UN/CEFACT

United Nations Centre for
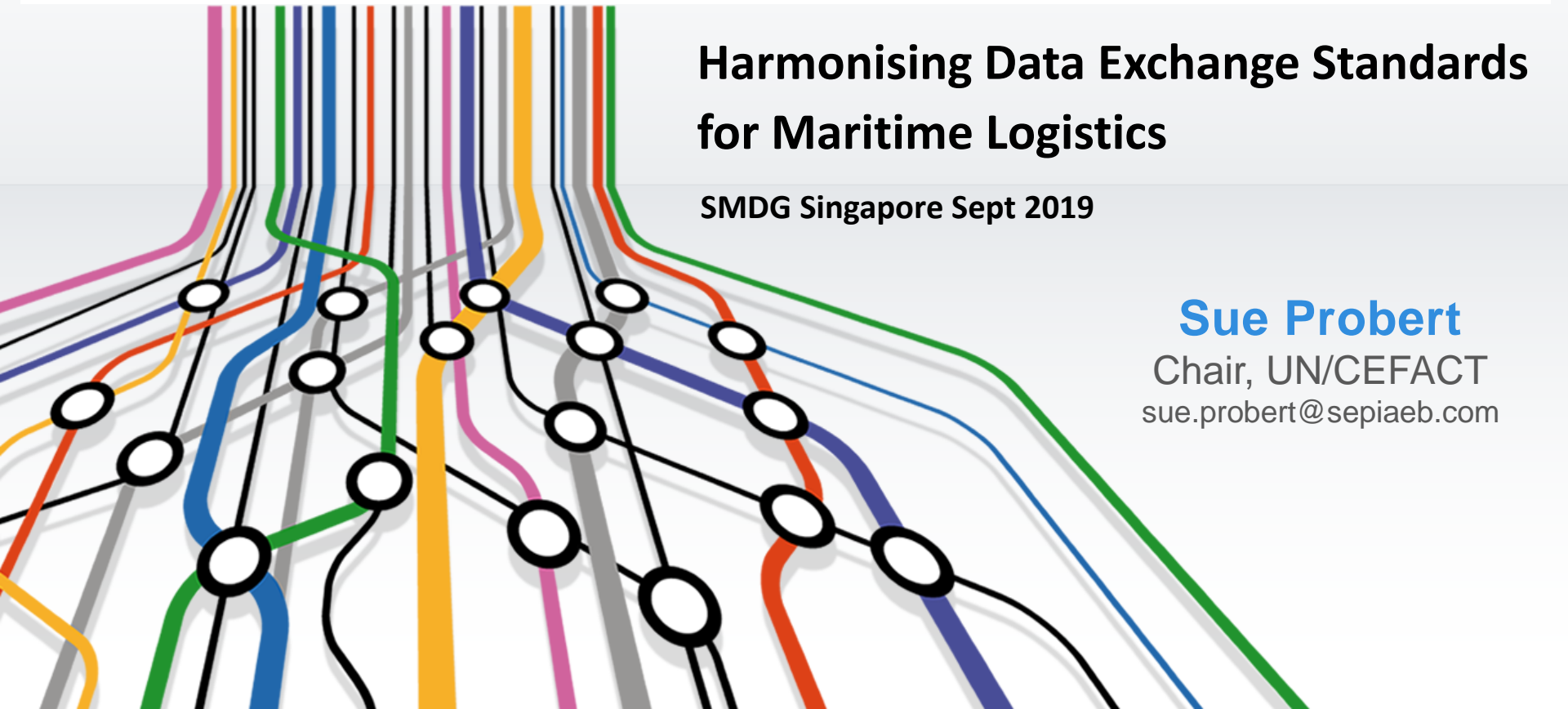Trade Facilitation and electronic Business

Data Standards for International Trade

Harmonising Data Exchange Standards for Maritime Logistics

SMDG Singapore Sept 2019

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Agenda

- Introduction to UN/CEFACT
  - Who we are
  - What we do
  - How we do it
  - Maritime data standards – our history
- The cross-border dimensions and importance of:
  - Multi Modal Standards
  - Semantic Anchors
  - Multi Syntax Reality
  - Cross-border and Regulatory Requirements
- State of play
  - Current projects
  - References

UN/CEFACT

The UN Centre for Trade Facilitation and electronic Business

Objectives

- Simple, transparent and effective processes for global business
- Efficient and automated exchange of information

Outputs

- Global Trade Facilitation and Electronic Business Recommendations and Standards

Means

- Public Private Sector Partnership
  – over 400 experts from government and business
- Experts meet via internet every week plus two Face-to-Face Forums per year

