

# **CAREC Time Release Study (TRS) Seminar**

**Single Window Environment  
& WCO Data Model**

**Tokyo, 8 September 2010**

**Shingo MATSUDA**

**World Customs Organization**





## **Single Window - Definition**

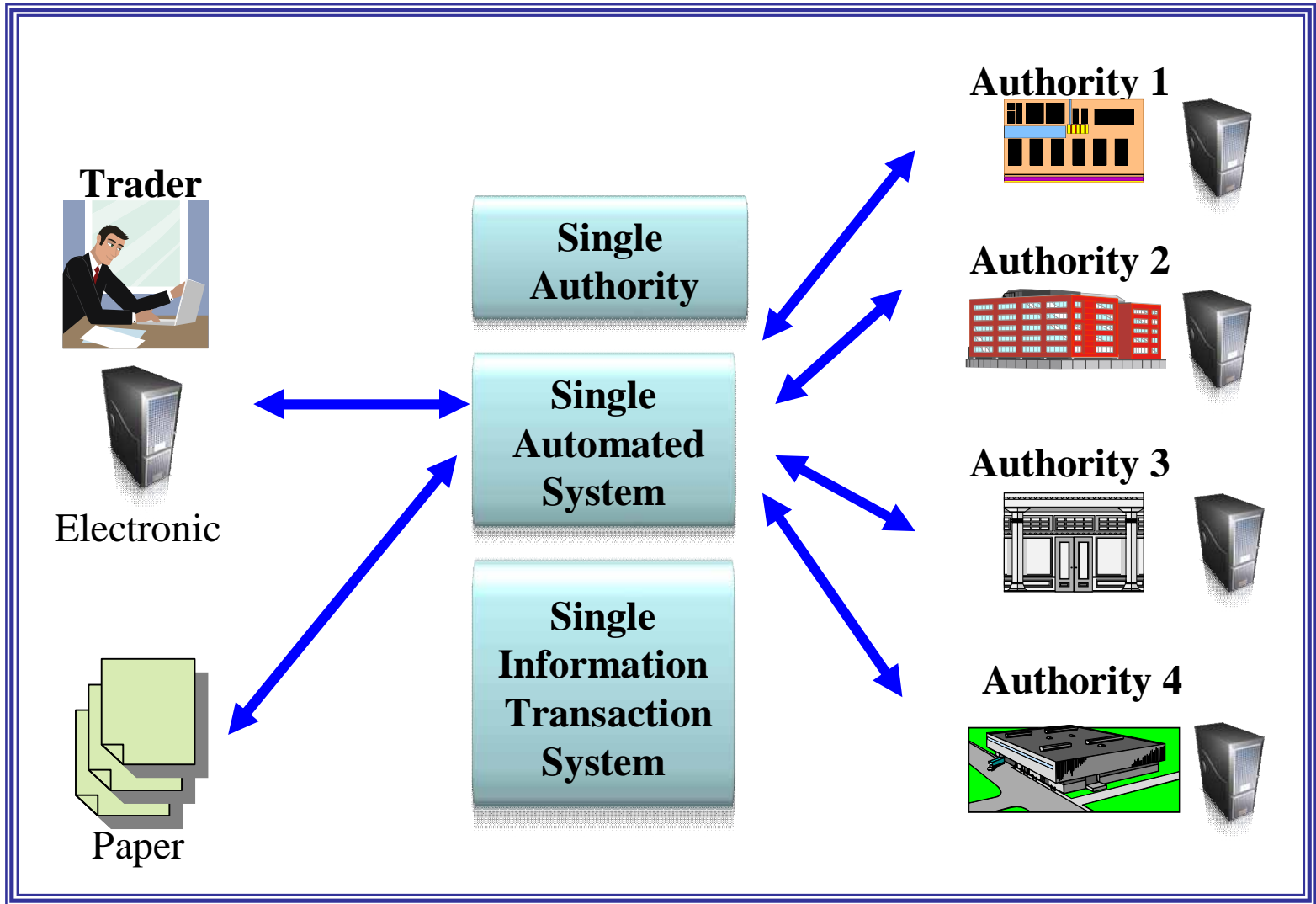
**Across border, ‘intelligent’, facility that allows parties involved in trade and transport to lodge standardised information, mainly electronic, with a single entry point to fulfil all import, export and transit related regulatory requirements.**

