

UN/CEFACT Technical Update

AFACT TMC

8 November 2016

Tokyo, Japan

Methodology & Technology PDA

- Library Publication Format Project
 - ➔ Call for participation
- Procedure for CCTS, CCBDA and NDR Artefacts Publication Project
 - ➔ Public review
- Procedures for Reference Data Model & Associated Artefacts Publication Project
 - ➔ Project initiation
- Code Management Project
 - ➔ Project proposed
- Business Document Header
 - ➔ Project proposed

Library Publication :XML4CCTS (ACC)

```
<xsd:complexType name="AggregateCoreComponentType">
  <xsd:sequence>
    <xsd:element name="UniqueID" type="IDType_655749"/>
    <xsd:element name="DictionaryEntryName" type="NameType_ADAD10" minOccurs="0"/>
    <xsd:element name="Definition" type="TextType_568D06"/>
    <xsd:element name="ObjectClassTerm" type="TextType_568D06"/>
    <xsd:element name="BusinessTerm" type="TextType_568D06" minOccurs="0"
maxOccurs="unbounded"/>
    <xsd:element name="UsageRuleID" type="IDType_655749" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="VersionID" type="IDType_655749"/>
    <xsd:element ref="LocalizedInformation" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:choice maxOccurs="unbounded">
      <xsd:element ref="BasicCoreComponent" minOccurs="0"/>
      <xsd:element ref="AssociationCoreComponent" minOccurs="0"/>
    </xsd:choice>
  </xsd:sequence>
</xsd:complexType>
```

Library Publication :XML4CCTS (ASCC)

```
<xsd:complexType name="AssociationCoreComponentType">
  <xsd:sequence>
    <xsd:element name="DictionaryEntryName" type="NameType_ADAD10" minOccurs="0"/>
    <xsd:element name="Definition" type="TextType_568D06"/>
    <xsd:element name="ObjectClassTerm" type="TextType_568D06"/>
    <xsd:element name="PropertyTerm" type="TextType_568D06"/>
    <xsd:element name="AssociatedObjectClassTerm" type="TextType_568D06"/>
    <xsd:element name="BusinessTerm" type="TextType_568D06" minOccurs="0"
maxOccurs="unbounded"/>
    <xsd:element name="Cardinality" type="CardinalityType"/>
    <xsd:element name="UsageRuleID" type="IDType_655749" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="AssociationType" type="CodeType_ED40BA"/>
    <xsd:element name="SequencingKeyOrdinal" type="OrdinalType_PQALZM"/>
    <xsd:element ref="LocalizedInformation" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="AssociationCoreComponentPropertyUID" type="IDType_655749"/>
  </xsd:sequence>
</xsd:complexType>
```

Library Publication :XML4CCTS (BCC)

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<xsd:complexType name="BasicCoreComponentType">
  <xsd:sequence>
    <xsd:element name="DictionaryEntryName" type="NameType_ADAD10" minOccurs="0"/>
    <xsd:element name="Definition" type="TextType_568D06"/>
    <xsd:element name="ObjectClassTerm" type="TextType_568D06"/>
    <xsd:element name="PropertyTerm" type="TextType_568D06"/>
    <xsd:element name="RepresentationTerm" type="TextType_568D06"/>
    <xsd:element name="BusinessTerm" type="TextType_568D06" minOccurs="0"
maxOccurs="unbounded"/>
    <xsd:element ref="Cardinality"/>
    <xsd:element name="CoreDataType" type="TextType_568D06"/>
    <xsd:element name="CoreDataTypeUID" type="IDType_655749"/>
    <xsd:element name="UsageRuleID" type="IDType_655749" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="SequencingKeyOrdinal" type="OrdinalType_PQALZM"/>
    <xsd:element ref="LocalizedInformation" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="BasicCoreComponentPropertyUID" type="IDType_655749"/>
  </xsd:sequence>
</xsd:complexType>
```

Code Management Project (Purpose)

Codes are an essential component of any Machine-To-Machine information flow. Codes have been developed over time to facilitate the flow of compressed, standardized values that can be easily validated for correctness to ensure consistent semantics .

Many international, national and sectoral agencies create and maintain code lists relevant to their area. If required to be used within an information flow, these code lists will be stored in their own environment and referred to as external code lists.

The project's purpose is define the procedures and methodologies for code list creation, management and maintenance. The resulting rules and guidelines will primarily be mandated for all UN/CEFACT deliverables but also applicable to external organisations.

Code Management Project (Scope)

The project will define the procedures, rules and methodologies for the following identified issues. Existing rules, such as those defined in the Core Components Technical Specification, CCTS, should be taken into account and if applicable be respected.

The project should take into account any UN/CEFACT deliverable that apply codes.

The primary target audience is UN/CEFACT Experts developing deliverables using coded representations but guidance to end users should be added when appropriate.

1. Version compatibility

The ability to use the latest possible version of a code list in association with any version of a message, i.e. decoupling the versioning of code lists from the business message versions

2. Extending code lists

Evaluate if permanent extensions are possible and desirable

3. Restricting code lists

Provide rules and methodology for restricting code lists for use within specific context. Users of the UN/CEFACT libraries may identify any subset they wish from a specific code list for their own community requirements.

4. Code list validation rules

Provide rules and methodology for how to validate instance documents against an XML Schema or UN/EDIFACT message type in respect to code lists

5. Temporary codes

Provide rules and methodology for the inclusion of temporary codes that will be replaced by a permanent code at the next UN/CEFACT standardised release.

