



# PEPPOL Deliverable D4.1 Standard Basic eOrdering Format and Data Structure



*Version 1.2*



PEPPOL WP4 2009-07-07



**Borderless eProcurement**  
Let's make it happen!

## Table of Contents

1	Preamble .....	4
1.1	Document Purpose .....	4
1.2	Structure of the Document .....	4
1.3	Version, List of Contributors .....	6
2	Background .....	8
2.1	PEPPOL Project .....	8
2.2	Scope of Work Package 4 – eOrdering .....	9
2.2.1	Objectives and Goals .....	9
2.2.2	Scope .....	10
2.2.3	Approach .....	11
3	Interoperability Issues in eOrdering .....	13
3.1	The European Interoperability Framework – EIF .....	13
3.2	Political Context .....	14
3.3	Legal Interoperability .....	14
3.4	Organisational Interoperability .....	15
3.5	Semantic Interoperability .....	15
3.6	Technical Interoperability .....	16
3.7	Benefits .....	16
4	Other European Initiatives .....	18
4.1	i2010 .....	18
4.2	IDABC .....	19
5	eOrdering Standardization Approaches .....	21
5.1	Definition and background .....	21
5.2	Overview of relevant Standardization Initiatives .....	22
5.3	ISO .....	23
5.4	UN/CEFACT .....	24
5.5	OASIS – UBL .....	24
5.6	NES-UBL .....	25
5.7	CEN/BII .....	26
5.8	xCBL .....	28
5.9	OAGIS .....	28
6	AS-IS Situation in eOrdering .....	30
6.1	Country-specific analysis .....	30
6.1.1	Austria .....	30
6.1.2	Denmark .....	34
6.1.3	Finland .....	36
6.1.4	Hungary .....	38
6.1.5	Italy .....	41
6.1.6	Norway .....	44
6.2	Requirements .....	47
6.2.1	Legal Interoperability .....	47
6.2.2	Organizational Interoperability .....	47
6.2.3	Semantic Interoperability .....	48
6.2.4	Technical Interoperability .....	49
7	eOrdering Specifications and Pilot Approach .....	50
7.1	Legal issues .....	50
7.2	Organisational .....	50
7.3	Semantics & Syntax .....	51
7.3.1	NES-UBL .....	51

7.3.2	CEN-BII .....	61
7.3.3	Profile 3: Basic Order .....	62
7.3.4	Profile 6: Basic Procurement .....	65
7.4	Technical (Transport Infrastructure) .....	72
7.4.1	Interoperability Issues .....	72
7.4.2	Pilot Approach .....	72
8	References .....	74
9	Annex .....	76
9.1	As-is Situation in other European Countries .....	76
9.1.1	Belgium .....	76
9.1.2	France .....	76
9.1.3	Spain .....	77
9.1.4	UK .....	78
9.2	IDABC e-Invoicing and e-Ordering project .....	79
9.2.1	Objectives .....	79
9.2.2	Rationale .....	80
9.2.3	Scope .....	80
9.2.4	Technical functionalities and approach .....	81
9.2.5	Potential beneficiaries .....	83
9.2.6	Financial sustainability .....	84

Pending EC approval

## 7 eOrdering Specifications and Pilot Approach

This chapter reflects on issues identified in chapters 3 and 6.2 and suggests approaches and solution.

As outlined in chapter 2.2.3, WP4's approach is to keep the initial complexity of the pilot as small as possible and to move into more advanced business scenarios based on the lessons learned and experiences with the simple pilot set-up. The eOrdering specifications discussed in the following chapters focus on the simplest form ("Basic Order").

As WP4 and WP5 agreed to aim for an integrated test scenario, covering both, the ordering and the invoicing part of the procurement process, the (again) simplest integrated business scenario ("Basic Procurement") is also discussed in some detail. From WP4's current perspective, the implementation of the latter scenario will be the second step in the pilot implementation. It is noted, that any descriptions of the invoicing part of the integrated "Basic Procurement" scenario are merely included for the reader to get a full picture of this integrated business case as – by PEPPOL definition – the eInvoicing part is handled by WP5.

Advanced eOrdering relevant profiles as listed in chapter 5.7 are intended to be included in the PEPPOL WP4 pilot at a later point in time.

### 7.1 Legal issues

As identified in chapter 3.3 on Legal Interoperability Issues there are no legal hindrances to sending orders between trading partners within the pilot.

As some WP4 member countries (namely Hungary and Italy) currently require to sign order documents (either on paper or digitally) and WP4 has decided to not include the issue of digital signature in the first phase of the pilot (at least not on a mandatory basis) in order to contain complexity, the following scenarios will be implemented to enable Hungary and Italy to participate in the pilot:

- Optional use of digital signature: based on the availability of the infrastructure for digital signature provided by WP1 and the ability of buy- and supply-side pilot partners, the optional use of digital signature will be included in the WP4 pilot
- Organisational work-around: should the pre-conditions for optional use of digital signature not be fulfilled with the pilot start, Hungary and Italy agreed to implement an (additional) organisational work-around: in parallel to the electronic submission of order documents over the PEPPOL infrastructure, traditional channels of information exchange (e.g. paper, fax) will be used in order to conform to the respective national regulations. This workaround is clearly restricted to a pilot scenario. However, WP4 expects some stimulation of a discussion on the subject of mandatory signing order documents in individual European countries while other countries do not seem to have these requirements. In the best case, these discussions could lead to a truly harmonized European approach to this issue.

### 7.2 Organisational

As outlined in chapter 3.4, organisational interoperability aspects focus on the process, i.e. the synchronization and cooperation of the process partners. Unlike former standardization approaches, the chosen profiles from NES-UBL and CEN/BII not only contain specifications on the document content but also include definitions of the processes and individual process steps, in which electronic documents are exchanged. These processes are outlined in more detail in the following chapter.

In PEPPOL context, organisational interoperability focuses on the information exchange between the buyer (awarding entity) and the supplier. There are, however, additional organisational (and technical) aspects that will have to be addressed by the individual PEPPOL participants, e.g. changes in the

“internal” information flow potentially initiated by PEPPOL work. From the point of view of PEPPOL, internal information flow could for example be the process by which the original requestor sends his purchase requisition to the purchasing department who turns it into an order to be sent to the supplier. Although relevant for the complete eOrdering cycle, such internal process steps (purchase requisition, goods receipt) will be out of scope for PEPPOL as they do not take place as “external” information exchanges between buyer and supplier. If WP4 participants have the need to adapt their respective internal processes, this will be done outside the scope of PEPPOL on a purely national basis.

## 7.3 Semantics & Syntax

CEN/ISSS WS/BII is currently working on the definition of eOrdering profiles. As it is not yet clear whether these profiles will be available with the start of the eOrdering pilot, WP4 also takes an initial pilot based on similar NES-UBL profiles into account. In that case, WP4 pilots would change to CEN-BII profiles once they are available.

As discussed in chapter 5.7, there are a number of potential CEN/ISSS WSS/BII profiles that could be taken into account by WP4. However, the analysis of the as-is situation in current national applications has shown that supported functions differ between the applications that will eventually be part of the PEPPOL pilot. WP4 has therefore decided to initially focus on 2 rather simple profiles. The business process as defined in “Basic Order Only” can be supported by all, the process steps of “Basic Procurement” by most pilot participants with some degree of adaption in the respective national solution. It is expected that the implementation of these profiles will generate know-how and lessons learned that will support WP4’s work when moving into more complex scenarios (e.g. Advanced Procurement Profiles BII 13 & 19 or BII 20 Customer Initiated Sourcing).

### 7.3.1 NES-UBL

The Northern European Subset (NES) group was established to enable interoperability of procurement data between users of the Universal Business Language (UBL). UBL is a royalty-free library of XML documents addressing the requirements of electronic procurement and international trade and transportation.

The focus of NES is to define the specific use of UBL 2.0 electronic procurement documents domestically and between the member countries. The definition covers semantic interoperability within and between all business sectors, public and private. The PEPPOL pilots on ordering will focus on NESUBL profiles three and six.

Profile 3: Basic Order Only

- Order (basic)

Profile 6: Basic Procurement

- Order (basic)
- Order Response Simple
- Invoice (basic)
- Credit Note (basic)

A short introduction to the NES profiles can be found in chapter 5.6.

#### 7.3.1.1 Profile 3: Basic Order Only

Profile three describes how to send a stand-alone order from Customer to Supplier. It is intended for low frequency, non-repetitive ordering of goods and services, itemised or otherwise. The expected business benefits for participants are electronic transfer of orders leading to a systematic acquisition process and increased trust in received Orders.

### 7.3.1.1.1 Scope of profile

Subject:

- Ordering
- Order acceptance and rejection
- In the profile title, 'Basic' indicates that the document content is a profile specific NES subset

Exclusions:

- Order acceptance and rejection are external (manual)

Aims:

- Systemised acquisition process

### 7.3.1.1.2 Description of profile

This profile describes a process comprising only an electronic (purchase) Order. It allows for electronic ordering of goods and services/services described in Catalogues or that are non-standard or not easily described in catalogues.