**(WCO unofficial definition)**



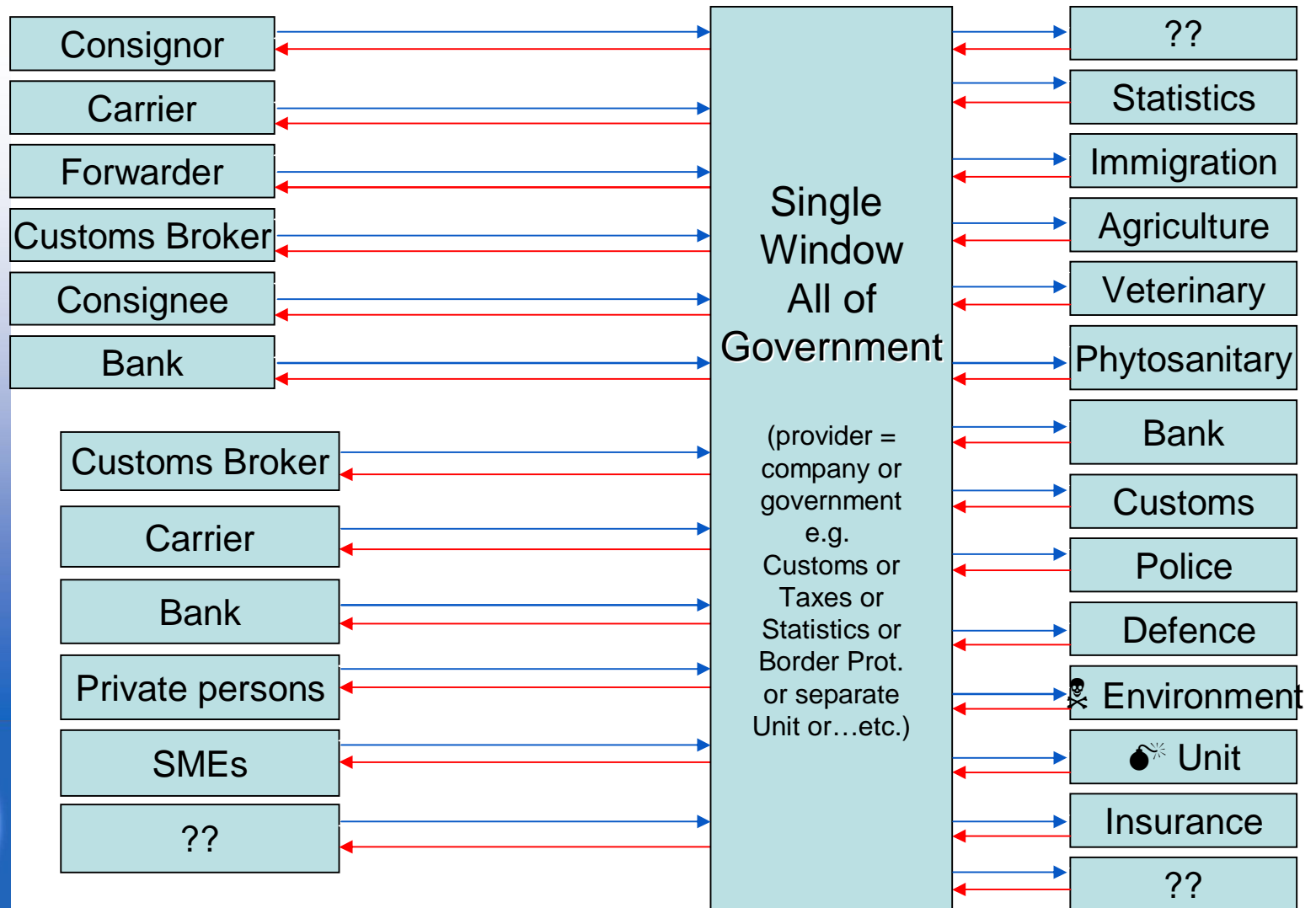


# Single Window -- The Most Common Models



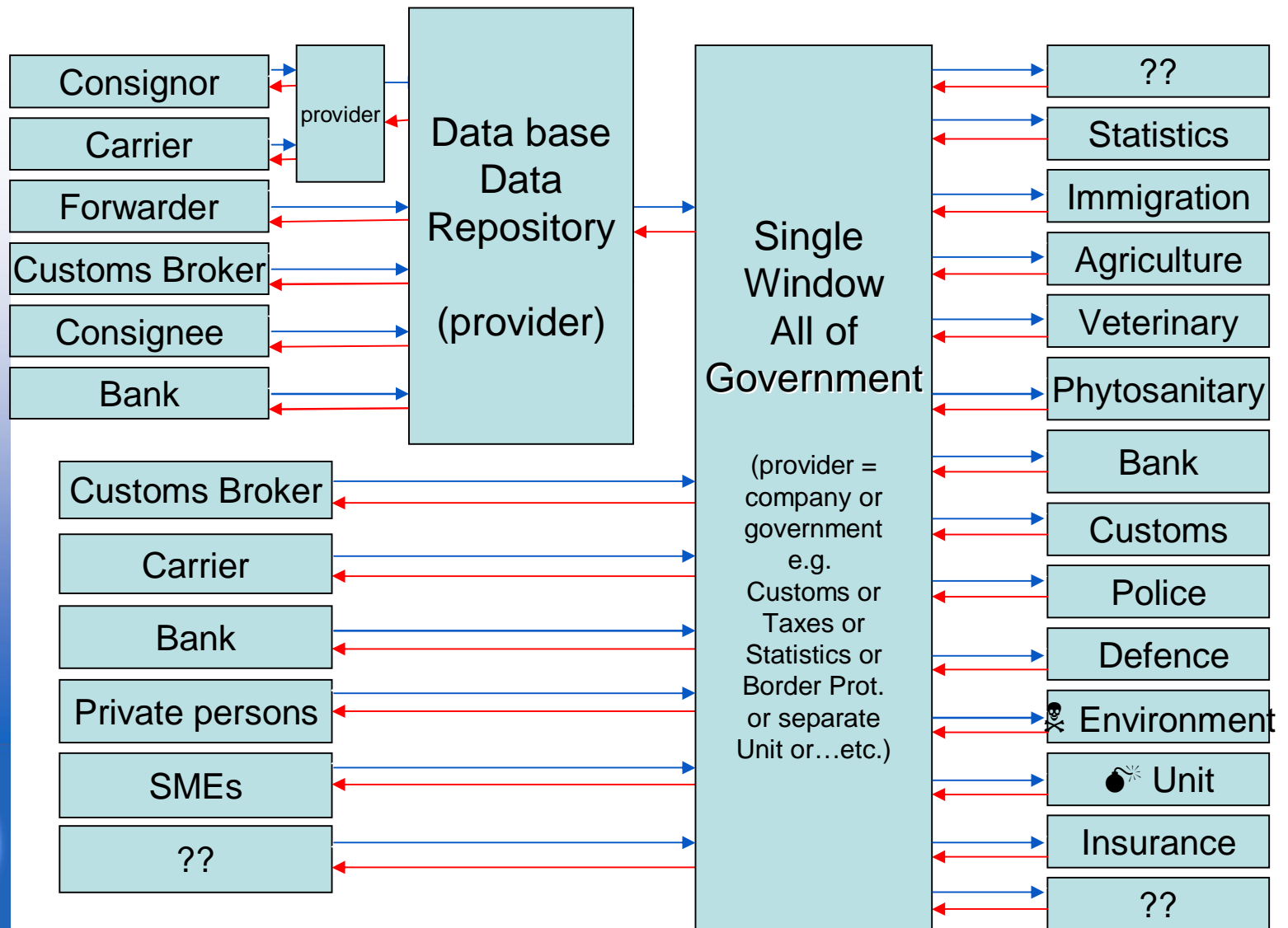


# Single Window - Data Flow (1)



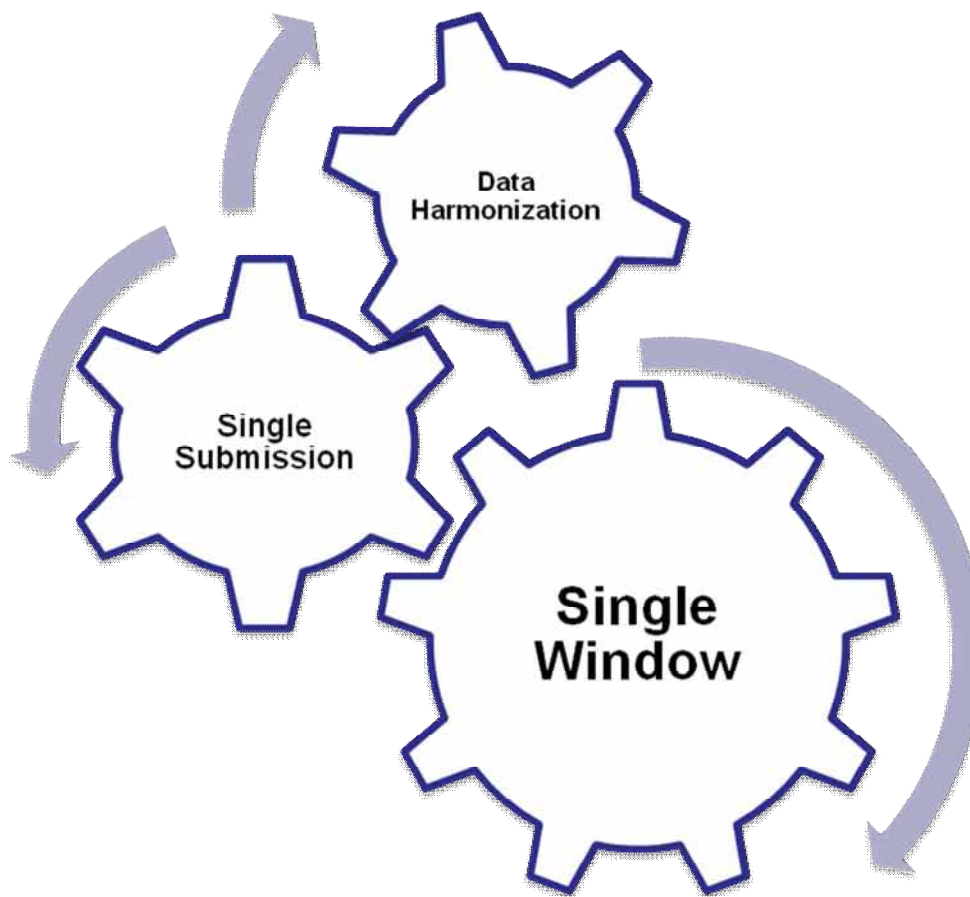


# Single Window - Data Flow (2)





# SW as a Portal for Single Submission





## Single Window Offers

- Single point of data submission
- Single point of response
- Transmitted to appropriate authorities
- Ability to reuse data – submit once use many times
- Data standardisation
- Online report capability





# Benefits of SW

## ➤ Benefits for Government

- Supply chain security increased
- More effective and efficient use of resources
- Improved trader compliance
- Increased accuracy of trade figures

## ➤ Benefits for Trade

- Reduced cost of compliance
- Faster clearance and release
- Predictable application/explanation of rules
- Effective and efficient deployment of resources







# Single Window - Political & Technical

**The Single Window environment is a complex technical issue, but it cannot work without the politics and other non-IT issues being examined first. Be sure to get the policy, legal and administrative frameworks analysed and sorted before looking at technical options.**

**(WCO Guidelines)**

## ➤ Political

- Developing Political will
- Management Group among border agencies
- Concept paper/feasibility study
- Decide a lead agency
- Policy Harmonization

## ➤ Technical

- Technical Group among border agencies
- Data Harmonization
- Development of SW system
- Alignment with global standards

