



BSI Standards Publication

Electronic invoicing

Part 1: Semantic data model of the core elements of an electronic invoice

National foreword

This British Standard is the UK implementation of EN 16931-1:2017+A1:2019, incorporating CEN corrigendum July 2020. It supersedes BS EN 16931-1:2017, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

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English Version

Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice

Facturation électronique - Partie 1 : Modèle
sémantique de données des éléments essentiels d'une
facture électronique

Elektronische Rechnungsstellung - Teil 1:
Semantisches Datenmodell der Kernelemente einer
elektronischen Rechnung

This European Standard was approved by CEN on 17 April 2017, includes Amendment 1 approved by CEN on 25 September 2019 and the Corrigendum issued by CEN on 29 July 2020.

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Contents

Page

European foreword	5
Introduction	7
1 Scope	9
2 Normative references	9
3 Terms and definitions	10
4 The concept of a core invoice	11
4.1 The core invoice model as a response to the challenge of interoperability	11
4.2 Contents of the core invoice model	12
4.3 How to use and extend the core invoice model	13
4.4 Compliance	14
4.4.1 General	14
4.4.2 Compliance of the core invoice usage specifications	14
4.4.3 Compliance of sending or receiving party	15
4.4.4 Compliance of an invoice document instance	15
5 Business processes and functionality supported by the core invoice	15
5.1 The business parties involved and their roles and relationships	15
5.2 Business process requirements supported	17
5.2.1 Introduction	17
5.2.2 Invoicing of deliveries against purchase orders, based on a contract (P1)	18
5.2.3 Periodic invoicing of deliveries based on a contract, where no purchase order is required (P2)	19
5.2.4 Invoicing the delivery against an incidental purchase order (P3)	20
5.2.5 Pre-payment (P4)	20
5.2.6 Spot payment (P5)	21
5.2.7 Payment in advance of delivery, based on a purchase order (P6)	22
5.2.8 Invoices with references to a despatch advice (P7)	22
5.2.9 Invoices with references to a despatch advice and a receiving advice (P8)	23
5.2.10 Credit Note or negative invoicing (P9)	23
5.2.11 Corrective invoicing (P10)	24
5.2.12 Partial and final invoicing (P11)	25
5.2.13 Self-billing (P12)	26
5.3 Invoicing functionality supported	26
5.3.1 Introduction	26
5.3.2 Accounting	27
5.3.3 Invoice verification	27
5.3.4 VAT reporting	30
5.3.5 Auditing	31
5.3.6 Payment	32
5.3.7 Inventory	33
5.3.8 Delivery process	34
5.3.9 Customs clearance	34
5.3.10 Marketing	34
5.3.11 Reporting	34
5.4 The core invoice model in relation to other documents in the procurement process	34

6	The semantic data model of the core elements of an electronic invoice and credit note	35
6.1	Introduction.....	35
6.2	The core invoice model - Legend.....	37
6.3	The semantic model.....	39
6.4	Business rules	74
6.4.1	Integrity constraints.....	74
6.4.2	Conditions	77
6.4.3	VAT rules	79
6.5	Semantic data types	93
6.5.1	Introduction.....	93
6.5.2	Amount. Type	94
6.5.3	Unit Price Amount. Type	94
6.5.4	Quantity. Type.....	94
6.5.5	Percentage. Type.....	95
6.5.6	Identifier. Type	95
6.5.7	Document Reference. Type	95
6.5.8	Code. Type	95
6.5.9	Date. Type.....	96
6.5.10	Text. Type	96
6.5.11	Binary Object. Type.....	96
6.5.12	Decimals.....	97
6.5.13	Rounding.....	98
7	Core Invoice Usage Specification.....	98
7.1	Introduction.....	98
7.2	Compliance.....	99
7.3	What may be specified in a CIUS.....	99
7.3.1	Introduction.....	99
7.3.2	Allowed specifications in a CIUS.....	100
7.4	Documentation of core invoice usage specifications.....	101
7.5	Mapping to syntax	102
7.6	Identification of core invoice usage specifications.....	102
	Annex A (informative) Examples	103
A.1	Calculation examples	103
A.1.1	Introduction.....	103
A.1.2	Example 1 (Different Invoiced item VAT rates).....	103
A.1.3	Example 2 (Item price base quantity)	105
A.1.4	Example 3 (Invoiced quantity unit of measure)	107
A.1.5	Example 4 (Discounts, allowances and charges).....	108
A.1.6	Example 5 (Negative Invoice line)	111
A.1.7	Example 6 (Prepayment and negative Amount due for payment)	113
A.1.8	Example 7 (Standard VAT including VAT exempted lines)	114
A.1.9	Example 8 (Reverse Charge, Intra EU supply and Export Invoices).....	116
A.2	Number of decimals and rounding.....	117

