

Odessa, 31 May 2016



HARMONIZATION OF DATA FORMATS AND DATA MODELS IN THE SINGLE WINDOW PROJECTS



Plan of Presentation

- General information on the problem
- Data Harmonization within the ISPS (PCS)
- National and international projects
- Conclusions and recommendations



HARMONIZATION OF DATA FORMATS AND DATA MODELS IN THE SINGLE WINDOW PROJECTS

General information on the problem

Harmonization of data types is one of the major stages of the implementation of the Single Window projects. The purpose of this step is to identify and eliminate ambiguity in the interpretation of data types and duplication of these types in the documents. The result should be submission of electronic documents in the form of related records that contain the unique harmonized data, or references to the NSI, describing all the steps of automated business process.

«The objective is to eliminate redundancies and duplication with the ultimate goal of defining one standard set of data and messages that traders and transport operators will provide to meet all governmental information requirements related to import, export, and transit»

UNECE RECOMMENDATION No. 34 DATA SIMPLIFICATION AND STANDARDIZATION FOR INTERNATIONAL TRADE



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General information on the problem

Elements of Information Systems, subject to harmonization :

- **Data Models** is a data model in this context involves semantic structures that can be used to create message profiles without having to consider the syntax. UN/CEFACT has created the Core Component Technical Specification (CCTS) to facilitate development of data models in a structured way. Data models should be harmonized across a domain and provide inter-operability between disparate companies and governments in business-to-business (B2B) and business-to-government (B2G) scenarios
- **Data Formats** is a syntactic representation of the semantic message structure. Data formats shall comply with the criteria of completeness, uniqueness and non-redundancy for the submission of information, which they describe.
- **Data Types** is a library of business semantics in the data model, harmonization, validation and publication of which is provided by the UN CEFACT. BPC uses Core Component Technical Specification (CCTS) to ensure consistency and interoperability.



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Data Harmonization within the ISPS (PCS)

- **Data Models** are based on WTO Data Model
- **Data Types** comply to national and international classifiers. New classifications for the data types are created, for which there were no such classifiers. Work is underway to unify the definitions of data elements to be excluded from their ambiguous application
- **Data Formats** are universal format, which has national and international certification and are used by the majority of Single Window projects (DSTU ISO / IEC 13250).



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National and international projects

- National Single Window for ship reporting – EMSA Prototype. SafeSeaNet Project.
- IMO Single Window Prototype
- eMar Project
- AnNa Project