**(UNECE)**





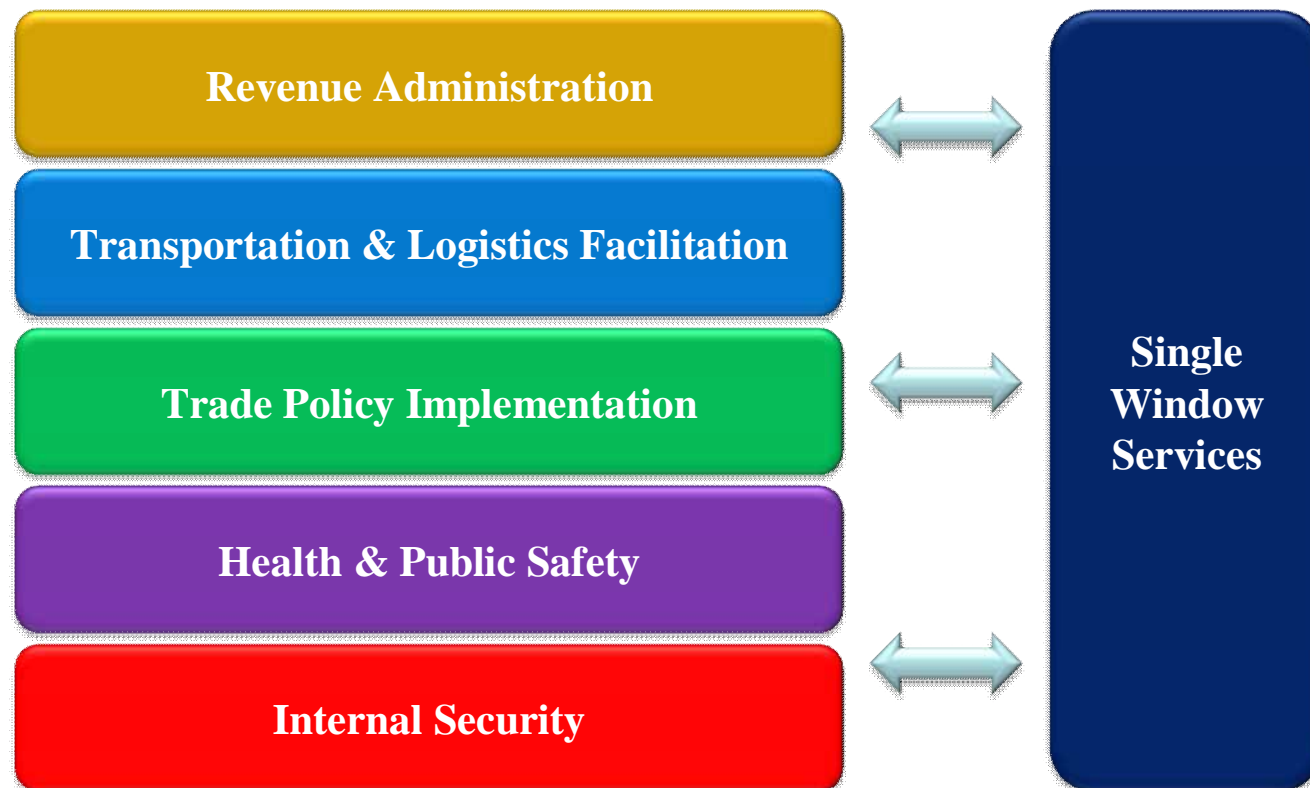
# SW and Customs

- Customs at the Center of SW
- Legal Issues & Customs
- Business Process Re-engineering & Customs
- Information management Issues & Customs
- E-Commerce & Customs