6. Externally maintained code lists

Define rules and procedures for referencing code lists maintained by organisations external to UN/CEFACT, e.g. ISO, ICC, W3C.

Header/ Envelope Document Exchange project (Purpose)

The Standard Business Document Header, SBDH, was developed by UN/CEFACT in 2004 to facilitate internal routing and management of EDI and other business document files, primarily in applications where documents are being exchanged directly between two systems.

The Business Document Envelope, BDE, was developed by OASIS in 2015 to facilitate routing of business document files across networks with multiple gateways/routers (also known as 4-cornered architectures).

The two specifications, although using different technical approaches, address to a large extent the same application area. This risks increasing the cost in global document exchange by forcing users to apply different software for different business partners.

Header/ Envelope Document Exchange project (Scope)

The project will explore if a joint technical specification can be developed that will outline:

- a single Header/Envelope Technical Specification
- where a header technology and envelope technology would be applied
- the relationship with CCL and CCTS
- how it could be used with, and how it would be agnostic to transport protocols, including AS2, ebMS and web services (including AS4)
- how it would be agnostic to payload content
- the implications on the current user base including migration guidance, if applicable

A proof of concept based on a draft of the deliverables outlined in chapter 3 should be carried out by a minimum of three independent implementations, demonstrating interoperability.

Out of Scope: The project will not include the use of newer exchange technologies and environments, such as cloud computing, APIs and mobile devices, except to prove being agnostic to transport technologies in general. If required, this will be set up as a separate project.

* **AS4** is a Conformance Profile of the [OASIS ebMS 3.0](#) specification

Supply Chain Management PDA

- Supply Chain Reference Data Model
 - ➔ Public review
- CI-SC Scheduling Project
 - ➔ Draft development

SCRDM

Project Purpose & Deliverables

Purpose:

- Development of a semantic model for the Supply Chain
- Easy to use and maintainable semantic framework
- Semantic links and guidelines

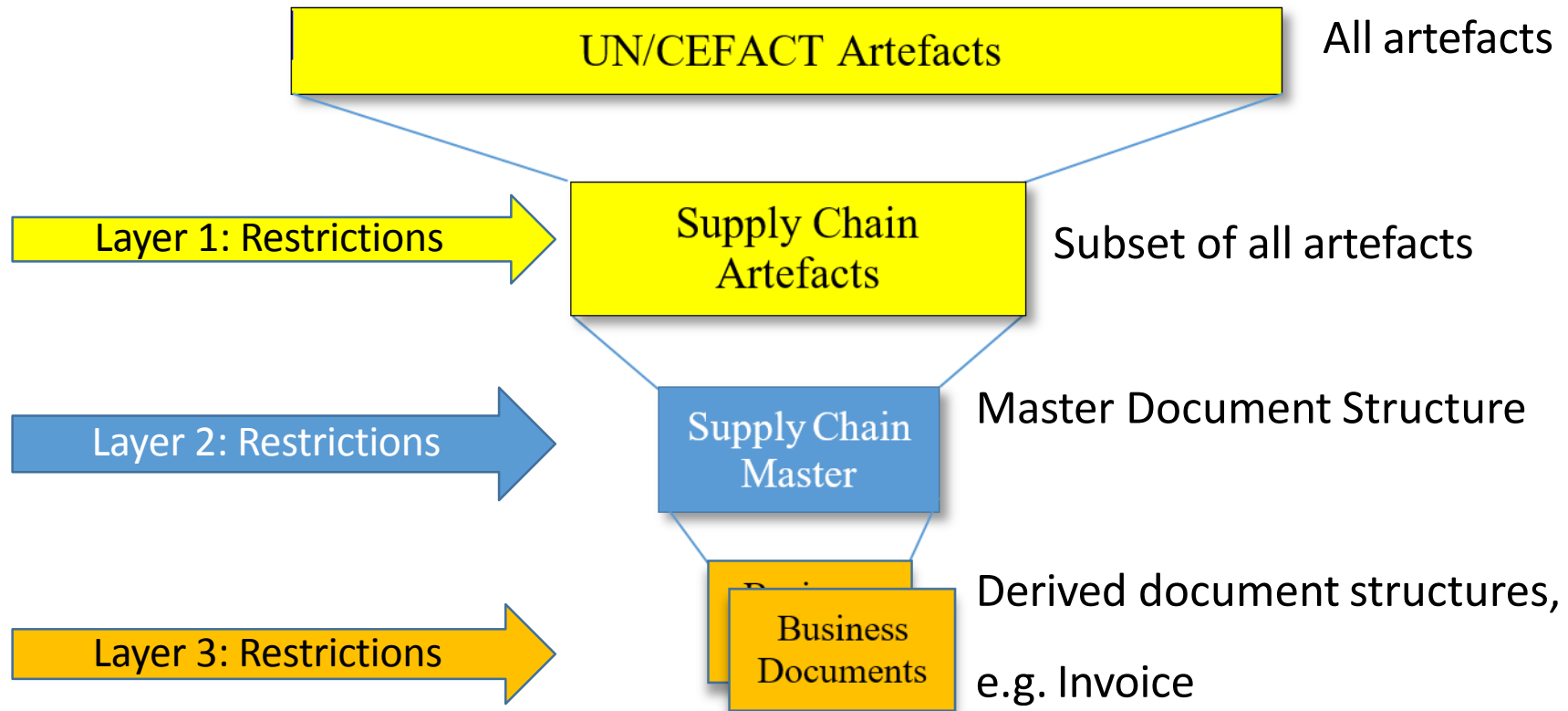
Deliverables:

- SCRDM Subset of CCL
- Semantics links
- Guidelines

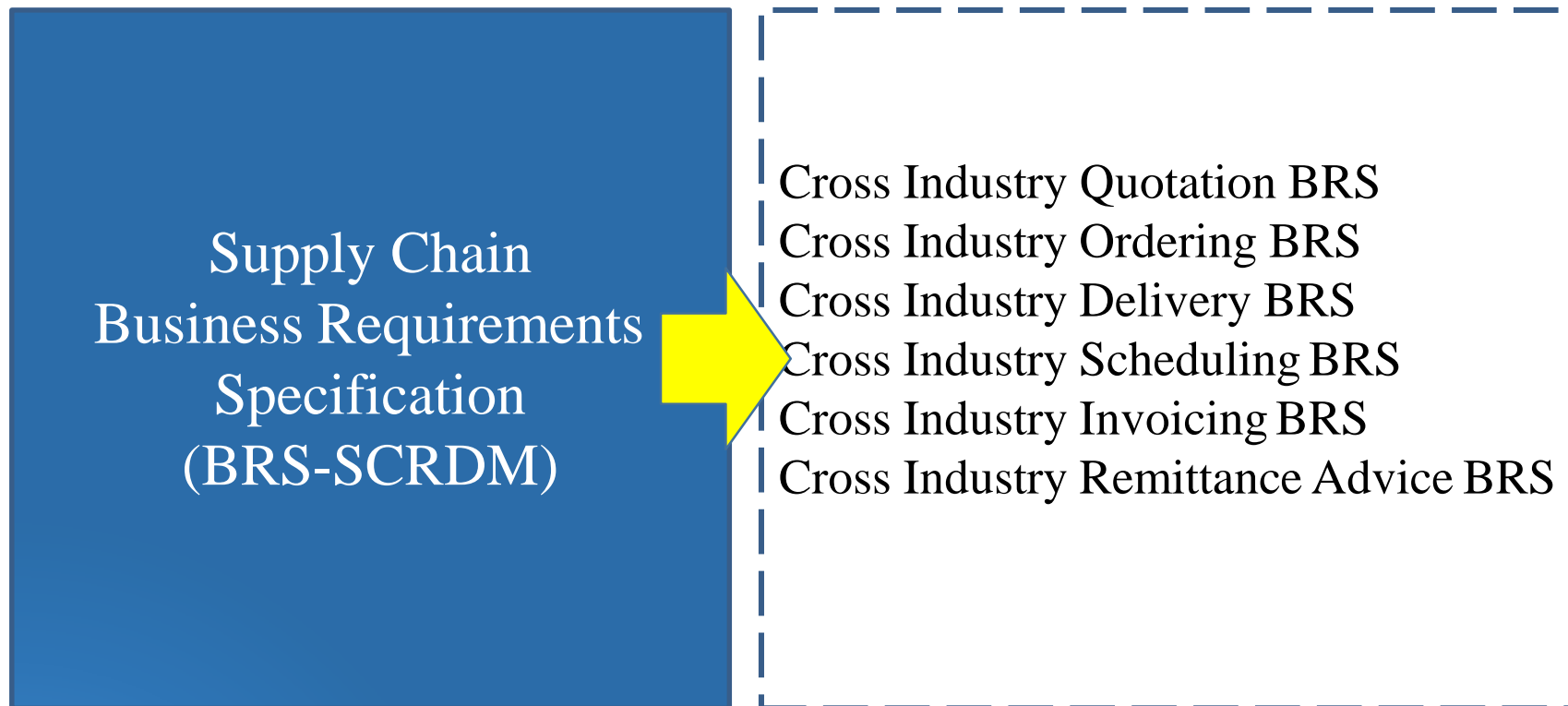
UN/CEFACT Reference Data Models

- Reference Data Model (e.g. SCRDM)
 - a subset of the UN/CEFACT Core Component Library
 - a rich collection of business artefactsfrom which standard business documents can be created
- The evolution:
 - creation of standard business document subsets from 'Master Structure'
 - contextual message restrictions are applied to the subset artefacts, the Master Structure and/or the business document

How the Supply Chain Reference Data Model works..