UN → UN/ECOSOC → UN/ECE → UN/CEFACT
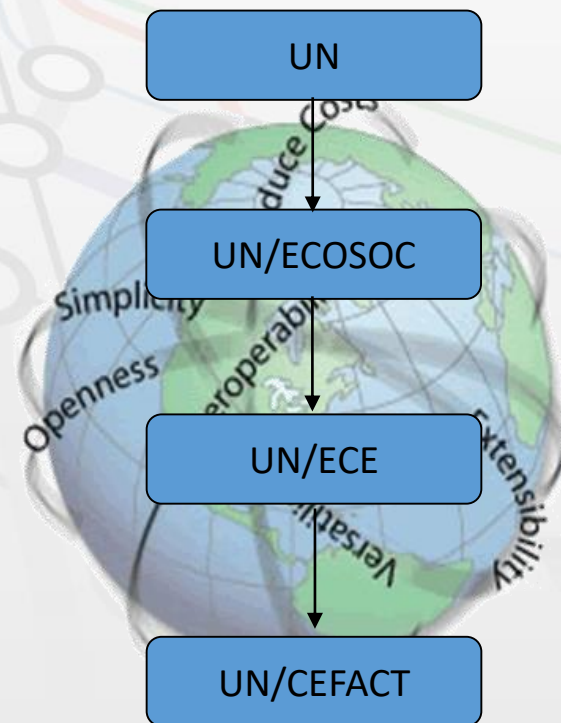
Global Remit

Unique Credentials

- Global Reach
- UN Blue Badge – Sustainable Development Goals (SDGs)
- Transparency and Independence
- Voluntary Expert Contributions
- Open Development Process
- International Supply Chain = Holistic Focus
- Free-for-use Deliverables
- Trustability - Quality and Longevity

Key Semantic Outputs

- Internationally developed and agreed Trade Facilitation Recommendation Code Lists

- Internationally developed and agreed Business Standards

- UNTDED (ISO 7372)

- Reference Data Models (Buy/Ship/Pay)

- Continually Maintained Libraries
  - UN Core Component Library (CCL)
  - UN/EDIFACT directories
  - UN/XML Schemas
  - Globally applicable Code Sets (UNCL)

Recommendation 1: UN Layout Key

- Specifically endorsed in the WTO TF Agreement and the WCO Revised Kyoto Convention

- Provides a common basis for the layout of trade-related documents and the information they contain:
  - Endorsed by key international organizations
  - E.g. Basis for the EU Single Administrative Document (SAD)

- All data elements in UNLK aligned documents have electronic equivalents in UN/EDIFACT, UN/CCL,