# SW and Customs Functions





# What is the Priority?



Country A



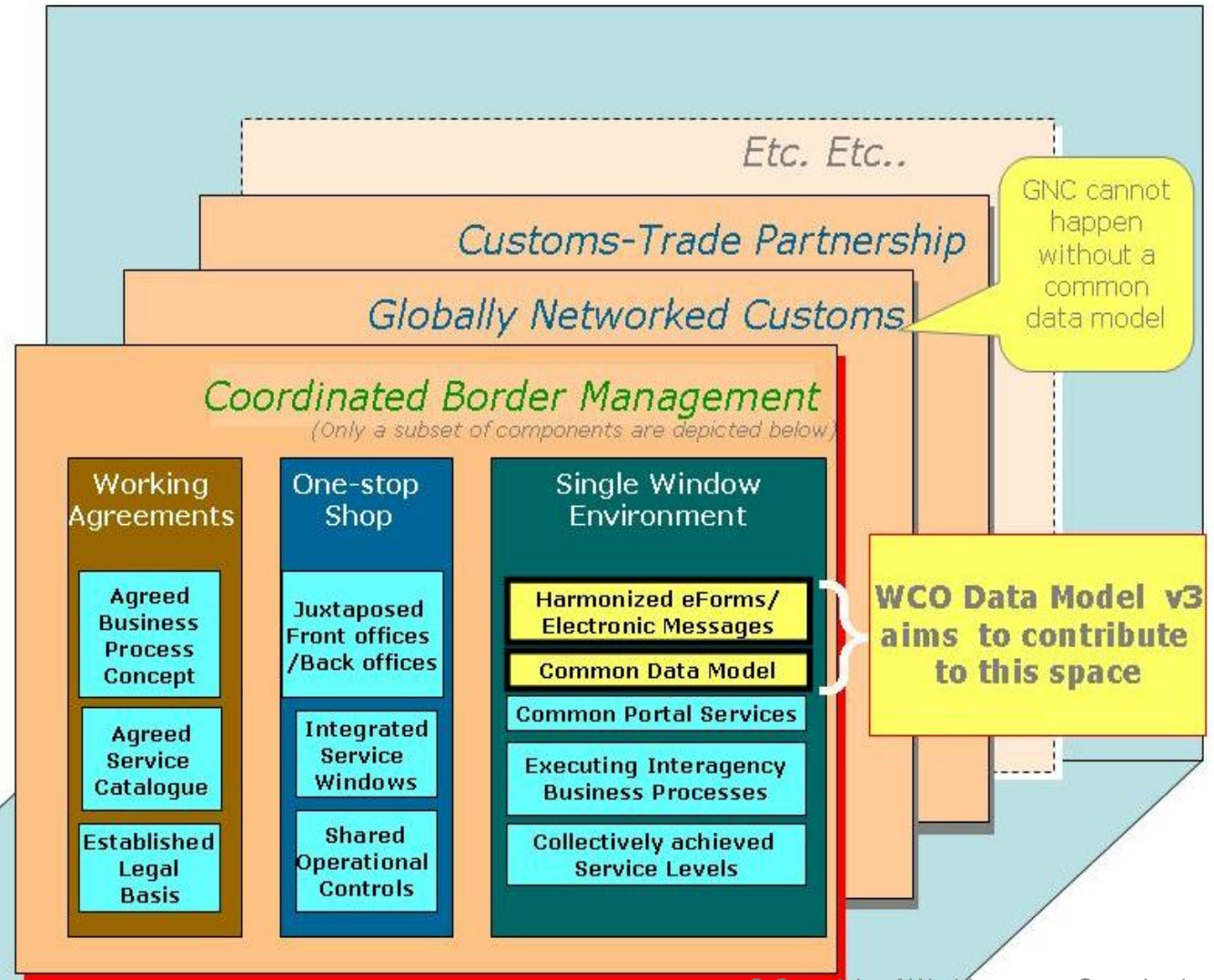
Country B

The choice of services for Single Window would depend on the national Customs





# SW and WCO





# WCO SW tools available

- WCO SW Data Harmonization Guidelines

- Practical Tool for SW Developer
- Process Guidance on Data Harmonization

**Data Capturing**

**Data Defining**

**Data Analysing**

**Data Reconciling**





# WCO SW tools available

- WCO Initial Functional Assessment

- Practical Tool for Customs
- Initial Assessment on data required by OGA
- Originally designed to identify functions of OGA in relation to WCO Data Model 3.0
- Also useful for initial stage of SW to identify stakeholders and their functions

## Contents of Questionnaire

1. Demographic Information (Details of OGA)
2. OGA Functions/Capabilities (Import, Export, Post-Release, Enforcement ...)
3. OGA System Information





# WCO SW tools available

## - WCO Data Model Version 3.0

### History

- WCO Customs Data Model, Ver. 1.0 (Jun2003)
- WCO Customs Data Model Ver. 2.0 (Jun2005)
- WCO **Data Model Ver. 3.0** (finalized in Dec 2009)

### WCO Data Model Version 3.0

- Simplifying reporting of goods, cargo & conveyances
- **Implementing Single Window business processes**
- Implementing complex requirements of partner  
Cross-Border Regulatory Agencies
- Dealing with complex schemes for duties, taxes/fees
- Helping prepare the blueprint for customs  
automated system
- **Transit (incl. e-TIR)**