A.3	Use cases	118
A.3.1	Taxes other than VAT	118
A.3.2	Allowances and charges	121
A.3.3	Factoring.....	125
A.3.4	Payment instructions	127
A.3.5	Corrections.....	129
Annex B (informative)	Assessment of the compliance of the European Standard with the requirements of the Standardization Request of the European Commission.....	131
B.1	Introduction.....	131
B.2	Sections of the invoice.....	131
B.3	How requirements in the Standardization Request are met in EN 16931-1.....	132
B.3.1	EU Projects	132
B.3.2	Specific business requirements.....	134
B.3.3	ESO (European Standardization Organization- CEN) requirements.....	142
B.4	Guide to indicators for relevance and risk as used in the above tables.....	144
B.4.1	Relevance rating	144
B.4.2	Risk rating	144
Annex C (informative)	How the semantic model meets legal requirements from relevant directives	145
Annex D (informative)	BPMN symbols.....	150
Bibliography		153

European foreword

This document (EN 16931-1:2017+A1:2019+AC:2020) has been prepared by Technical Committee CEN/TC “Electronic Invoicing”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by May 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document includes Corrigendum 1 issued by CEN on 2019-11-13 and Amendment 1, approved by CEN on 2019-9-25 and Corrigendum 2 issued by CEN on 2020-07-29. This document includes the corrigendum EN 16931-1:2017+A1:2019/AC:2020 which corrects references and wordings in 4.2, Table 2, Table 3, 6.5.3 to 6.5.5, 6.5.13, A.1.5 and A.3.2.4.

This document supersedes A1 EN 16931-1:2017 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags AC AC.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2014/55/EU [1].

For relationship with EU Directive 2014/55/EU [1], see informative Annex B, which is an integral part of this document.

A1 Attention is drawn to the existence of deviations from the content of the EN due to national regulation. See annex E for all relevant information concerning them. A1

This document is part of a set of documents, consisting of:

- EN 16931-1:2017 Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice
- CEN/TS 16931-2:2017 Electronic invoicing - Part 2: List of syntaxes that comply with EN 16931-1
- CEN/TS 16931-3-1:2017 Electronic invoicing - Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice
- CEN/TS 16931-3-2:2017 Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note

- CEN/TS 16931-3-3:2017 Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Cross Industry Invoice D16B
- CEN/TS 16931-3-4:2017 Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B
- CEN/TR 16931-4:2017 Electronic invoicing - Part 4: Guidelines on interoperability of electronic invoices at the transmission level
- CEN/TR 16931-5:2017 Electronic invoicing - Part 5: Guidelines on the use of sector or country extensions in conjunction with EN 16931-1, methodology to be applied in the real environment
- CEN/TR 16931-6¹ Electronic invoicing - Part 6: Result of the test of EN 16931-1 with respect to its practical application for an end user - Testing methodology

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¹ In preparation.