The Order may refer to a framework agreement for its terms and conditions; otherwise the Customer's terms and conditions apply.

The Order may contain Items (goods or services) with Item identifiers and Items with free text description. Because of this, the internal processes for transaction handling at the Supplier are expected to require manual intervention.

This process is intended to result in acceptance or rejection of the Order, but such responses are external e.g. by phone or email. This profile can be used with no or little integration to ERP systems.

Documents included in this profile:

- Order (basic)

### 7.3.1.1.3 The expected scenarios are the following:

1. Accepted Order
2. Rejected Order

### 7.3.1.1.4 Business requirements

1. the Customer sends an electronic Order that can be received and processed by the Supplier
2. if the process results in a confirmed Order i.e. a contract is established, the Supplier is obliged to deliver the goods and/or services and the Customer is obliged to pay for those goods and services under the agreed terms and conditions

### 7.3.1.1.5 Actors involved in the process

Party	Role	Comments
Customer	Buyer	The Party that purchases the goods or services. The Party that sends the Order.
Supplier	Seller	The Party responsible for handling Buyer services The Party that receives the Order. The Seller Party is responsible for providing the goods and services to the Buyer.

### 7.3.1.1.6 Process parameters

#### The following business rules are valid on Document level

1. reference to a contract or framework agreement may only be made at document level
2. Delivery details stated at document level must apply to all Order Lines
3. Payment Means and Terms stated at document level must apply to all Order Lines
4. accounting details stated at document level must apply to all Order Lines

#### The following business rules are valid on Line level

1. an Order Line may contain an identified Item or an Item with a free text description
2. quantities must be positive and amounts must not be negative

#### The following exceptions are valid for the profile

1. Order acceptance and rejection is handled externally
2. fulfilment and billing processes are handled externally

#### The following pre-conditions are valid for the profile

1. the Customer and the Supplier have identified each other
2. the Supplier has agreed to accept electronic Orders that use the profile

### 7.3.1.1.7 Activity diagram

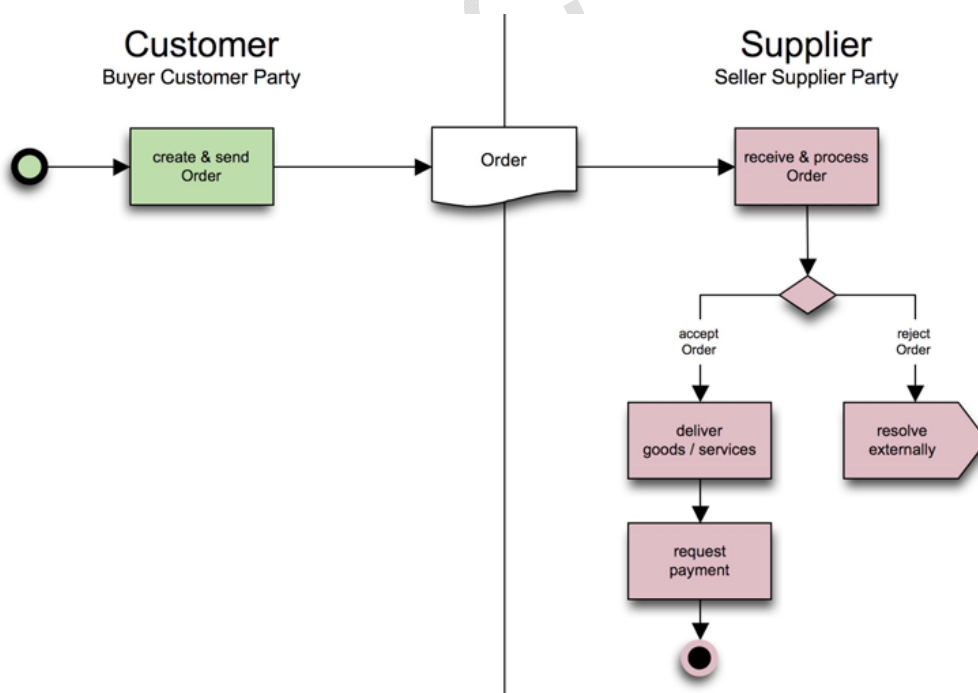


Figure 15: NES-UBL Profile 3 – Activity Diagram

### 7.3.1.1.8 Activity description

Role/party	Activity	Description
Buyer Customer	create and send Order	Buyer Customer creates and sends an Order to Seller Supplier.
Seller Supplier	receive and process Order	Seller Supplier receives and processes the Order.

Seller Supplier	accept or reject Order	Seller Supplier accepts or rejects the Order. Acceptance of the Order initiates a delivery and payment request process. Rejection leads to an external resolution process. Notification of acceptance/rejection is external.
	deliver & receive	Implied, despatch, delivery and receipt are external to this profile.
Accounting Supplier	Request payment	Implied, billing is external to this process.

### 7.3.1.2 Profile 6: Basic Procurement

Profile six describes how Customers and Suppliers can send simple documents, Order, OrderResponse, Invoice and CreditNote between them to facilitate simple trade of goods and services. Among the expected business benefits for participants is electronic transfer of orders. Additional benefits are:

For the Customer:

- automated matching of the Invoice with the Order
- reduced requirement for manual intervention
- automatic Invoice validation
- potential for systematic Invoice processing

For the Supplier:

- electronic delivery of the Order
- faster Invoice transfers
- acknowledgement of Invoice receipt

#### 7.3.1.2.1 Scope of profile

Subject:

- . Ordering
- . Order acceptance and rejection
- . Invoicing and Crediting
- . Invoice acceptance and error notification
- . Rectification of Invoice errors by supplementary Invoice and/or Credit Note
- . In the profile title, 'Basic' indicates that the document content is a profile specific NES subset

Exclusions:

- . Counter-offer
- . Invoice acceptance and notification of Invoice errors are external (manual)

Requirements:

- . Order acceptance and rejection apply to the entire Order
- . Invoices must refer to Orders
- . Credit Notes must refer to Invoices

- the Invoice and Credit Note must comply with the commercial and fiscal requirements of the country where the Supplier is registered

Aims:

- Systemised Order and Invoice matching
- Reduced manual intervention and errors

#### **7.3.1.2.2 Description of profile**

This profile describes a process comprising an electronic (purchase) Order, an electronic Order Response Simple, an electronic Invoice and, potentially, an electronic Credit Note. Billing anomalies are resolved by the issuing of a Credit Note and/or a subsequent Invoice.

The Order may refer to a framework agreement for its terms and conditions; otherwise the Customer's terms and conditions apply.

The Order may contain Items (goods or services) with Item identifiers and Items with free text description. Acceptance or rejection of the Order in full is communicated by the Supplier to the Customer in an Order Response Simple.

Following purchase and delivery, the Supplier sends the Customer an Invoice that makes reference to the original Order.

This profile may cover Invoice factoring arrangements.

Invoice errors may be resolved by way of a Credit Note and/or a supplementary Invoice.

Documents included in this profile:

- Order (basic)
- Order Response Simple
- Invoice (basic)
- Credit Note (basic)

#### **7.3.1.2.3 The expected scenarios are the following:**

1. Accepted Order, accepted Invoice
2. Rejected Order
3. Accepted Order, Invoice overcharge
4. Accepted Order, Invoice undercharge
5. Accepted Order, Invoice contains wrong information

#### **7.3.1.2.4 Business requirements**

1. The Customer sends an electronic Order that can be received and processed by the Supplier
2. the Supplier sends an electronic Order Response Simple, stating whether the Order is accepted or rejected in full. The Order Response Simple can be received and processed automatically by the Customer
3. if the process results in an accepted Order i.e. a contract is established, the Supplier is obliged to deliver the goods and/or services and the Customer is obliged to pay for those goods and services under the agreed terms and conditions
4. the Supplier sends an electronic Invoice and, potentially, an electronic Credit Note that can be received and processed by the Customer

5. by reference to the Order and its Lines, the Invoice enables automated matching by the Customer via a workflow process
6. the Invoice and Credit Note content enables the Customer's system to route the document to a specific person, department or unit within the organisation; this may be required for authorisation etc.
7. the Invoice and Credit Note must comply with the commercial and fiscal requirements of the country where the Supplier is registered
8. the Invoice and Credit Note content facilitates automatic validation of legal and tax values, tax accounting and payment
9. Credit Notes refer to associated Invoices

#### 7.3.1.2.5 Actors involved in the process

Party	Role	Comments
Customer	Buyer	Customer Buyer The Party that purchases the goods or services. The Party that sends the Order and receives the Order Response Simple. A company may delegate the task of purchasing to a specialized group to consolidate orders and gain greater discounts.
Supplier	Seller	The Party responsible for handling Buyer services. The Party that receives the Order. The Seller Party is responsible for providing the goods and services to the Buyer. The Seller Party is responsible for providing the goods and services to the Buyer.
Supplier	Accounting	The Party that claims the payment and is responsible for resolving billing issues and arranging settlement. The Party that sends the Invoice and the Credit Note.
Customer	Accounting	The Party responsible for making settlement relating to a purchase. The Party that receives the Invoice and the Credit Note.