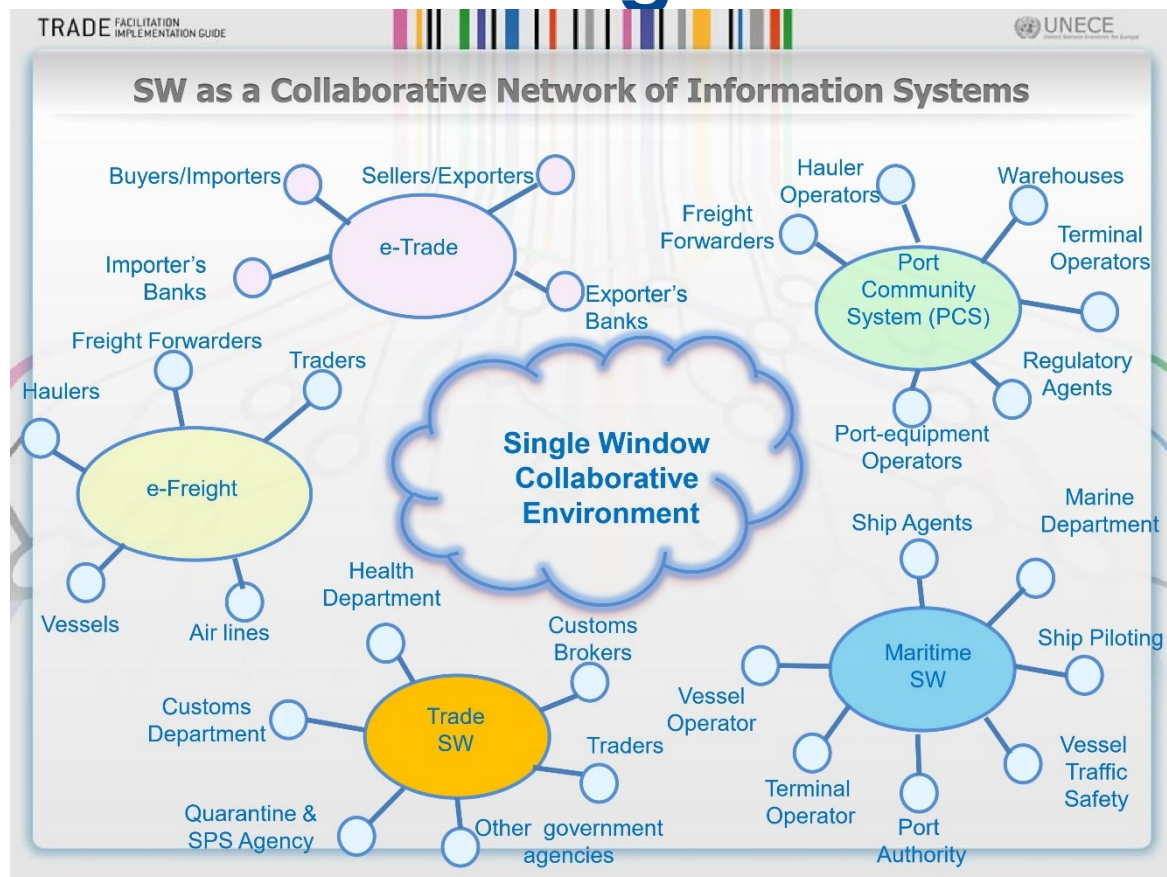
Data Models:

- WCO Data Model
- ISO Data Model
- CEFACT Data Model



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The unification and integration. Single Window for single windows.



