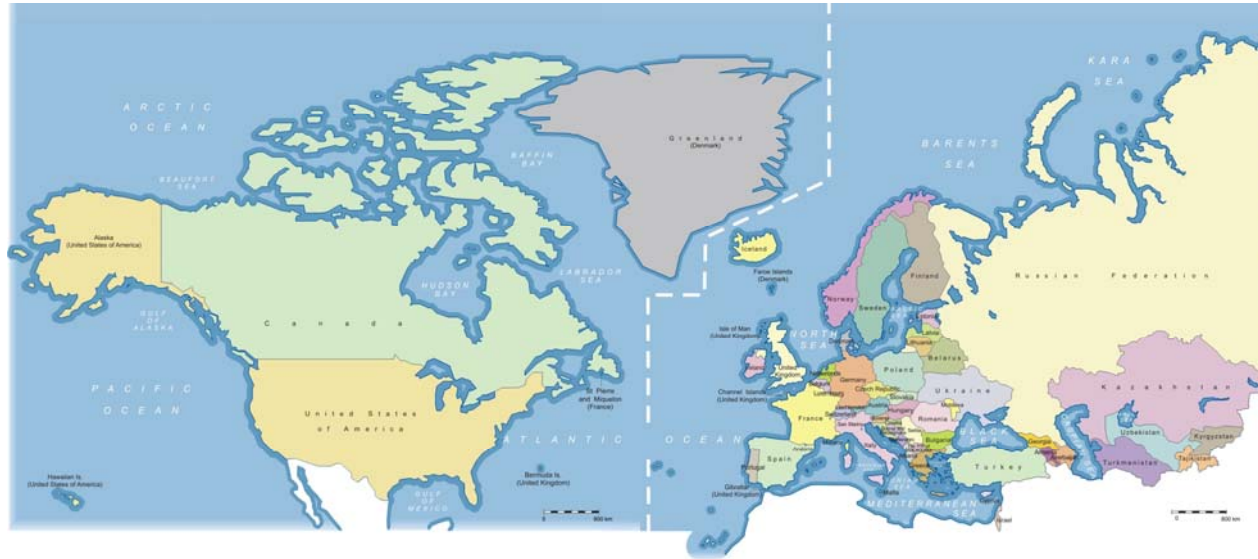


International Standards and Best Practices for Implementing Single Window

Baku, Azerbaijan, July 2010



UN Economic Commission for Europe



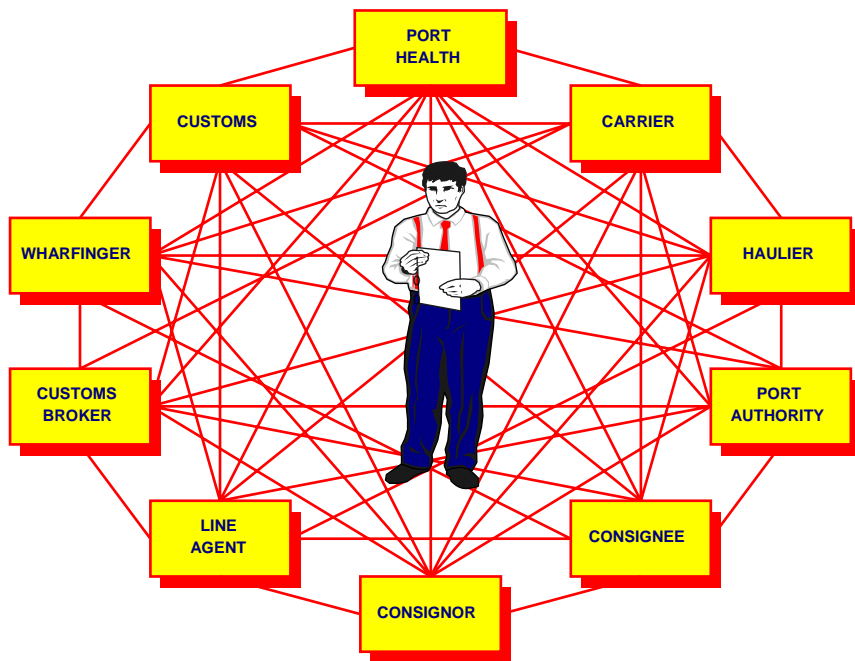
- 1 (a) Initiate and participate in measures for facilitating concerted action for the economic development and integration of Europe, for raising the level of European economic activity, **and for maintaining and strengthening the economic relations of the European countries both among themselves and with other countries of the world.**

UNECE and Standards for Trade

- **UNECE is the focal point in the UN system to develop trade-related recommendations, standards and tools;**
- **UN Centre for Trade Facilitation and Electronic Business (CEFACT): UN Layout Key, UN/EDIFACT, XML Standards;**
- **UNECE standard development coordinated with major standard setting organizations (ISO, ITU, IEC) and industry associations (WCO, ITAT, FIATA, ..);**
- **Technical cooperation: network between UN Regional commissions, UNCTAD, World Bank, ...**