- Recommendation has recently been revised

UN/CEFACT – International Code Lists

Single Windows Document Families – Border Challenges

Trade

Materials Management

Transport

Payment

Insurance

B2B

UN/CEFACT Buy/Ship/Pay

UN/CEFACT eCert SPS

B2G
G2B

WCO Data Model

G2G

Other Cross-Border Agencies

Customs
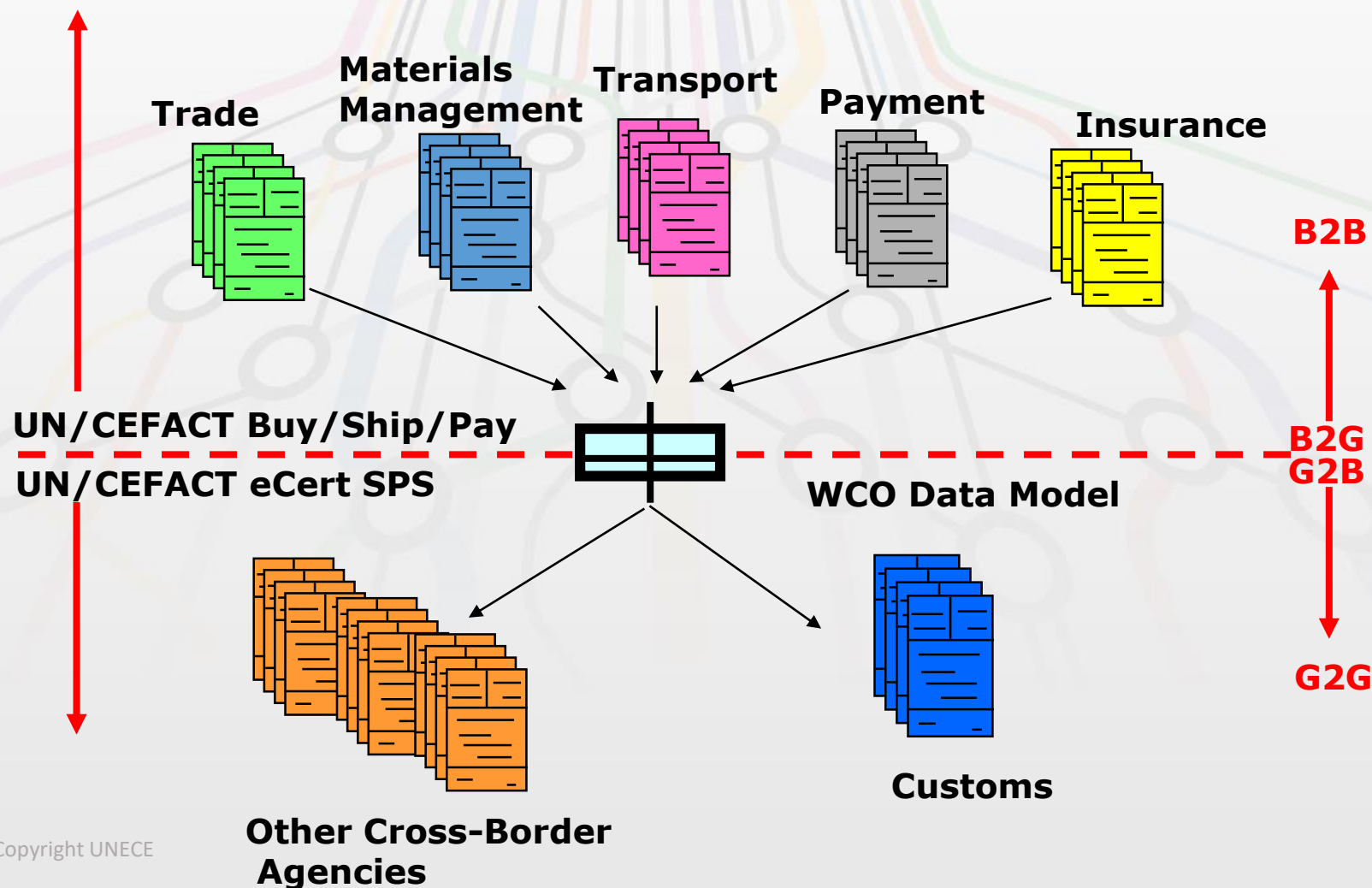
Key Problems facing the Private Sector when conducting or supporting international transactions

- Too many legal requirements still mandating use of paper documents

- Modal specific international transport conventions in an increasingly intermodal or synchro-modal transport & logistics world

- Multiple regulatory requirements with unharmonised data definitions and exchange protocols

- Legal goods held back at borders or en route by Customs, Port Health or other cross-border agency due to:
  - Unavailability of accurate data at inspection point
  - Lack of pre-arrival accurate targetting information

- eCommerce tsunami of parcel deliveries and returns

UN/CEFACT International Supply Chain Process Model

BUY ➤ **SHIP** ➤ **PAY**

Prepare for Export ➤ **Export** ➤ **Transport** ➤ **Prepare for Import** ➤ **Import**

INVOLVES

Commercial Procedures

- Establish Contract
- Order Goods
- Advise On Delivery
- Request Payment
- Packing
- Inspection
- Certification
- Accreditation
- Warehousing

Transport Procedures

- Establish Transport Contract
- Collect, Transport and Deliver Goods
- Provide Waybills, Goods Receipts Status reports etc.

Regulatory Procedures

- Obtain Import/Export Licences etc
- Provide Customs Declarations
- Provide Cargo Declaration
- Apply Trade Security Procedures
- Clear Goods for Export/Import

Financial Procedures

- Provide Credit Rating
- Provide Insurance
- Provide Finance
- Execute Payment
- Issue Statements

The Relationship between International Sales and Transport Service Contracts

Actors/Roles
Customer
  Buyer
  Final Consignee
  Importer
  Transport Services
Buyer

Actors/Roles
Authority
  Customs
  OGAs
  Certification Authority
  Chamber of Commerce

Sales Contract

International Purchase and Supply

Actors/Roles
Supplier
  Seller
  Original Consignor
  Exporter
  Transport Services Buyer

Actors/Roles
Intermediary
  Transport Services Provider
  Carrier
  Freight Forwarder
  Bank
  Customs Agent
  Insurer

Identify Potential Sales Partner

Establish Agreement (Sales)

Order (Sales)

Ship

Pay (Sales)

Sales Quotation

Sales Order

Transport Service Contract
  Establish Agreement (Transport)
  Order (Transport)
  Ship Transport Services
  Pay (Transport)

