

4.1.5 MASP Group 4 – Customs cooperation initiatives and technological development to facilitate Customs EIS (including current CCN operations)

In the context of MASP fiche grouping, the fourth group consists of customs cooperation initiatives, which address efforts to strengthen cooperation between Member States. The group also focuses on initiatives to accelerate progress in the field of technology with the purpose of creating new functions in the European Information Systems.

4.1.5.1 *National Core Systems Implementation by Collaborating Projects (4.1)*

The Commission and Member States did not report any activities on this project for 2016. However, a few Member States had a dedicated budget to conduct analysis and modelling for future system implementation.

4.1.5.2 *Single Point for Entry or Exit Data (SPEED2) (4.2)*

SPEED is a secure portal which provides a technical infrastructure solution that enables the automated data exchange between the electronic customs systems of Member States and third countries that are not linked to CCN/CSI through EU bilateral or multilateral agreements.

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[13] The document can be found under the following URL link:
https://www.unece.org/trans/bcf/etir/references.html

[14] The list of the contracting parties can be found under the following URL link:
https://www.unece.org/tir/system/countries.html

Several Member States reported on operation activities. During 2016, the SPEED2 platform was reliably running in test, conformance and production environments. The required tools and processes have been configured and tuned to satisfy monitoring, availability, stability, continuity and performance demands. SPEED2 is currently used for the AEO-MRA JP, AEO-MRA CN, SPEED2 TIR RU, EU SW-CVED 1.3.1 and FATCA business flows. Moreover, SPEED2 TIR RU business flow was disentangled by the SPEED2 platform and is ready to accommodate SPEED1/NCTS TIR RU, resulting from the decommissioning of SPEED1 infrastructure. More business flows are planned to be implemented with SPEED2, such as OECD-CTS, EU SW-CVED 1.4.0 and 2.0.0, NCTS TIR-RU (Migration), TIR-Ukraine, TIR-Moldova, AEO MRA-USA, AEO MRA-Canada, AEO MRA-Norway, SSTL (CN) and CRMS (CN).

4.1.5.3 *Master Data Consolidation (4.3)*

The Member States did not report any activities. Likewise, no IT activities were reported from the Commission as the project objectives will be achieved on a system-by-system basis. However, a few Member States had a dedicated budget to conduct analysis and modelling for future system implementation.

4.1.5.4 *Single Electronic Access Point (SEAP) (4.4)*

The components related to the implementation of SEAP will be carried out with a focus on the new IT systems developments to the extent that the concept of SEAP should be considered for each new IT system. From the Commission side, the project should be rolled out within the lifecycles of various other projects (CD, BTI, COPIS, etc.) and interlinked with the UUM&DS project. The Member States did not report any particular activities in 2016.

4.1.5.5 *CCN2 (4.5)*

Although the CCN2 project has proved to be more difficult than anticipated, the DG TAXUD CCN2 team made significant efforts to keep up with the planning for the key milestones. Almost the entire CCN2 infrastructure was delivered, installed and configured in DG TAXUD's Data Centre.

In 2016, CCN 2 Release 1 PROD, a prerequisite for the timely entry in production of CD, faced delays due to a number of defects detected during the testing process. The update of CCN2 specifications in order to fix outstanding documentation defects is progressing. The CCN2 Reference Application which is used as a blue print for future business application developments using CCN2 was delivered and tested. A minor update was also delivered in order to implement changes introduced by the upcoming CCN2 Platform patch 5. In addition, the specification and design phase are ongoing for CCN2 Release 2 whose scope is the integration of legacy CCN/CSI interfaces in order to phase out existing CCN/CSI gateways. Business System Process models, functional specifications, user interface specifications, Master Test plans and most of the IRDs were finished during 2016.

Member State activities relating to CCN2 involved progress in terms of the design of national systems, drafting of technical specifications, national user requirements and training. CCN2 Mode 1 (connectivity) CT was carried out by FI, FR, HR and PL. The national project teams collaborated with the Commission in working groups, examining requirements and analysing CCN2 service implementation, CT and environment setup in view of the CCN evolution.

4.1.5.6 *Uniform User Management and Digital Signatures (UUM&DS) – Direct Trader Access to EIS (4.6)*

In 2016, the UUM&DS project progressed as planned. UUM&DS Release 1 deployment in CT is ongoing. The final FSS/TSS and the Master Test Plan were approved by Member States at ECCG level with the test design specifications and acceptance test plan under preparation. 18 Member States participated in the UUM&DS Collaboration Project Group and pilots. The UUM&DS project pilots 1 and 2 tests were completed successfully for 10 Member States. Pilot 3 end-to-end testing is still in progress.

Many Member States reported progress on the UUM&DS project at a national level. The major part of activities was related to the analysis of requirement, CT and documentation of national developments. During 2016, CZ completed the design of the national system and introduced changes to the Identity and Access Management System (roles and representation). SI, BG, EE and HU analysed national IAM systems, reviewed documentation and prepared technical specifications, whereas LT drafted the Terms of Reference for the development of the national UUM&DS project. Current project activities in DE are related to the use of the central UUM&DS component, however the planning process is targeted towards integration within a wider "Citizens and business customer portal" to be developed by the Federal Customs Authority.

4.1.5.7 *High Availability DG TAXUD operational capabilities (4.7)*

In order to build the capacity for high availability, the Commission has developed high availability and disaster recovery capabilities in the two DG TAXUD data centres hosted in Luxembourg. In 2016, new servers and storage capacity were deployed in these data centres to handle new operational and technical requirements.

The following projects were successfully completed during 2016:

- Provision of full High Availability/Disaster Recovery capabilities in the DG TAXUD data centres involving 39 legacy applications;
- Data Centre network interconnection: capacity upgrade has been completed along with end to end testing;
- Implementation of Virtual Machine (VM) and out of band management (OoB) access. This project is meant to improve the security by segregating the production flow of traffic with the management traffic.

4.1.5.8 *Maintenance and Updates of Operational IT systems (4.8)*

This section provides an overview of the trans-European systems operations in 2016, including error rate evaluation and system availability. The figures contained in the section depict the evolution of the message volume exchanged on the common domain within a certain period of time.

This section places emphasis on NCTS, ICS and ECS operations and maintenance, with the exception of LT that reported activities related to TARIC3 in its 2016 national progress report. The majority of Member States reported on ongoing maintenance and enhancements of the operational systems. Among the maintenance activities carried out, the analysis of RfCs and the implementation of the Known Error Lists (KELs) were the most prevalent.

4.1.5.8.1 *New Computerised Transit System (NCTS Phase 4)*

2016 marked an important development in NCTS operations. RS acceded to the Common Transit Convention[15] joining the NCTS procedures on 01/02/2016. The operational status of NA-RS activities was satisfactory with a limited number of movements and a low number of rejections. An increase in the number of movements starting in TR was observed after RS joined NCTS. Based on the legal changes defined in the UCC, the exchange of IE011 message ended on 01/05/2016. All common domain messages related to NCTS (except for IEs from NA-TR activated on 11/10/2016 and the non-duplicated IEs from NA-CH) are automatically duplicated by DG TAXUD to OLAF and filtered by OLAF since 01/09/2016 pursuant to the legal provisions. A full scope CT activity started in 2016 and is still ongoing. The new Belgian NTA is expected to be deployed after the completion of the related CT campaign.

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[15] Convention on a Common transit procedure of 20 May 1987

With regard to maintenance and modifications to the NCTS, the RfC-List.28 contained various improvements and corrective changes which had a positive impact on the quality of global operations during 2016. The upcoming RfC-List.29 (containing five RfC proposals) was formally accepted during the 20th ECCG meeting on 05/10/2016 with an implementation date of 01/10/2017.

During 2016, 10.5 million transit movements were released. Figure 1 depicts the evolution of movements since 2006, the average number of which reached 41.495 movements released per business day (+3% compared to 2015). The total number of messages exchanged on the common domain increased in 2016, while a relative stability was observed in the previous years. The improvement in the quality of operations is depicted in the decrease of the average error rate in 2016 with very limited major issues throughout the year.

In 2016, Member States mainly reported on maintenance and enhancements of the transit system.
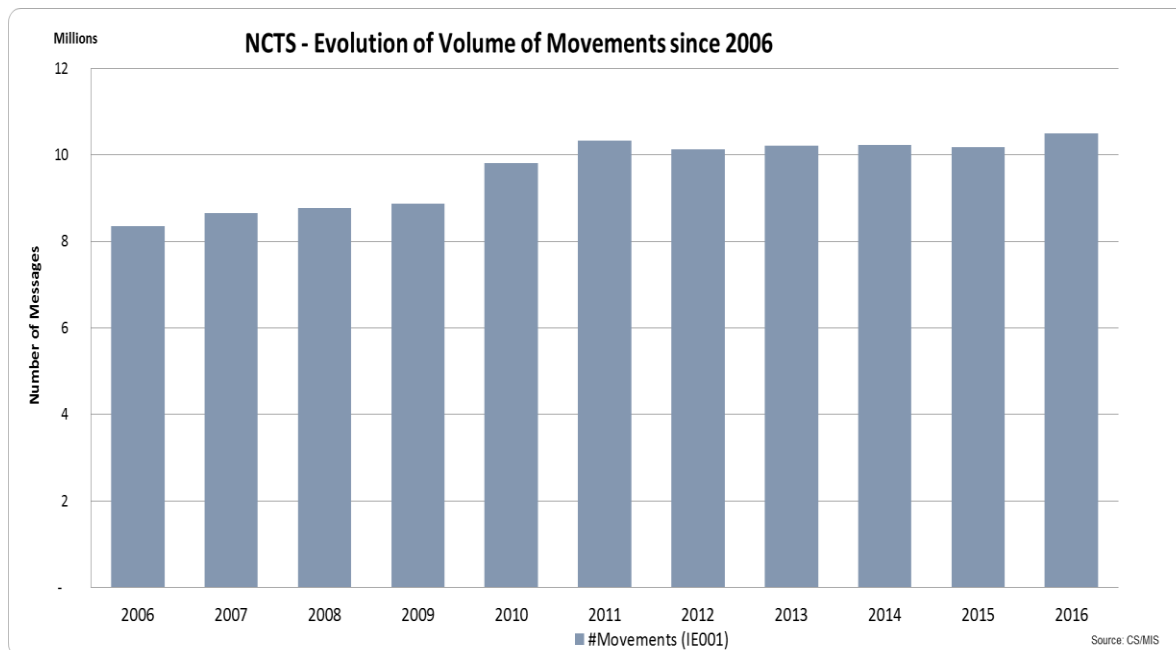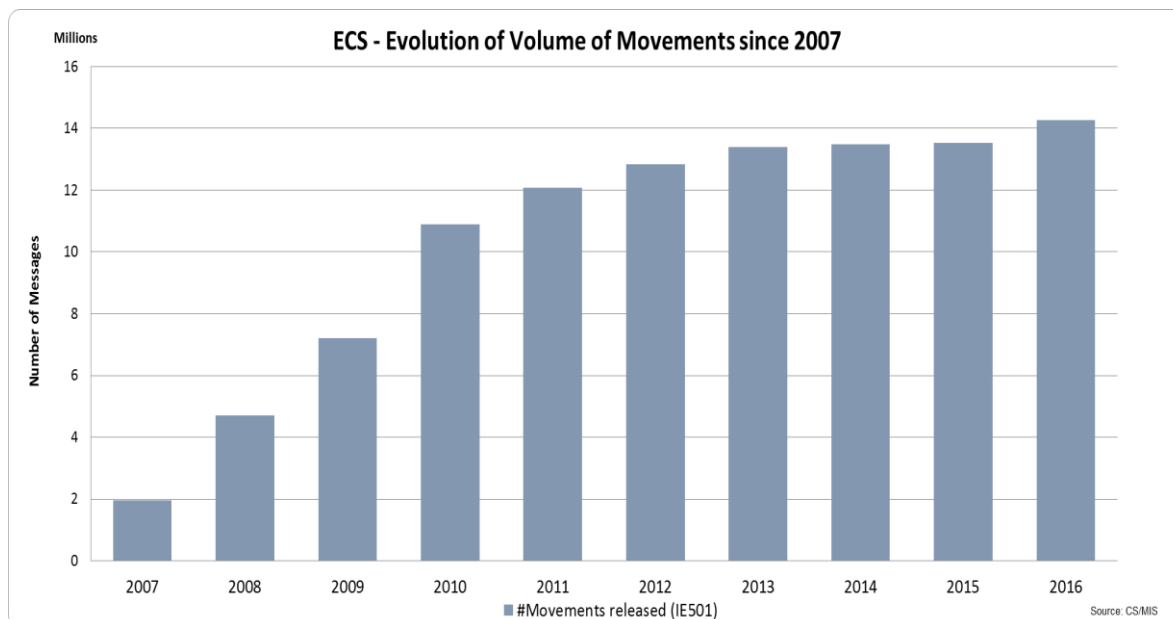