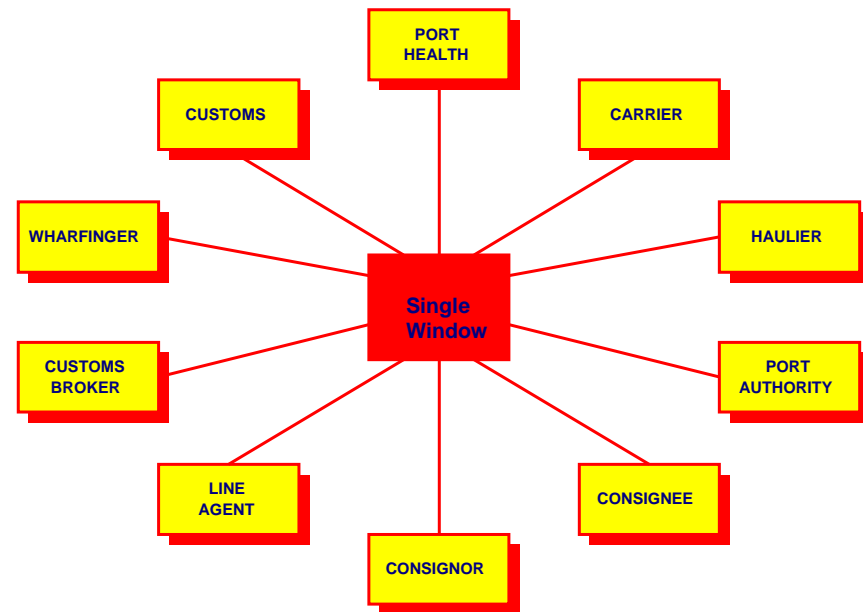
Streamlining trade information: The Single Window Concept

FROM



**Mountains of paper
Up to 30 % mistakes**

TO



**One time submission, re-use
of information, co-ordinated
control**

UN Recommendation 33 on Single Window

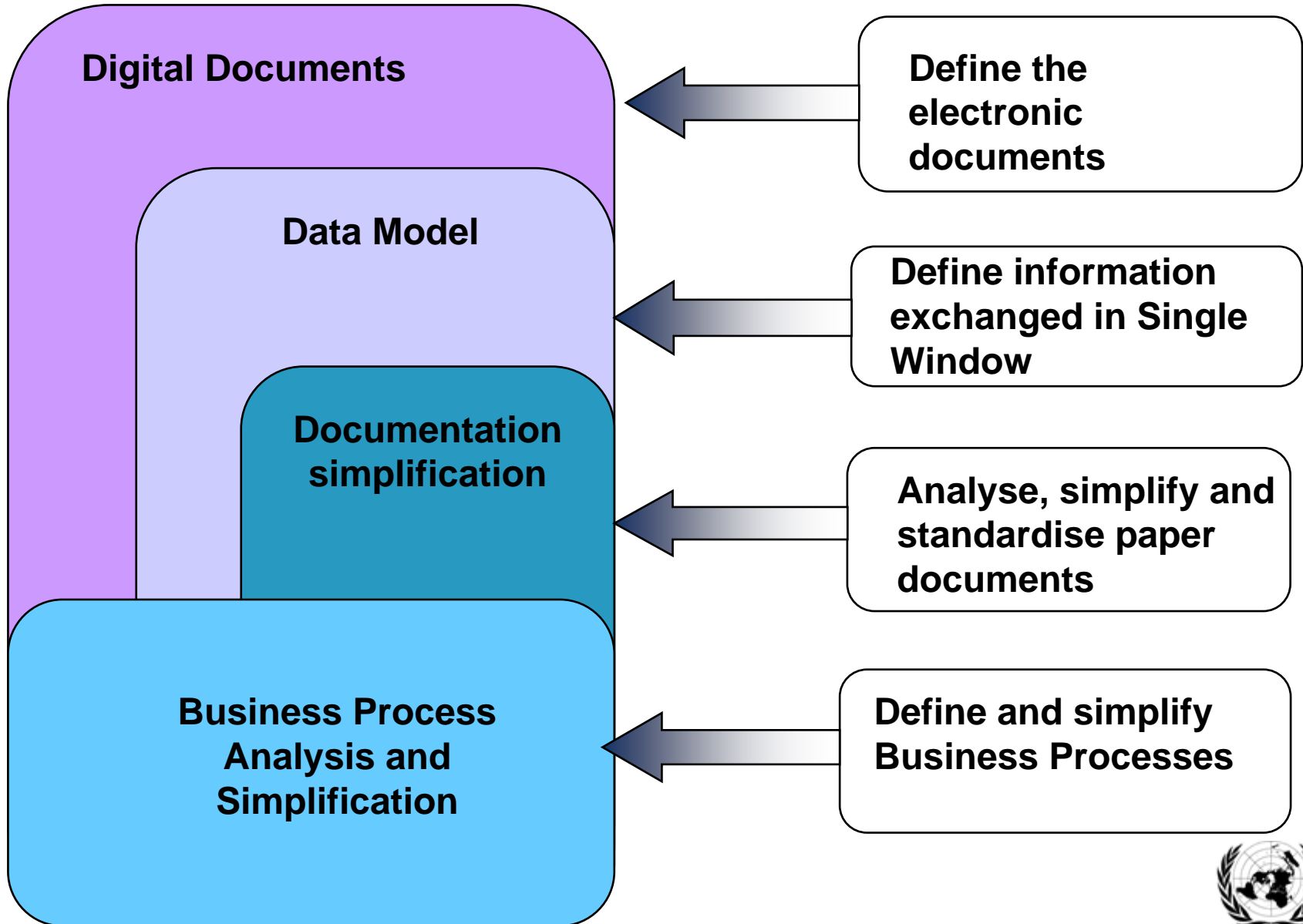
Recommends Governments to establish Single Window for Cross Border Trade