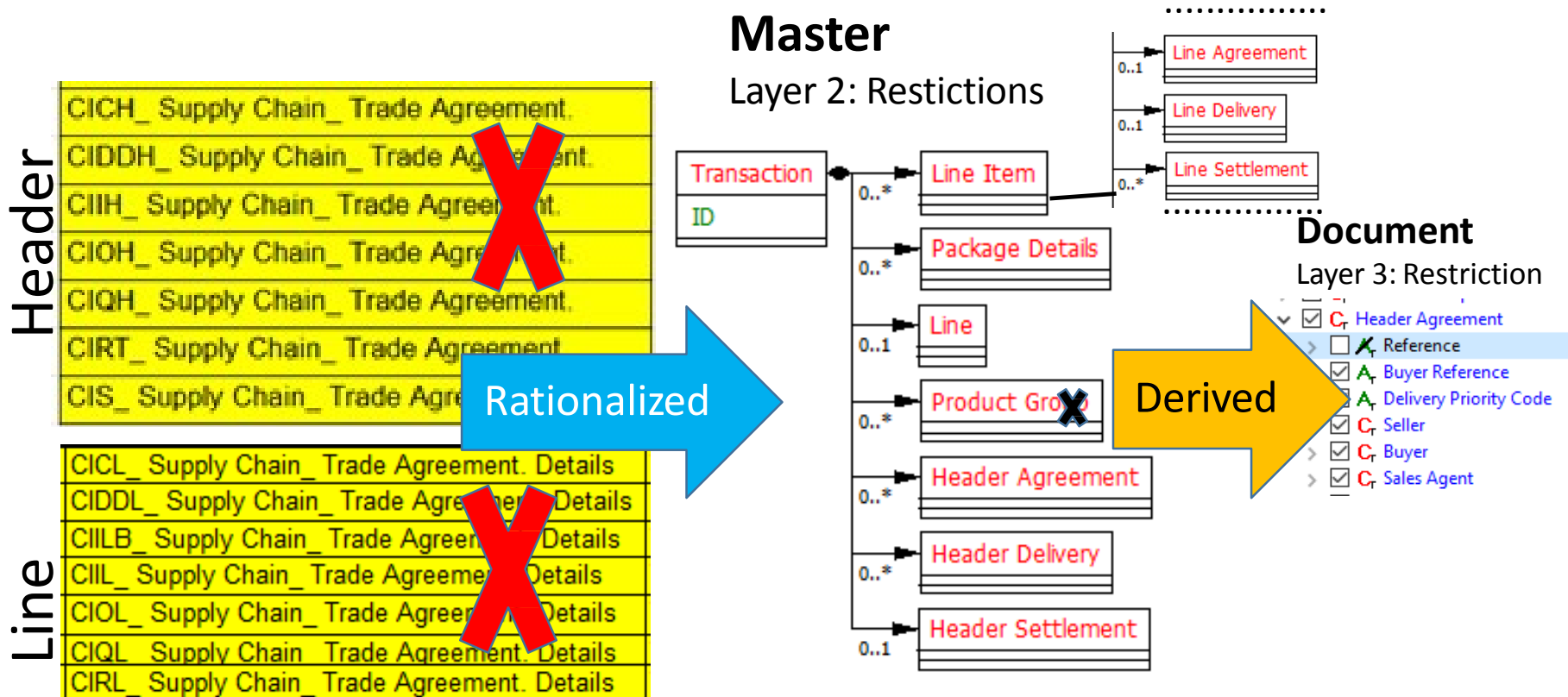


The high level: on top of BRSs



So what's new?

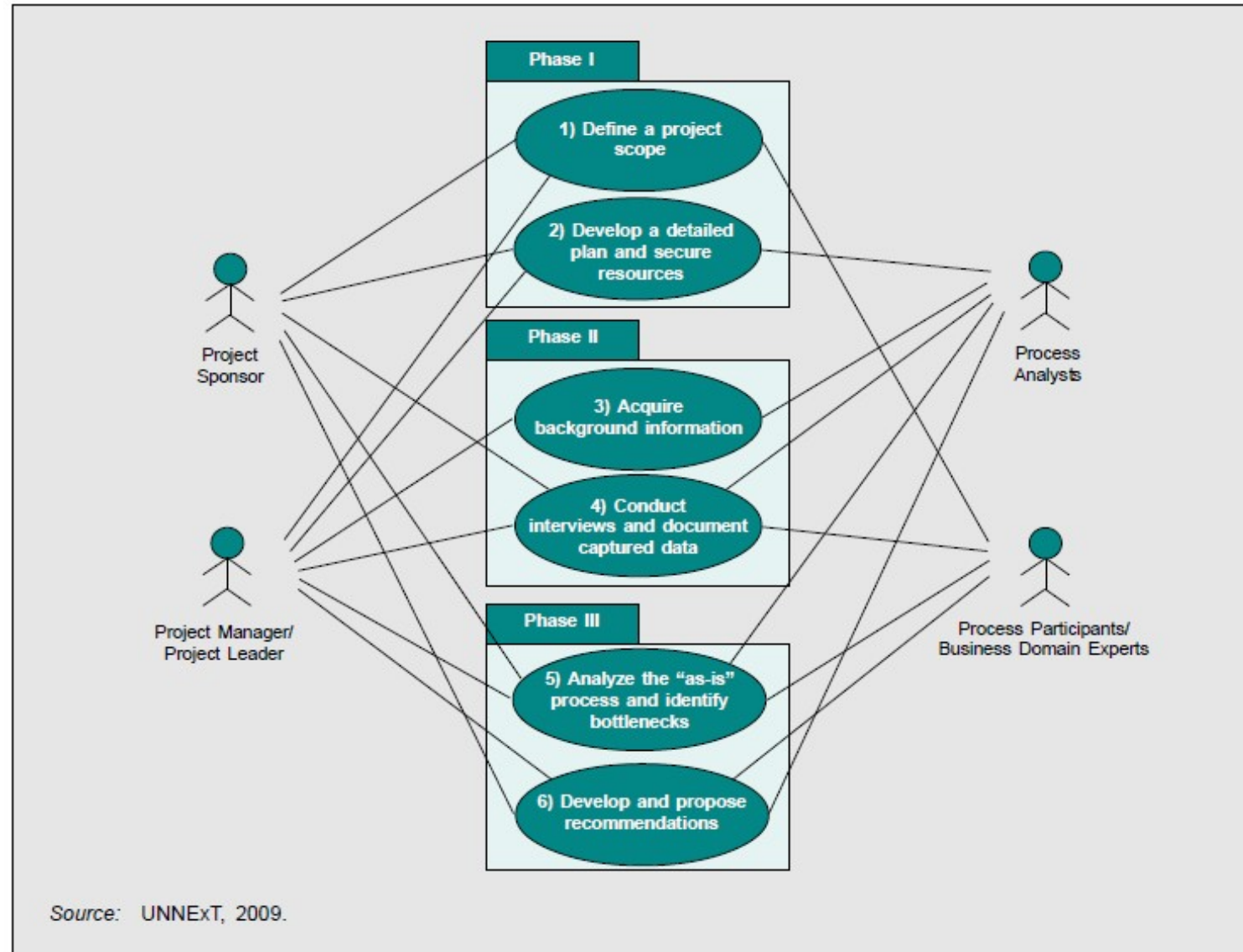
- Artefacts which are process driven instead of document specific
- Restrictions done on master and/or document layer



Rationalization results...