#### 7.3.1.2.6 Process parameters

##### The following business rules are valid on Document level

1. Reference to a contract or framework agreement may only be made at document level
2. Delivery details stated at document level must apply to all Order Lines
3. Payment Means and Terms stated at document level must apply to all Order Lines
4. Accounting details stated at document level must apply to all Order Lines
5. Order Response Simple is a response, positive or negative, to the entire content of the Order, including all terms and conditions
6. An Invoice must make reference to an Order
7. A Credit Note must make reference to one or more Invoices

8. Invoice Payment Means and Terms stated at document level must apply to all Invoice or Credit Note Lines
9. Tax information stated at document level must apply to all Invoice or Credit Note Lines
10. Stated pre-payments must apply to the Invoice as a whole
11. Invoice acceptance applies to the entire Invoice

**The following business rules are valid on Line level**

1. An Order Line may contain an identified Item or an Item with a free text description
2. Quantities must be positive and amounts must not be negative
3. Invoice and Credit Note Line level tax coding is mandatory in some countries

**The following exceptions are valid for the profile**

1. The notification of Invoice errors is handled externally

**The following pre-conditions are valid for the profile**

1. The Customer and the Supplier have identified each other
2. The Supplier has agreed to accept electronic Orders that use the profile
3. The Customer has agreed to accept electronic Order Response Simple, electronic Invoices and electronic Credit Notes that use the profile

**7.3.1.2.7 Activity diagram**

PART 1

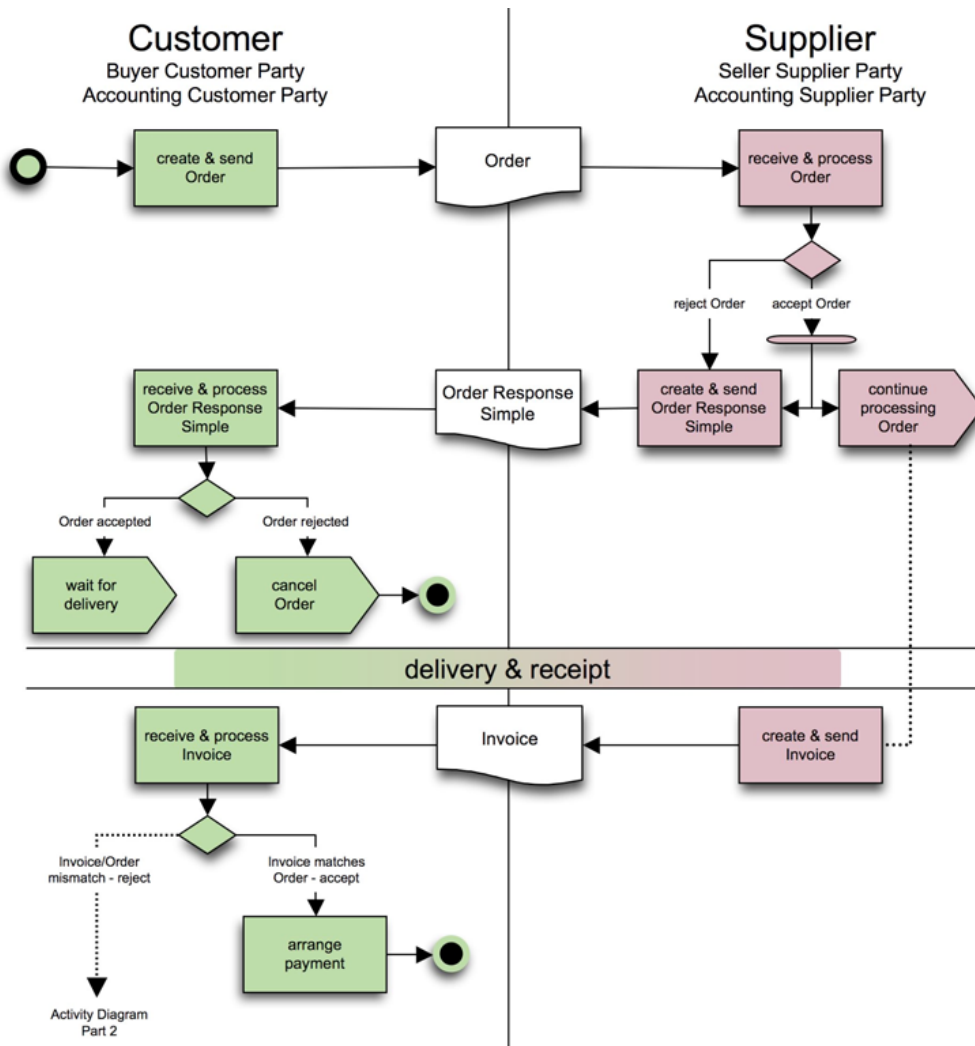


Figure 16: NES-UBL Profile 6 – Activity Diagram Part 1

Pending

PART 2

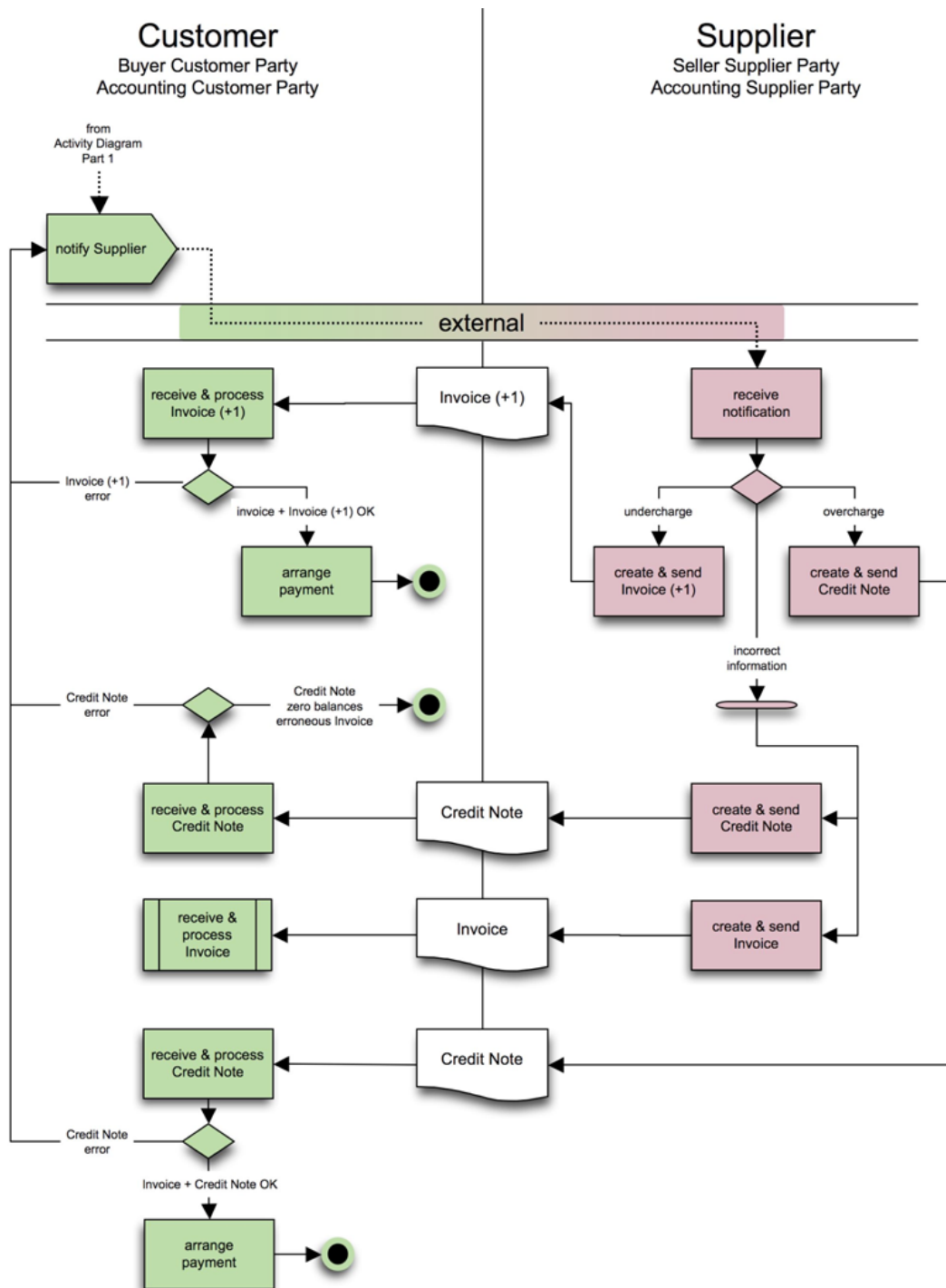


Figure 17: NES-UBL Profile 6 – Activity Diagram Part 2

7.3.1.2.8 Activity description

Role/party	Activity	Description
Buyer Customer	create and send Order	Buyer Customer creates and sends an Order to Seller Supplier.
Seller Supplier	receive and process Order	Seller Supplier receives and processes the Order.
Seller Supplier	accept Order	In accepting the Order in full, Seller Supplier creates and sends a positive Order Response Simple and initiates a delivery and payment request process.
Seller	reject Order	In rejecting the Order, Seller Supplier Party creates and