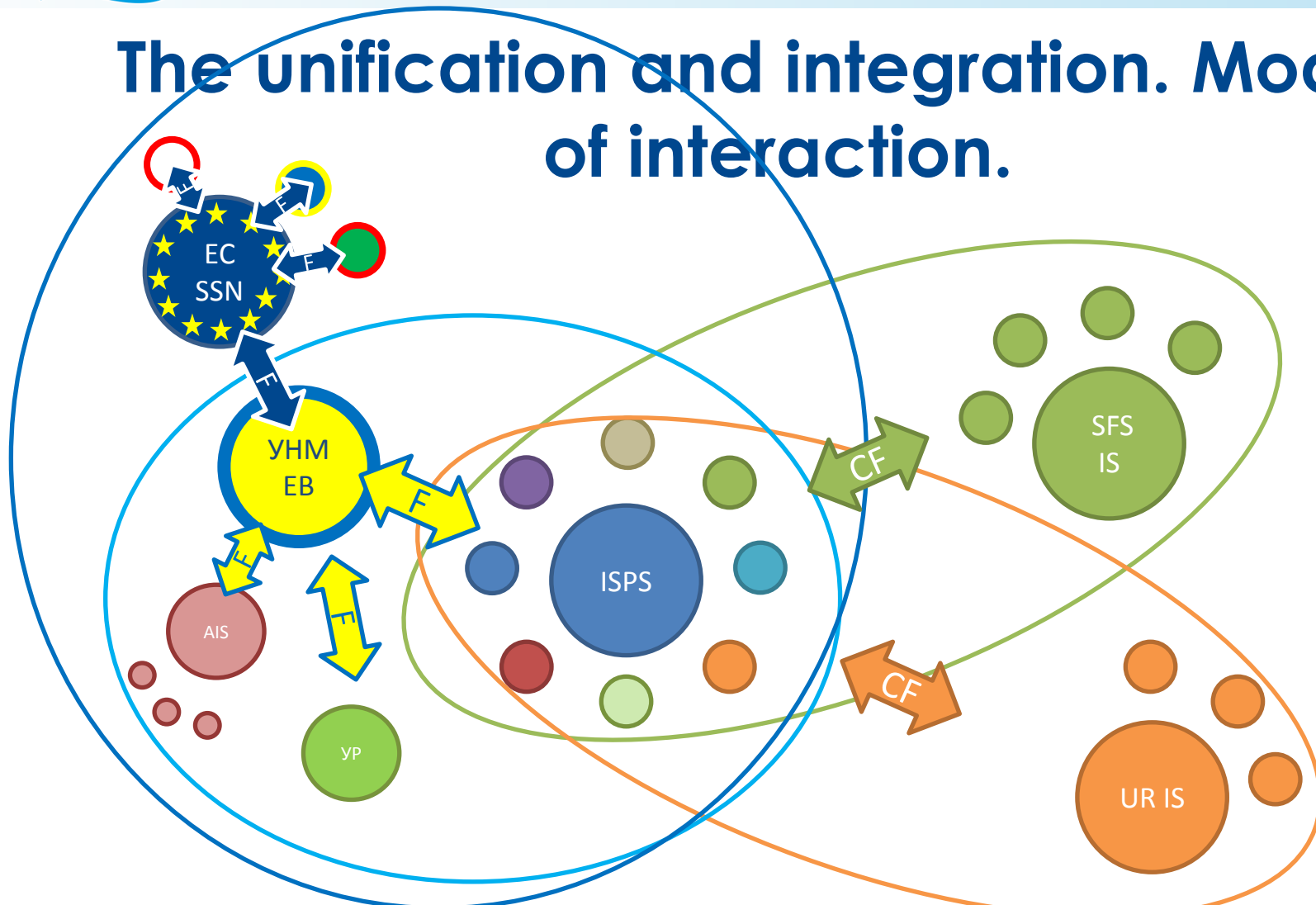
www.unece.org

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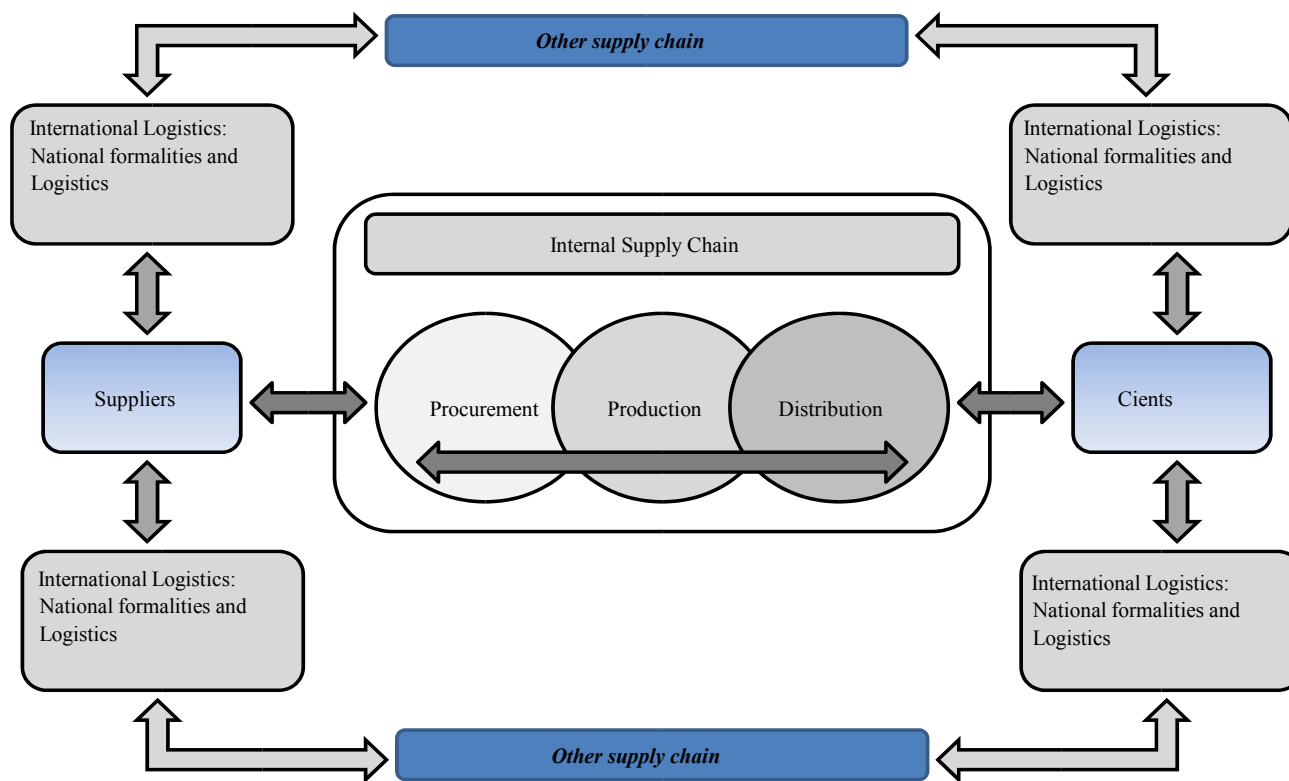
The unification and integration. Models of interaction.