Border Clearance(s)
  Import/Export Declarations
  Cargo and Trasnit Reports
  Origin and other Certificates
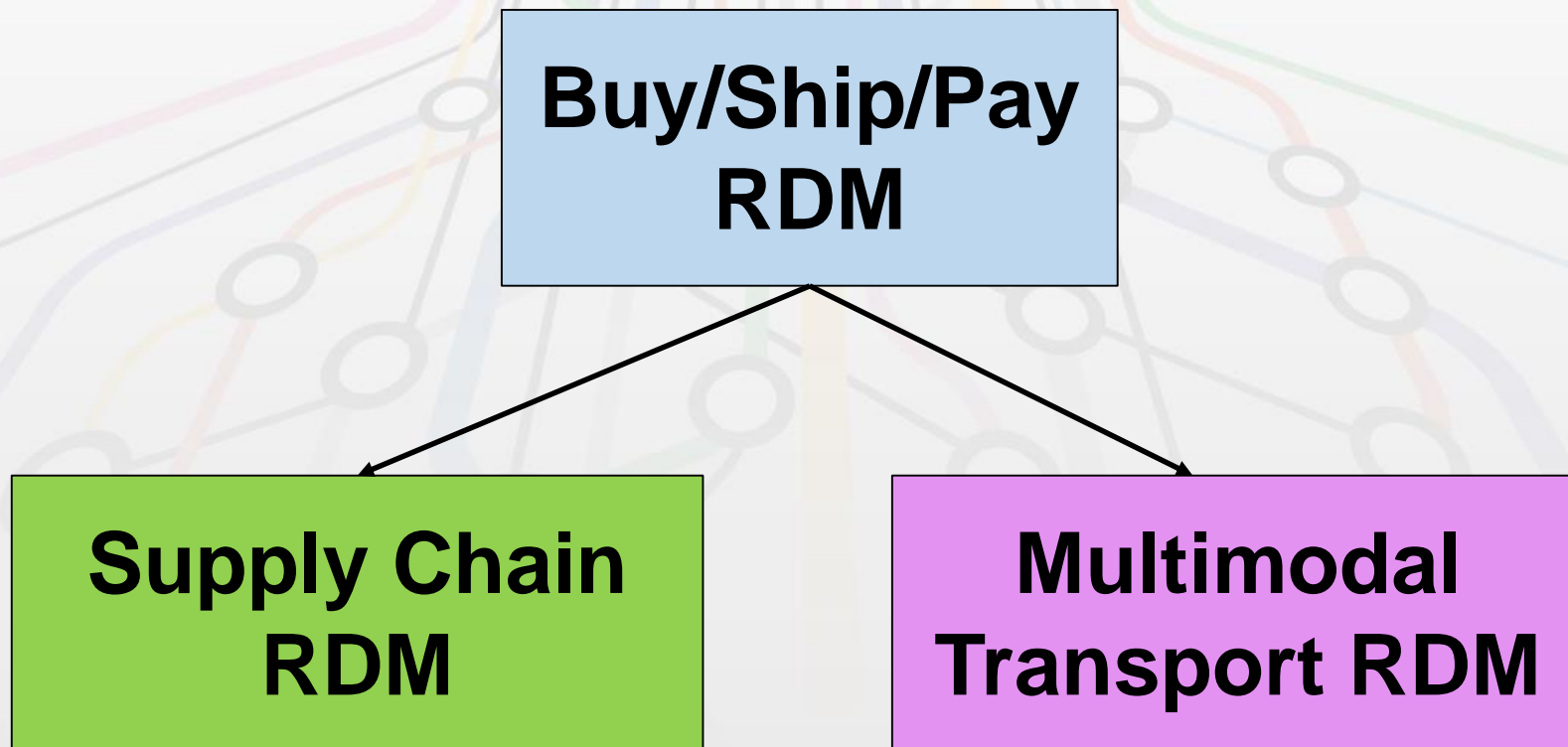
Sales Invoice