Supplier		sends a negative Order Response Simple.
Buyer Customer	receive and process Order Response Simple - acceptance	In receiving a positive Order Response Simple, Buyer Customer awaits delivery and payment request.
Buyer Customer	receive and process Order Response Simple - rejection	In receiving a negative Order Response Simple, Buyer Customer cancels the Order.
	deliver & receive	Implied, despatch, delivery and receipt are external to this profile.
Accounting Supplier	create and send Invoice	Accounting Supplier creates and sends an Invoice to Accounting Customer.
Accounting Customer	receive and process Invoice	Accounting Customer receives and processes the Invoice – matches against Order.
Accounting Customer	accept or reject Invoice	Accounting Customer accepts or rejects Invoice in full. Acceptance of the Invoice initiates a payment process. Rejection leads to Accounting Customer's notifying the Accounting Supplier of the discrepancy (external).
Accounting Customer	accept Invoice – arrange payment	In accepting the Invoice, Accounting Customer Party initiates a payment process (external).
Accounting Customer	reject Invoice – notify Accounting Supplier	In rejecting the Invoice, Accounting Customer Party notifies Accounting Supplier Party (external).
Accounting Supplier	receive and process (external) notification	Accounting Supplier receives and processes the manual notification from Accounting Customer. Note: this profile does not preclude the Accounting Supplier from noticing an error and taking corrective action independently.
Accounting Supplier	create and send Invoice (+1)	If the notification has (correctly) identified an undercharge, Accounting Supplier creates and sends a second Invoice to Accounting Customer.
Accounting Supplier	create and send Credit Note	If the notification has (correctly) identified an overcharge, Accounting Supplier creates and sends a Credit Note to the Accounting Customer.
Accounting Supplier	create and send Credit Note and 'replacement' Invoice	If the notification has (correctly) identified an Invoice containing wrong information (other than monetary amounts), Accounting Supplier creates and sends a Credit Note (zero balancing the Invoice) and a replacement Invoice to Accounting Customer.
Accounting Customer	receive and process Invoice (+1)	Accounting Customer receives and processes Invoice (+1). If Invoice + Invoice (+1) equals the correct amount, payment is initiated.
Accounting Customer	receive and process Credit Note	Accounting Customer receives and processes the Credit Note. If Invoice + Credit Note equals the correct amount, payment is initiated.
Accounting Customer	receive and process Credit Note and 'replacement' Invoice	Accounting Customer receives and processes the Credit Note and the 'replacement' Invoice (new process). If the Credit Note zero balances the Invoice, the Credit Note processing ends; if not, the Customer notifies the Supplier.

### 7.3.2 CEN-BII

The CEN/ISSS Workshop on business interoperability interfaces for public procurement in Europe (CEN/ISSS WS/BII) is established in order to

- Identify and document the required business interoperability interfaces related to pan-European electronic transactions in public procurement expressed as a set of technical specifications, developed by taking due account of current and emerging UN/CEFACT standards in order to ensure global interoperability;
- Co-ordinate and provide support to pilot projects implementing the technical specifications in order to remove technical barriers preventing interoperability.

To facilitate implementation of electronic commerce in a standardized way, thereby enabling the development of standardized software solutions as well as efficient connections between trading partners without case by case specification of the data interchange, the workshop agreed to document the required business interoperability interfaces as profile descriptions. The end goal is to reduce the cost of implementing electronic commerce to a level that is economical for small and medium size companies and institutions.

The CEN/BII artefact will be ready by the end of 2009. The PEPPOL pilots on eOrdering intend to implement profiles three and six. The PEPPOL profiles are based on the existing work within NES so implementing the NES profiles is a good starting point for future implementation of CEN/BII profiles.

#### 7.3.2.1 What is a CEN/BII profile<sup>33</sup>?

A profile is defined as “A specification of how one or more Business Processes are executed by specifying the business rules governing its business collaborations and the information content (data model) of the electronic business transactions exchanged.”

In the context of the CEN BII a profile provides a detailed description of:

- the choreography of the business process(es) covered, i.e. a detailed description of the way the business partners will play their respective roles and share responsibilities with the support of their respective information systems, as well as the possible run-time scenarios and the business commitments achieved,
- the business rules governing the execution of that business process(es), its business collaborations and business transactions, as well as any constraints on information elements used in the transaction data models
- the electronic business transactions exchanged as part of the business process and the sequence in which these transactions are exchanged,
- the information content of the electronic business transactions exchanged by pointing to a given data model for each of the business transactions.

As well as determining what business transactions are used, the profile restricts their content in terms of information elements and the cardinality of elements through data models and business rules. The key standardization aspect of the profile is thus in the semantics rather than the syntax. Consequently the business transactions within a profile can be structured based on different message standards/syntax as long as the chosen standard contains all the necessary data elements.

Although the Profile Descriptions provided by the CEN ISSS WS/BII will be neutral of syntax, the workshop has agreed to develop its deliverables based on the UBL messages standard. This is done

---

<sup>33</sup> CEN ISSS WS BII, BII profile architecture. Unpublished document from the CEN/BII working group  
<https://sharepointsite.cenbii.eu/WG1>

in order provide the market with implementable specifications. The implication of this decision is that the description of especially message content is aligned to the UBL 2.0 message standard.

#### 7.3.2.1.1 What is a business process?

A profile is defined as “The behaviour of two or more business partners in order to achieve a common business goal. A CEN BII profile may provide support for several business processes like ordering, fulfilment, billing and payment. A Business process specifies the business commitment of profiles and transactions, defines relationships between transactions and how business information is assembled.

- A business process contains one or more collaborations.
- A profile may be governed by none to many business rules.
- The execution of Collaboration may be restricted by none to many Business rules.
- An information set may be governed by none to many business rules.

#### 7.3.2.1.2 What is a collaboration?

Business collaboration is a part of a business process that describes in detail the requirements on the collaboration between two or more involved partners and the exchange of transactions between two roles.. Business partners take part in a business collaboration use case by playing an authorized role in it.

- Collaboration defines the choreography of one or more transactions that are its components.
- Collaboration requires business information to be exchanged between the roles.
- The execution of collaboration is governed by one or many business rules that govern it.

#### 7.3.2.1.3 What is a transaction?

A business transaction is the basic building block to define choreography between authorized roles. If an authorized role recognizes an event that changes the state of a business object, it initiates a business transaction to synchronize with the collaborating authorized role. It follows that a business transaction is an atomic unit that leads to a synchronized state in both information systems.

- The choreography of transactions is defined in one or more collaborations.
- A transaction is exchanged between two and only two business roles.
- A transaction requires business information.
- Transactions are expressed as information envelopes (messages) in the context of profiles.

### 7.3.3 Profile 3: Basic Order<sup>34</sup>

This profile describes a process comprising only an electronic (purchase) Order. It allows for electronic ordering of goods and services/services that are non-standard or not easily described in catalogues.

The Order may contain Items (goods or services) with Item identifiers and/or items identified by name/description. Because of this, the internal processes for transaction handling at the Supplier are expected to require manual intervention.

This process is intended to result in acceptance or rejection of the Order, but such responses are external e.g. by phone or email.

---

<sup>34</sup> CEN ISSS WS BII, BII profile 03 - Basic order wd3. Unpublished document from the CEN/BII working group, <https://sharepointsite.cenbii.eu/WG1>

This profile can be used with no or little integration to ERP systems.

Documents included in this profile:

- - Order (basic level)

### 7.3.3.1 Business requirements

1. The Customer sends an electronic Order that can be received and processed by the Supplier.
2. If the process results in a confirmed Order i.e. a contract is established, the Supplier is obliged to deliver the goods and/or services and the Customer is obliged to pay for those goods and services under the agreed terms and conditions.

### 7.3.3.2 Profile content

#### 7.3.3.2.1 Partners

The customer is the legal person or organization who owns the products after successful completion of the transaction. The following roles can be found in a customer company: buyer, consignee, invoicee, VAT representative.

The supplier is the legal person or organization who owns the products, and consigns or makes them available in trade. The following roles can be found in a supplier company: seller, consignor, invoice issuer, VAT representative.

Role/actor	Description
Buyer	The buyer is the legal person or organization acting on behalf of the customer and who buys or purchases the goods or services.
Seller	The seller is the legal person or organization acting on behalf of the supplier and who sells goods or services to the customer.

