1. Introduction & Basic Principles for the WCO Data Model

1.1 Background

Information and documentation are key elements in the control of international cross-border trade. In today's interconnected electronic environment, these components will increasingly include Government-to-Government information exchange prior to the arrival of goods in order to provide the necessary level of security and efficient release times.

Standardized and harmonized information requirements and procedures are essential to establish a common understanding which allows for an effective and efficient exchange of information between parties involved in international cross-border movements.

The WCO Customs Data Model provided a common understanding of customs information requirements. The Data Model also provided Contracting Parties to the Revised Kyoto Convention with a global customs standard to implement provisions dealing with reduced data requirements and electronic submission of declarations and supporting documents.

1.2 The G7 Customs Initiative

The G7 Heads of States and Government, at meetings in Lyon (1996) and Denver (1997), and the G7 Finance Ministers at the Birmingham (1998) and Okinawa-Kyushu (2000) Summits, agreed to standardize and simplify Customs data requirements of the G7 countries. They also agreed to standardize the format in which data is to be reported electronically in order to facilitate international trade, reduce costs for businesses and governments, and promote economic growth. The G7 agreed to the attached "Kyoto Customs Data Principles", as well as a timetable to achieve implementation of the standardized electronic formats (2005, if possible).

1.3 WCO Customs Data Model

Following a request from the G7, the WCO took over the maintenance and management of the G7 Initiative in January 2002 to advance the work of the G7 Initiative into a global customs standard from which the WCO Customs Data Model evolved. Initially the data set and the Message Implementation Guidelines were simply renamed to "WCO Customs Data Model – version 1.0".

As a consequence of the events of September 11, 2001, a Task Force on Supply Chain Security was established by the WCO. In order to meet the requirements defined by the Task Force, the WCO Customs Data Model was updated to version 1.1.

Version 2.0 of the WCO Customs Data Model covered conveyance reporting as well as a data set for transit, as defined by the Common Transit Convention. It also contained Other Governmental Agency (OGA) data and incorporated business data modelling using the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Modelling Methodology (UMM).

The increasing emphasis on single window concepts identified a need for further inclusion of Cross Border Regulatory Agency (CBRA) requirements. A single window allows traders to exchange information once with a single official body, preferably Customs, to fulfil all regulatory requirements related to import, export and in-transit procedures. This work formed the basis of Version 3.0 of the renamed WCO Data Model.

1.4 Principles

The WCO Data Model (WCO DM) Version 3.0 is based on the following basic principles and best practices:

1.4.1 Business process modelling

The work of the WCO DM includes the analysis and modelling of the most important processes contained in the "Revised Kyoto Convention". The WCO DM covers processes directly related to the release and clearance of goods, means of transport and crew before, at, and after the border, including requirements for agriculture, health, immigration (crew), Marine safety, food safety, statistics and hazardous waste.

1.4.2 Use of EDI and e-commerce technology

The WCO DM for the various cross-border regulatory procedures and processes is geared exclusively to the requirements of an automated environment using e-commerce technologies. The Data Model therefore forms the basis for the development of common electronic messages for goods imported, exported and in transit on the basis of international standards such as the United Nations Electronic Data Interchange for Administrations, Commerce and Transport (UN/EDIFACT) or the electronic business eXtensible Mark-up Language (ebXML). This

requires the development of common message structures that are compatible with relevant commercial information flows.

1.4.3 Common data repository

Uniform data requirements are crucial to cross-border control and trade facilitation. For this reason, the harmonization of data requirements for import and export, the creation of common definitions, and the standardization of data content and its format are essential building blocks for the WCO DM.

The WCO DM defines the maximum data requirements for eleven separate import, export and transit-related procedures, which encompasses approximately 450 data elements. These data sets should be considered the primary source for the design and development of cross-border single window systems. While these data sets define the maximum requirement, wherever possible CBRAs should request only the minimum number of data elements necessary to administer their specific legislative or regulatory mandate. These self-imposed limits discourage future increases in data requirements and the commensurate burden on traders.

The intent of the WCO is for customs administrations to accept the relevant portion of the WCO data set for customs procedures, provided that all the required data elements are received electronically using specified electronic formats. This would offer traders the ability to transmit data to any administration without resetting their computer format, while also enabling multinational traders to rationalize the maintenance of various interfaces to Customs IT systems.

Version 3 of the WCO DM may be implemented with or without a Single Window environment, as it serves as a standardized data requirement library for Business to Government (B2G) and the Government to Government (G2G) exchange of information.

1.4.4 Seamless transaction

The WCO DM follows the concept of a seamless data flow, where import, export and in-transit data requirements are aligned and the respective electronic declarations share the same structure. This should allow traders to exchange information more economically.

During the developmental stage of Version 3 of the DM, the need for a single and unified government message was identified. This template would provide the ability to include all of the necessary information for any regulatory trade and transport report in a single message. The message will include all the current WCO DM message information elements. The template will be flexible enough to support the necessary information requirements by any business implementation. The message is intended to be scalable, allowing administrative data needs to be mapped against the message in any required combination of information requirements.

1.4.5 Data Model Maintenance

The WCO has agreed upon rules and procedures for the maintenance of the WCO DM (located in the section "Maintenance procedure"). Part of this maintenance procedure includes the production of a new version of the WCO DM every 5 years.

1.4.6 Trade participation

The WCO DM is an important contribution to the facilitation of international trade. In order for it be successfully implemented, it is crucial to have comprehensive participation of the various sectors of business involved in international trade and transport.

The WCO encourages international trade and transport associations to become actively involved in this work to ensure compatibility with business practices.