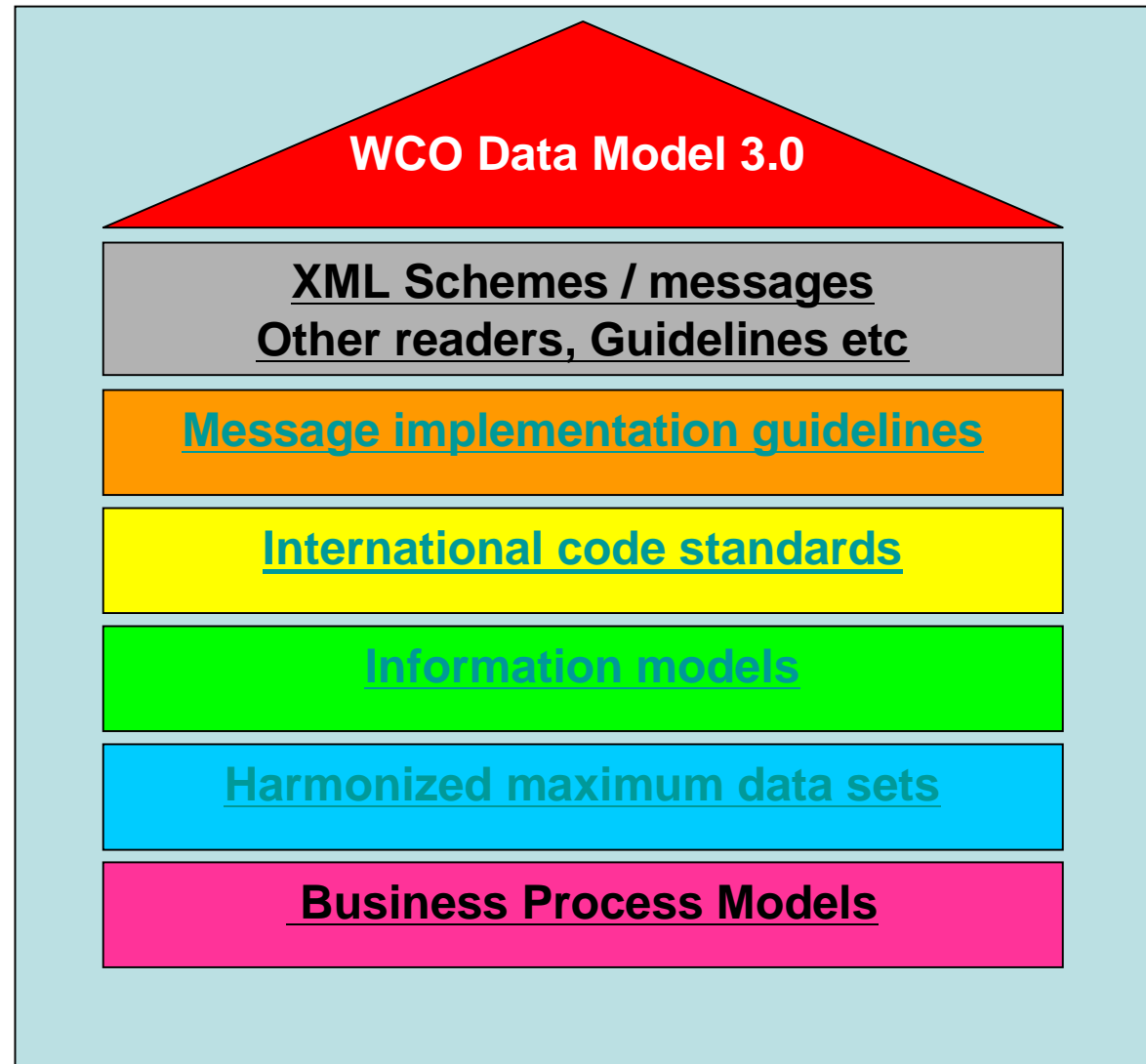






# WCO Data Model Component

**Data Model**





# WCO Data Model Component

## - (1) Business Process Model

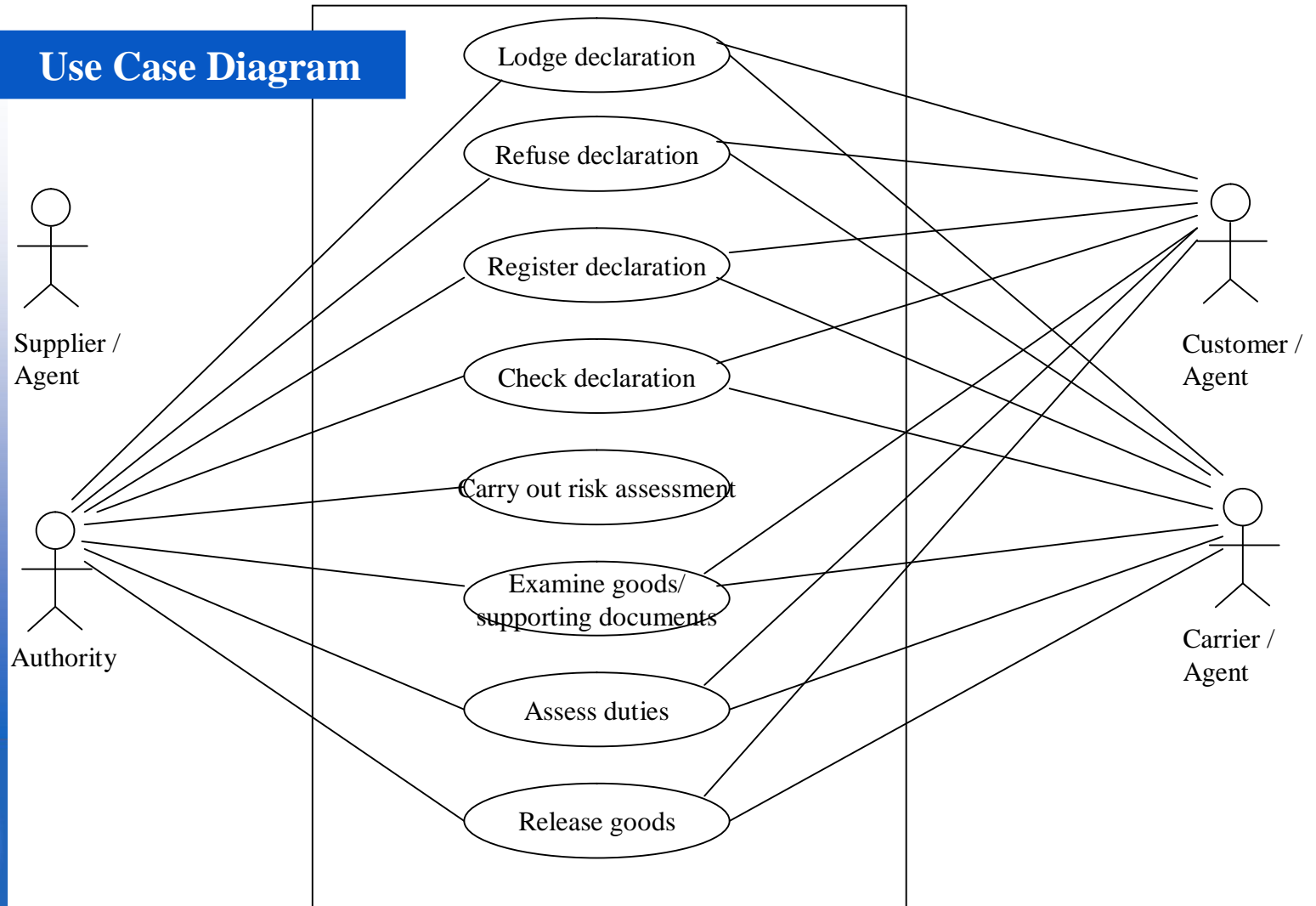
- Simple Business Process Model
  - Use Case Diagram
  - Use Case Description
  - Activity Diagram
- } Process
- Class Diagram  
(Classification of data elements,  
relationship of classes)
- } Information