The following diagram links the business processes to the roles performed by the Business Partners.

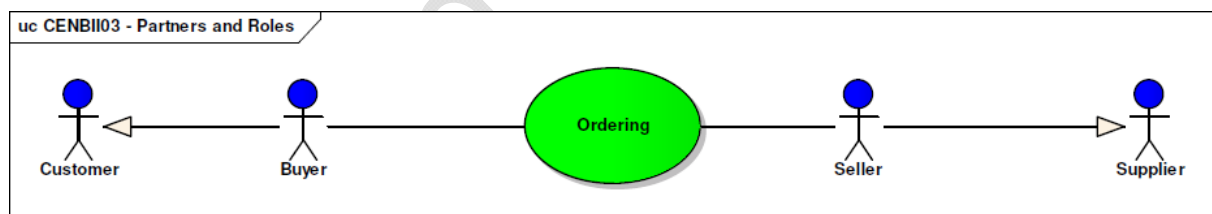


Figure 18: CEN BII Profil 3 – Partners and Roles

#### 7.3.3.2.2 Business collaboration

Each business process in scope contains within itself one or more business collaboration:

Business Process	Business Collaboration(s)
Ordering	• Ordering

The following diagram shows the relationships (i.e. links) between the collaborations of each business process implemented by the profile. The choreography of business collaborations defines the sequences of interactions when the profile is run within its context. Each sequence of interactions can be understood as a run-time scenario.

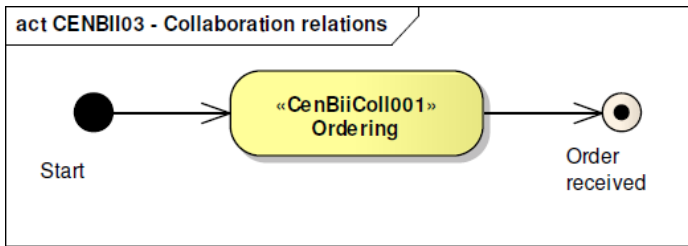


Figure 19: CEN BII Profile 3 – Collaboration Relations

**Pre-conditions**

1. The Customer and the Supplier have identified each other.
2. The Supplier has agreed to accept electronic Orders.

**Description**

1. The Customer creates an electronic order and sends it to the Supplier.
2. Any supplier response is out of scope of the profile.

**Post-conditions**

1. An order has been placed with the seller.

**Exceptions**

1. Order acceptance and rejection is handled externally
2. Fulfilment and billing processes are handled externally

**7.3.3.2.3 Detailed collaboration**

*7.3.3.2.3.1 Ordering collaboration*

Categories	Description and Values
Description	A Buyer sends an order to a Seller for any goods or services.
Pre condition	none
Post condition(s)	Order has been submitted.

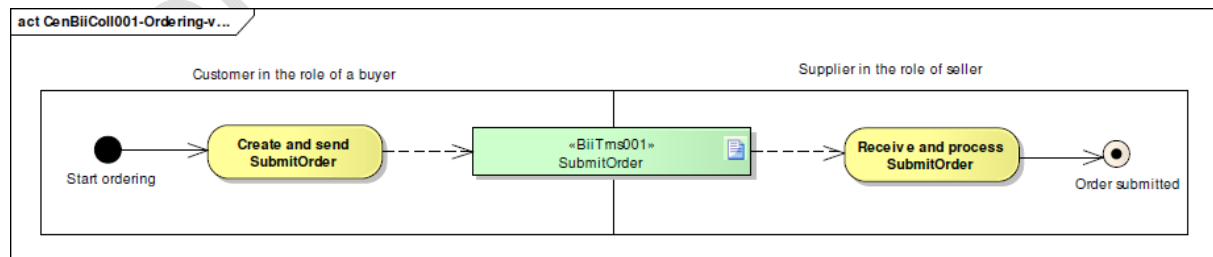


Figure 20: CEN-BII Profile 3 – Ordering Collaboration

**Business rules**

1. Customer’s terms and conditions apply as stated in the order or in referenced contracts such as framework agreement; if nothing else is agreed the terms and conditions are according to applicable laws and regulations.

2. By sending a SubmitOrder the Buyer is obligated to its content in accordance with terms specified in the SubmitOrder itself or external documentation.

#### 7.3.3.2.4 Detailed transaction

The figure below identifies the electronic transactions exchanged as part of this process and the sequence in which these documents are exchanged.

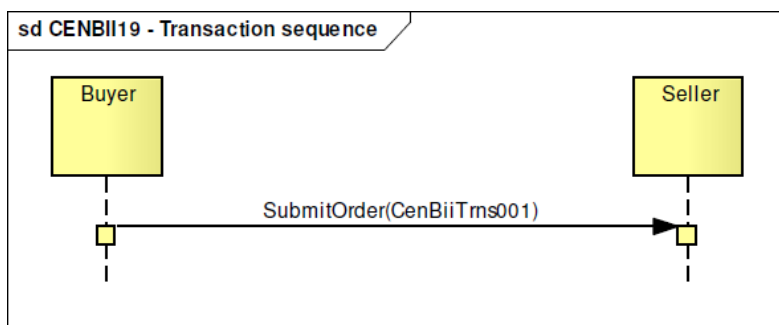


Figure 21: CEN-BII Profile 3 – Transaction Sequence

Transaction	Description
SubmitOrder	A structured electronic business document that contains information directly relating to the economic event of ordering products and/or services. The document by means of which a Buyer initiates a transaction with a Seller for the supply of goods or services as specified, according to conditions set out in a quote, catalogue, counter offer, or otherwise known to the Buyer.

### 7.3.4 Profile 6: Basic Procurement<sup>35</sup>

This profile describes a process comprising an electronic (purchase) order, an electronic order response, an electronic invoice, and, potentially, an electronic credit note. Billing anomalies are resolved by the issuing of a credit note or a subsequent Invoice.

The order may refer to a framework agreement for its terms and conditions; otherwise the Customer's terms and conditions apply.

The Order may contain items (goods or services) with item identifiers and items with free text description. Acceptance or rejection of the order in full is communicated by the Supplier to the Customer in an order response.

Following purchase and delivery, the Supplier sends the Customer an invoice that makes reference to the order.

This profile may cover invoice factoring arrangements.

Invoice errors may be resolved by way of a credit note and/or a supplementary invoice.

<sup>35</sup> CEN ISSS WS BII, BII profile 06 – Basic procurement wd03. Unpublished document from the CEN/BII working group, <https://sharepointsite.cenbii.eu/WG1>

### 7.3.4.1 Business Requirements

1. The Customer sends an electronic order that can be received and processed by the Supplier.
2. The Supplier sends an electronic order response, stating whether the order is accepted or rejected in full. The order response can be received and processed automatically by the Customer.
3. The Supplier sends an electronic invoice and, potentially, an electronic credit note that can be received and processed by the Customer.
4. By reference to the order and its lines, the invoice enables automated matching by the Customer via a workflow process.
5. The invoice and credit note content enables the Customer's system to route the document to a specific person, department or unit within the organization; this may be required for authorization etc.
6. The invoice and credit note must comply with the commercial and fiscal requirements of the country where the Supplier is registered.
7. The invoice and credit note content facilitates automatic validation of legal and tax values, tax accounting and payment.
8. Credit notes refer to associated invoices.

### 7.3.4.2 Profile content

#### 7.3.4.2.1 Partners

The customer is the legal person or organization who owns the products after successful completion of the transaction. The following roles can be found in a customer company: buyer, consignee, invoicee, VAT representative.

The supplier is the legal person or organization who owns the products, and consigns or makes them available in trade. The following roles can be found in a supplier company: seller, consignor, invoice issuer, VAT representative.

Role/actor	Description
Buyer	The buyer is the legal person or organization acting on behalf of the customer and who buys or purchases the goods or services.
Seller	The seller is the legal person or organization acting on behalf of the supplier and who sells goods or services to the customer.
Creditor	One to whom a debt is owe. The Party that claims the payment and is responsible for resolving billing issues and arranging settlement. The Party that sends the Invoice. Also known as Invoice Issuer, Accounts Receivable, Seller.
Debtor	One who owes debt. The Party responsible for making settlement relating to a purchase. The Party that receives the Invoice. Also known as Invoicee, Accounts Payable, Buyer

The following diagram links the business processes to the roles performed by the Business Partners.