Defines features:

- ... one time submission
- ..of standardized information and documents
- sharing of information amongst government agencies;
- coordinated controls and inspections of the various governmental authorities;
- Allow payment of duties and other charges;
- Be a source of trade related government information.

How to automate data processing for Single Window: Four Steps

Objectives



Digital Documents

Data Model

**Documentation
simplification**

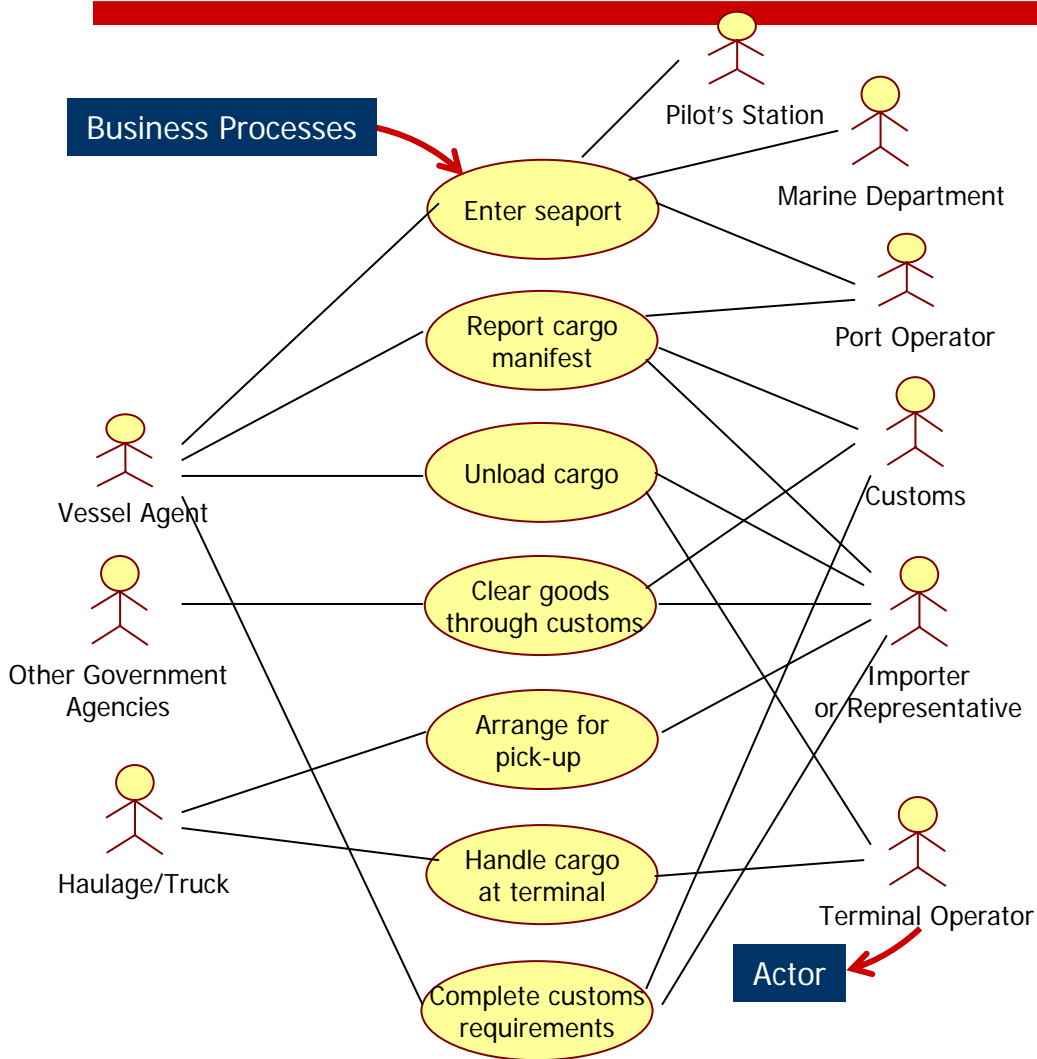
**Business Process
Analysis and
Simplification**

Business Process Analysis

- ❑ Provides an end-to-end view of a supply chain
- ❑ Is a structured analysis and description of the Business Process in the Supply Chain
- ❑ Provides a basis to record time, costs, delays,..
- ❑ Starting point to improve and automate the process

Standards & Tools: UML, UMM, UNECE/ESCAP
Business Process Analysis for Single
Window,...