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The unification and integration. Integration into a single supply chain.



[United Nations Economic and Social Commission for Western Asia](#)

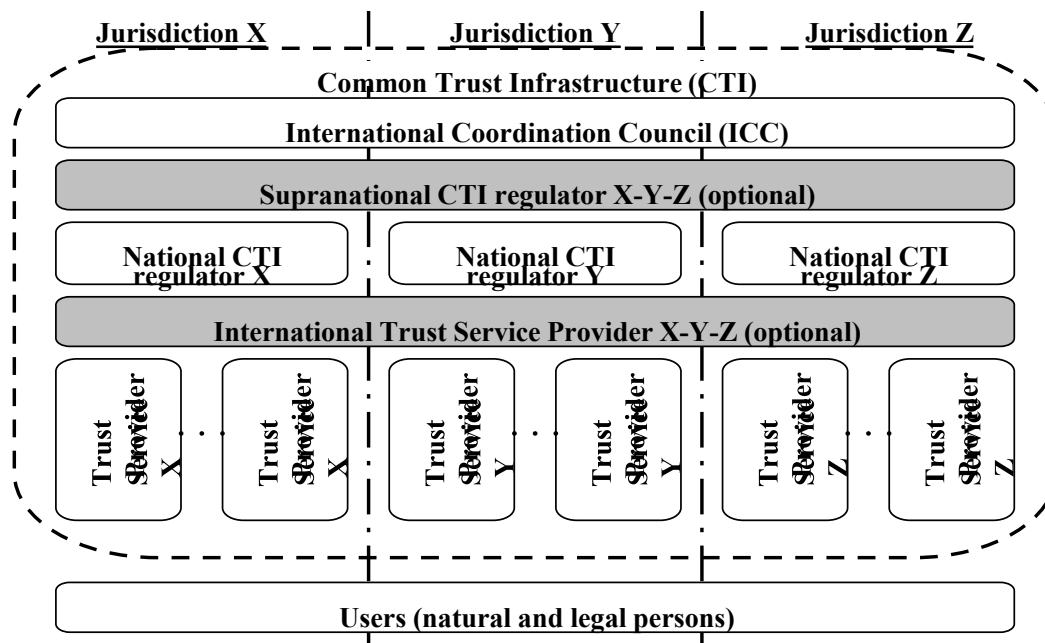




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Single Windows Interoperability

- UN/CEFACT Draft Recommendation to ensure the interoperability of the Single Windows and mutual legal recognition.



[United Nations Economic Commission for Europe](http://www.unece.org)





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Conclusions and recommendations

- Harmonization and standardization of data and formats is not only an IT project, but a political and organizational work aimed at reducing the administrative barriers that hinder the movement of goods, vehicles and passengers.
- There is a need in mapping of basic data models used by the industry. In particular, this work was done by EMSA for IMO forms.
- There is a need to harmonize the EDI/XML transformations between the SW projects under the auspices of mutually beneficial jurisdiction.
- There is a need in integration of existing IS within the existing standards and regulations, rather than duplicating the SW.
- It is necessary to continue work on the harmonization of reference data.
- There is a need in adoption of UN/CEFACT recommendation to ensure the interoperability of Single Windows and mutual legal recognition.

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THANK YOU