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Transport Service Contracts

The Transport Service Contract

International Supply Chain Contracts
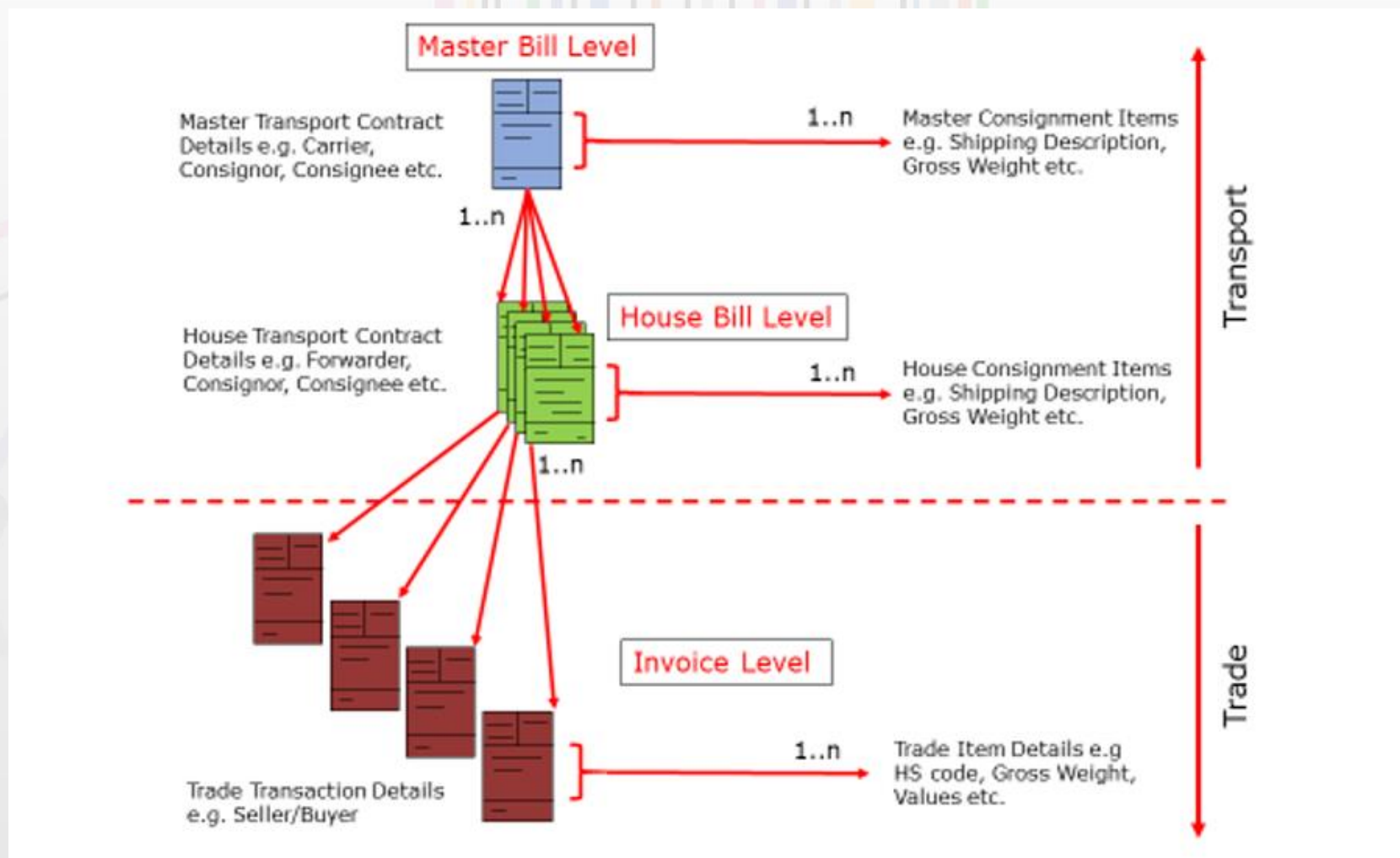
UN/CEFACT International Supply Chain Reference Data Model Family

Buy/Ship/Pay RDM

**Supply Chain RDM**

Multimodal Transport RDM

Global Trade – Semantic Anchors

- **Shipment (Trade Delivery)**

- A shipment is an identifiable collection of one or more Trade Items (available to be) transported together from the Seller (Original Consignor/Shipper) to the Buyer (Final/Ultimate Consignee):
    - A Shipment can only be destined for one Buyer
    - A Shipment can be made up of some or all Trade Items from one or more Sales Orders
    - A Shipment can have only one Customs UCR
    - A shipment may form part or all of a Consignment or may be transported in different Consignments.

- **Consignment**

- A consignment is a separately identifiable collection of Consignment Items (available to be) transported from one Consignor to one Consignee via one or more modes of transport as specified in one single transport service contractual document:
    - A Consignment can only have one Transport Service Buyer
    - A Consignment can only have one Transport Service Provider
    - A Consignment can only have one Consignor
    - A Consignment can only have one Consignee
    - The Transport Service Buyer can be either the Consignor or the Consignee
    - A Consignment is made up of one or more Consignment Items
    - A Consignment can be made up of some or all Trade Items (aggregated into Consignment Items) from one or more Shipments