1. Setting Scope for Implementation: Importation by Sea

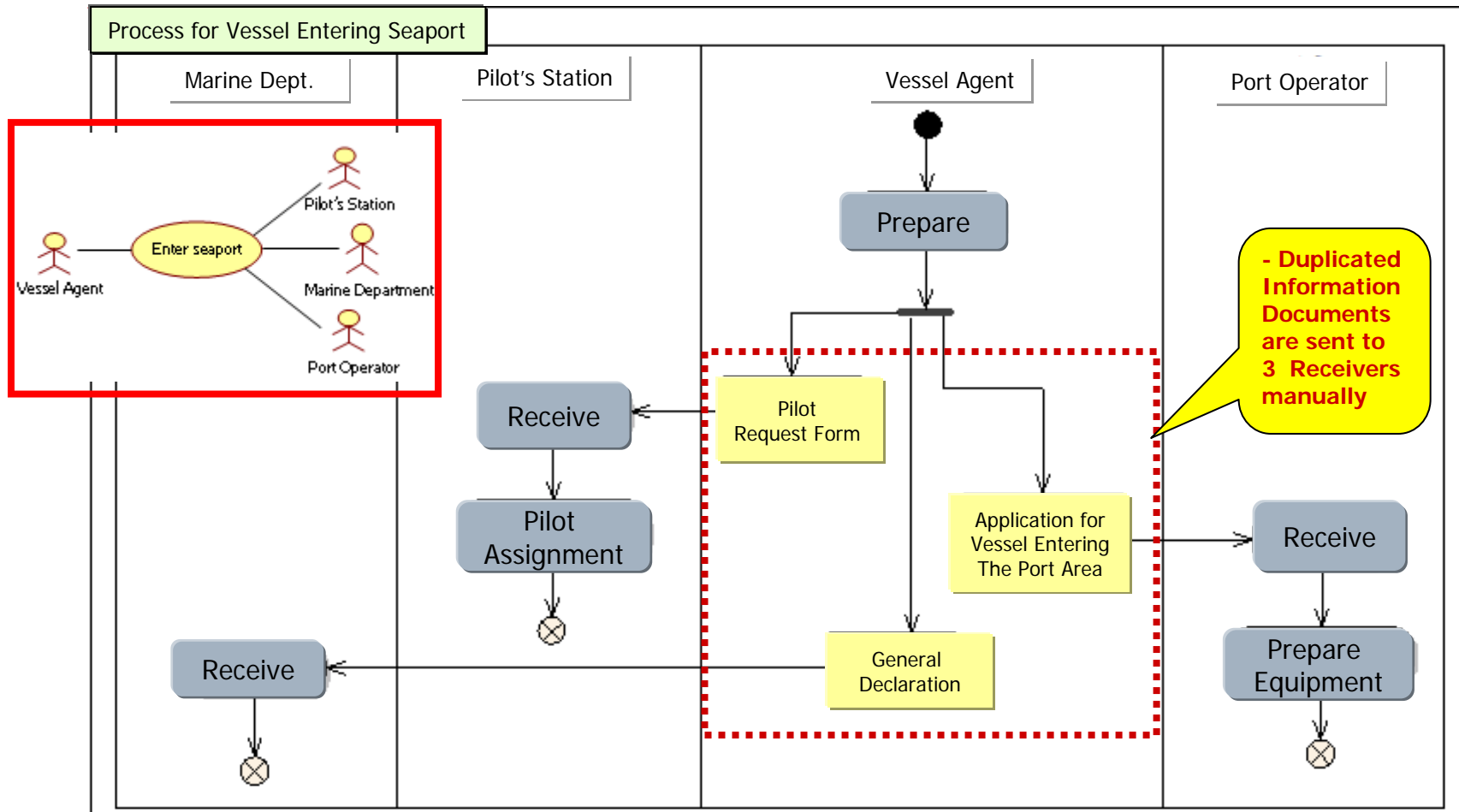


Examples: Capturing the Stakeholders who're involved in Importation by Sea

- Vessel Agent
- Pilot's Station
- Marine Department
- Port Operator
- Customs
- Other Government Agencies
- Importer or Representative
- Terminal Operator
- Haulage/Truck



Analyse and simplify: A Vessel Entering the Seaport (existing)



Problems :

- Duplicated Information
- High Cost and Time for sending and receiving documents
- Data Inconsistency

Summary of a study: Usage Time for Export

Transport Mode	Existing Usage Time (day)	Expected Usage Time (day)	Expected Reduced Time (day)	Expected Reduced Time (%)
Export by Ship	22	15	7	31.82
Export by Airplane	12	9	3	25.00
Export by Truck	12	7	5	41.67
Export from ICD	11	9	2	18.18



Business Process Analysis

BPA provides answers to core questions on the business process

- Who is involved?
- What exactly is done?
- In which sequence?
- What is the result?
- Which data/documents are produced?
- Which information is needed?
- How long does it take/how much does it cost?
- Can it be done better?