- 40% less business information artefacts needed
- Realized by just adding 17 new artefacts (ABIEs) to the Library (1%)
- Just 1400 artefacts needed for Supply Chain (out of 11,500)
- Just 1000 for the invoice
- Easily maintainable
- Easier to implement (less is more!)

Common step: Business Process Analysis



Common methodology: UMM/UML

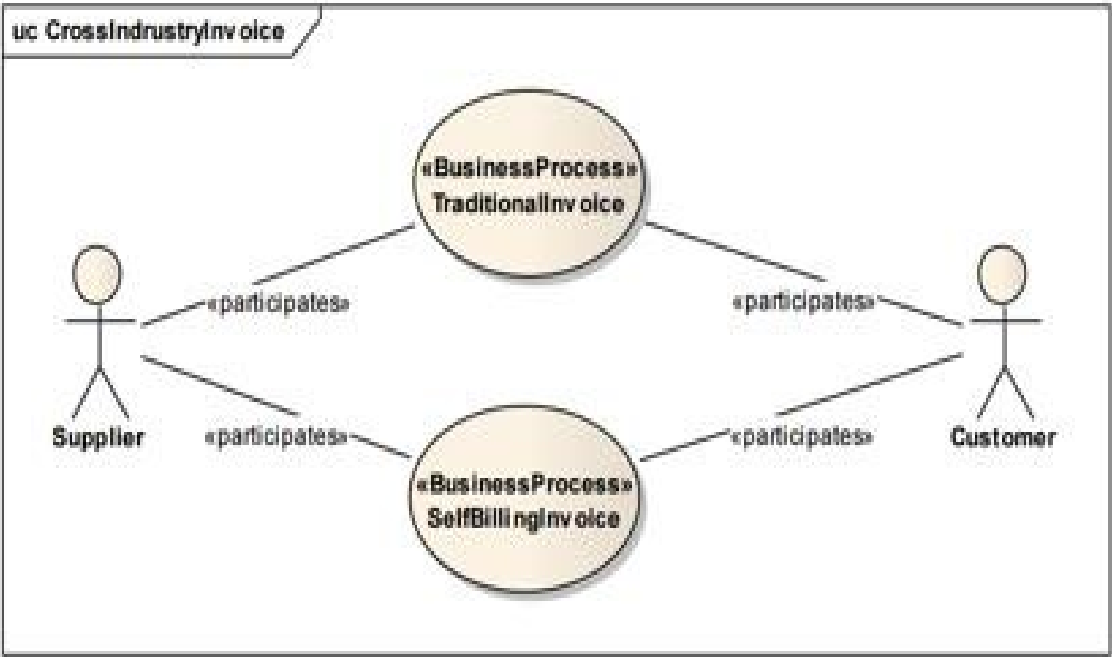


Figure 4 Use Case Diagram: process and actors

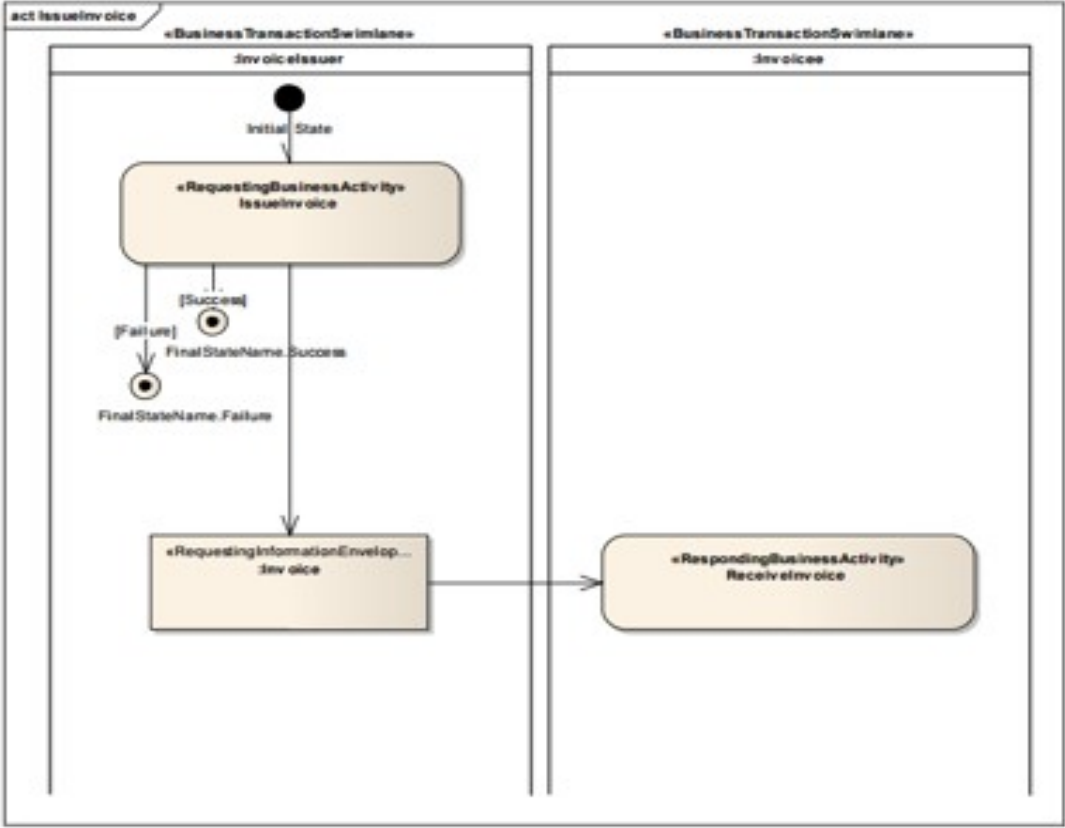


Figure 5 Use Case Activity Diagram

Common step: categorize & compile data

Process	UNLK Document Family	Documents
Buy	Commercial Transaction	<ul style="list-style-type: none"> All documents exchanged between partners in international trade for the invitation to tender, through the exchange between prospective seller and prospective buyer to the inclusion of contract, i.e., Enquiry/Request for Quotation/Offer Invitation; Offer/Quotation; Order; Acknowledgement of Order/Pro-forma Invoice; Dispatch Advice