Buy/Ship/Pay –
Cross-Border Trade, Transport & Customs
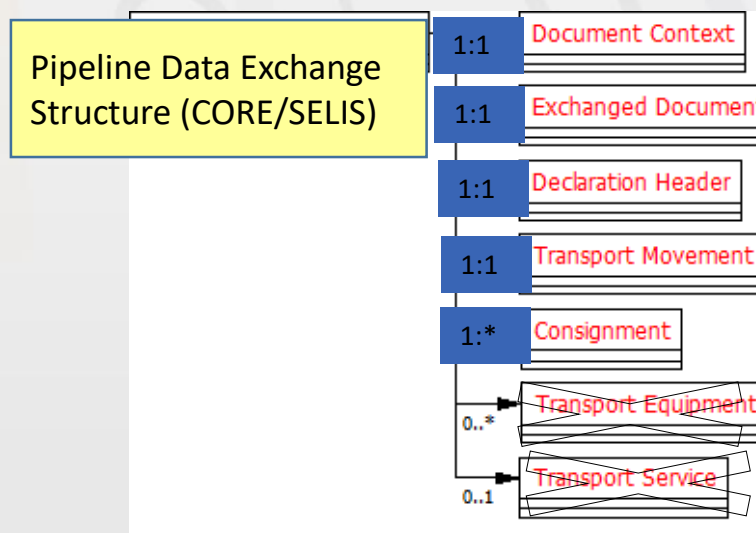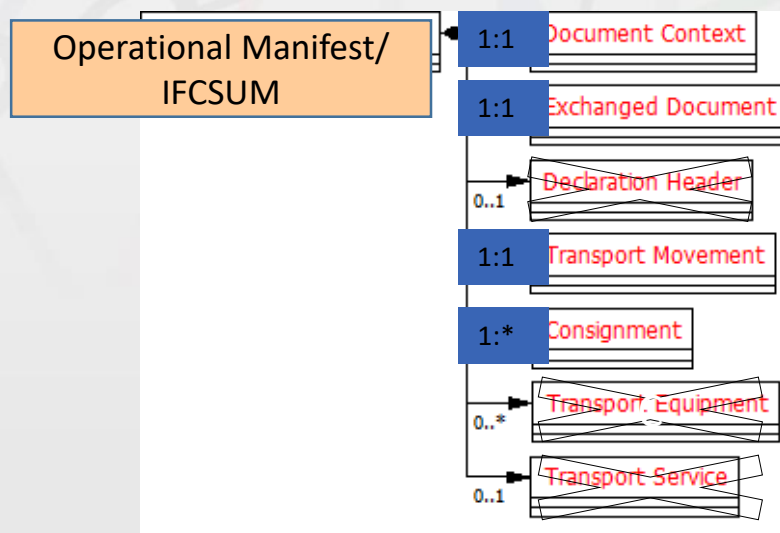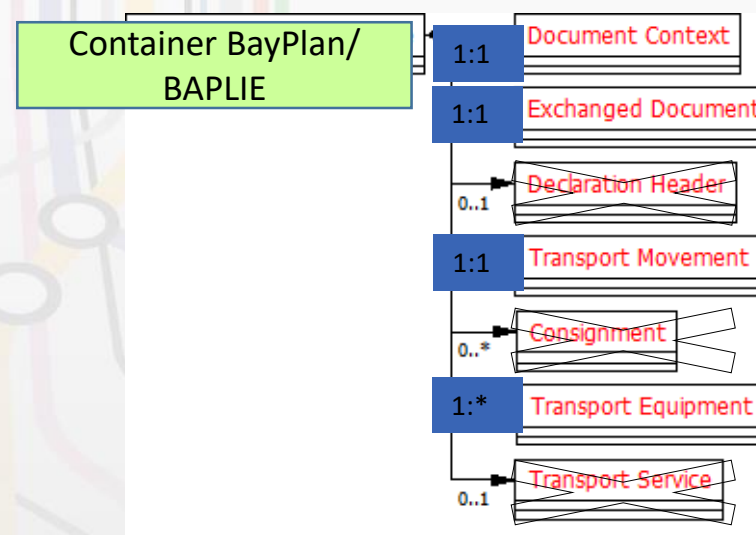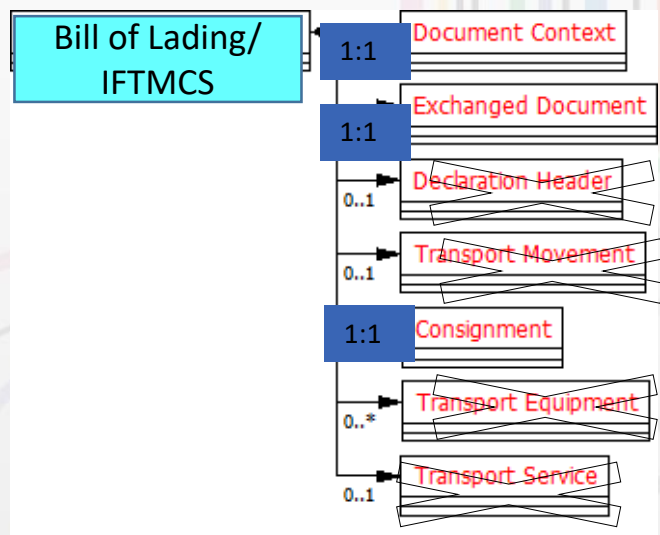Business Entity Overview