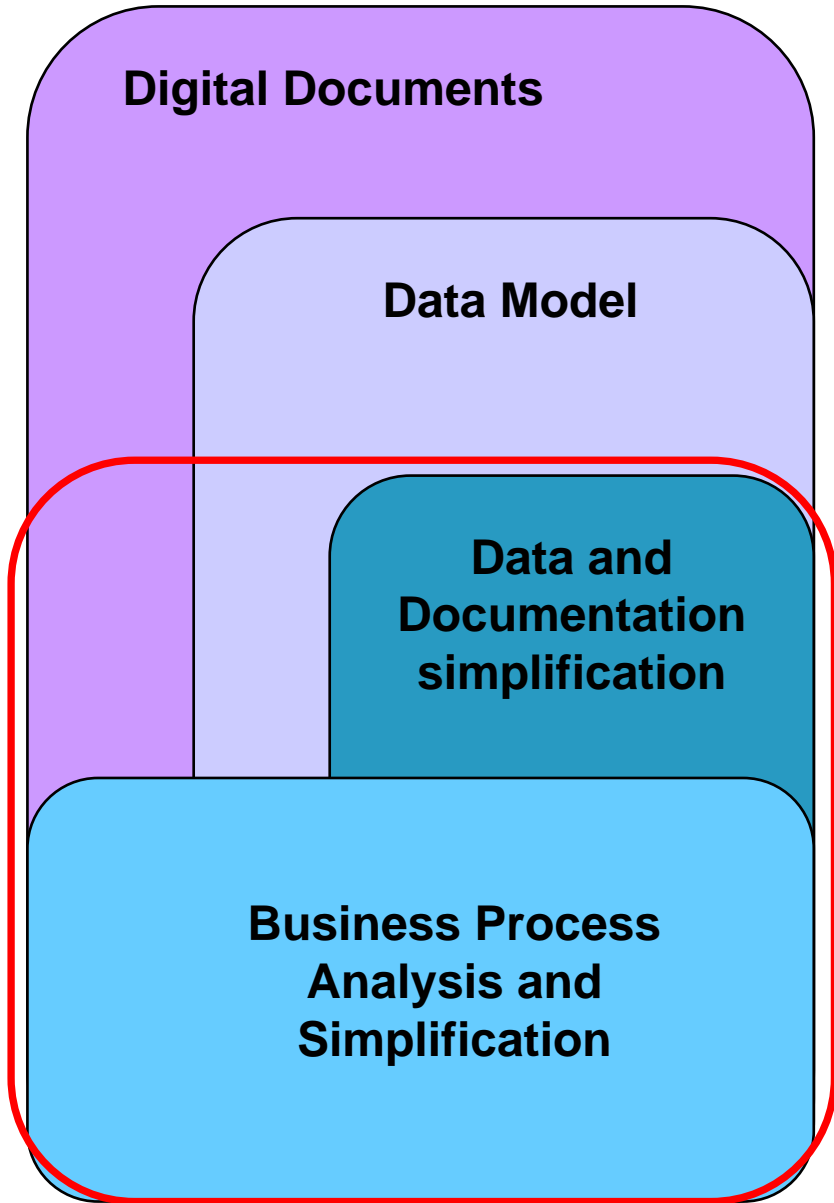
...

Digital Documents

Data Model

**Data and
Documentation
simplification**

**Business Process
Analysis and
Simplification**



Data and Document Simplification

Objective: Define data from a business perspective; harmonise, simplify, standardise data and documents

- ❑ UNLK: Align documents to international standards
- ❑ Code Lists: Define codes and data formats
- ❑ UNTDED: Define data using standard semantic
- ❑ Compare data among documents and simplify

Standards & Tools: UN Layout Key, UN/TDED (ISO 7273), ECE/CEFACT Recommendations, WCO DE, IATA,...



United Nations Layout Key for trade documents (UNLK)

- ❑ The international standard for trade documents
- ❑ Standard template for trade documents
- ❑ Rules were data specific data elements are presented in a trade document
- ❑ Three simple rules how to adapt the template to specific country/industry needs
- ❑ Today all major international trade documents are aligned to the UNLK

UNLK: Layout Key for Trade Documents

LAYOUT KEY FOR TRADE DOCUMENTS

Consigner (Exporter)	Consigner (Exporter)	Date, Reference No, etc.	Date, Reference No, etc.
Consignee	Consignee	Buyer (if other than consignee) or other address	Buyer (if other than consignee) or other address
Notify or delivery address	Notify or delivery address	Country whence consigned	Country whence consigned
Transport details	Transport details	Country of origin	Country of origin
		Country of destination	Country of destination
		Commodity No.	Commodity No.
		Gross weight	Gross weight
Shipping marks; Container No.	Shipping marks; Container No.	Cube	Cube
Number and kind of packages; Goods description	Number and kind of packages; Goods description	Net quantity	Net quantity
		Value	Value
		More particular needs in individual applications	
		Place and date of issue; Authentication	Place and date of issue; Authentication