Pay	Payment	<ul style="list-style-type: none"> Instructions (or applications) from customers to banks, i.e., Instruction for bank transfer; Application for banker's draft; Application for banker's guarantee; Collection order; Documentary credit application Advice or information from banks to customers or to beneficiaries of payment, i.e., Collection payment advice; Documentary credit payment; Acceptance or negotiation advice; Documentary credit; Banker's guarantee Information exchanged between banks

Figure 7 Example of document categorization

ASEAN ATIGA FORM D A Certificate of Origin certifies expressly that the goods to which the certificate relates originate in a the specific country. Issuing Authorities, 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 rice to be exported has the quality set by importer. Board of Trade of Thailand
	11 Place of departure TDED 3214: Name of the port, airport or other type of location from which a means of transport is scheduled to depart or has departed an.. 256 (Min = 1, Max = 1)	20 Place of departure TDED 3214: Name of the port, airport or other type of location from which a means of transport is scheduled to depart or has departed an.. 256 (Min = 1, Max = 1)
11-2 Country of Exportation TDED 3229: Country subdivision where goods begin their journey to export location an..9 (Min=1, Max=1)	5 Destination country TDED 3216:Name of the country to which the goods are to be delivered to the final consignee or buyer an..35 (Min = 1, Max = 1)	21 Country of destination of goods TDED 3014: Name of the country to which a consignment of goods is to be or has been delivered an..35 (Min = 1, Max = 1)

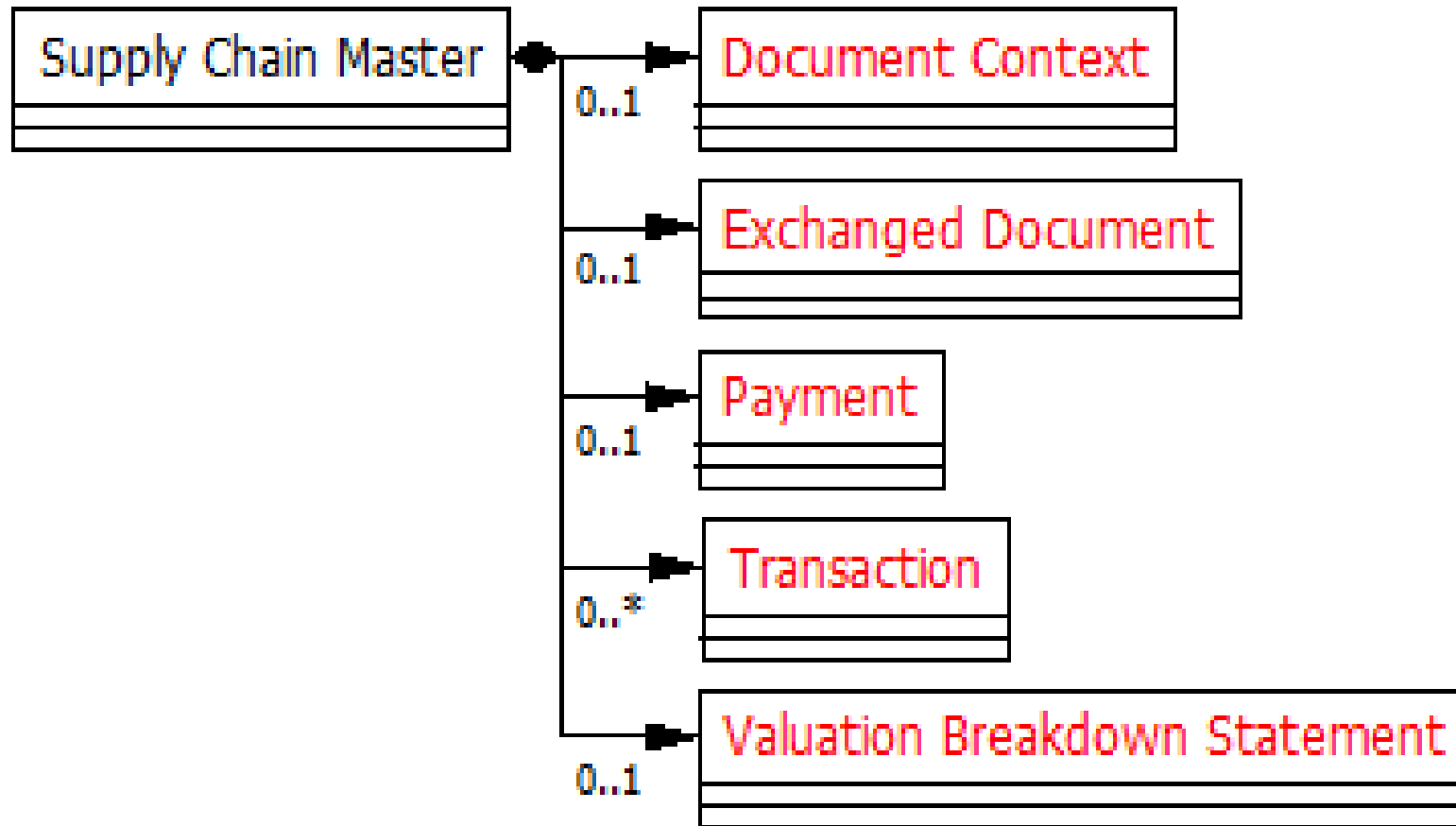
Figure 8 Example of data dictionary compilation

Data requirement mapped to SCRDM artefacts

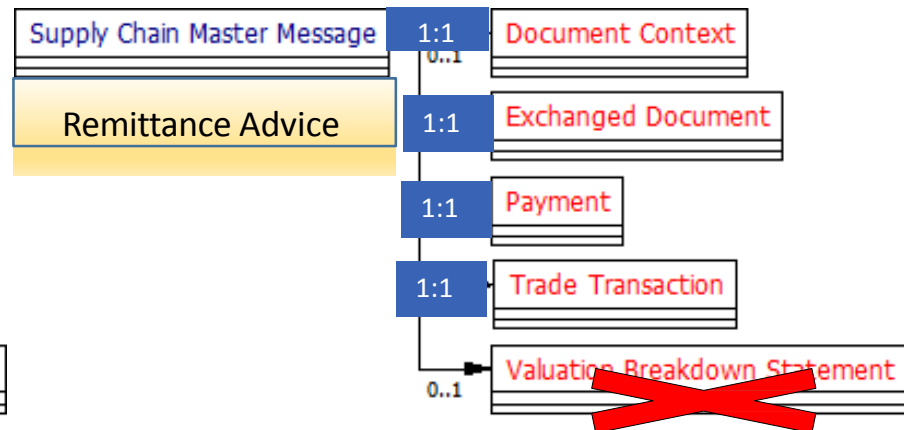
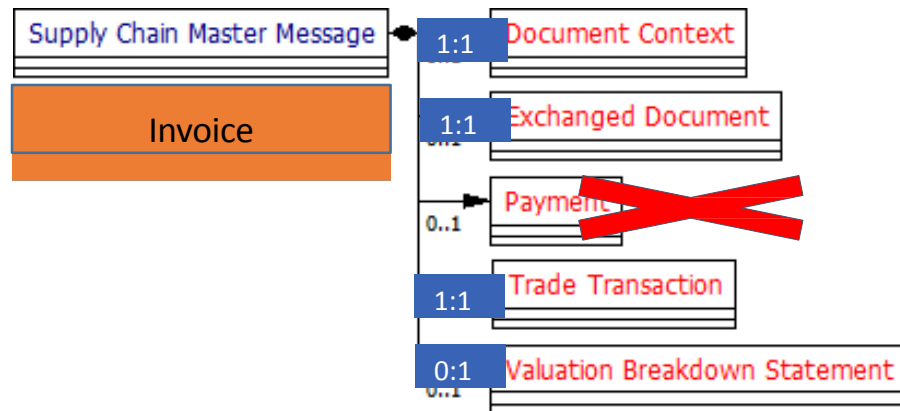
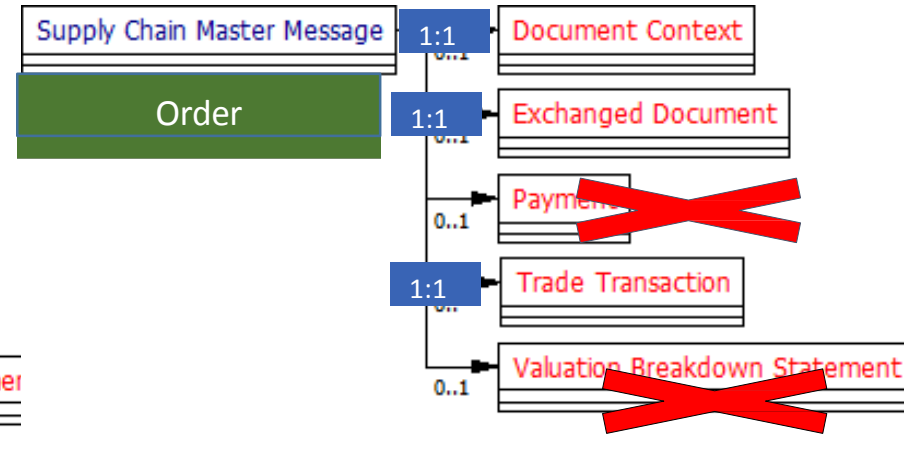
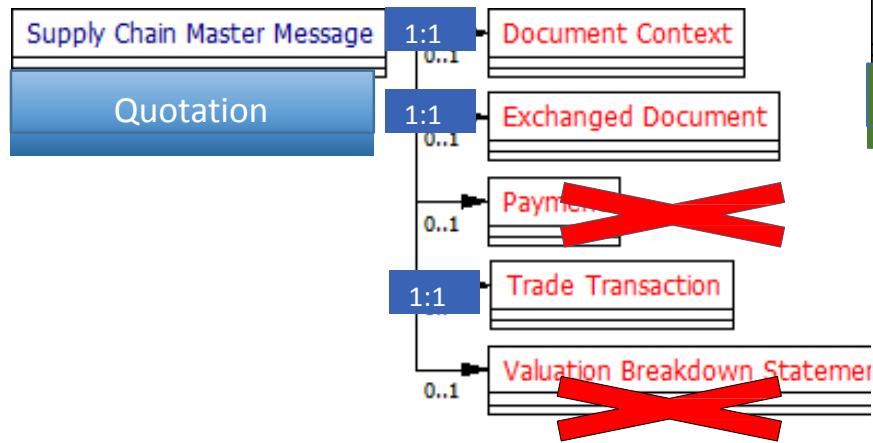
Compiled data dictionary ID	Business Name	Unique UN Assigned ID	ABIE/ BBIE/ ASBIE/ACC/B CC/ASCC/DT/ CC/SC	Dictionary Entry Name (auto-generated)	Definition Mandatory
	Header Agreement	UN01011547	ABIE	Header_Trade Agreement_Details	The contractual terms of a header trade agreement.