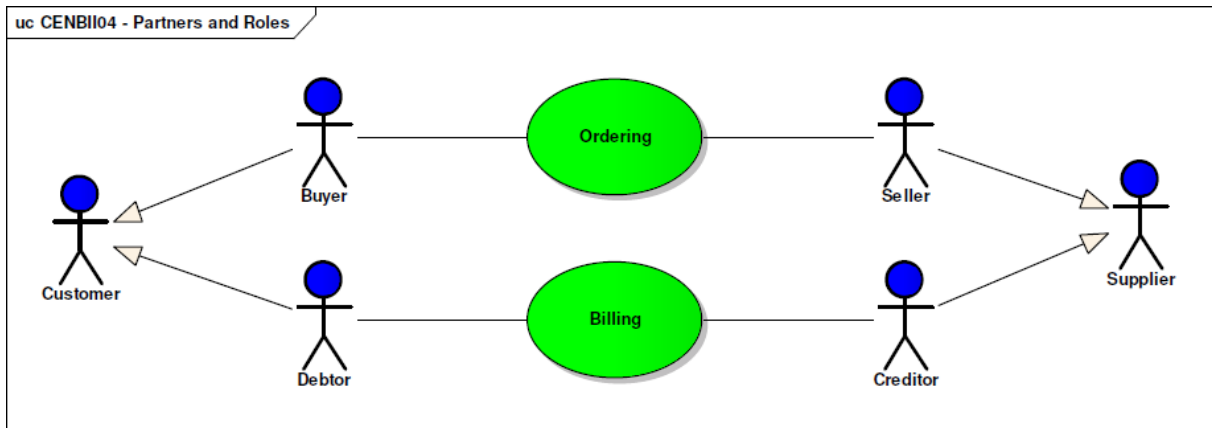


Figure 22: CEN-BII Profile 6 – Partners and Roles

**7.3.4.2.2 Business collaboration**

Each business process in scope contains within itself one or more business collaboration:

Business Process	Business Collaboration(s)
Ordering	<ul style="list-style-type: none"> <li>• Ordering</li> <li>• OrderResponse</li> </ul>
Billing	<ul style="list-style-type: none"> <li>• Invoicing</li> <li>• ResolveInvoiceDispute</li> </ul>

The following diagram shows the relationships (i.e. links) between the collaborations of each business process implemented by the profile. The choreography of business collaborations defines the sequences of interactions when the profile is run within its context. Each sequence of interactions can be understood as a run-time scenario.

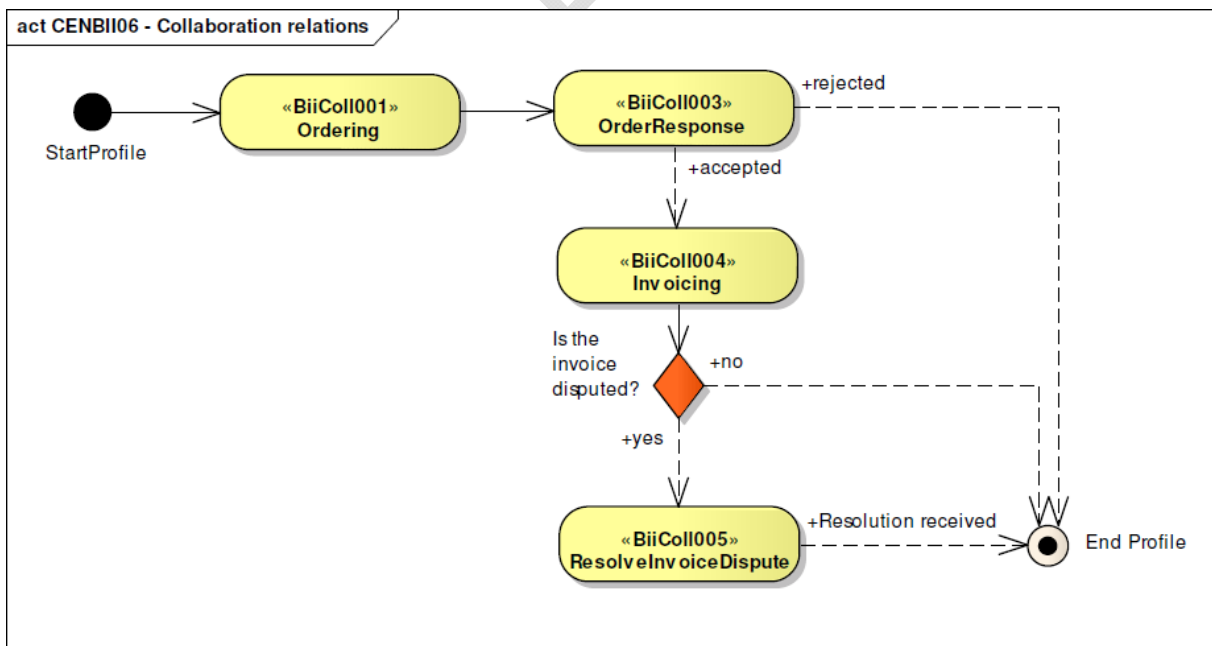


Figure 23: CEN BII Profile 6 – Collaboration Relations

**Pre-conditions**

1. The Customer and the Supplier have identified each other.

2. The Supplier has agreed to accept electronic orders.
3. The Customer has agreed to accept electronic order response, electronic invoices and electronic credit notes that use the profile.

**Description**

1. The Customer sends an order which the Supplier either accepts or rejects in full.
2. Following an accepted order the Supplier sends an invoice to the customer.
3. The Customer may dispute the invoice through an external process in which case the Supplier may resolve the dispute with an additional invoice or a credit note.

**Post-conditions**

1. In the case of a rejected order, no commitments exist between the Customer and the Supplier.

**Scenarios**

1. Accepted Order, accepted Invoice
2. Rejected Order
3. Accepted Order, Invoice overcharge
4. Accepted Order, Invoice undercharge
5. Accepted Order, Invoice contains wrong information

**Exceptions**

1. The notification of invoice errors is handled externally.

**7.3.4.2.3 Detailed collaborations**

*7.3.4.2.3.1 Ordering collaboration*

Categories	Description and Values
Description	A Buyer sends an order to a Seller for any goods or services.
Pre condition	none
Post condition(s)	Order has been submitted.

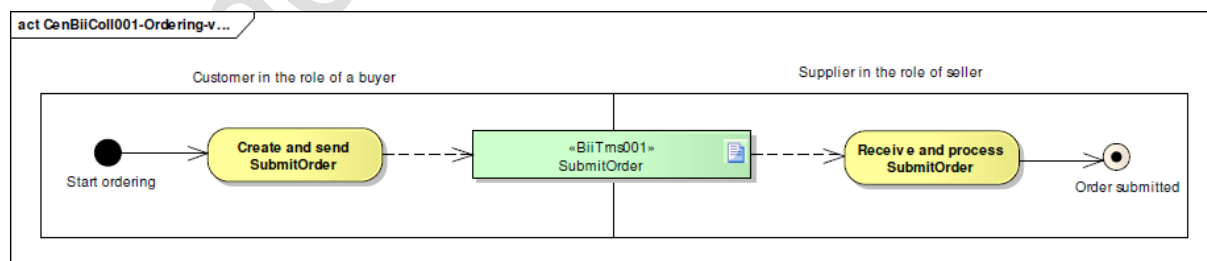


Figure 24: CEN-BII Profile 6 – Ordering Collaboration

*7.3.4.2.3.2 OrderResponse collaboration*

Categories	Description and Values
Description	The Seller responds to an order with a simple acceptance or rejection, stating whether he will supply the ordered items in full or not at all.

Pre condition	The Seller has received an order from the Buyer
Post condition(s)	<ol style="list-style-type: none"> <li>1. The Seller has accepted the order in full and established a contract.</li> <li>2. The Seller has rejected the order in full.</li> </ol>

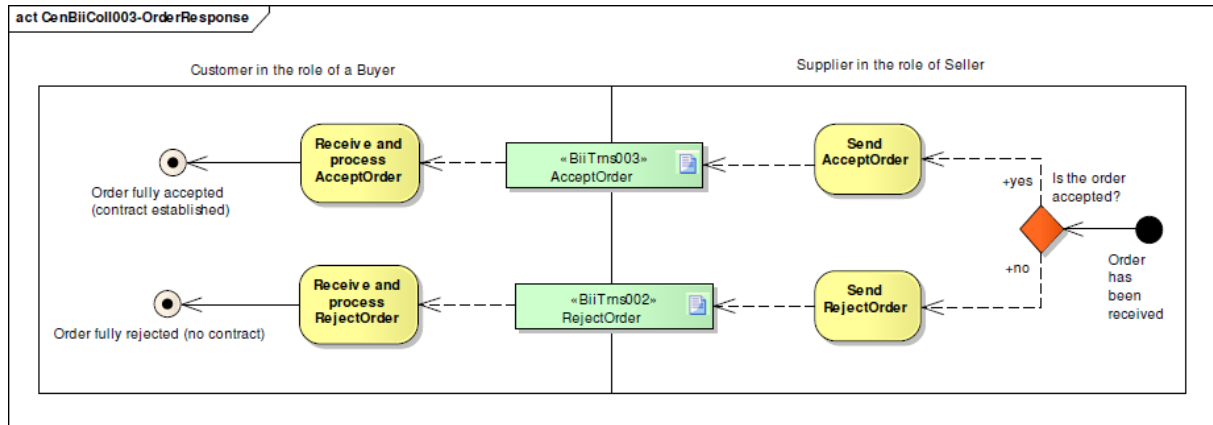


Figure 25: CEN-BII Profile 6 – Order Response Collaboration

7.3.4.2.3.3 Invoicing collaboration

Categories	Description and Values
Description	The collaboration is used to deliver an Invoice from creditor to a debtor but it does not require the debtor to produce any business level response.
Pre condition	none
Post condition(s)	The Debtor has Received an Invoice