Figure 1: NCTS - Evolution of movements (message IE001)

4.1.5.8.2 Export Control System (ECS Phase 2)

Similar to the NCTS, the RfC-List.28 had a positive impact on the quality of global operations during 2016. The upcoming RfC-List.29 containing four proposals will be implemented on 01/10/2017.

The number of movements released (approximately 14.3 million electronic messages 'IE501') during 2016 represented an increase compared to 2015. The evolution of movements depicted in Figure 2 demonstrates that the number of ECS messages exchanged annually between the Member States in the common domain grew by 15% from 2010 to 2016. The error rate has declined since 2011 as a result of the continuous efforts of NAs (supported by DG TAXUD) to improve their application. In 2016, the error rate increased, mainly impacted by performance issues in NA-BE between February and mid-May, without, however, affecting the traders.

Based on the legal changes introduced in the UCC, the reference data update was applied to CS/RD for 38 document types with a validity date of 01/05/2016. Since 01/09/2016, all the ECS common domain messages are automatically duplicated by DG TAXUD to OLAF, and filtered by OLAF in accordance with the legal provisions. A significant number of error messages were triggered by archiving old movements and 'out of sequence' rejections (in export followed by transit cases) with no business impact on traders. In addition, two full scope CT activities were conducted. The new Dutch NECA (declaration system) passed CT and started its deployment in March 2016 which was completed after multiple waves in December 2016. The new Polish NECA successfully passed CT in August 2016 but a deployment date has not yet been set.

Figure 2: ECS - Evolution of movements released (message IE501)

4.1.5.8.3 Import Control System (ICS Phase 1)

The latest RfC-List.28 was also deployed in December 2016 for ICS, having a positive impact on the quality of global operations during 2016. The forthcoming RfC-List.29 containing four proposals will be implemented on 01/10/2017.

As depicted in Figure 3, approximately 45 million movements were lodged in the EU during 2016 with an increase of 8% compared to 2015. Significant variations in comparison with 2015 were recorded in the Member States, showing an increase in activity of up to 90% (FI, NL, DE) and a decrease of up to -25% (BE, PL, EL). The most noteworthy variations were observed in FI (+90%), NL (+30%), DE (+17%) and BE (-25%), PL (-12%), EL (-5%). The main contributors remained DE with 31% of the overall ENS, followed by UK and FR (both at 16%), which sum up to an aggregate of approximately 63% of the total ENS lodged. In addition, about 60% of the total ENS movements were submitted for air transport.
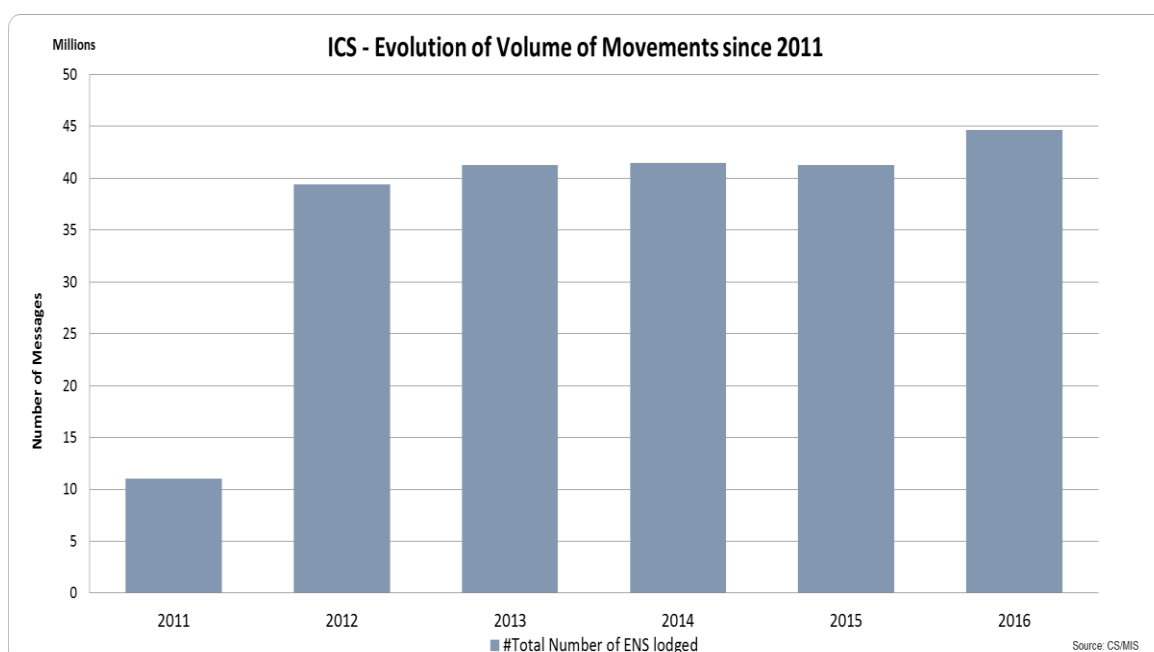
Figure 3: ICS - Evolution of number of ENS

4.1.5.9 *Business Continuity (4.9)*

In 2016, the Commission drafted Business Continuity Concept Paper v.2 to define the general approach to business continuity as guidance to further prepare and update the specific operational agreements that need to be concluded and implemented in cooperation with Member States. These agreements will establish the necessary requirements for the availability of the electronic systems and the business continuity procedures in case of temporary unavailability of relevant IT systems. The Business Continuity Concept Paper, discussed at the ECCG meeting on 05-06/10/2016, primarily focused on the rules to be applied in case of system unavailability, introducing a classification of availability requirements divided into three categories A (high availability), B (limited high availability) and C (medium availability). In addition, the document included new systems, such as the CD, Guarantee Management (GUM) and any other reference data which requires proper processing in a given transaction system.

For information purposes, this report also presents a statistical overview of the Common Communication Network (CCN), which experienced steady growth over 2016. The CCN applications exchanged 4.54 billion messages marking an increase of 39,10% over 2015 when 3.27 billion messages were exchanged. This growth is contributed to the increase of message quantity and volume raised by 14,20% (5.81 TBs) in 2016 compared to (5.09 TBs) in 2015.

Figure 4 below delineates the evolution of CCN message quantities and volume exchanged since 2008.
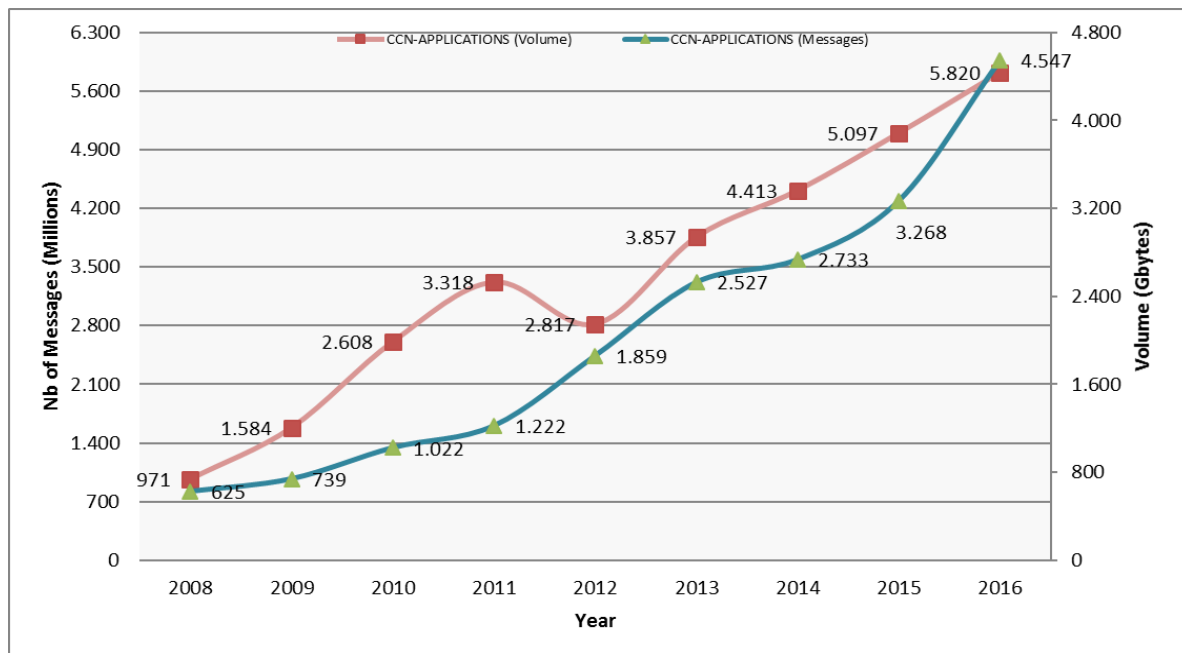
Figure 4: Evolution of CCN message quantities/volume

This figure reflects a recovery increase in the rising[16] number of exchanged messages through the years. In 2016, the number of exchanged messages presented a significant growth of 19,57% over 2015. However, the volume growth[17] depicts a slight decrease of 1,35%.