10001	Seller	UN01011551	ASBIE	Header_Trade Agreement_Seller_Trade_Party	The seller party for this header trade agreement.
10002	Buyer	UN01011552	ASBIE	Header_Trade Agreement_Buyer_Trade_Party	The buyer party for this header trade agreement.
10010	Delivery Terms	UN01011560	ASBIE	Header_Trade Agreement_Applicable_Trade_Delivery Terms	The terms of delivery applicable to this header trade agreement.
10011	Payment Terms	UN01011561	ASBIE	Header_Trade Agreement_Applicable_Trade_Payment Terms	The payment terms applicable to this header trade agreement.

Figure 9 Data dictionary mapped to Context CCL (RDM)

Check the master structure



Sample SCRDM CCBDA Subset Message structures



Supply Chain Management Domain

SME Manufacturing requirements (Japan)

1. Target Messages:

Quotation, Order, Dispatch Advice, Invoice

2. Requirements:

Specify the relevant parties other than the buyer and the seller.

Specify the project relevant to the trade.

Specify the inspection details of the project relevant to the trade.

Specify the per package unit quantity.

Specify the information about the logistics package for the order.

 Approved and published in CCL16B

Supply Chain Management Domain

CI-SC Scheduling project

1. Objective:

To expand the current SCM BIEs for Manufacturing Process Supporting Scheduling Supply Chain

1. Enhance Cross Industry Scheduling Demand Forecast (CIDF)
2. Enhance “Kanban” information in Cross Industry Scheduling Supply Instruction (CISSI)
3. Support the Consigned Vendor Managed Inventory (VMI)
4. Support Supply Chain hierarchy
5. Support buyer supplied product handling
6. Expand “CI_ Exchanged Document_ Context”

2. Supporting countries:

Japan, German, Netherland, Italy, France

CI-SC Scheduling Project Status

Requirements Total: 19

Agree the required solution	10
Go To BRS	2
Withdrawn	6
Pending	1

We decide to start developing the Draft BRS (Move ODP Status 2 to 3).

The Draft BRS will be prepared for the public review by the next Forum.

The next Conference Call will be held on 15th , November.

CI-SC Scheduling Requirements Status

Requirements		Status
2.1 Enhance the function of Cross Industry Scheduling Forecast (CIDF).		
	2.1.1 Specify whether the message is Notification or Confirmation	Withdrawn
	2.1.2 Specify the date of Notification and Confirmation	Agree
	2.1.3 Specify the per package unit quantity for delivery	Agree
	2.1.4 Specify the planned total quantity, the planned total quantity for the next month and the planned total quantity for the month after the next	Withdrawn
	2.1.5 Specify the transport service for the delivery	Agree
	2.1.6 Specify the physical logistics package	Agree
2.2 Specify the information of Identification Tag for Cross Industry Scheduling Supply Instruction (CISSI)		
	2.2.1 Specify the name, the purpose and the confirmed date for the exchanged document	Agree
	2.2.2 Specify the order price and the tax	Agree
	2.2.3 Specify the details for the delivery	Agree
	2.2.4 Specify the delivery time exactry	Withdrawn
	2.2.5 Specify the page number of the reference document and the note for the reference document	Agree
	2.2.6 Specify the transport service for the delivery	Agree
	2.2.7 Specify the information of Identification tag for logistics	Go to BRS
	2.2.8 Specify the physical logistics package	Pending
2.3 Consumption Report		Go to BRS
2.4 Support Supply Chain hierarchy		Withdrawn
2.5 Support buyer supplied product handling		Withdrawn
2.6 Expand the functionarity of the document context.		
	2.6.1 Specify the domain identified parameter	Withdrawn
	2.6.2 Specify the user specified parameter	Agree

Core Component Library Maintenance

- CCL 16B published in October
 - CCs: 7,489
 - BIEs: 11,731
 - qDTs: 161
 - XML Messages: 115
- CCL 17A submission
 - Cut-off date: 30 January 2017