Free disposal

UNLK: Alignment of Trade Documents



LAYOUT KEY FOR TRADE DOCUMENTS

Consignor (Exporter)		Date, Reference No., etc.			
Consignee		Buyer (if other than consignee) or other address			
Notify or delivery address		Country whence consigned		Country of origin	
		Country of destination		Country of destination	
Transport details		Terms of delivery and payment			
Shipping marks: Container No.	Number and kind of packages	Goods description	Commodity No.	Gross weight	Cube
				Net quantity	Value
					Place and date of issue; Authentication

Free disposal

UNeDocs

1 Consignor (Exporter) No. _____

2 Consignee No. _____

3 Mode of transport (if by sea)

4 Inland route (if by land)

5 Place of loading

6 Location of goods

7 Packages and description of goods

8 Additional information Documents produced Conditions and authorities

9 Calculation of taxes

10 Parcel No. _____

11 Transported in (Place and date)

12 Quantity (weight)

13 CONTROL BY OFFICE OF DEPARTURE

Place: _____ Stamp: _____

Standard Number: _____ Identity: _____

Technical notes: _____

Signature: _____

EUROPEAN COMMUNITY EXPORT CUSTOMS DECLARATION

DECLARATION

3 Items 4 Loading No. _____

5 Name 6 Total packages 7 Reference number _____

8 Person responsible for technical matters No. _____

9 Country (No.) 10 Trade No. _____

11 Country of origin 12 Country of destination

13 C-IMP-EXP-Code 14 Country of origin Code

15 Country of origin 16 Country of final destination

17 Identity and nationality of means of transport at departure 18 CO 19 Delivery status

20 Identity and nationality of active means of transport (including the trailer) 21 Country and international number 22 Expiry date 23 Nature of transporter

24 Mode of transport (if by sea) 25 Inland route (if by land) 26 Place of loading 27 Transit and banking date

28 Office of exit 29 Location of goods

30 Date 31 Country Code

32 Country code Code 33 Gross mass (kg)

PROCEDURE 34 Has mass (kg) 35 Gross _____

36 Summary declaration (Previous document) 37 Supplementary code

38 A/C Code 39 Identification

40 Date 41 Details payment 42 Identification of warehouse

ACCOUNTING DETAILS

Total

43 Office of destination and country

44 Place and date

Signature and name of individual representative

© United Nations electronic Trade Documents UNeDocs.

Did you say Paris?

There are five locations in the world called “Paris”

US IL	PRP	Paris
US KY	PZT	Paris
US TN	PHT	Paris
US TX	PRX	Paris
CA ON	PAO	Paris
FR 75	PAR	Paris

The Paris in Canada is identified by CAPAO, the Paris in France by FRPAR

...just try to send a container to Paris in Canada without a LOCODE



Codes for Trade Data

Importance of codes for trade data exchange

Codes:

- Are Language independent
- Avoid costly errors and misunderstandings
- Unique → step towards automation
- Maintenance is outsourced
- Worldwide usage: by WCO, IATA, FIATA, UPU, UN/EDIFACT, UNLK etc.

Codes for Trade Data

UN/CEFACT has developed 15 recommendations to Governments on the use of Codes

Country, Currency, Location, Units of Measurement, Representation of Date and Time, Trade and Transport Status, Means of Transport, Transport Mode,, ..

WCO recommend the use of these codes in the Customs domain

Rec:19
Mode of Transport

Rec:16
UN/Locode

ISO Country
Code

Rec: 17
Payment
Terms

The image shows a screenshot of a PDF form titled "EUROPEAN COMMUNITY EXPORT CUSTOMS DECLARATION" displayed in a PDF viewer. The form is divided into several sections with numbered fields. Blue callout boxes point to specific fields: "Rec:19 Mode of Transport" points to field 25; "Rec:16 UN/Locode" points to field 27; "ISO Country Code" points to field 10; "Rec: 17 Payment Terms" points to field 20; "Rec:9 Currency Code" points to field 22; "Commodity Code" points to field 33; "Rec:20 Units of Measurement" points to field 35; "Rec: 21 Package Codes" points to field 32; and "Rec: 28 Means of Transport" points to field 21. The form includes fields for consignor/exporter, consignee, country of origin, country of despatch, and various codes and numbers.

Rec: 28
Means of
Transport

Rec: 21
Package Codes

Rec:20 Units of
Measurement



Analyze and define the data elements in a document

UNTDDED (ISO 7374)

Definitions of important data elements used in international trade

Example:

6292 Gross Weight

Weight (mass) of goods including packaging but excluding the carrier's equipment.