Trade Data

Transport Data

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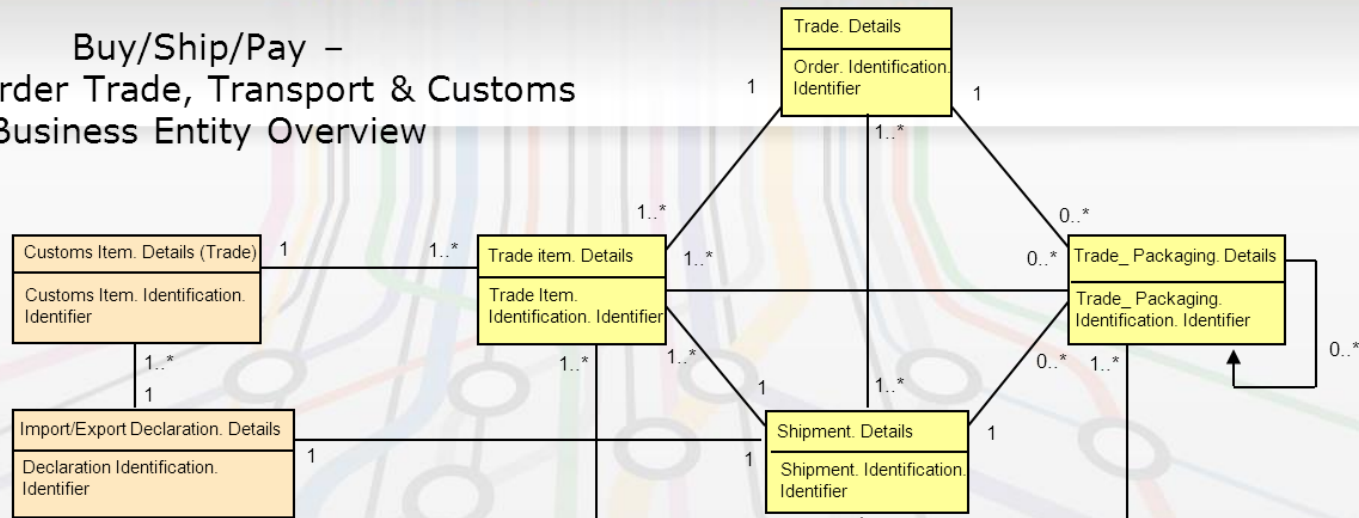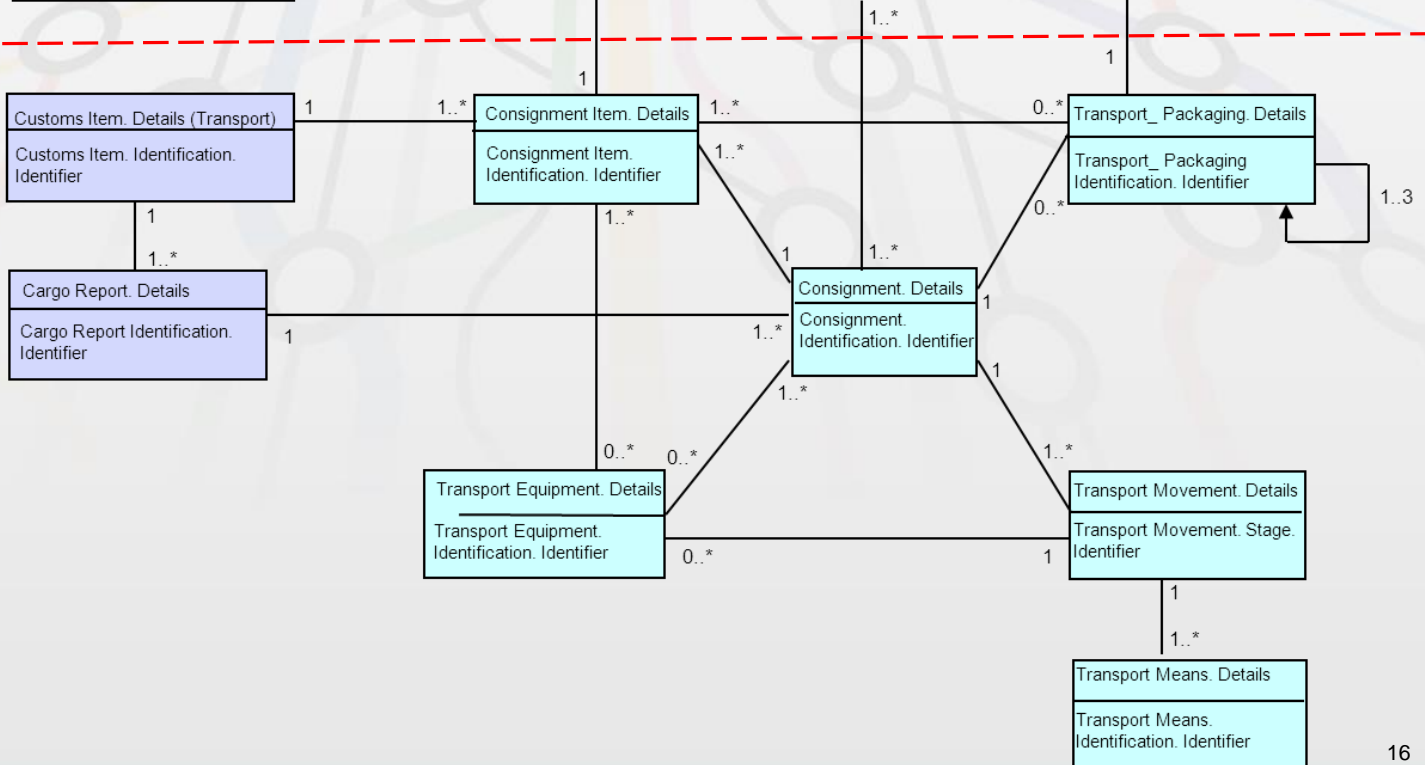
History of Maritime Standards