Introduction

The European Commission estimates that “The mass adoption of e-invoicing within the EU would lead to significant economic benefits and it is estimated that moving from paper to e-invoices will generate savings of around EUR 240 billion over a six-year period”². Based on this recognition “The Commission wants to see e-invoicing become the predominant method of invoicing by 2020 in Europe.”

To achieve this goal, Directive 2014/55/EU [1] on electronic invoicing in public procurement aims at facilitating the use of electronic invoices by economic operators when supplying goods, works and services to the public administration. The Directive sets out the legal framework for the establishment and use of a European Standard (EN) for the semantic data model of the core elements of an electronic invoice.

The semantic data model of the core elements of an electronic invoice – the core invoice model – as described in this document is based on the proposition that a quite limited, but sufficient set of information elements can be defined that supports generally applicable invoice-related functionalities. These functionalities are described in Clause 5. The core invoice model, as described in Clause 6, contains information elements that are commonly used and accepted including those that are legally required.

It is expected that in most situations, business partners would use the core invoice model exclusively and the invoices they send or receive would not contain any additional structured information elements. However, in some sectors or situations where there are specific information requirements, the required information may be conveyed in the form of unstructured text. Unstructured text has the drawback in that it cannot be processed automatically and therefore requires human intervention. Alternatively, the specific information requirements can be implemented using information elements that extend the core invoice model. Any such extension needs to respect the semantic definitions in the core invoice model. Only business partners that are part of such a sector or supply chain would be expected to be able to process the extensions. In these circumstances, it should be possible to define a number of required additional information elements whilst still utilizing the core invoice model concept.

In line with Directive 2014/55/EU [1] and after the publication of the reference to this document in the Official Journal of the European Union, all contracting authorities and contracting entities in the EU will be obliged to be able to receive and process an e-invoice as long as it contains all of the (applicable) core elements of an invoice defined in this European Standard (and provided that it is represented in any of the syntaxes identified in the related Technical Specification CEN/TS 16931-2 “List of syntaxes that comply with EN 16931-1” in accordance with the request referred to in paragraph 1 of article 3 of the Directive 2014/55/EU. The inclusion of any additional information which is not contained in the core model will be at the sender’s discretion and contained in unstructured text or in an extension, by agreement with the contracting entity. The inclusion of any extension in an e-invoice will be optional, and it will not form an integral part of the European Standard. See Clause 4 below for further detail on extensions.

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0712:FIN:en:PDF>.

By ensuring semantic interoperability of electronic invoices, the European Standard and its ancillary European standardization deliverables will serve to remove market barriers and obstacles to trade deriving from the existence of various national rules and standards – and thus contribute to the goals set by the European Commission.

1 Scope

This European Standard establishes a semantic data model of the core elements of an electronic invoice. The semantic model includes only the essential information elements that an electronic invoice needs to ensure legal (including fiscal) compliance and to enable interoperability for cross-border, cross sector and for domestic trade. The semantic model may be used by organizations in the private and the public sector for public procurement invoicing. It may also be used for invoicing between private sector enterprises. It has not been specifically designed for invoicing consumers.

This European Standard complies at least with the following criteria:

- it is technologically neutral;
- it is compatible with relevant international standards on electronic invoicing;
- the application of this standard should comply with the requirements for the protection of personal data of Directive 95/46/EC, having due regard to the principles of privacy and data protection by-design, data minimization, purpose limitation, necessity and proportionality;
- it is consistent with the relevant provisions of Directive 2006/112/EC [2];
- it allows for the establishment of practical, user-friendly, flexible and cost-efficient electronic invoicing systems;
- it takes into account the special needs of small and medium-sized enterprises as well as of sub-central contracting authorities and contracting entities;
- it is suitable for use in commercial transactions between enterprises.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes (ISO 3166-1)*

ISO 4217, *Codes for the representation of currencies*

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO 15000-5, *Electronic Business Extensible Markup Language (ebXML) — Part 5: Core Components Specification (CCS)*

ISO/IEC 6523 (all parts), *Information technology — Structure for the identification of organizations and organization parts*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE Business terms that are part of the semantic model are defined in the model itself.