# WCO Data Model Component

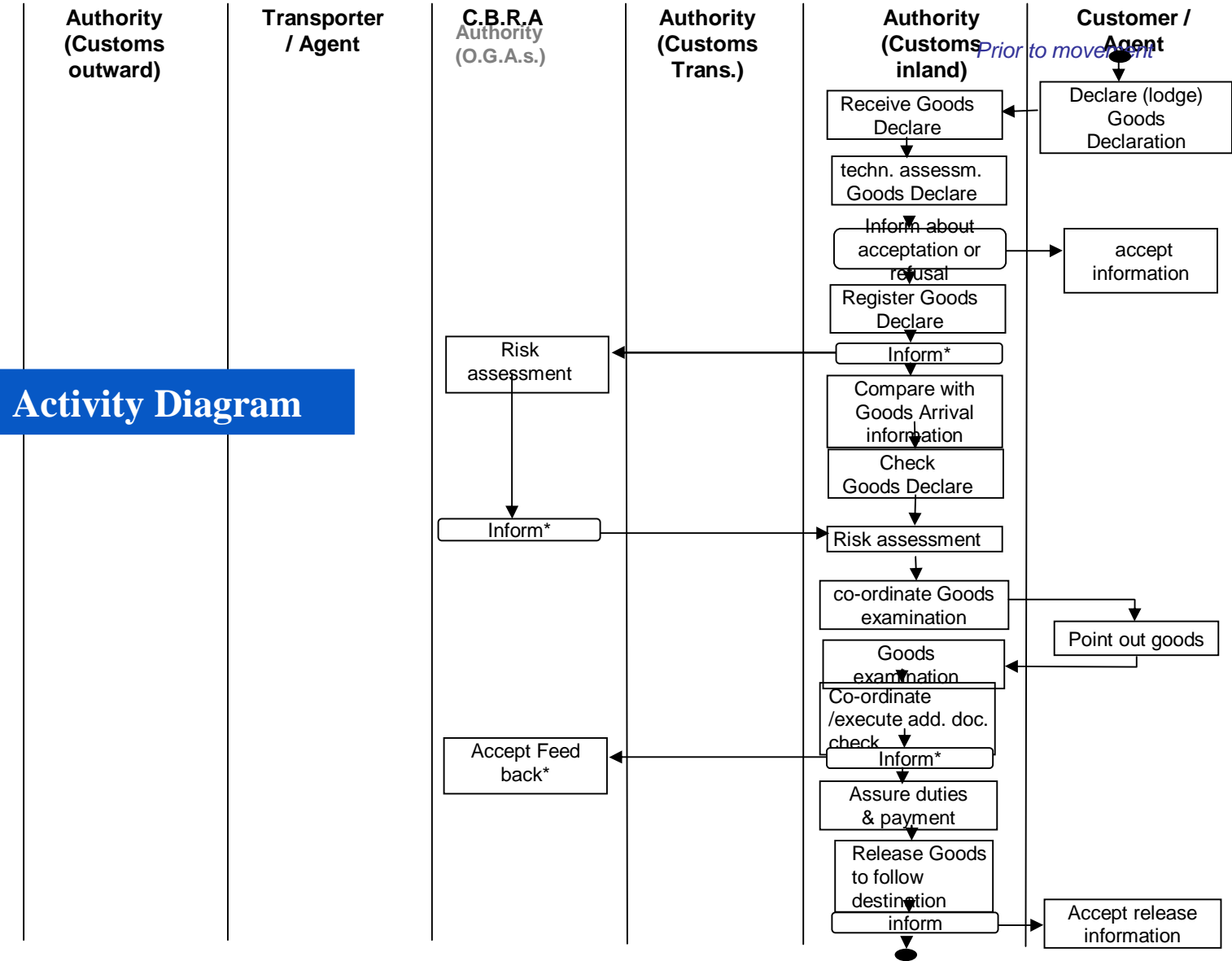
## Use Case Diagram





Supplier / Agent

# WCO Data Model Component





# WCO Data Model Component

## - (2) The Data Sets

- Maximum data in 11 data sets – for 11 different procedures – in total 450 data elements
- Based on the 2005 Edition of the UNTDED
- Detailed information about a single data element



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	WCO details						Conveyance				WCO details		UNTDDED Details			
2	WCO ID	Name	Definition	Data model classes	Import	Export	Conveyance	Transit	Response	Format	Code remarks	UID	Name	DENS	SAFE	
3																
4																
86	149	Conveyance reference number	To identify a journey of a means of transport, for example voyage number, flight number, trip number.	BorderTransportMeans TransitTransportMeans	X	X	X	X		an..17		8028	TransportMeans.Journey.Identifier		X	
87	150	Number of containers	Total number of freight containers or similar unit load devices.	BorderTransportMeans			X			n..6		8046	Consignment.TransportEquipment.Quantity			
88	151	Equipment supplier type, coded	Code identifying a type of party that is the supplier of transport equipment.	TransportEquipment	X					n1	EDIFACT codes	8077	TransportEquipment.SupplierPartyType.Code			
89	152	Equipment size and type identification	Code specifying the characteristics, i.e. size and type of a piece of transport	TransportEquipment	X	X	X	X		an..4	ISO, IATA, EDIFACT or user codes	8155	TransportEquipment.Characteristic.Code		X	
90	154	Transport equipment loaded status	Code specifying how full a piece of transport equipment is.	TransportEquipment	X	X	X			n1	EDIFACT codes	8169	TransportEquipment.Fullness.Code			
91	156	Departure date and time	Date and time of departure of the means of transport.	BorderTransportMeans TransitDepartur	X	X	X	X		an..17 (CCYYMMDD HHMMSS)		2380	Date Or Time Or Period. Text			
92	157	Container legal status indicator	Indication of the container's legal status with respect to the Container Convention.	TransportEquipment	X	X				n1	0 = no, 1 = yes	8193	TransportEquipment.LegalStatus.Code			
93	159	Equipment identification number	Marks (letters and/or numbers) which identify equipment e.g. unit load device.	EquipmentIdentification	X	X	X	X	X	an..17	ISO 6346, IATA	8260	TransportEquipment.Identifier		X	
94	161	Previous government procedure	Code specifying the government procedure, if any, which has been applied to the goods prior to the application of a different government procedure.	GovernmentProcedure	X	X				an..7	For Customs: User codes, categorized based on the revised Kyoto Convention.	9033	Customs.PreviousProcedure.Code			
95	162	Arrival confirmation indicator	Indicator that the start date of a customs control is confirmed or not.	Consignment	X					n1	0 = no, 1 = yes	7365	Processed.Indicator.Code			
96	163	Party relationship, indicator	Indication as to the effect of relationship existing between two parties such as financial relationship	CustomsValuation	X	X				n1	0 = no, 1 = yes	7365	Processed.Indicator.Code			
97	164	Type of duty regime, coded	Code specifying a type of duty regime.	DutyTaxFee	X	X				an..3	EDIFACT codes	9213	Duty.Regime.Code			
98	165	Seal number	The identification number of a seal affixed to a piece of transport equipment.	TransportEquipment	X	X	X	X		an..35		9308	TransportEquipment.Seal.Identifier		X	