Steps:

- Make a list of all data elements in a document
- Define data elements in your own language/terminology
- Define data using international standard:
 - UNTDED (ISO 7374)
 - WCO DE

Example: Harmonization of 4 Export Documents:
from 155 data elements to 70 data elements

Certificate of Origin
A Certificate of Origin certifies expressly that the goods to which the certificate relates originate in specific country.
Department of Foreign Trade,
Ministry of Commerce, Thailand

11 Gross weight
TDDED 6292: Weight (mass) of goods including packaging but excluding the carrier's equipment
n..14
(Min=1, Max= unbounded)

10-2 Description of goods
TDDED 7002: Plain language description of the nature of a goods item sufficient to identify it for customs, statistical or transpo purposes
an..512
(Min=1, Max= unbounded)

9 Marks and numbers on packages
TDDED 7102: Marks and numbers identifying individual packages
an..512
(Min=1, Max= unbounded)

Digital Documents

Data Model

**Data and
Documentation
simplification**

**Business Process
Analysis and
Simplification**

Data Model

A data model describes the data to be exchanged in a Single Window from an eBusiness perspective

Objective: Create model of the information that will be exchanged in the Single Window

- Identify standard data model for electronic data exchange
- Map national business data requirements to data model international standard for electronic data elements
- Optional: Adapt data model to the national data requirements

Standards & Tools: UNECE Core Components, WCO Data Model...



The Problem: Electronic data exchange requires very precise data definitions

*TDED 3404 Person name
Family name and given names
of an individual.*

Person Name

- Nickull, Duane A.
- Mr. Nickull
- Duane Nickull
- D. A. Nickull
- Duane A. Nickull
- Duane Allan Nickull
- Nickull, Duane Allan
- Mr. D. Nickull
- Monsieur D.A. Nickull

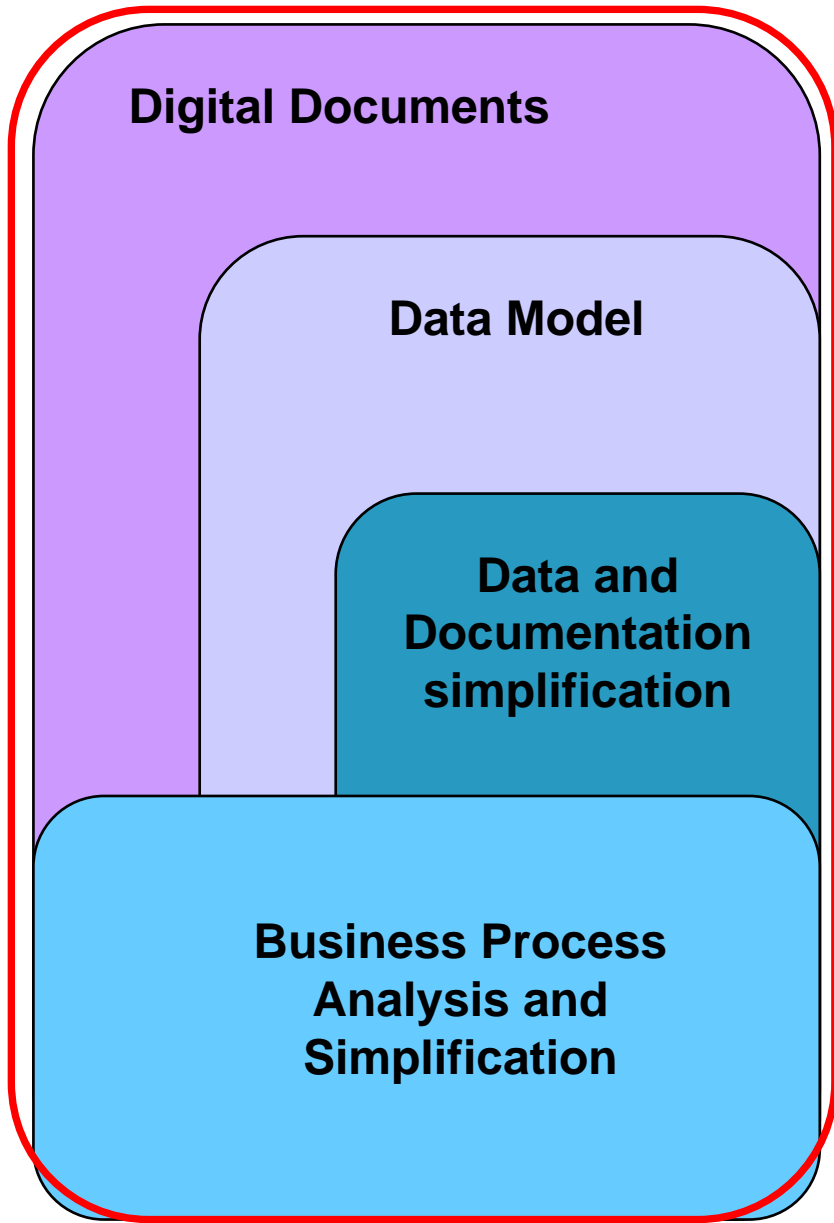
UN/CEFACT Core Components

- ❑ An international standard (ISO 15000-5)
- ❑ provides definitions and structure to describe complex information
- ❑ ..exchanged in supply chains
- ❑ ..in a syntax neutral format
- ❑ Used to build data models
- ❑ Examples:
WCO Data Model, CEFACT XML messages, CITES permits, ..



