

# EU launches a new Customs Data Model based on WCO standards

By **Frank Janssens,**

HEAD OF UNIT,

and **Jean-Luc Delcourt,**

HEAD OF SECTOR, CUSTOMS PROCESSES, DATA AND PROJECT MANAGEMENT UNIT,

EUROPEAN COMMISSION DIRECTORATE-GENERAL FOR TAXATION AND CUSTOMS UNION

Between 2016 and 2020, many new electronic Customs systems will be developed within the European Union (EU). The new systems will have new data requirements based on a new WCO compatible data model, called the EU Customs Data Model (EU CDM). The EU CDM will enable further harmonization of electronic data requirements within the EU, and build a three-tier interoperable structure from the global level to the regional and national levels. Among the expected results are enhanced regional integration, better interconnection between Customs and other administrations active at the border, as well as between Customs and economic operators.

IN 2018 THE EU will celebrate the 50 year jubilee of its Customs Union. During its half century in existence, this Customs Union has not only extended its geographic coverage, but gradually harmonized and integrated its procedures too.

The next important step consists of the implementation of the Union Customs Code (UCC), adopted on 9 October 2013 as EU Regulation No 952/2013 of the European Parliament and of the Council, which provides for further EU-wide common procedures and for many new electronic Customs systems with new data requirements.

The initiative meets the need for Customs to adapt its ways to the current trade environment and to respond to the opportunity to improve data exchange efficiency, as well as the quality of information supplied by economic operators.

Optimizing data exchange is indeed critical to the efficient functioning of trade facilitation related projects which require seamless cooperation between involved

public authorities, such as the setting-up of a Single Window environment and the implementation of new developments in the field of supply chain security.

### Three-layer approach

Successfully tackling the above challenges requires an organized and well-documented approach that provides standardization where needed, but which leaves enough freedom for managing information exchanges where regional and national contexts so require.

As a first layer, and as a seminal basis for any further developments, the WCO Data Model (WCO DM) provides the required global approach and offers the needed harmonization to make cooperative work possible with other public services active at the border.

The WCO DM approach not only has indubitable global trade facilitation advantages, but also offers opportunities to further expand regional integration. Where a group of countries wish to enjoy the economic and political advantages of regional

integration, this comes with specific sets of common legislation and administrative practices, which include commonly agreed data requirements and structures.

The EU integrated approach, insofar as data management for Customs is concerned, has found its concrete form in the EU CDM, which constitutes a second layer of development, meant to be entirely compatible with the first one, i.e. the WCO DM.

Whilst the EU Customs Union has achieved remarkable integration, some Customs and border formalities remain nationally defined. The EU CDM, built upon the WCO DM, enables the establishment of national Customs data models as a third layer of completion and detail, themselves compliant with the two others. This layer is especially useful where automated national Customs systems, which need to be compatible with other EU instruments, are developed.

### The EU CDM

From a formal point of view, the information collected by Customs is published

in the Official Journal of the EU as annexes to the UCC Implementing Acts (IA) and Delegated Acts (DA), currently under adoption. They establish the required legal basis for data requirements that need to be provided by economic operators, and also enable all concerned to access, in all the EU's official languages, the legal details which form the basis of the EU CDM.

From a practical point of view, the EU Commission has decided to use a specific tool to develop and maintain the EU CDM – the tool that was already chosen by the WCO to distribute its Data Model. This tool offers many practical advantages, not only providing a source of information for international standards used, but also the environment where data requirements are managed.

The tool comes pre-loaded with the WCO DM and other agreed international standards. As such, it offered an ideal starting environment for mapping EU data requirements against the WCO DM. Whilst doing so, it was found that some EU requirements were not available in

**The WCO DM approach not only has indubitable global trade facilitation advantages, but also offers opportunities to further expand regional integration. Where a group of countries wish to enjoy the economic and political advantages of regional integration, this comes with specific sets of common legislation and administrative practices, which include commonly agreed data requirements and structures.**

for errors when translating the legal provisions into a technical form, usable in the modelling world.

In that respect, beside the auto-generation of documents and structures for publication, the tool can also produce XML schemas – a tool for software designers, used to express the structure and constraints of an XML document – following the WCO XML schema design rules or, should the need arise, following other appropriate formats.

The WCO DM includes Information Packages which are templates for information exchange. As part of these Packages,

the WCO DM or that they needed to be adapted. As a result, regional EU data is being added to the WCO DM to reflect the content of the EU CDM.

The tool enables the automatic generation of the data annexes to the UCC IA and DA for publication in the Official Journal of the EU. This functionality ensures a single source of information for legal and technical instruments, thereby eliminating risks

an EU Customs Information Package, that reflects the requirements of all EU Member States, is being produced.

EU Member States can reuse the EU Customs Information Package to cover national needs beyond the EU CDM. These needs can be administrative, technical or be linked to other data sources – for example, transport or veterinary authorities. In the same fashion as is done at the EU level, Member States can also generate their extended XML schemas, and if they follow the same schema, both levels will be interoperable.