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[16] Since 2015 the number of messages have a continues growth from 19,56% to 39,13% in 2016.

[17] In 2015, the message volume was 15, 52%, experiencing a slight decrease of 14,17% in 2016.
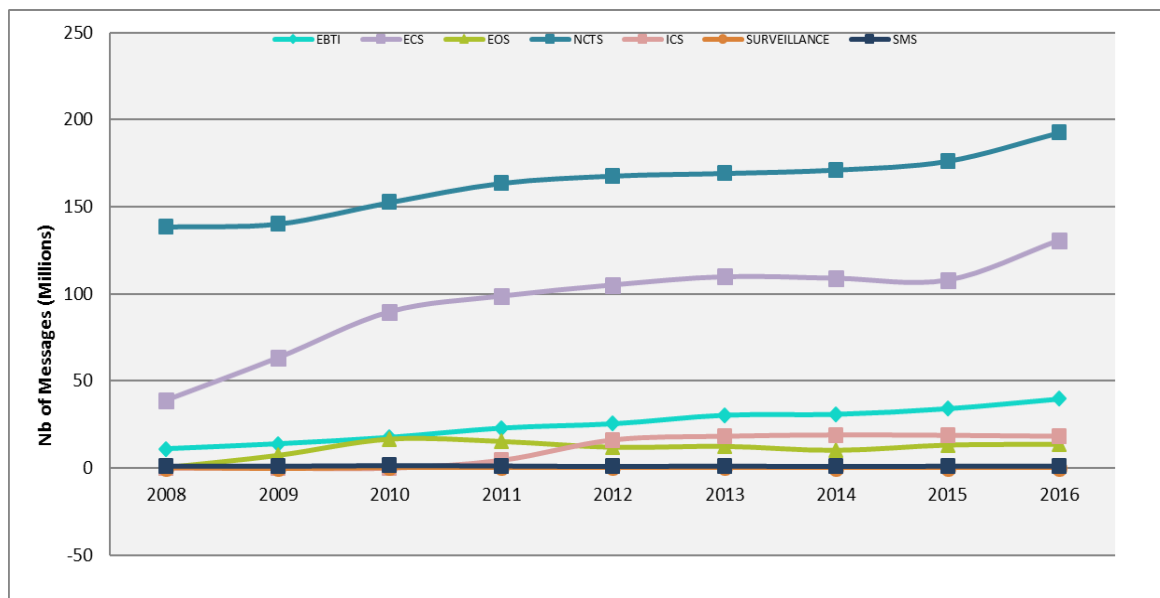
Figure 5: System message evolution

Figure 5 presents the evolution of the exchanged message quantities over the years for NCTS, ECS, ICS, EOS, EBTI, Surveillance and SMS. In comparison to 2015, SMS, EBTI, EOS, ECS, Surveillance and NCTS experienced an increase in 2016, whereas ICS indicated a minor decrease.
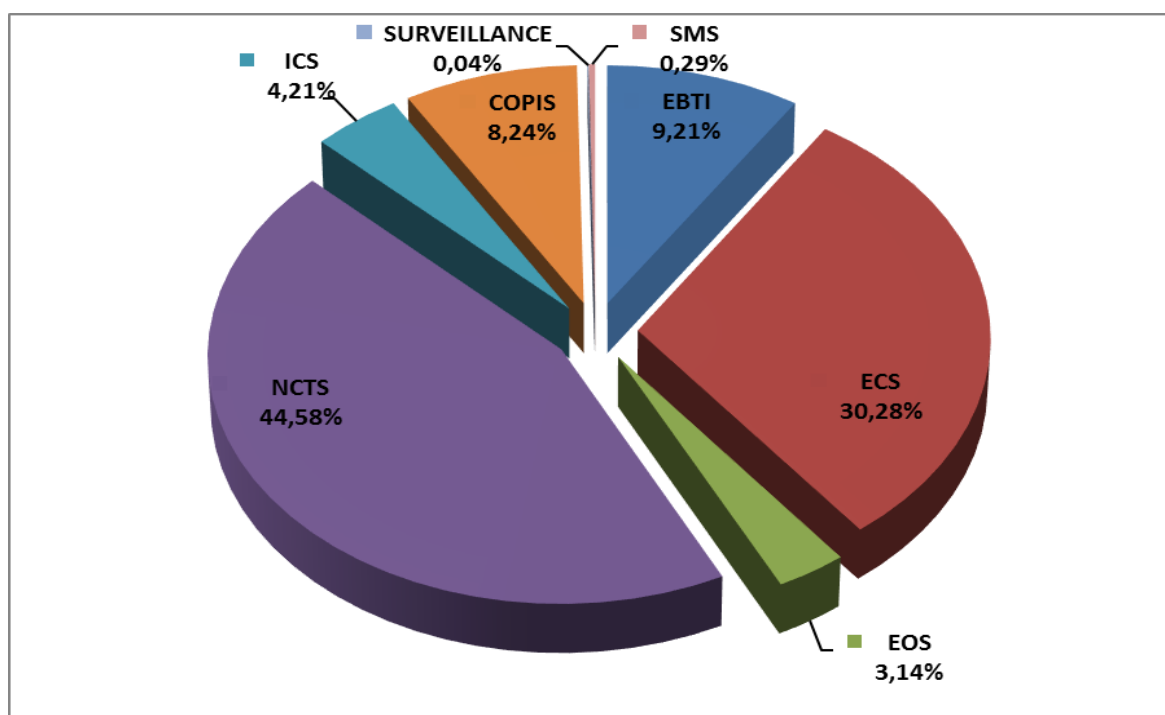
Figure 6: CCN messages distribution per application

Figure 6 depicts the number of messages exchanged per system (NCTS, ECS, ICS, EOS, EBTI, Surveillance, COPIS and SMS). The quantity of messages exchanged by the movement systems, such as NCTS, ECS, and ICS, constitutes 79, 07% of the total messages exchanged by all systems versus 78,30% in 2015. Hence, this percentage has experienced a slight increase of 0,77%.

4.2 Other National Projects and Activities

In their 2016 national progress reports, Member States provided information about other national projects and activities. AT completed the implementation of UCC requirements on national e-customs and other systems for 01/05/2016. EE upgraded the national TARIFF/QUOTA systems by implementing the Arctic Customs AB software solution. The simplified mobile version of TARIFF

query system is planned to be developed in the following year. IE volunteered to conduct backward compatibility testing with the Commission and updated user lists from CS/RD to CS/RD2.

During 2016, LV reported that the national Electronic Customs Data Processing System modules (ICS, ECS, TCS, EORI, eManifest/TS) were maintained and improved in alignment with the UCC requirements. LV carried out significant changes pertaining to system architecture by generating several independent subsystems to improve system availability and performance. In addition, LV developed a document archiving solution which was installed in the production environment in December 2016.

4.3 Supporting activities

An objective of the EU Customs Union in the context of electronic customs reform is the support for cooperation between the different customs administrations of the Member States at national level. This approach toward cooperation contributes to ensuring coherence of customs operations by spreading best practices and increasing coordination between customs authorities and other relevant public authorities or economic operators. In addition, this approach has the potential to produce far-reaching benefits in terms of harmonising working methods for customs control and improving governance structure.

In 2016, Member States reported on their main activities related to the promotion of e-Customs services, training for customs officials, consultation with economic operators, as well as activities carried out between e-Customs and other e-Government systems.

4.3.1 Supporting tools used for collaboration and communication between EU and EU Member State administrations

The Commission continued to take an active role in facilitating supporting application tools for the effective coordination of the e-Customs projects. Two of the main supporting tools that have been developed for sharing information and improving business processes are PICS (Programmes Information and Collaboration Space) and ARIS Publisher.

PICS is an online collaboration and document sharing tool used to support tax and customs administrations across the EU. Led by DG TAXUD, this platform offers the Commission and the Member States administrations an online space for cooperation to increase the efficiency and flexibility of the Customs 2020 Programme activities. Similarly, ARIS is a software tool designed to support the continuous improvement of the EU customs business modelling approach. In 2016, all ARIS environments were upgraded to the more stable and featured version 9.8.4, which accelerated the performance and preparation of BPM releases.

4.3.2 Consultation with economic operators

In order to facilitate the implementation of the e-Customs IT projects and to promote the transparency of national measures, the Member State administrations have taken significant steps towards maintaining a regular dialogue with trade representatives and economic operators. Over the past year, the Member States organised a series of seminars, workshops and meetings in close cooperation with the trading community to introduce recent developments related to the technical, legal and business arrangements in the field of e-Customs. In addition, special attention was given to the needs of economic operators in fostering an environment that is conducive to collaboration through information sharing and consultation initiatives.

The Member State customs authorities regularly informed trade associations and economic operators of the potential impact of the UCC-related changes on the national IT systems. The majority of meetings organised with trade representatives addressed recent procedural and legislative changes brought about by the UCC adoption. More specifically, these meetings tackled issues like system functionality/interface/implementation for projects, such as "UCC CD", "UCC REX", "UCC BTI", "UCC AEO and impacts of MRA", "UCC Automated Export System (AES)", "UCC Transit System including NTCS" and "EU Customs Single Window Programme."

The past year saw significant progress towards spearheading electronic initiatives to simplify procedures for economic operators. In this context, seminars, webinars and information sessions were specifically organised to inform economic operators on the present and expected future developments in the field of e-Customs, exploring procedures pertaining to the UCC Notification of Arrival, Presentation Notification and Temporary Storage, and addressing common challenges in several key areas, including the new CD, adjustments of the import applications and AES, EU CVED-SW solution, XML specifications relating to UCC-related changes to ICS, to name a few. The economic operators were informed through their affiliated bodies, relevant forums or online consultations.

In particular, FI organized 14 trader co-operation meetings and 35 seminars/webinars for traders with a total of 1010 participants from 426 companies. EE published 29 customer instruction bulletins and 28 customer notices on the national customs website for training purposes. In addition, EE introduced the new National TARIFF system, while addressing official letters to banks and economic operators with the intention of identifying their specific needs and priorities. Moreover, DE conducted ad-hoc workgroup meetings for many port and terminal operators as well as express carriers to improve the quality of operational behaviour.

4.3.3   Training for Customs officials and other competent officials

The effectiveness of the e-Customs initiative can only be achieved by placing due emphasis, among other factors, on the skills and the training of the customs officials who manage the day to day customs operations. The changing dynamics of the e-Customs environment demand a common core of high quality training and consultation on customs law and IT system procedures. In this respect, Member States conducted numerous training sessions, seminars and workshops with customs officials, focusing primarily on the alignment of IT systems with the EU customs legislation.