3.1

electronic invoice

invoice that has been issued, transmitted and received in a structured electronic format which allows for its automatic and electronic processing

[SOURCE: Directive 2014/55/EU [1]]

3.2

semantic data model

structured set of logically interrelated information elements

3.3

information element

semantic concept that can be defined independent of any particular representation in a syntax

3.4

structured information element

information element that can be processed automatically

3.5

syntax

machine-readable language or dialect used to represent the information elements contained in an electronic document (e.g. an electronic invoice)

3.6

business term

label assigned to a given information element which is used as a primary reference

3.7

core invoice model

semantic data model of the core elements of an electronic invoice

3.8

core elements of an electronic invoice

set of essential information elements that an electronic invoice may contain in order to enable cross-border interoperability, including the necessary information to ensure legal compliance

3.9

identifier

character string used to establish the identity of, and distinguish uniquely, one instance of an object within an identification scheme from all other objects within the same scheme

Note 1 to entry: An identifier may be a word, number, letter, symbol, or any combination of those, depending on the identification scheme used.

3.10

identification scheme

collection of identifiers applicable for a given type of object governed under a common set of rules

3.11**compliant**

some or all features of the core invoice model are used and all rules of the core invoice model are respected

Note 1 to entry: Based on TOGAF definition of a compliant specification [18].

3.12**conformant**

all rules of the core invoice model are respected and some additional features not defined in the core invoice model are also used

Note 1 to entry: Based on TOGAF definition of a conformant specification [18].

4 The concept of a core invoice**4.1 The core invoice model as a response to the challenge of interoperability**

The establishment of interoperability of business information systems with respect to the exchange of electronic documents such as invoices is viewed by many as a major challenge for the following reasons:

- a) the overall business environment is very diverse and consequently so is the information that needs to be exchanged between business partners;
- b) documents such as invoices consist of many information elements; attempting to define and standardize all occurring information elements would generate a very large and complex information model that no single organization could implement entirely;
- c) even if a complete implementation of such a large model were possible, its implementation across the business environment would be very challenging and costly;
- d) as experience shows, business partners in various industry sectors will agree on subsets of the model that are supported by their business information systems. Such variety would work against the principles of using common standards, jeopardize interoperability and result in expensive implementation projects.

This document is based on a different approach. In contrast to collecting and meeting the requirements of all businesses, a semantic model is defined that includes only the essential information elements that an electronic invoice needs to ensure legal (including fiscal) compliance and to enable interoperability for cross-border, cross-sector and domestic trade. The semantic model may be used by public and private sector organizations for public procurement invoicing. It may also be used for invoicing between private sector enterprises.

The result of this approach is a semantic model of core information elements for an electronic invoice, i.e. a core invoice model. The following guiding principles form the basis of the core invoice model:

- 1) it should be easier to prepare and send, as well as to receive and process electronic invoices when compared to paper invoices;
- 2) the use of standardized information elements should make electronic invoice processing more efficient than processing paper invoices;

- 3) compliance with the core invoice model should mean that business partners should be able to interpret and understand the content of an electronic invoice at the semantic level without prior consultation or bilateral agreements;
- 4) invoices should be composed of structured information elements to enable efficient and automatic processing;
- 5) invoice processing software should be able to present all information elements in the core invoice model, and automatically process all structured data;
- 6) the use of structured data should result in optimized business processes;
- 7) the core invoice model makes no assumption about the method by which an invoice is created, delivered and processed. It may be exchanged directly between business partners or exchanged using an intermediary service provider;
- 8) the core invoice model makes no assumption about the syntax or transmission technology used. Senders and receivers of e-invoices shall ensure the authenticity and integrity of the invoice according to relevant regulations. Mapping to several syntaxes is provided in CEN/TS 16931-3 from subpart 2 onward.