In terms of information dissemination, this methodology allows the EU CDM information to be made available to Member States' administrations and their information technology teams, facilitating the development or updating of their systems.

It also allows other users, such as other administrations or economic operators, to inherit the EU CDM and customize it in accordance with their specific requirements, to the extent authorized by EU law. The publication can be done in the native tool format or in other formats which are more widely available.

#### **The 'Views' options**

Whilst developing the EU CDM, the Commission noted that all procedures related to the UCC could not be mapped to the WCO DM according to the same principles. This stems from the fact that certain economic operators' submissions derive from the transportation world and others from the import/export environment.

As their respective ways of perceiving information differs to a point that they cannot be reconciled within a single mapping structure, they have to be approached according to two different perspectives that imply the definition of two different 'views', namely the 'shipment' view and the 'consignment' view, both equally acceptable within the overall data model.

The EU CDM attaches great importance to ensure that both the shipment and consignment views are available in the WCO DM to fully reflect all trading practices, thereby enabling the adequate mapping of all data submissions received by Customs. Expressed in a simple way, one could say that:

- the 'EU CDM Shipment view' mainly contains traditional Customs declaration information, such as import, export and transit declarations, both in a standard and simplified format;
- the 'EU CDM Consignment view' is more geared towards safety and security information, such as the entry summary declaration and arrival and presentation notifications.

Whilst the perspectives are different, both views are structured in a very similar way with a clear tree structure and an indication of each data element within its own specific place, within the overall structure of the data model.

#### Using the EU CDM

The EU CDM is not only available to EU Member States' Customs administrations as a source of information on EU legislation and as an instrument to manage data in Customs procedures and automated systems, but also offers a number of additional opportunities at the national level:

- The reuse and customization at the national level of the WCO DM and the EU CDM Information Package;
- It provides the basis to cover EU Member States' national requirements by extending the EU CDM Information Package, itself based on the wider WCO DM enriched by data maintenance requests (DMRs) discussed within the WCO's Data Model Project Team (DMPT) and

the Information Management Sub-Committee (IMSC).

From a technical perspective, the EU CDM and the tool used to manage it will enable the auto-generation of national document structure publications for both single documents and their supersets, and the auto-generation of nationally used XML schemas – exchange interfaces of all Member States which follow the same XML design will be technically interoperable.

Both the publication of a national document structure and XML schemas constitute intermediate technical documents, which take the legal requirements and translate them into a readable format for IT developers, enabling software developers to perform their tasks. They include message structures, rules and conditions, as well as specifications, applying to the national document structure and XML schemas.

The EU Member States and economic operators will, beside the legal texts to be published in the EU Official Journal, also be able to obtain the EU CDM in an editable format, such as in pdf, MS Excel and/or MS Word, as well as in a read/print only format directly derived from the tool in a separate 'publishing' environment. For those who decide to choose the tool used by the WCO, the European Commission plans to make available the EU CDM in its native editable format as produced within the tool. Any completion, modification, etc., will need to be performed by the user using a tool of his/her own choice.

#### Coordinated border management

The EU CDM is an excellent basis and tool for integrating the needs and requirements of other administrations active at the border. Special mention should also be made on the establishment of an EU Single Window environment. The EU Council, in its conclusions on this subject, recommended to «accelerate the harmonization of required data by different authorities at the EU and national level, building on existing international standards, and proceeding with the digitalization agenda ». This implies:

- reusing and customizing the WCO DM, in line with the needs of associated

administrations active at the border, in order to establish and operate a Customs Single Window environment;

- implementing national adaptations in combination with the above customizations, whilst ensuring compatibility with the WCO DM and the EU CDM, the objective being to allow administrations to adapt the EU CDM to include their own national specificities which are not provided for in EU law, and therefore not included in the EU CDM – an obvious example being the national fiscal, notably excise, idiosyncrasies that can be different in each Member State;
- including additional border agencies' requirements via the submission of DMRs to the WCO DMPT and IMSC.

In parallel, exploring additional opportunities for cooperation with economic operators is envisaged in relation to the use of the EU CDM for streamlining and automation projects, which should further facilitate and harmonize the exchange of information between Customs and economic operators.

Such initiatives include the data mining tool for the 'Surveillance 2+' system which ensures the collection of data within the framework of import/export monitoring, and the Binding Tariff Information (BTI) system which includes a database of all BTI applications, as well as the Central System/Reference Data (CS-RD2 system) which provides the bedrock for the use of common codes in the EU's multilingual environment.

In this way, Customs will considerably improve its role, both in relation to trade facilitation and control. Moreover, the improved interoperability, induced by better data integration throughout the supply chain and enhanced data quality that will result from the EU CDM, will contribute to a more efficient risk management approach.

#### More information

[Frank.janssens@ec.europa.eu](mailto:Frank.janssens@ec.europa.eu)

[Jean-Luc.delcourt@ec.europa.eu](mailto:Jean-Luc.delcourt@ec.europa.eu)

[taxud-info@ec.europa.eu](mailto:taxud-info@ec.europa.eu)