In 2016, an extensive UCC EU eLearning programme[18] has been developed and deployed to support the implementation of the new Union Customs Code (UCC). This programme was organised by DG TAXUD under the Customs 2020 programme in collaboration with 70 customs experts from national authorities and the private sector. The UCC EU eLearning programme concentrated on understanding the implications of the UCC changes and its application on customs processes affecting existing and future systems. This eLearning programme has been developed in levelling modules containing in total 17,5 hours of learning material. The development of the UCC eLearning programme started in 2015 and was gradually released from March to May 2016. These modules are addressed both to customs officers and economic operators in the EU. In addition, it is also important to note that the courses provided in the eLearning programme can run on a stand-alone basis. With regard to the following analysis, a detailed explanation can be found in DG TAXUD's report[18].

15 Member States have confirmed using the modules provided for the full curriculum of eLearning programme courses in 2016. This represents an uptake of 197 country-courses to train a minimum of 23.685 trainees. As regards the EU eLearning usage, a total of 305 courses have been registered whereby 220 took place in English and 105 in other EU languages. The current figures indicate that the UCC eLearning programme courses have been downloaded 12.920 times from the Europa website.

Based on user satisfaction surveys, the full UCC eLearning programme pertaining to the UCC-related changes and its implementation performed very well with an average score of 76,2 out of 100 where 75 stands for 'very good' (additional information can be found in the EU eLearning Monitoring Report 2015-2016[18]).

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[18] More details are available on Europa webside: http://ec.europa.eu/taxation_customs/eu-training/general-overview_en and upon request from DG TAXUD.

In cases where the learning objectives were met with an average score of 80,8 for the full UCC eLearning programme courses, some problems were encountered due to the lack of sufficient information, thereby affecting the learning retention.

With reference to the report[18], Figure 7 illustrates that, with a few exceptions, all UCC-related courses score above 75 (equivalent to 'very good') on all quality parameters.
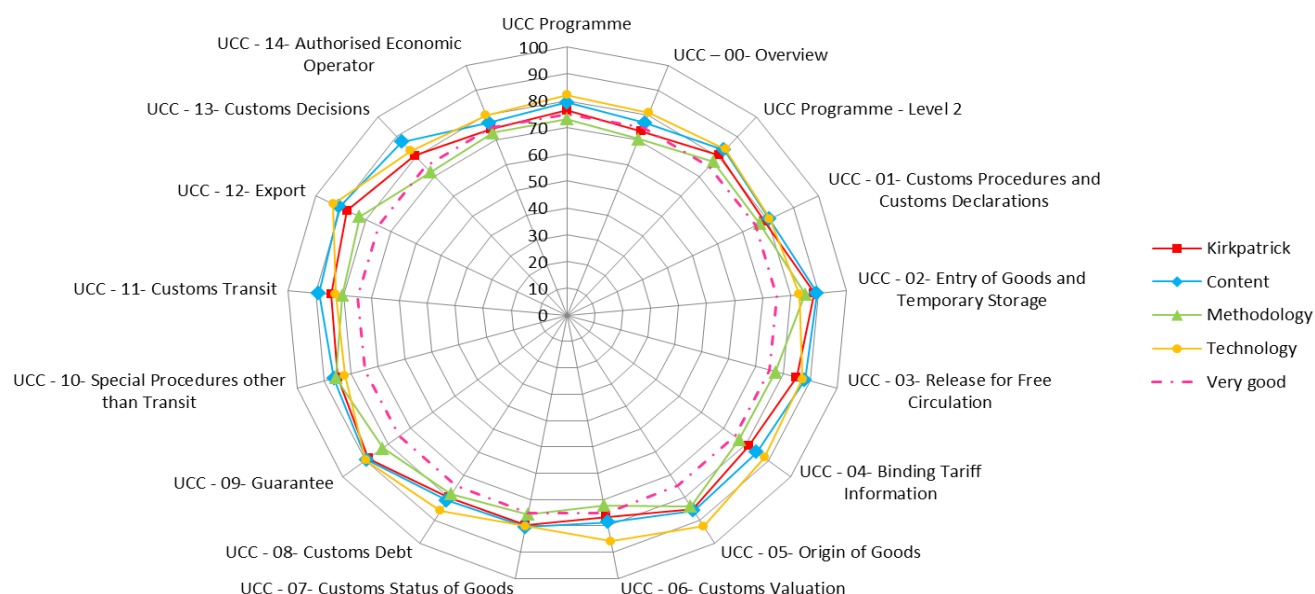
Figure 7: User satisfaction - UCC EU eLearning programme (Jan 2017)

By the end of 2016, the Registered Exporter System (REX) was also developed and delivered as part of the UCC EU eLearning programme. In addition to the usual target audience of EU customs officers and economic operators, this course is also addressed to the competent authorities and economic operators of the beneficiary countries (i.e. India). Member States were also offered the opportunity to localise the course based on a partnership agreement. Thus far, 5 partnership agreements have been established with FR, HU, PL, RO and SI. Concurrently, beneficiary countries have also been given the opportunity to set up on-site training courses regarding the REX system under this partnership agreement. Since the REX system was available as of 01/01/2017, the eLearning courses encompassing REX modules were delivered at the end of 2016. During this period, 670 users were trained.

The Member States organised various seminars and workshops throughout 2016 at ministerial level on an as-needed basis. Several customs administrations offered online courses and trainings engaging in projects, such as *UCC PoUS, UCC NA, PN and TS, UCC-related changes to ICS, Adjustment of the existing import applications under the UCC, UCC CD, UCC BTI, UCC AES, UCC NCTS, UCC UUM&DS* and *UCC REX*. In addition, training documentation was also developed on a continuous basis, addressing the new *UCC AES, UCC NCTS, UCC CCN2* and *UCC REX* projects.

In 2016, EE prepared a manual user for the national TARIFF system. Various meetings concerning IT technology & infrastructure issues and webinars pertaining to the CCN2 project were hosted by PL customs' authorities in partnership with the Ministry of Finance. Special-purpose trainings were also organised on the national system ("COTS" software) used in the development of NCTS PL2. CS/RD2 training sessions were also organised to ensure the correct synchronisation of reference data from the CS/RD2 to the national domain. During this training, specific instructions related to the extraction of reference data for customs systems, such as NCTS, ECS, were provided to the CS/RD2 users.

In addition, bilateral and multilateral meetings were held in connection with the EU Single Window initiative. Prior to this project's deployment rollout, CZ organized Specialised Certification Courses

for its customs officials, focusing on restrictions and prohibitions with a particular emphasis on CITES permits and certificates as well as veterinary goods.

4.3.4 Promotion and implementation of e-Customs services

The promotion of cooperation within national customs administrations constitutes an integral factor in optimising customs process flows. In 2016, the Member State authorities conducted various meetings and seminars with project working groups, national partners, trade contact groups, governmental and customs institutions, national veterinary services, tax authorities, IT support centres, chambers of commerce, economic operators and technical universities in order to promote an integrated levels of administration working together to ensure a uniform functioning of the EU Customs Union.

The promotion activities were targeted at the ongoing task of developing and implementing the following projects, "UCC AES", "UCC NCTS", "UCC NA, PN and TS", "UCC-related changes to ICS", "UCC GUM", "e-CLO systems" and "CCN2". EE introduced and promoted the national e-customs solution to different organisations and three customs administrations. HU published information regarding new ECS and NCTS functions after minor changes were initiated on the national level. CZ promoted the implementation of GUM e-Customs services and measures taken to enable full use of the systems within the National Trade Contact Group. In addition, CZ also promoted the CCN2 solution and changes foreseen on the national level, especially to e-Customs IT project team leaders and national applications developers. PL promoted the implementation of e-Customs services for the national AIS and AES systems in the context of the legal provisions concerning the UCC Special Procedures. Through NCTS liaison officials and local trainers, PL also promoted the NCTS PL2 project to the traders and local businesses.

4.3.5 Coordination of e-Customs with other e-Government systems or activities

In order to coordinate activities between the e-Customs domain and other e-Government services, the Member State customs authorities supported a large number of key meetings and extensive collaboration in the technical assistance field to ensure the coherence of all operations related to e-Customs. In 2016, coordination activities on national MASP projects were managed through cooperation with various ministries, ICT departments, tax administrations, national banks, economic operators, certification and statistical authorities, customs clearance, excise and legal service units, national competent authorities for veterinary control as well as port and immigration authorities. The objective was to inform all relevant stakeholders on the necessary requirements to implement the MASP and e-Customs related projects in terms of concrete measures to put into place.

The following Member State initiatives were highlighted among the important efforts deployed in 2016 in view of coordination activities for the MASP projects:

- In PL, NCTS2 was interfaced with CS/RD, CS/MIS, ATIS, SPEED, the national Risk Management System, EORI/EOS/AEO, national guarantee management system, AES, AIS, Customs Tariff System, Safe TIR and TRACES for the verification of the CVED certificates. The system also used the nationally developed mechanisms for user authentication, user access control and the digital signature of messages. In order to achieve the required level of interoperability with other IT systems, the NCTS PL team was involved in intensive coordination activities with other project teams. UCC AES was interfaced with the national Risk Management System, EORI/EOS/AEO, Customs Tariff System, EMCS application, NCTS2, reference data processing system (PDR), the national system of the Agricultural Market Agency in order to balance the CAP export licence (AGREX). Furthermore, PL organised working meetings with representatives from Ministry responsible for the NSW implementation according to directive 2010/65/EU and the preparation of interface between ICS and NSW.

- During 2016, HR upgraded the national ECS system with a new functionality regarding integration with risk analysis, and reporting about control after risk analysis, maintenance, implementation of improvements, analysis of new AES documentation and documentation of RfC-List.29.

- With respect to the Single Window project, CZ collaborated with DG TAXUD and DG SANTE via the EU Single Window CVED Project, and with Ministry of Environment, national Agricultural agency, Ministry of industry and Trade on a national level. In BG, the SW project required close cooperation within the national customs administration and the national competent authority for veterinary control.

- By closely cooperating with the IT Centre of the Ministry of Finance, EE reviewed the Surveillance3 Business Case document. In addition, EE made changes to the existing guarantee management systems in coordination with the customs and revenue departments.

- With regard to UUM&DS, AT carried out coordination activities with the national eIDAS team (Federal Chancellery), the AIM system and the national business register.

- In order to implement the MASP-related obligations, BG fulfilled the national e-Customs Roadmap 2016-2020, which includes measures and requirements related to the integration of national projects pertaining to MASP. These measures and requirements are specified in the national BCA IAM system for the national functionalities that will provide direct trader access to EIS.