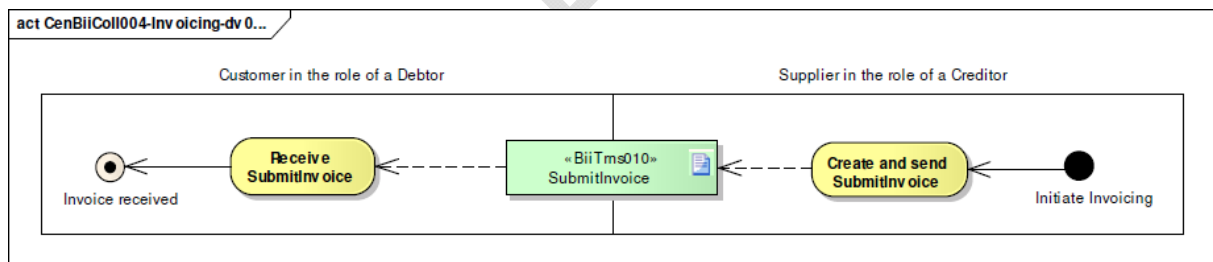


Figure 26: CEN-BII Profile 6 – Invoicing Collaboration

7.3.4.2.3.4 ResolveInvoiceDispute collaboration

Categories	Description and Values
Description	<p>Following a disputed invoice this collaboration is used to exchange documents to resolve an invoice dispute.</p> <p>Note: this profile does not preclude the Creditor from noticing an error and taking corrective action independently.</p>
Pre condition	A Creditor has received a dispute on an invoice previously sent to a Debtor.
Post condition(s)	<ol style="list-style-type: none"> <li>a. The Debtor has received a resolution to the dispute.</li> <li>b. The Creditor has recognized that the dispute concerns a request for additional documents.</li> </ol>

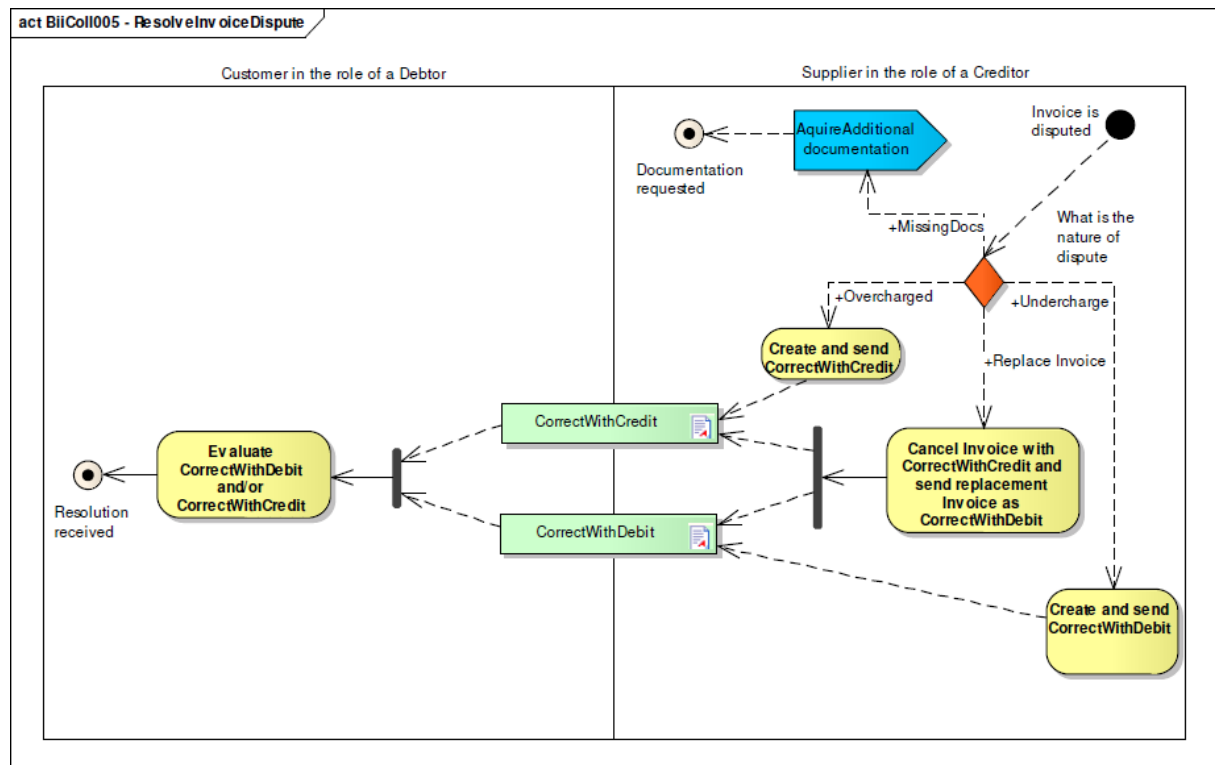


Figure 27: CEN-BII Profile 6 – Resolve Invoice Dispute Collaboration

### Business rules

1. If the process results in an accepted order i.e. a contract is established, the Supplier is obliged to deliver the goods and/or services and the Customer is obliged to pay for those goods and services under the agreed terms and conditions.
2. By sending a SubmitOrder the Buyer is obligated to its content in accordance with terms specified in the SubmitOrder itself or external documentation.
3. By sending an AcceptOrder transaction as a response to an order the Seller establishes a contract to which he is committed and commits the Buyer.
4. The Seller may not fulfil an order before sending a Accept Order transaction to the Buyer.
5. By sending a RejectOrder transaction as a response to an order no commitment is imposed on either partner and the Buyer is relieved from his commitment to the order.

#### 7.3.4.2.4 Detailed transaction

The figure below identifies the electronic messages exchanged as part of this process and the sequence in which these documents are exchanged.

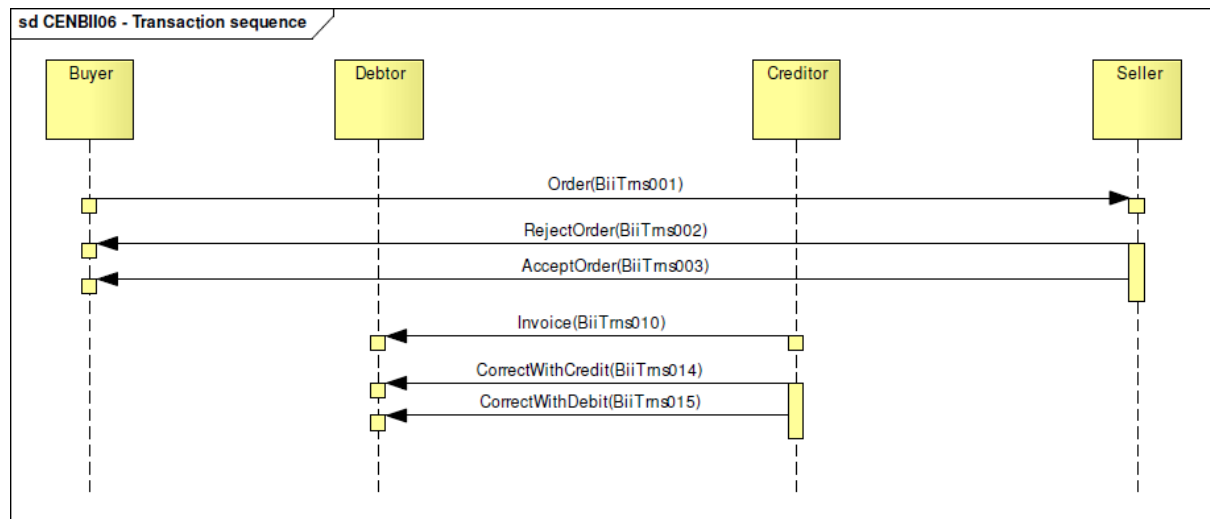


Figure 28: CEN-BII Profile 6 – Transaction Sequence

Transaction	Description
SubmitOrder	A structured electronic business document that contains information directly relating to the economic event of ordering products and/or services. The document by means of which a Buyer initiates a transaction with a Seller for the supply of goods or services as specified, according to conditions set out in a quote, catalogue, counter offer, or otherwise known to the Buyer.
RejectOrder	A structured electronic business document for rejecting a single order received in full.
AcceptOrder	A structured electronic business document for accepting a single Order received in full.
SubmitInvoice	A structured electronic business document claiming payment for goods or services supplied under conditions agreed between the Creditor and the Debtor. In most cases this document describes the actual financial commitment of goods or services ordered from the Supplier.
CorrectWithCredit	A structured electronic business document for a Creditor to specify a reduced payment in reference to an Invoice or to cancel that Invoice fully.
CorrectWithDebit	A structured electronic business document claiming payment for goods or services supplied under conditions agreed between the Creditor and the Debtor. In most cases this document describes the actual financial commitment of goods or services ordered from the Supplier.