# WCO Data Model Component

## - (3) Information Model

### Modelling Objectives

- Establish a basis for designing and developing information systems and messages
- Analysis of business processes
- Optimisation of business processes

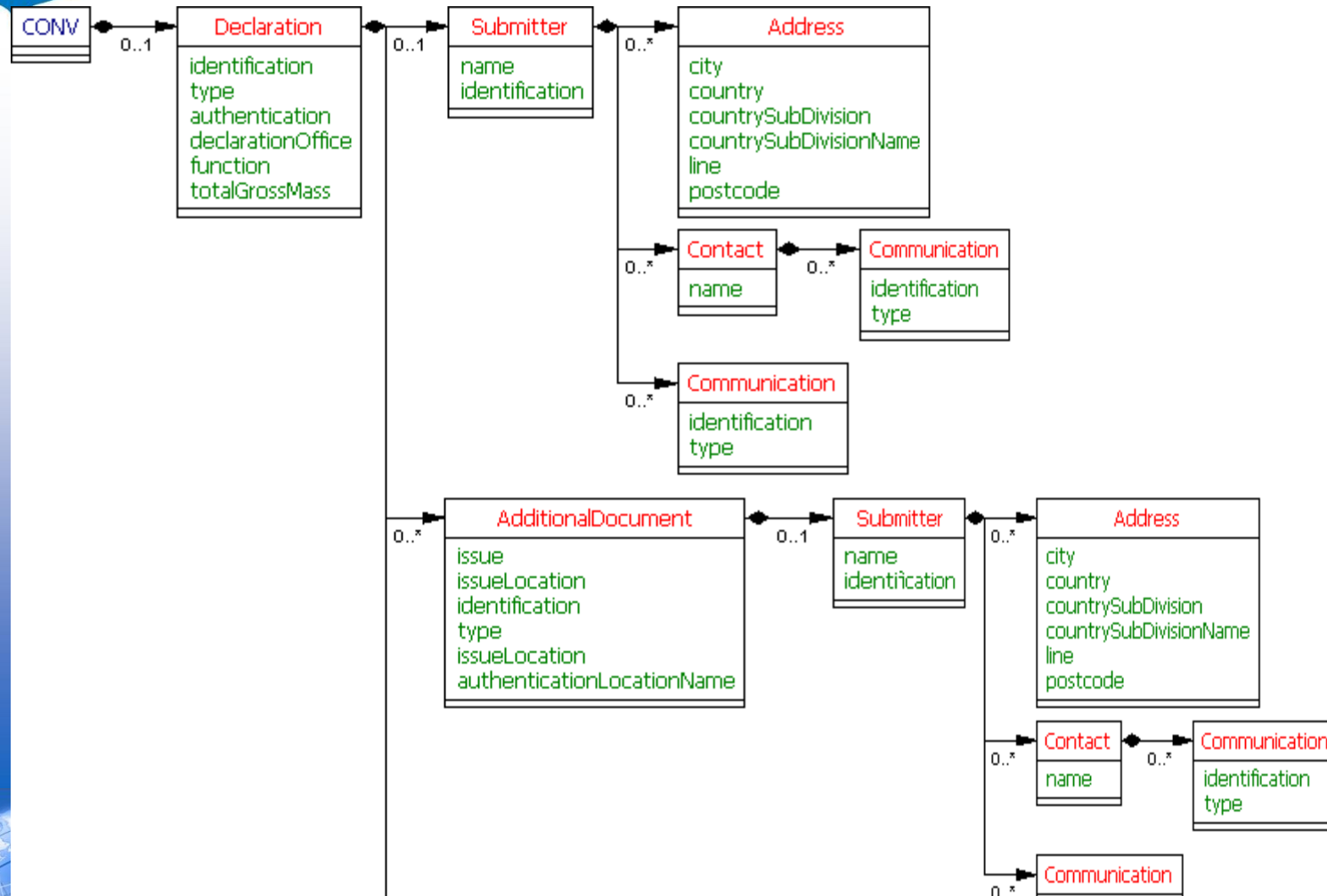
### Modelling Standards

- UMM-UN/CEFACT Modelling Methodology
- UML2 – Unified Modelling Language





# WCO Data Model Component







# WCO Data Model Component

## - (4) International Code Standard

### Examples

- WCO - The Harmonized System
- ISO 3166 - Country codes
- ISO 4217 - Currency codes
- ISO 6346 - Container codes
- UN/Rec. - No. 5 – Incoterms
- UN/Rec. - No. 16 – UN/LOCODE
- UN/Rec. - No. 20 – Units of measure
- UN/Rec. - No. 28 – Type of means of transport
- Wassenaar codes – Dual use goods





# WCO Data Model Component

## - (5) Message Implementation Guidelines

- Assisting users to implement a WCO Data Model message
- Description of the exact usage of the data sets
- For XML generic implementation principles, Schemas and messages





## **WCO Data Model; Top 4 Benefits**

- **Reduces costs to trade by simplifying data requirements**
- **Improves reporting and compliance by improving the quality of data**
- **A comprehensive reference on cross border regulatory data standards**
- **Enables SW implementation**
  - **Can be used as the basis for Data Harmonization**
  - **Includes data requirements from Customs, statistics, agriculture ....**
  - **Provides an electronic message solution for SW**





## **Ongoing Works on WCO SW**

- **Other ongoing work in this area**
  - **WCO Guide on Single Window Business Processes**
  - **WCO Guide in handling supporting documents in a Single Window.**
- **Compendium to come out in June 2011.**
  - **How to Build a Single Window Environment?**
  - **Coordinated Border Management**
  - **Risk Management**





**Thank you for your kind attention.**

**For more information please visit  
the WCO Web site: [www.wcoomd.org](http://www.wcoomd.org)**

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WCO, Brussels