5   COSTS

5.1   Costs incurred by DG TAXUD on IT systems development in 2016

Figure 8 depicts the Commission's costs committed under the 2016 budget for IT system development and maintenance as well as customs coordination. The common Customs 2020 joint action costs pertain to participation costs in the programme events, such as the ECCG and the technical sub-group meetings. Other costs associated with joint actions that cover IT training sessions under the Customs 2020 programme are also included in this category.

System/Activity			Commission Committed budget for 2016 (EUR)
	Customs Projects	AEO MR adaptation	150.000,00
		UCC Customs Decisions	750.000,00
		UCC Proof of Union Status (PoUS)	200.000,00
		UCC BTI Phase 2	200.000,00
		UCC Automated Export System (AES)	250.000,00
		UCC Common and Community Transit System (UCC NCTS)	300.000,00
		REX	342.000,00
		UCC Guarantee Management	300.000,00
		UCC Special Procedures (information sheets)	200.000,00
		Surveillance 3	800.000,00
		UCC Strengthening the Security of the Supply Chain at Entry (including Air Cargo Security) and Customs Risk Management in the EU	600.000,00
		CLASS	544.000,00
		EU implementation or eATA	100.000,00
		CRMS-CN	400.000,00
		Customs Union Performance	250.000,00
		Suspensions 2	150.000,00
		TIR data exchange with Moldova and Ukraine	100.000,00
		Uniform user management & digital signature (UUM&DS)	1.205.000,00
		IT architecture Customs	1.100.000,00
	Total:		*7.941.000,00*
CCN2			*3.505.112,41*
Studies and Development Total			*11.446.112,41*
Maintenance (corrective/evolutive) of Customs systems			4.852.455,73
Operations of IT systems			29.071.627,77
Communication network CCN/CSI and other meddleware (e.g. SPEED2)			2.000.000,00
Common costs Customs2020	E-customs joint actions - ECCG meetings		755.263,00
	E-customs joint actions - Trainings		290.841,00
Quality Assurance including TEMPO			5.846.031,22
DIH and Data modelling (including interface ARIS and GEFEG consulting and licenses)			407.272,72
BPM			2.000.000,00
Intra-muros services			4.451.295,60
GRAND TOTAL			**61.120.899,45**

Figure 8: Commission allocated costs in year 2016 (expressed in €)

As detailed in Figure 8, the Commission's dedicated 2016 budget for e-Customs has reached 61.120.899,45 €. In contrast to the overall cost allocated in 2015 (64.846.943,70 €), a 5,75% decrease is observed in 2016 due to budgetary restrictions. An additional expense of 96.496,66 € was also reported by the Commission in 2016 incorporating other activities not strictly related to e-Customs. Given that this amount includes various activities not necessarily related to e-Customs, it was excluded from the calculations presented in the table above.

The following Figure 9 represents the main categories of the Commission's costs which were mostly absorbed by two categories, operations and the studies and development of IT systems as illustrated in the graph below. In comparison to 2015, IT systems operations' costs had a significant increase of 210% in 2016. This occurred as a result of the implementation and development of CS/RD2 project that became operational at the end of 2016. In addition, this increase includes the deployment preparation for REX and UCC Customs Decisions projects, which are scheduled to be implemented in 2017. Moreover, the system studies and development cost decreased in 2016 also due to budgetary restrictions.
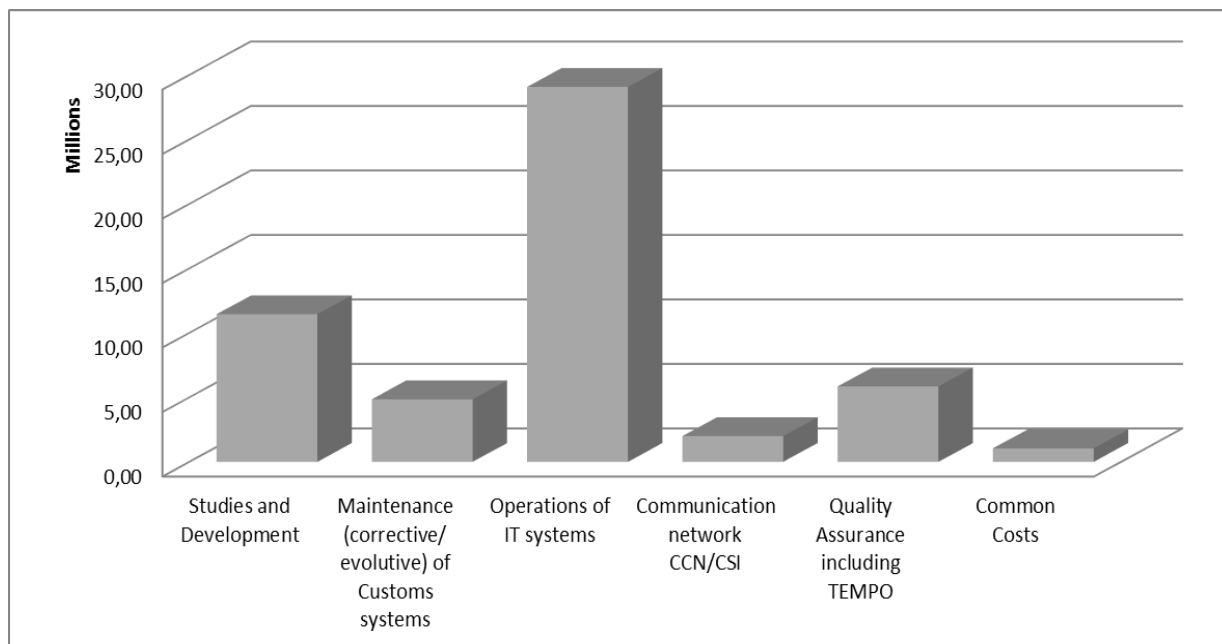
Figure 9: Main categories of Commission Costs in year 2016

5.2 Costs incurred by Member States in 2016

The Figure 10[19] below illustrates Member States' investment per project according to the MASP Revision 2014, as reported in the national annual reports.

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[19] The Master Data Consolidation (4.3) project is excluded from the graph due to zero cost reported.
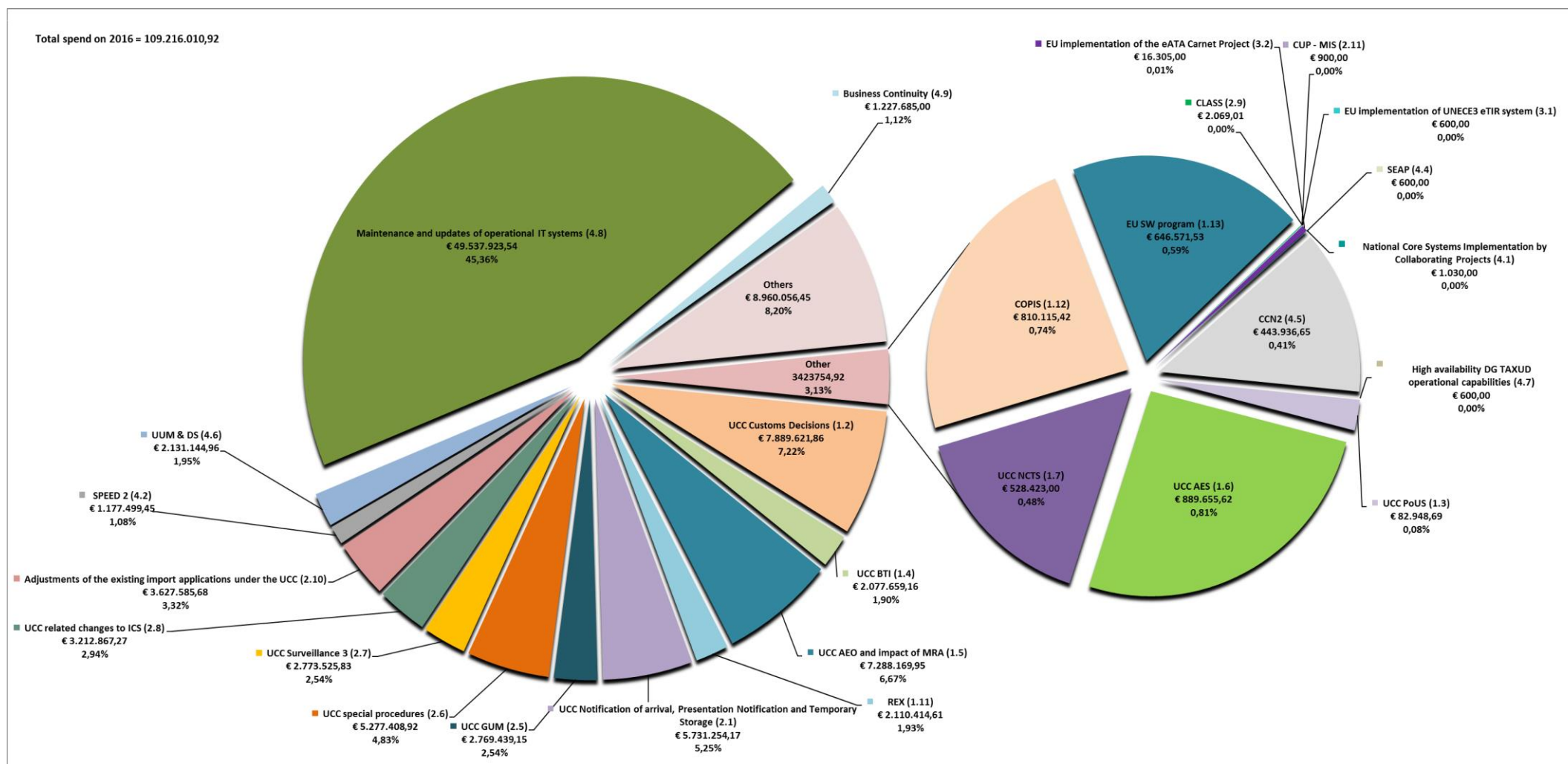
Total spend on 2016 = 109.216.010,92

Maintenance and updates of operational IT systems (4.8)
€ 49.537.923,54
45,36%

Business Continuity (4.9)
€ 1.227.685,00
1,12%

Others
€ 8.960.056,45
8,20%

Other
3423754,92
3,13%

UCC Customs Decisions (1.2)
€ 7.889.621,86
7,22%

UUM & DS (4.6)
€ 2.131.144,96
1,95%

SPEED 2 (4.2)
€ 1.177.499,45
1,08%

Adjustments of the existing import applications under the UCC (2.10)
€ 3.627.585,68
3,32%

UCC related changes to ICS (2.8)
€ 3.212.867,27
2,94%

UCC Surveillance 3 (2.7)
€ 2.773.525,83
2,54%

UCC special procedures (2.6)
€ 5.277.408,92
4,83%

UCC GUM (2.5)
€ 2.769.439,15
2,54%

UCC Notification of arrival, Presentation Notification and Temporary Storage (2.1)
€ 5.731.254,17
5,25%