Map the data elements to the Data Model

ASBIE (Association Business Information Entity)	BBIE (Basic Business Information Entity)	SC (Data Type – Supplementary Component)	Certificate of Origin A Certificate of Origin certifies expressly that the goods to which the certificate relates originate in a specific country. Department of Foreign Trade, Ministry of Commerce, Thailand	Permit for the Export of Rice (A. 4) Permit for the Export of Rice (A. 4) is only given to rice exporters who follow the Ministry of Commerce's Regulation for Rice Exportation 1997. Department of Foreign Trade, Ministry of Commerce, Thailand	Certificate of Standards of Products (MS. 24) Certificate of Standards of Products (MS. 24) certifies that the rice to be exported has the quality set by importer. Board of Trade of Thailand
UNeDocs_Ship BIM. Specified. Supply Chain_Consignment Included. Supply Chain_Consignment Item	Supply Chain_Consignment Item. FOB. Amount	Amount Currency. Identifier		17 Price (FOB) TDED 5032: Amount declared for customs purposes of those goods in a consignment which are subject to the same customs procedure, and have the same tariff/statistical heading, country information and duty regime n..18 (Min = 1, Max = unbounded)	13 FOB Amount TDED 5032: Amount declared for customs purposes of those goods in a consignment which are subject to the same customs procedure, and have the same tariff/statistical heading, country information and duty regime n..18 (Min = 1, Max = unbounded)
UNeDocs_Ship BIM. Specified. Supply Chain_Consignment Included. Supply Chain_Consignment Item	Supply Chain_Consignment Item. Gross Weight. Measure	Measure Unit. Code	11 Gross weight TDED 6292: Weight (mass) of goods including packaging but excluding the carrier's equipment. n..14 (Min=1, Max= unbounded)		
UNeDocs_Ship BIM. Specified. Supply Chain_Consignment Included. Supply Chain_Consignment Item	Supply Chain_Consignment Item. Net Weight. Measure	Measure Unit. Code		15 Net weight TDED 6016: Weight (mass) of goods item excluding all packing n..16 (Min = 1, Max = unbounded)	12 Net weight TDED 6016: Weight (mass) of goods item excluding all packing n..16 (Min = 1, Max = unbounded)
UNeDocs_Ship BIM. Specified. Supply Chain_Consignment Item. Nature Identification. Transport_Cargo	Transport_Cargo. Identification. Text		10-2 Description of goods TDED 7002: Plain language description of the nature of a goods item sufficient to identify it for customs, statistical or transport purposes an..512 (Min=1, Max= unbounded)	13 Description of goods TDED 7002: Plain language description of the nature of a goods item sufficient to identify it for customs, statistical or transport purposes an..512 (Min = 1, Max = unbounded)	
UNeDocs_Ship BIM. Specified. Supply Chain_Consignment Included. Supply Chain_Consignment Item. Physical. Logistics_Shipping Marks	Logistics_Shipping Marks. Marking. Text		9 Marks and numbers on packages TDED 7102: Marks and numbers identifying individual packages an..512 (Min=1, Max= unbounded)		18 Marks and numbers on packages TDED 7102: Marks and numbers identifying individual packages an..512 (Min = 1, Max = unbounded)



Digital Documents

Data Model

**Data and
Documentation
simplification**

**Business Process
Analysis and
Simplification**

Electronic Documents

Objective: Provide the specification for the electronic documents and data

- Every document is a part of the data model
- Create specification of this data in
 - XML
 - UN/EDIFACT
 - Other syntax
- THE END

Standards: UN/EDIFACT, CEFAC T Naming and Design Rules, WCO DM, ...

UN/EDIFACT

- ❑ The international standard for Electronic Data Exchange (ISO 9735)
- ❑ Published and maintained by UNECE

www.unedifact.org

- ❑ 209 message formats, 2 publications per year
- ❑ Characteristics:

- + robust, stable, standard, ***“Workhorse”***

- implementation & (software) license costs, Internet/application integration, SME

eXtended Markup Language (XML)

- ❑ Standard for semantic description of data
- ❑ Web related standard
- ❑ Characteristics:
 - + large support by IT industry, simple integration into applications, low cost, ..
 - + one short step from Data Model to XML, ..**
 - Lack of eBusiness standards, low market penetration, long term success frequent changes, high costs, ..

Not **whether** XML or EDIFACT, but **where** XML and EDIFACT



-
- We could make a slide here wit PDF, XML, EDIFACT

Summary

- ❑ Single Window requires analysis and simplification of processes and data for cross border trade
- ❑ Objective: Analyse, simplify, standardise automate
- ❑ Four step model to automate processes and data
- ❑ UNECE and WCO provide a set of standards and tools to support these processes
- ❑ UNECE/ESCAP provide joint Capacity Building through the UN Network of Experts

Thank you

Markus.Pikart@unece.org