4.2 Contents of the core invoice model

The core invoice model is based on the proposition that a quite limited, but nevertheless consists of a sufficient set of information elements which can be defined and support generally applicable invoice-related functionalities. These functionalities include invoice issuance and delivery, invoice validation, accounting, VAT reporting, payment and auditing. The core invoice model contains information elements that are commonly used and accepted, including those that are legally required.

If all organisations in Europe were to implement the core invoice model in their business information systems using the specified information elements, then sending, receiving and processing invoices electronically, without human intervention, would be possible. There would be no need for onerous pre-negotiated bilateral agreements between organizations on the actual semantic content of the invoice and its exchange. The only assumption is the existence of a normal business contract or trading agreement. The core invoice model supports a set of invoice functions, as specified in Clause 5 below.

The set of information elements that are contained in the core invoice model is commonly considered to consist of two parts: a legal part and a common part.

The legal part of the core invoice model supports the observance of both tax and commercial legal and regulatory requirements pertaining to electronic invoicing commonly in force throughout the EU.

The common part contains commonly used and accepted information elements that are not sector or country specific.

A specific information element may be correctly allocated to one or both parts. Therefore categorizing elements with respect to these parts in the semantic model is not considered to be meaningful.

To fulfil the requirements above, judgment has had to be made on the selection of the information elements to be included in the core invoice model. First, for the legal part requirements, the selection has been made regarding the information elements required on a mandatory basis by EU VAT Directives and individual state law, whether local VAT regulations, or any other local legal provision (regulatory, contractual company law, laws on business

documents, etc.). In some cases, those information elements that are exclusively confined to a single or very small number of countries and therefore fall outside the doctrine of 'commonly in force throughout the EU' have not been included in the core invoice model. Secondly, the elements selected to satisfy the requirements of the common part form a justifiable selection of requirements required in commercial practice.

An important criterion when to include an information element in the core invoice model that is above and beyond one that is legally required is whether it can be assumed that the buyer's information system can process (or otherwise handle) such an element. If the business information systems of most buyers are incapable of processing such an information element, that element should not be part of the core invoice model. If such an element is nevertheless required in a specific context, it should be contained within an extension to the core invoice model, either specific to a sector or country. The methodology to create extensions is described in [AC] CEN/TR 16931-5 [AC]. When experience shows that an extension is frequently used, then such an extension could be added as information elements to the core invoice model in a later version rather than continuing to be handled in an extension.

4.3 How to use and extend the core invoice model

As stated in the previous subclause, the core invoice model is intended to be used for all generally applicable invoicing processes. In most situations, business partners would use the core invoice model exclusively and the invoices they send or receive would contain only structured information elements defined in the model. Where a dedicated field exists for a business term or piece of data, this field shall be used for the information content instead of using a textual field.

There are however circumstances where the trading partners may wish to: Either 1. restrict the information elements to be used in an e-invoice or 2. to provide additional information elements. The first requirement is satisfied using a Core Invoice Usage Specification (CIUS). The second requirement is satisfied using an extension specified in an Extension Specification.

In many trading situations, it may be appropriate to restrict the use of conditional information elements present in the core invoice model in some way to support automated processing. The use of a CIUS to specify these requirements is described in Clause 7 below. The CIUS is a specification that provides a seller with detailed guidance, explanations and examples, relating to the actual implementation and use of the information elements in the core invoice model in a specific trading situation.

Typically, a CIUS will be created by a contracting entity (buyer) in relation to its own supply chain or by a group of contracting entities wishing to achieve consistency in the way that the information elements in the core invoice model are to be used by sellers trading with an identified sector or community of buyers. The requirements set out in such a CIUS will be communicated to sellers or placed on a website, and may be included in the contractual documentation between the parties. Alternatively, a CIUS may be created by a group of sellers and agreed in turn by their buyer or buyers in the context of a specific industry or supply chain.