UCC AEO and impact of MRA (1.5)
€ 7.288.169,95
6,67%

REX (1.11)
€ 2.110.414,61
1,93%

UCC BTI (1.4)
€ 2.077.659,16
1,90%

EU implementation of the eATA Carnet Project (3.2)
€ 16.305,00
0,01%

CUP - MIS (2.11)
€ 900,00
0,00%

CLASS (2.9)
€ 2.069,01
0,00%

EU implementation of UNECE3 eTIR system (3.1)
€ 600,00
0,00%

SEAP (4.4)
€ 600,00
0,00%

National Core Systems Implementation by Collaborating Projects (4.1)
€ 1.030,00
0,00%

EU SW program (1.13)
€ 646.571,53
0,59%

CCN2 (4.5)
€ 443.936,65
0,41%

COPIS (1.12)
€ 810.115,42
0,74%

High availability DG TAXUD operational capabilities (4.7)
€ 600,00
0,00%

UCC NCTS (1.7)
€ 528.423,00
0,48%

UCC AES (1.6)
€ 889.655,62
0,81%

UCC PoUS (1.3)
€ 82.948,69
0,08%

Figure 10: Member States costs of Customs IT systems in 2016

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Member States had to report on 27 MASP 2016 projects. The number of reported projects remained 27 from 2015 to 2016 due to reporting on the same MASP Revision 2014 that was considered for both years of reporting for e-Customs projects. However, the total number of projects reported was 26 due to no activities on Master Data Consultation (4.5). According to Figure 10, the greatest share of the Member States' budget in 2016 was consumed for the maintenance and updates of the operational IT systems which constituted 45,36% of the total expenditure. However, this figure was considerably reduced to 60,50% in 2015. This decrease was primarily due to the substantial functionality of the operational systems. As such, the need for updates and maintenance required in 2016 is less. In addition, the UCC Customs Decisions (1.2), UCC AEO and impacts of MRA (1.5) and the UCC Notification of Arrival, Presentation Notification and Temporary Storage (2.1) absorbed approximately 6,38% of the overall expenditure (respectively 7,22%, 6,67% and 5,25%). Furthermore, a noteworthy increase was observed in the expenditure of "Other" projects, holding an aggregate percentage of 8,20% of the total investment and representing an increase of 1,84% from 2015. This indicates that the Member States began the alignment of their national systems when the UCC came into force. As regards the UCC Customs Decisions (1.2), REX (1.11), CCN2 (4.5) and UUM&DS (4.6), Member States achieved a substantial increase (3,22%, 0,03%, 0,23% and 1,72% respectively) in budget expenditures throughout 2016 in comparison to 2015. This increase is contributed to the fact that particular attention was paid to REX (1.11) which became operational at the beginning of 2017 with the UCC Customs Decisions (1.2) to follow in the same year. Likewise, this increase was reflected in the budget allocation for CCN2 (4.5) and UUM&DS (4.6) since they serve as the supporting technology to the aforementioned projects.

The following Figure 11 depicts the comparison between the operational and non-operational IT systems' costs, consuming respectively 45,36% and 57,64% of the overall system expenditure reported in 2016. A significant increase of 18,94% has been recorded for non-operational IT systems in 2016 (57,64%), compared to 38,70% in 2015 and 19,50% in 2014. The cost increase related to the fact that Member States allocate their budget for the existing system in order to align them with the UCC implementation.
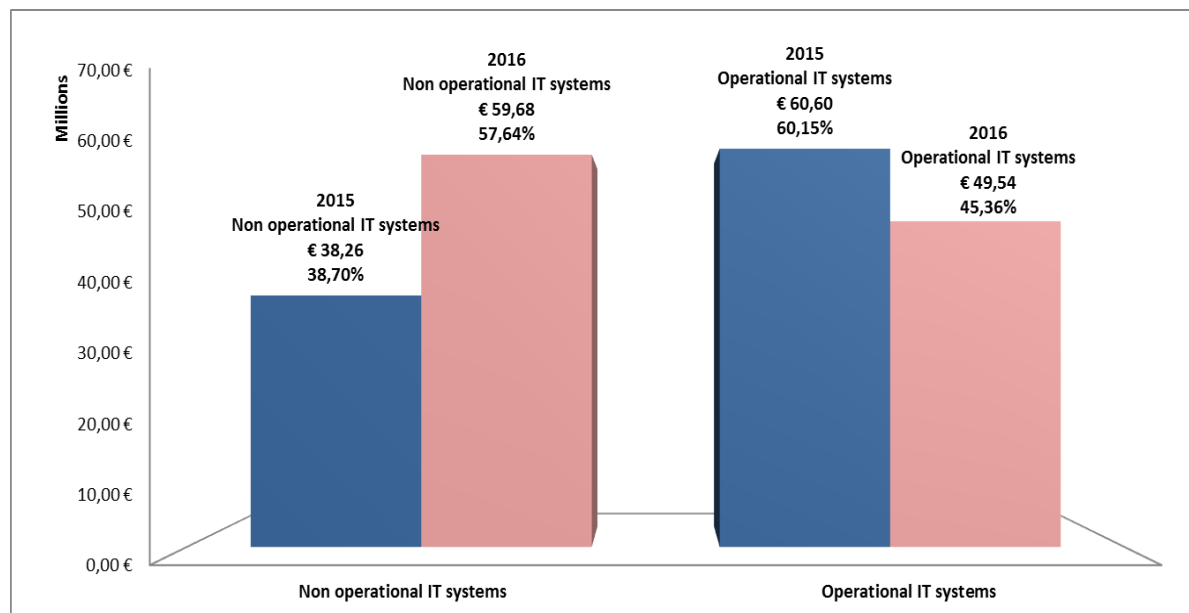
Figure 11: Costs on Operational IT systems and non-Operational IT systems as part of all systems in 2016

Figure 12 presents the accumulated cost of the MASP Revision 2014 project groups. Group 1 refers to the Customs European Information Systems (EIS), Group 2 relates to Customs European initiatives' that require further analysis and agreement, Group 3 encompasses Customs International Information Systems, and lastly, Group 4 presents Customs cooperation initiatives and technological developments to facilitate Customs EIS, along with the maintenance of existing projects. The main budget consumption consisting in 49,92% was absorbed by Group 4. Group 1 consumed 20,44% of the total budget followed by Group 2, which utilized 21,42%. In contrast,

Group 3 consumed only 0,02% of the overall budget for MASP groups. In relation to 2015, it is worth noting that the significant increase from 6,36% to 8,20% in the operations of the project group "Others".
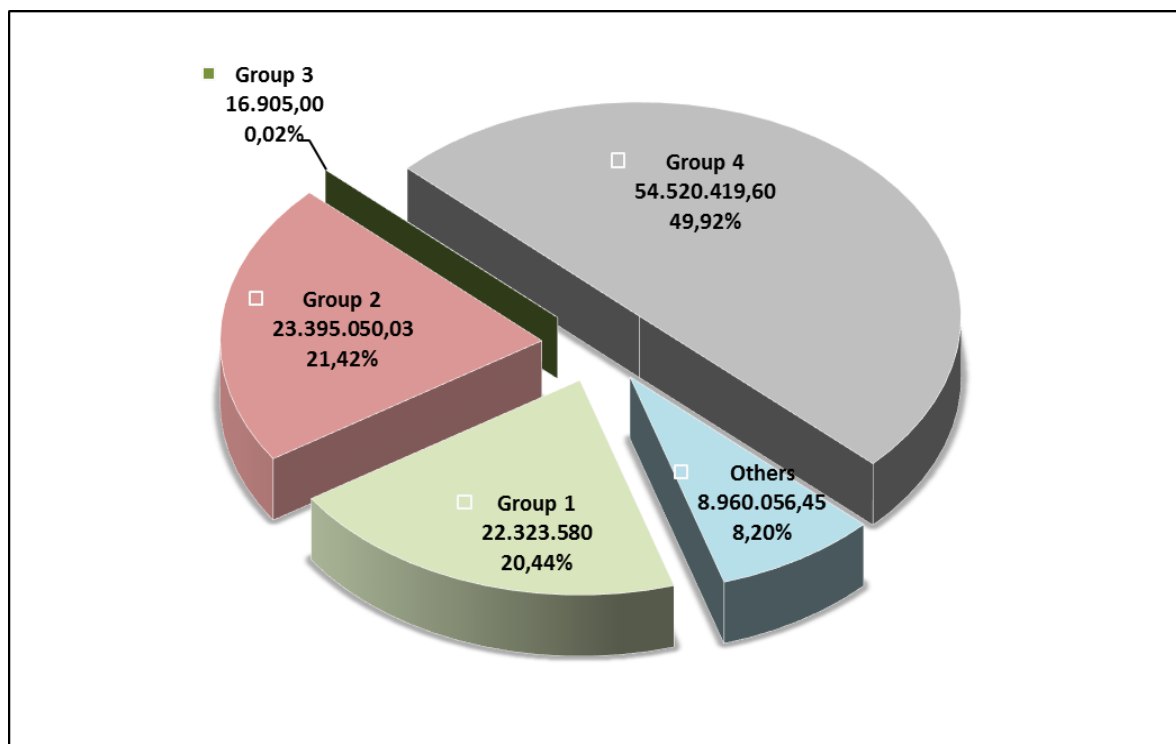

Figure 12: Cost spent per MASP revision 12 Project Groups

Analogous to the data cost figures provided in the Member State annual progress reports, it is observed that:

- The number of Member States that contributed budgetary information is not the same throughout the years. More explicitly, 22 Member States reported in 2008, 25 in 2009, 23 in 2010, 12 in 2011, 25 in 2012, 24 in 2013, 22 in 2014, 24 in 2015 and 25 in 2016.

- Various approaches pursued by Member States result in diverse reporting for the project phases and/or costs associated to them (i.e. project progress, software/hardware costs). This expenditure is aggregated under the respective project as reported.

- The national systems could be developed on common platforms and the costs of numerous systems are noted only under one reference baseline. This affects the results and the accuracy of the data.

