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Capturing of Business Requirements

Technical Guideline

DRAFT

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Document Summary

The purpose of this document is to provide a technical guidance on how to capture and document business requirements in order to produce BII profiles.

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1 Preamble

The objective of the second phase of the CEN Workshop on Business Interoperability Interfaces for public procurement in Europe – CEN WS/BII2 – is to provide a framework for interoperability in pan-European electronic procurement transactions, expressed as a set of technical specifications that cross-refer to relevant activities, and in particular are compatible with UN/CEFACT - in order to ensure global interoperability. The workshop is focusing on implementation facilitations and co-ordinating pilots implementing the technical specifications output. The requirements and final specifications are input into UN/CEFACT.

The original CEN ISSS BII workshop was concluded in December 2009, and its results were issued as CWA 16073:2010. In early 2010, a second Workshop – CEN BII2 – was initiated to follow up on and improve the work created in the first workshop. The purpose of the second phase of the workshop on Business Interoperability Interfaces for public procurement in Europe is to establish a forum for development and governance, by:

- Providing technical support for adopters and implementers of the BII deliverables;
- Providing a forum for governance, life cycle management and further refinements of the CWA published by CEN WS/BII;
- Contributing to coordination and harmonization amongst European initiatives addressing various aspects of e-procurement;
- Actively cooperating with the relevant organisations to ensure that European requirements are catered for in international standards and initiatives.

2 Background

The method of defining the required business information entities (Business terms/elements) in BII phase 1 was in many regards simple and pragmatic. The workshop members contributed with their knowledge together with contributions from NES and CODICE. The rationales and requirements for business information entities were documented in most cases but not all. The documentation is captured inside the data models that represent the transactions. The data models in BII were either based on UBL or following the same approach as UBL.

Since not all requirements were documented in the same level of detail as others, BII-members and the users often find information entities that have unclear business function or where the intended use is ambiguous. We also have certain information entities that are not documented at all and it can be hard to understand if the information entity is there by mistake or on purpose.

Even though the data models that are used in BII (UBL, CII (CCL09A) and input from CODICE) are syntax neutral (since they are CCTS based models), they sometimes impose semantics that are not exactly what we want to express. We also struggle with situations where requirements of BII have no realizations in the standard model. It then becomes hard to document these and these requirements have to be managed separately.

The same situation would occur also if we used the CCL from UN/CEFACT for the purpose of capturing requirements. It is not a matter of underlying standard that is used but rather the method of capturing and documenting requirements.

Furthermore, we have in BII not documented the reasons/drivers/contexts for the majority of the requirements. Without a proper understanding of why the requirement exists, it becomes complicated for the users to understand if they share the requirement. An example could be that we have requirement for textual descriptions of products within the Order transaction. The requirement comes from an intended process where the supplier is expected to use the order in a (semi-)manual workflow. The textual description of the product will be presented to and understood by a human being. However, in a process where the product master data is synchronized in advance (with pricelists and catalogues), only the article number is necessary to identify the product and the supplier can have an automated process of verifying and handling the Order. So consequently - the users benefit from understanding the reasons for information entities to be available and what process (or other context) the requirement support.

3 How to document requirements

The documentation of the requirement should answer the following questions (where applicable):

1. What is needed?
2. Why is it needed?
3. When is it needed?
4. Who needs it? (can be a partner role, a system, a third party such as tax authority)

The requirement should not say how the requirement should be implemented or solved.

BII defines a list of requirement categories or reasons. A business information entity can be required for more than one reason/category. A business information entity must be required by at least one reason/category. As defined in BII1, the business requirements can be related to different concepts (see the meta model in the "Profile Architecture" document:

<http://spec.cenbii.eu/Profiles/DesignDoc/BII%20profile%20architecture%20v1p4.pdf>). Some requirements ends up as business rules that can be transformed into executable formulas (like summation rules), other requirements relates to content of messages (necessary information entities or information constraints).

4 Requirement categorization

The purpose of categorizing the requirement is to give a better understanding of when and where the requirement applies. Depending on the category, a requirement can be realized on the suitable level of the CEN/BII artefacts. If an information element is needed only in a specific process or under specific legal context, this information is important when implementing the requirement in the data model or in the profile specification.

4.1 Transaction

Intrinsic requirements related to the transaction itself. Requirements describing the rational and reasons for having information entities such as document ID, issue date, line number.

4.2 Collaboration

Requirements driven from the use of a transaction within a collaboration. Requirements describing the rational and reasons for having information entities such as Order reference in an Order Response

4.3 Process/Profile

Requirements for information elements that are needed to be able to carry out a process described in a profile. If the profile states that manual assessment of an invoice must be possible, profile driven requirements could be clear text product name (for manual assessment) and references to the requisitioner.

4.4 Official constraint (Legal/fiscal)

Requirements that come from legal or fiscal rules (like VAT-number of Seller in an Invoice)

4.5 Industry

Requirements that are industry specific.

4.6 Common practice

Requirements that are common practice to use. The structure of a postal address or that a Party can be identified with more than one identifier.

4.7 Geopolitical

Requirements that are specific to a geographical or political area (such as a country).