A CIUS is a set of usage guidelines or restrictions made to the core invoice model that will still produce an invoice instance that is fully compliant with the core invoice model set out in this document. That means that a receiver of an invoice document instance that has been created in compliance with a CIUS is still able to receive and process it in accordance with the rules defined for the core invoice model.

In some sectors or situations where there are specific additional information requirements, the required information may be conveyed in the form of unstructured text. Unstructured text has

the drawback in that it cannot be processed automatically and therefore requires human intervention.

Alternatively, the specific information requirements can be implemented using an extension containing information elements that extend the core invoice model (See CEN/TR 16931-5 for the methodology applicable to the use of extensions). Any such extension shall not infringe or contradict the semantic definitions in the core invoice model. Only business partners that are part of such a sector or supply chain would be expected to be able to process the extensions. In these circumstances, it is possible to carefully define the required additional information elements, whilst still utilizing the core invoice model concept.

Some extensions are not specific to a single supply chain or industry sector, but may be specific to functions or business processes required by more than one sector. E.g. the vendor managed inventory (VMI) process has been implemented by, for example, the automotive, steel and printing industries. The VMI business process may require additional information elements, not present in the core invoice model. Clearly, similar functions and processes should consistently use the same information elements across Europe.

The development of sector specific or cross-sector extensions should be based on justified business requirements. These can only be gathered by industry experts, (private and public) sector organizations and their customers, who understand those requirements. The semantic model of these additional information elements will need to be defined and registered as an extension with the appropriate organization.

4.4 Compliance

4.4.1 General

Compliance to the core invoice model, can be measured at three levels:

- at the level of specifications;
- the actual implementation of a given sender or receiver; and
- the individual invoice instance documents.

Each of these levels is discussed in 4.4.2 to 4.4.4.

4.4.2 Compliance of the core invoice usage specifications

The core invoice usage specifications that are used in conjunction with the core invoice model shall themselves comply to the methodology and rules described in this guideline and expressed in the following criteria:

- the specification shall clearly state what business functions and/or legal requirements it is intended to support;
- the specification shall clearly state its issuer and responsible 'governor';
- the specification shall clearly state in what way the requirements of the CIUS differ from the core invoice model, either by documenting the difference only or by specifically pointing out what the differences are;
- the resulting invoice document instance shall be fully compliant to the core invoice model.
- the specification and, when relevant, its version shall be uniquely identifiable both for referencing and for identification in processing;

- the specification shall state its underlying specifications (the core invoice model as well as other specifications that it may build upon);
- the syntax binding of a specification shall follow the syntax binding methodology defined in CEN/TS 16931-3-1.

4.4.3 Compliance of sending or receiving party

A receiving party may only claim compliance to the core invoice model if he accepts invoices that comply with the core invoice model in general, or with a CIUS, that is itself compliant with the core invoice model.

A sending party may claim compliance if he sends invoices that comply to the core invoice model, including those issued in accordance with a conformant CIUS.

4.4.4 Compliance of an invoice document instance

An invoice document instance is compliant to the core invoice model if it respects all rules defined for the core invoice model, which may include the specification contained in a conformant CIUS.

If an invoice instance document supports requirements that can be considered as a use of a CIUS, the invoice instance document is still compliant to the core invoice model. These invoice instance documents can still be received and processed by a party who is not supporting the CIUS because it still complies to the rules of the core invoice model.

5 Business processes and functionality supported by the core invoice

5.1 The business parties involved and their roles and relationships

In the basic purchase-to-pay process there are two business parties, the Customer and the Supplier. Each party may fulfil two or three roles in the process. The Customer party has the role of the Buyer (the commercial role that contracts with a Seller and orders the goods and services) and the Receiver (the operational role that receives the goods and services). The Supplier party has the role of the Seller (the commercial role that is contracted by a Buyer) and the Payee (the role that receives the payment). Both parties are considered to be Taxable persons (the role that declares and pays or reclaims VAT), except for some public entities. The Supplier may delegate the operational aspects of that role to a Tax representative, who declares and pays VAT on his behalf.