Figure 13 depicts the overall allocation of Member States' costs in 2016. The main utilization of Member States budget is apportioned mainly on MASP project groups that absorb 63% of the total cost, wherein "Maintenance" and "Others" consume 31% and 6% of the overall budget respectively.
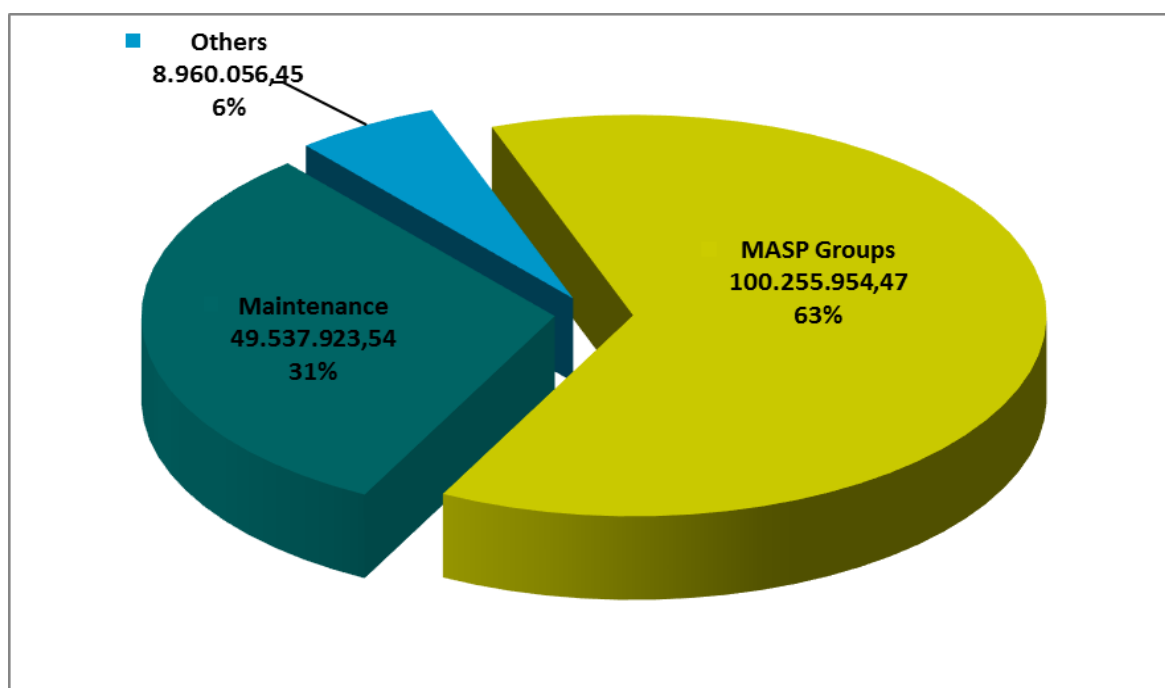
Figure 13: Distribution of Member States' expenditure

Figure 14 below presents the total investment of Member States in customs IT systems for the period 2008-2016. It is noteworthy to mention that the cited figures are not directly comparable due to the uneven number of Member States reported over the years. The number of the reporting Member States is respectively presented at the top of each bar for all the years.
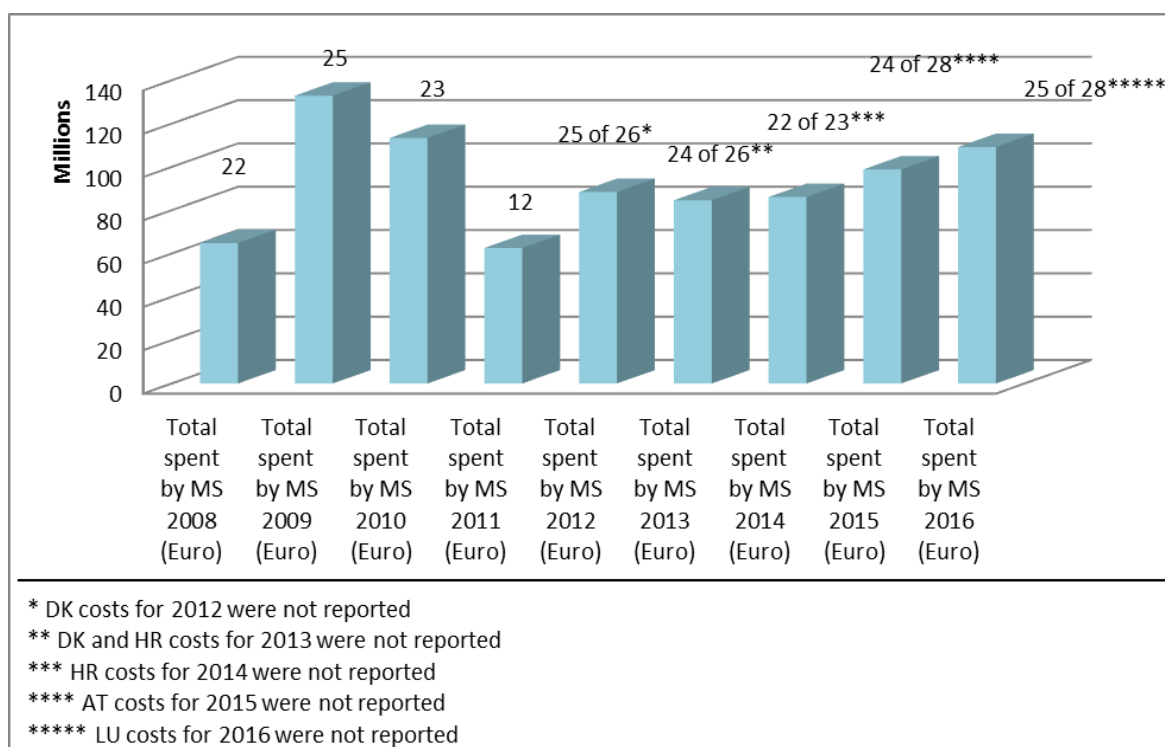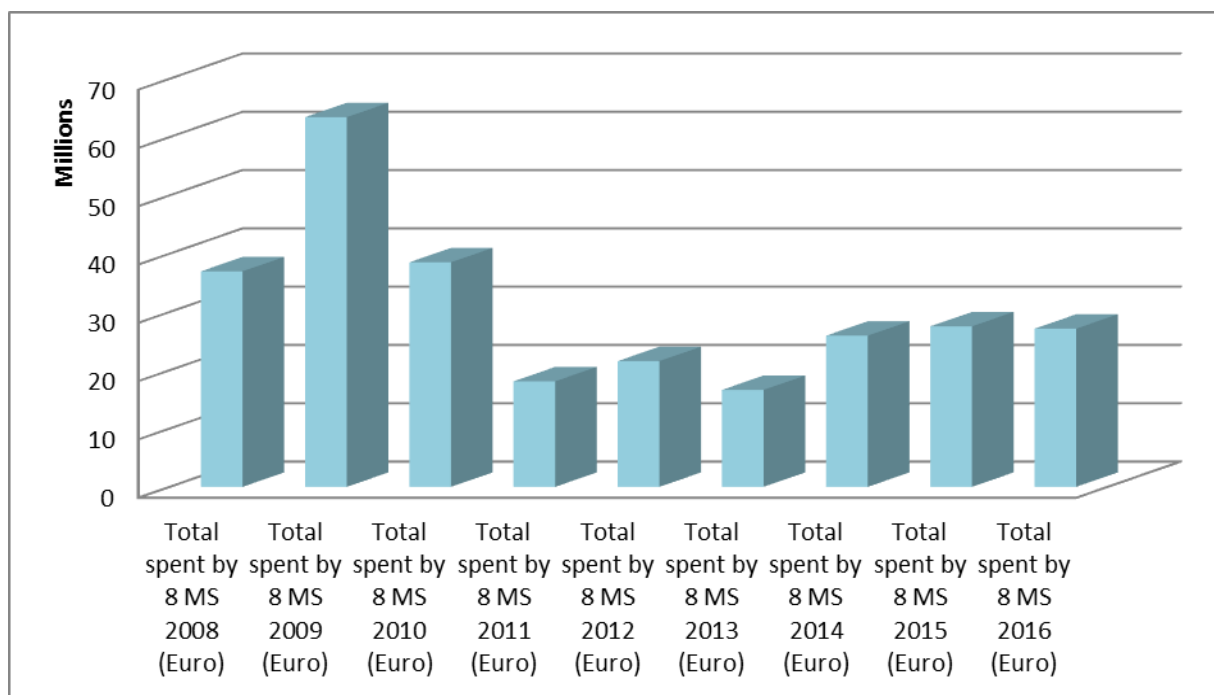

Figure 14: Member States' costs, 2008-2016

Figure 15 delineates the average cost per Member State through the years 2008-2016. The total sum dispensed by Member States for each year is divided by the number of Member States reported in the aforementioned time period.
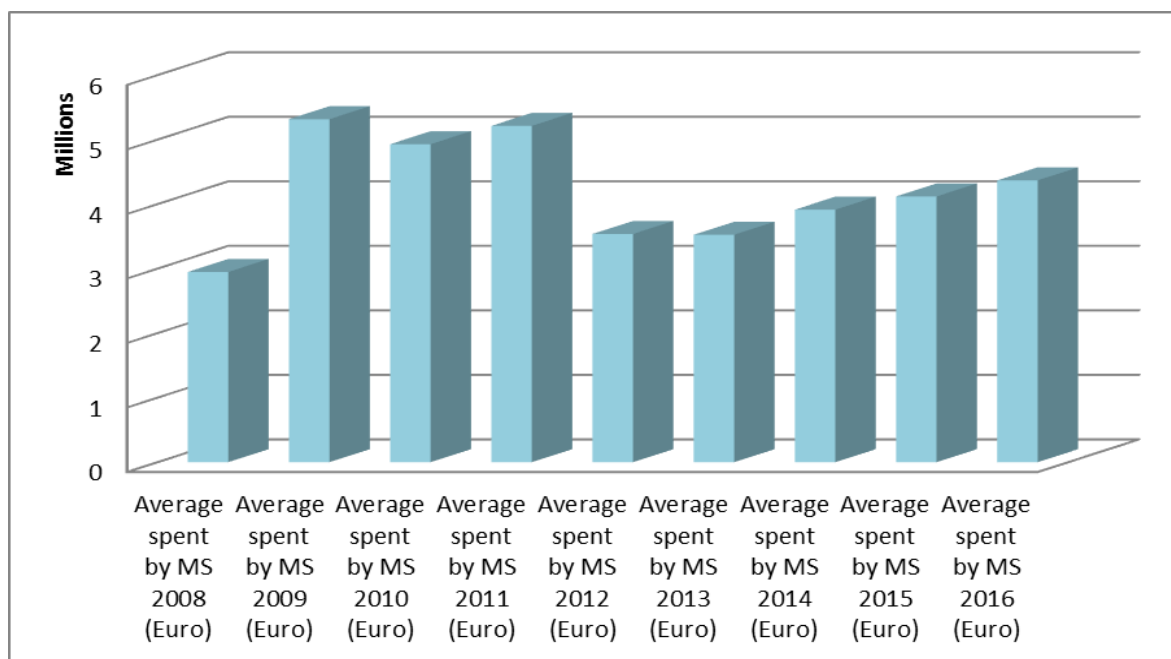
Figure 15: Average Member States' costs, 2008-2016

As shown in the figure above, the average disbursed cost per Member State has increased by 7,3% in 2016 compared to 2015. As demonstrated in the graph, the total project expenditure dropped to its lowest levels (22,91%) in the period between 2012 and 2013, however the past three years were marked by a rapid increase, reaching 63,16% in 2016.