- UN Trade Data Elements Directory and UN Layout Key Document Standards

- UN/EDIFACT – 30 years of message development and increasing implementation

- International Code Lists

- Multi Modal Transport Reference Data Model (MMT RDM)

- Current emerging technology and methodology projects for the industry such as RDM2API etc.

Contextualized messages structures – Multimodal Transport

Bill of Lading/ IFTMCS

Container BayPlan/ BAPLIE

Operational Manifest/ IFCSUM

Pipeline Data Exchange Structure (CORE/SELIS)

Multimodal Transport Profile Messages

Published:

- ## eCMR electronic international Road Consignment Note

see https://www.unece.org/cefact/ News section:

> **2 March 2018:** UN/CEFACT is please to announce the publication of its electronic Road Consignment Note (eCMR) standard . This standard provides a free, open specification that will help parties to implement the UNECE Additional Protocol to the CMR Convention concerning the eCMR. For more information, please see the press release.

Future developments:

- Logistics pipeline data exchange structure (PDES)
- Smart Container
- Other modal transport contract messages
- Container handling messages
- Bayplan, Verified Gross Mass and Container Handling messages
- IMO FAL messages
- Consignment tracking messages

IMO FAL Ship Reporting Project

- IMO Electronic ship reporting regulation from 2019
- Updated IMO FAL Convention and Compendium to be published 2019
- New Compendium includes port call regulatory requirements data model
- UN/CEFACT Annex project to map the IMO FAL data model to the Multi Modal Reference Data Model and UN/EDIFACT (updated)
- Project members include carriers and port community system providers
- Links to Maritime Single Window initiatives (e.g. EU MSW)

Pipeline Data Exchange Standard Project

Transparency in Supply Chain

Awaiting collection — Container Loaded — Arrived at Port of Loading — Loading onto the Vessel — Vessel Departed — Change of Vessel — Vessel Arrived — Unloaded from Vessel — Departed Port of Discharge — Delivered

- Supply Chain data extracts sent to regulatory agencies at key time points
- Standardised overall data exchange structure
- Quality data from the original source at earliest time
- Regulatory and supply chain visibility benefits
- Aligned to EU Union Customs Code (UCC) ICS2 regulatory requirements

Smart Container Project

- White paper published

- Use cases developed for using data provided by smart container devices

- Enriching the Multi Modal Transport RDM to include such data

- Defining how smart container data relates to and can benefit existing data exchanges e.g. tracking and tracing, monitoring risks, protecting trade etc.

Smart Container Project

SMART CONTAINER and Data Pipelines

Seamless Integrated Data Pipeline

Shipping Lines

Terminal Operators

Leasing Companies

Port Community Systems
PCS

BCOs

Empty Depot Operators

3PLs, 4PLs

Insurance Companies

Custom Authorities

Transportation Companies

GPS position and trader ID

New data Elements

Smart Container message

Multimodal Transport Reference Data Model

UN/Core Component Library

Blockchain Project

Name	Description	Link
White Paper Overview of Blockchain for Trade	Blockchain, which is one form of Distributed Ledger Technology (DLT), offers opportunities to increase the reliability and security of trade transactions. The repetition of data among multiple ledgers in a network, as well as the immutability of information after it has been integrated into the blockchain, can increase levels of confidence for both traders and regulators.	English 📄
White Paper on Technical Application of Blockchain to UN/CEFACT Deliverables	Blockchain technology is one of the most talked about topics in the sphere of information technology as well as in the facilitation of electronic business. The cryptocurrency blockchain applications are well known and well-publicized, however, this technology has the potential to influence the way that we do business today, as its use expands to new areas	English 📄

For further information:

Smart Container Project
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IMO FAL Project
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Blockchain Project
- Project Leader: Virginia Cram-Marcos crammartos@triangularity.net

Next Transport & Logistics meeting:
UN/CEFACT Autumn Forum October 2019 (Location tbc)

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