## 7.4 Technical (Transport Infrastructure)

The goal of the PEPPOL transport infrastructure is to provide secure access to trading partners across border in PEPPOL participant countries.

The details of the technical infrastructure will be provided by WP8. Therefore, only a very brief introduction of the technical components is included in this paper in order to give the reader a rough idea of the infrastructure design.

### 7.4.1 Interoperability Issues

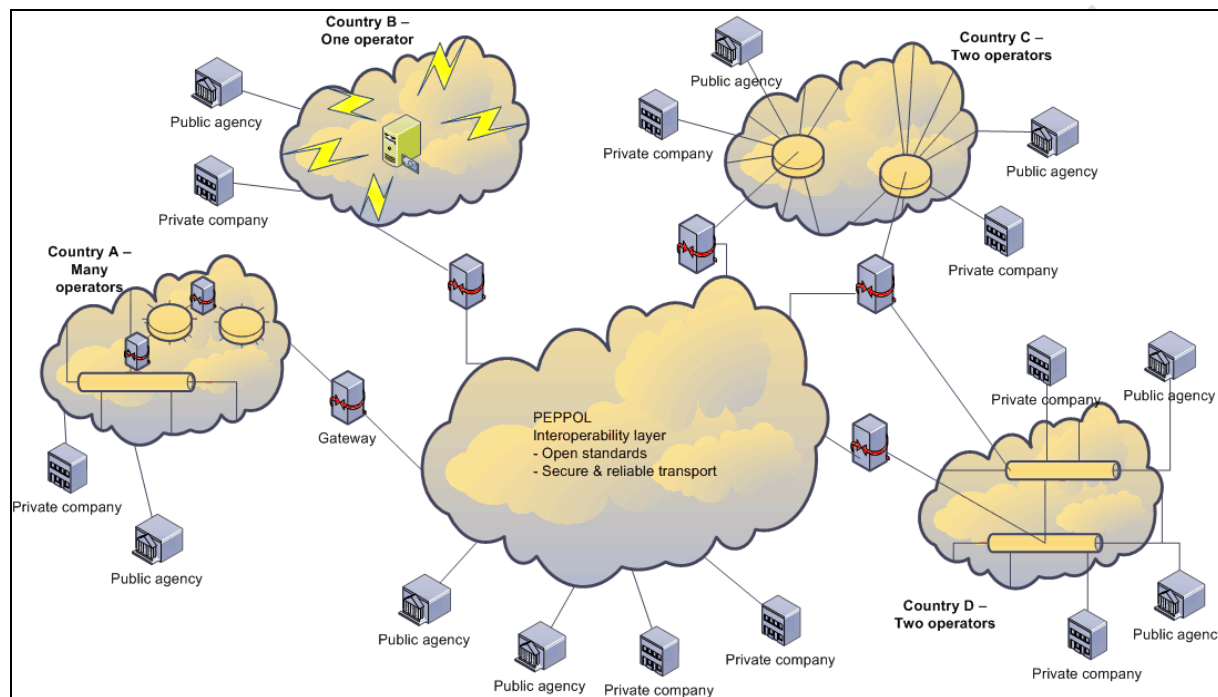


Figure 29: PEPPOL e-Business Document Transport Infrastructure

This text is based on the **PEPPOL eBusiness transport infrastructure – v0,7 specifications**<sup>36</sup>.

The PEPPOL e-business document transport infrastructure will make it possible to exchange electronic business documents in a secure and reliable manner via the Internet. The PEPPOL network infrastructure will connect existing e-business frameworks and value added networks that will allow any business in participating country to participate in the electronic business processes if they have internet access and can be securely identified. This infrastructure will be built on existing technologies and standards that have been tested and have been proven to be reliable and secure for enterprise use.

### 7.4.2 Pilot Approach

One of the premises of the PEPPOL pilot is that it should allow existing eProcurement infrastructure to be reused.

In preparation of the pilots each participating country will have to consider how current national infrastructure is linked to a PEPPOL Access Point (AP). The use of local infrastructure and document format is a matter of choice within the participating country. It is expected that with time the national solutions will merge towards the PEPPOL approach, both concerning infrastructure and document standards.

<sup>36</sup> [http://docs.google.com/Doc?id=dg8mxnjx\\_0dck65kgx](http://docs.google.com/Doc?id=dg8mxnjx_0dck65kgx)

Each country or trading area will provide an access point that uniquely identifies companies and government agencies on a local network within his domain. In that way existing infrastructure and document formats in each country can be linked together in a secure way.

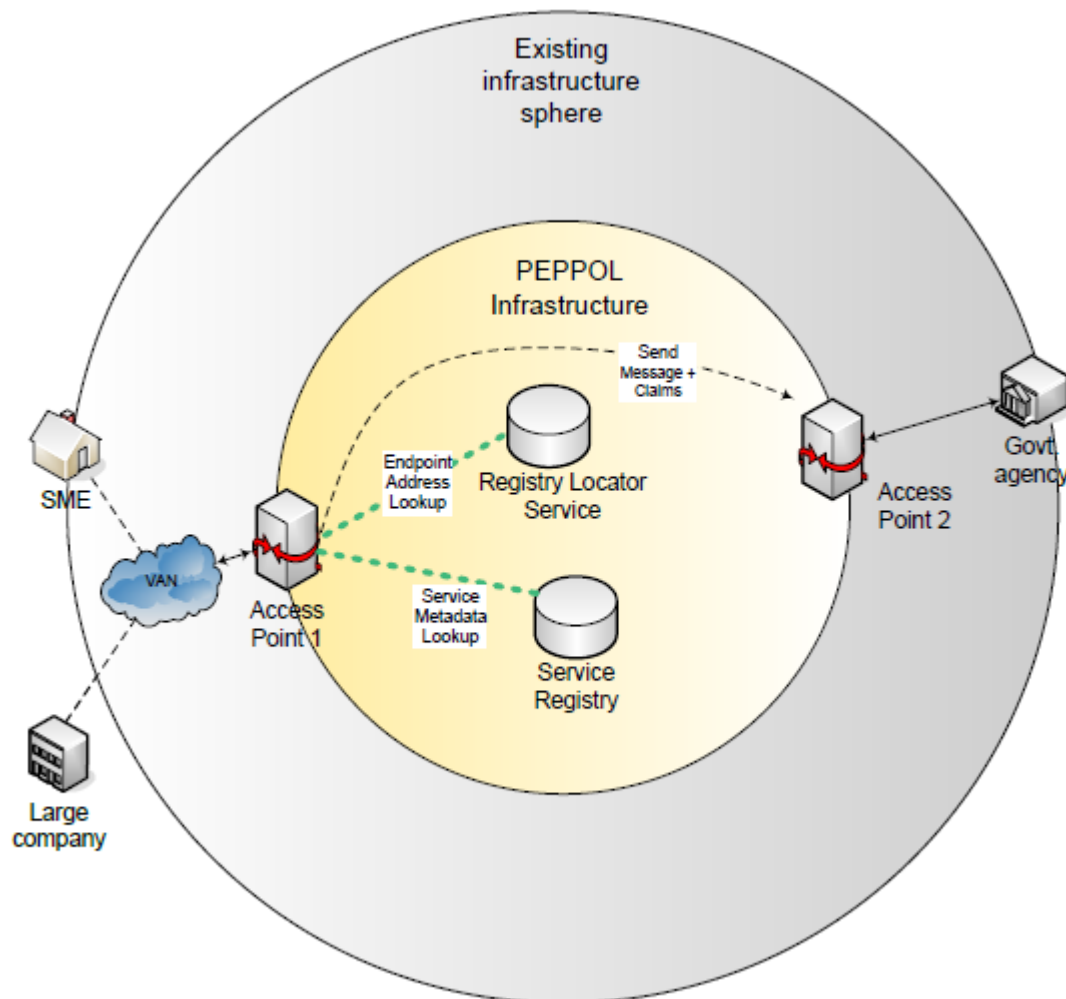


Figure 30: PEPPOL Infrastructure Integration Scenarios

How documents are sent within the participating countries to and from a PEPPOL Access Point (AP) and in what format is a matter of adaption within the participating country to the local infrastructure and formats used. It is expected that with time the national solutions will merge towards the PEPPOL approach, both concerning infrastructure and document standards.

In the pilot a document from an eProcurement platform can be sent to the local AP.

1. Sender will send an order in local format over local network to his PEPPOL AP.
2. Receiving AP will transform content if needed to PEPPOL format.
3. Document will be repackaged for the PEPPOL transport and sent.
4. The receiving AP will repackage and transform content, if needed, for the local network
5. Receiver will receive the document in local format over his local infrastructure.