This sharp trend reversal is also justified in the following Figure 16, which presents the total amounts utilized by FI, HU, LT, NL, PL, PT, SE, and UK for the period 2008-2016. The expenditure in 2016 has decreased by 1,46% in comparison to 2015. This can be interpreted as a result of the expected new MASP revision 2016 to be adopted which will indicate more realistic project planning for the future projects by setting up the priorities and feasibilities indicated by Members States during the survey conducted in 2016.

**Figure 16: Total costs over the years 2008-2016 for 8 Member States that reported in all years**

Furthermore, Member States' consumption of man-hours is illustrated in the following Figure 17[20] for each project of the MASP revision 2014.

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[20] The Master Data Consolidation (4.3) project is excluded from the graph due to zero working hours reported.

Figure 17: Member States' man-hours for Customs IT systems in 2016

According to Figure 17, the main proportion of the utilization of man-hours in 2016 was the maintenance and updates of the operational IT systems, incorporating 61,32% of the total time spent. This consumption is proportional to the Member States' cost that was absorbed by the Adjustments of the existing import application under the UCC (2.10), UCC Customs Decisions (1.2) and UCC Notification of Arrival, Presentation Notification and Temporary Storage (2.1) projects, which employed a great share of the man-hours by consuming 9,74%, 4,69% and 2,87% respectively.
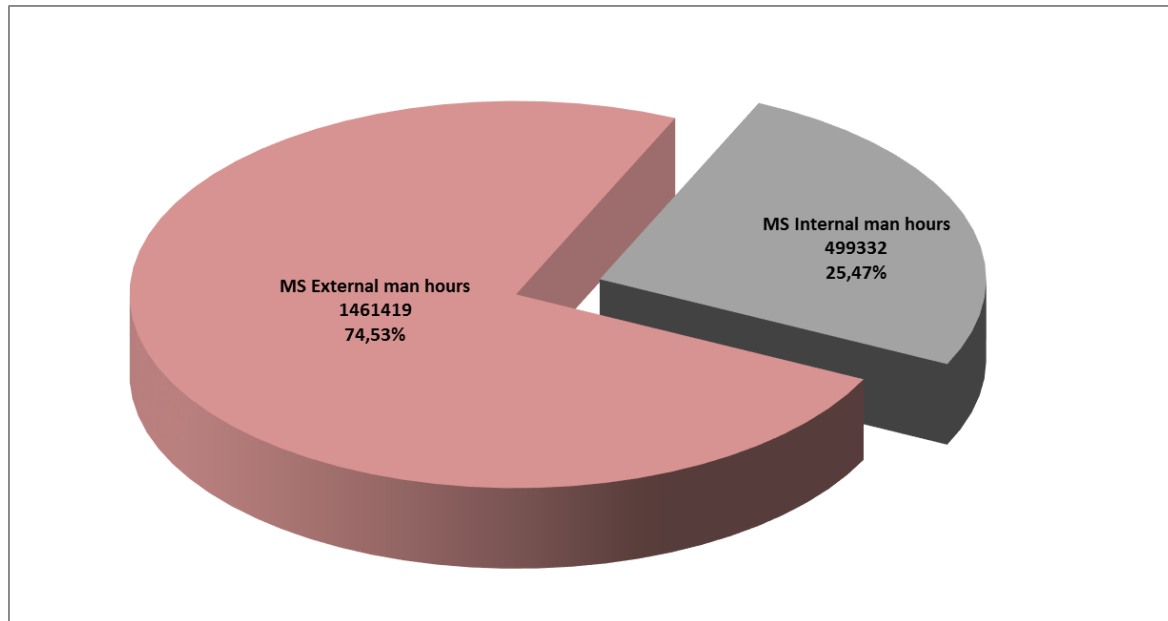
Figure 18: Member States' man-hours consumed in 2016

Lastly, Figure 18 displays the man-hours that the Member States have devoted to all MASP projects in 2016. As illustrated in the figure above, the external man-hours make up the majority of the projects' operation, more explicitly 74,53% in contrast to the internal man-hours that absorbed 25,47%.

6 ACRONYMS AND ABBREVIATIONS

Acronym	Description
AEO	Authorised Economic Operator
AES	Automated Export System
AFA	Application for Action
AFIS	Anti-Fraud Information System
AGREX	Export Licence for exports of agricultural products from the Community
AIM	Automated Infrastructure Management System
ARIS; ARIS9.8.4	Architecture of Integrated Information Systems (DG TAXUD has chosen ARIS produced by IDS-Scheer as a technical supporting tool for the business process modelling following the Commission overall policy of using ARIS software platform); New version ARIS9.8.4
ATIS	Anti-Fraud Transit Information System
BCP	Business Continuity Plan
BOI	Binding Origin Information
BPM	Business Process Modelling
BTI	Binding Tariff Information
CAP	Common Agricultural Policy
CBG	Customs Business Group
CCC-GEN	Customs Code Committee – General Customs Legislation section
CCI	Centralised Clearance for Import
CCID	Centralised Clearance Import Design
CCN; CCN2	Common Communication Network; Common Communication Network 2
CD	Customs Decisions System
CDCO	Centrally Developed/Centrally Operated
CDM	Customs Data Model
CDMS	Customs Decisions Management System
CED	Common Entry Document
CERTEX	Certificates Exchange Project
CETA	Comprehensive Economic and Trade Agreement
CLASS	Classification Information System
COM	European Commission
COPIS	Anti-Counterfeiting and Anti-Piracy System
CPG	Customs Policy Group
CRMS	Customs Risk Management System
CRS	Customer Reference Services
CS/MIS	Central Services - Management Information System
CS/RD; CS/RD2	Central Cervices – Reference Data; Central Cervices – Reference Data 2

Acronym	Description
CSI	Common Systems Interface
CT	Conformance Test
CTS	Common Transmission System
CUP-MIS	Customs Union Performance – Management information System
Customs 2020	EU cooperation programme providing national customs administrations with the possibility to create and exchange information and expertise
CVED	Common Veterinary Entry Document
CVEDA	Common Veterinary Entry Document for Animals
CVEDP	Common Veterinary Entry Document for Animal Products
DA	Delegated Acts
DG MOVE	Directorate General for Mobility and Transport
DG TAXUD	Directorate General for Taxation and Customs Union
DG SANTE	Directorate-General for Health and Food Safety
DRP	Disaster Recovery Plan
eATA	Electronic Admission Temporaire/Temporary Admission
EBTI	European Binding Tariff Information
ECCG	Electronic Customs Coordination Group
ECS	Export Control System
ECSP2	Export Control System Phase 2
eIDAS	Is an EU regulation on electronic identification and trust services for electronic transactions in the internal market. It is a set of standards for electronic identification and trust services for electronic transactions in the European Single Market.
EIDR	Entry into Declarant's Records
EIS	European Information System
EMCS	Excise Movement and Control System
EMSA	European Maritime Safety Agency
ENS	Entry Summary Declaration
EORI	Economic Operators Registration and Identification
EOS	Economic Operators System
eTIR	Electronic TIR
EU	European Union
EXP	Export
FATCA	Foreign Account Tax Compliance Act
FMES	Functional Message Exchange Specifications
FSS	Functional System Specifications
FTSS	Functional Transit System Specification
G2G	Government to Government

Acronym	Description
GEFEG	GEFEG software is used to model data formats and develop implementation guidelines for data interchange standards. GEFEG is the only software tool that brings together modelling, XML schema development, and editing of classic EDI standards under a unified user interface.
GNC	Globally Network Customs
GSP	Generalised System of Preferences
GUM	Guarantee Management System
GUMD	Guarantee Management System Design
GW	Gateway
HTML	Hypertext Markup Language
IA	Implementing Act
IAM	Identity and Access Management
ICC	International Chambers of Commerce
ICS; ICS 2.0	Import Control System; Import Control System 2.0
IE	Information Exchange identifier
INF	Information Sheet
IRD	Interface Requirements Document
IT	Information Technology
KEL	Known Error List
L1 BPM	Level 1 – Global BPM (overview of EU Customs Business Domain and Global Business Data).
L2 BPM	Level 2 – High Level BPM (interactions between the main Business Processes with each EU Customs Business Domain).
L3 BPM	Level 3 – Business Requirement BPM (Flow of the legal and business tasks within each main business process and the interactions between the involved stakeholders).
L4 BPM	Level 4 – Functional Requirement BPM (i.e. functional specification) (Flow of the envisaged system; information exchanges; data rules and conditions; requirements trees; test cases and scenarios).
MASP	Multi-Annual Strategic Plan
MRA	Mutual Recognition Agreement
MR	(AEO) Mutual Recognition
NA	National Administration
NECA	National Electrical Contractors Association
NCTS; NCTS2	New Computerised Transit System; New Computerised Transit System 2
NSW	National Single Window
NTA	National Transit Application
OJ	Official Journal
OECD	Organisation for Economic Co-operation and Development

Acronym	Description
OLAF	European Anti-Fraud Office
OoB	Out of Band Management
PDR	Reference Data Processing System
PICS	Programmes Information and Collaboration Space
PN	Presentation Notification
PoUS	Proof of Union Status
QUOTA	Electronic system for quota management / allocation
REX	Registered Exporters System
RfC	Request for Change
RTC	Rational Team Concert tool
SAD	Single Administrative Document
SEAP	Single Electronic Access Point
SMS	Specimen Management System
SP	Special Procedures
SPEED; SPEED2	Single Point for Entry or Exit of Data; Single Point for Entry or Exit of Data 2
SSTL	Smart and Secure Trade Lanes
Surveillance; Surveillance2; Surveillance3	A central database (managed by DG TAXUD) providing statistics for all products imported into the EU customs territory and for certain products exported from the EU customs territory
SURV-RECAPP	Surveillance Reception Application
SW	Single Window
SW-CVED	Single Window – Common Veterinary Entry Document
TARIC 3	Integrated Tariff of the European Communities 3
TB	Terabyte
TCS	Trade Customs Solutions
TEMPO	TAXUD Electronic Management of Project Online
TIR	Transports Internationaux Routiers / International Road Transports
TMES	Technical Message Exchange Specifications
TP	Trader Portal
TRACES	Trade Control and Expert System
TSS	Technical System Specifications
TS	Temporary Storage
UCC	Union Customs Code
URL	Uniform Resource Locator
UUM&DS	Uniform User Management & Digital Signature
UCC WP	Union Customs Code Work Programme
UNECE	United Nations Economic Commission for Europe

Acronym	Description
VM	Virtual Machine
WCO	World Customs Organisation
XML	Extensible Markup Language
Country Codes	http://www.iso.org/iso/country_codes.htm (ISO 3166)