5 Documentation and templates

5.1 Requirement lists

The requirements are captured in a list where all necessary information can be documented.

Identifier – A unique number of the requirement. Can be used as a key when mapping to a Transaction Data Model

Group – Indicates if the requirement relates to a transaction in whole or if it relates to the lines

Requirement name/Business term – The name of the requirement or name of the business term that is required.

Description of use – A description of the requirement and when and how it should work.

Rationale – An additional description explaining the rationale.

Requirement driver (see list above) – A structured indicator defining the source of the requirement

5.2 Example

	B	C	D	E	F	G	H	I	J	K	
1	Requirement details					Supporting questions					
2	Requirement ID	Group	Requirement name	Description	Rationale	Who needs it?	What is needed?	When is it needed?	Why is it needed?	Is this requirement supported in all cases? (Core)	Process
16	INV-1	Header	Tax Point Date	Under certain circumstances the issue date of an invoice (containing VAT) differs from the date when the VAT becomes due for the buyer. The date must therefore be stated explicitly. This tax point date can be the date on which the supply of goods or of services was made or completed or the date on which the payment on account was made insofar as that date can be determined and differs from the date of the issue of the invoice. The date should only be stated when it differs from the issue date. It is up to the	For further details, see: EU 2006-112 Article 226 Point 7						Invoice

Requirement ID: INV-1

Requirement name: Tax Point Date

Group: Header (the Tax Point Date relates to the whole document and should not be stated for each line of an invoice)

Description of use: Under certain circumstances the issue date of an invoice (containing VAT) differs from the date when the VAT becomes due for the buyer. The date must therefore be stated explicitly. This tax point date can be the date on which the supply of goods or of services was made or completed or the date on which the payment on account was made insofar as that date can be determined and differs from the date of the issue of the invoice. The date should only be stated when it differs from the issue date. It is up to the supplier to provide the information. For further details, see: EU 2006-112 Article 226 Point 7

Rationale: For further details, see: EU 2006-112 Article 226 Point 7

Category – Profile/Process: Invoicing

Category – Collaboration: -

Category – Transaction:

Category – Common Practice: -Category – Official constraint/fiscal: VAT in Europe

Category – Industry: -

So, looking at the example above, can we find answers to the questions below?

1. What is needed?

Under certain circumstances the issue date of an invoice differs from the date when the VAT becomes due for the buyer. The date must therefore be stated explicitly.

2. Why is it needed?

This tax point date can be the date on which the supply of goods or of services was made or completed or the date on which the payment on account was made insofar as that date can be determined and differs from the date of the issue of the invoice.

3. When is it needed?

The date should only be stated when it differs from the issue date.an invoice (containing VAT)

4. Who needs it?

becomes due for the buyer

It is up to the supplier to provide the information.

Even though the questions are not answered explicitly in the requirement description, they can be answered to some degree by dissecting the text. The supporting questions in the requirement spread sheet can be used to document the answers and to help formulating the business requirement statement.

5.3 Use of existing semantic standards

Not always are the names and definitions in existing semantic standards clear or precise enough to give a proper understanding of the underlying reason for the use of a business term. The names and definitions are sometimes alien in their structure compared to ordinary natural language.

The definitions from OASIS UBL is:

Business Information Entity: Invoice. Tax Point Date. Date

“The date of the Invoice, used to indicate the point at which tax becomes applicable.”

The definition from UN/CEFACT Cross Industry Invoice is:

Business Information Entity: Cross Industry_ Invoice. Supply Chain_ Trade Transaction. Applicable. Supply Chain_ Trade Settlement. Tax Point. Date Time

“The date, time, date time, or other date time value of the tax point when taxes are, or will be, applicable for this supply chain trade settlement.”

To include the underlying requirement in the documentation of an implementation guide of a semantic standard can greatly enhance the understanding and by that also cater for better interoperability (see example of a requirement for Tax Point Date in the section above).

5.4 Grouping of requirements for each Profile/Transaction data model

In the work of defining and gathering requirements, modelling solutions should not be specified. It is important that the requirement is described in enough detail so that it can either be mapped to an existing model or possibly be used to create a model in a later stage. However, it could be useful to separate requirements that relates to a document in full (header information such as the required parties in an order) and requirements that always goes together or that can be repeated, such as the line items in an invoice. Some complex transactions could possibly benefit for further groups.

Document level – requirements for information entities that relates to the complete document

Document line level – requirements for information entities that needs to be repeated for each document line (invoice line/order line/catalogue line)

5.5 Repository of requirements

It can be useful to have a repository of requirements. The levels/concepts listed above refer to/gather the requirements from this repository.

6 Benefits

- The profile will have a clear connection to the data model and ALL business information entities that are used
- Profiles becomes truly syntax neutral
- We can explain better why the transaction data models are defined as they are.
- We are not limited to any specific data model or underlying standard when we document our requirements. We will be able to describe requirements that are not part of a standardized model since the model itself is not used as the "repository" of requirements.
- Can to some extent be done by automatically capture the knowledge by documenting the original requirements from BII 1-transaction data model without breaking backward compatibility.