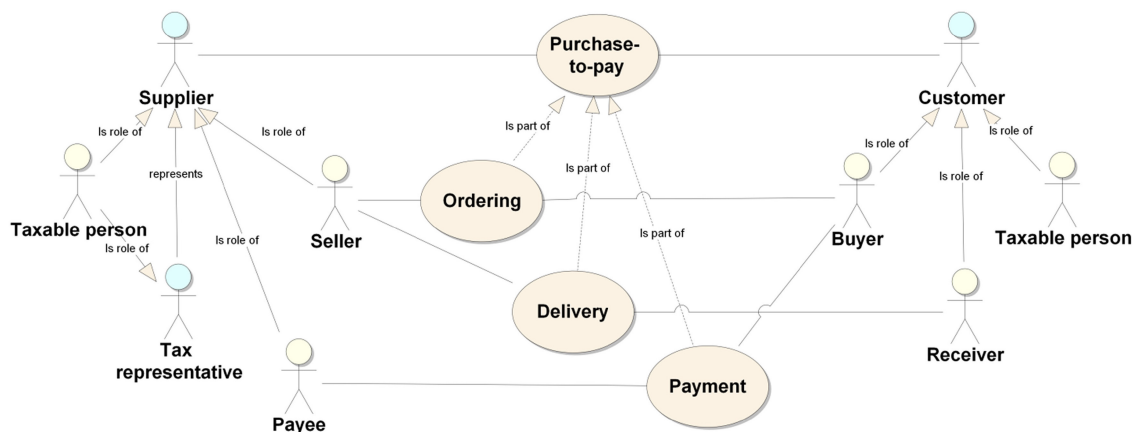


Figure 1 — Parties and roles

In the core invoice model, it is assumed that the Supplier party combines, by default, the roles of Seller and Payee. Roles may however be outsourced. The role of Payee may be fulfilled by another party, e.g. a factoring service. The same applies to the roles of the Customer (Buyer and Receiver) that may be fulfilled by different parties. It is assumed that the Seller issues the invoice. Note that in certain transactions the Buyer may be liable to pay VAT instead of the Seller.

An invoice consists of a header and one or more line items. All information about the parties is defined at header level.

Table 1 illustrates the different roles in an invoice:

Table 1 — Parties and roles

Context	Role	Explanation
Supplier:		
Trade	Seller (invoice issuer)	Principal role
Payment	Payee	Additional role, may be a different party from the Seller (e.g. a factoring service)
Tax	Taxable Person (may engage a Tax representative)	Designation for tax purposes
Customer:		
Trade	Buyer (invoice receiver)	Principal role
Delivery	Receiver	Additional role, may be a different party from the Buyer (e.g. a subsidiary of the Buyer in another location)
Tax	Taxable Person	Designation for tax purposes

Other parties may also play roles in the invoicing process, such as (e.g. transport) service providers and (e.g. tax) authorities. They are however indirectly involved as an agent or counterpart and not included in the table.

5.2 Business process requirements supported

5.2.1 Introduction

The core invoice model supports a basic purchase-to-pay process. Purchase-to-pay processes can be complex due to logistics, legal, product and technical requirements. Examples of such complex processes are: vendor managed inventory, invoicing on behalf of multiple parties in the same invoice, invoicing complex products or project-related products, or 'swap' deals. These processes are out of scope of the core invoice model. However, the core invoice model can be extended to support such processes. The extension methodology is described in CEN/TR 16931-5.

This subclause 5.2 describes the processes that are supported by the core invoice model. These processes include buying, selling, delivering goods and services and payment between Customers and Suppliers and their respective roles. How the invoice and other documents are electronically exchanged is not described in the process models. Parties may handle document exchange with their own resources or outsource (part of) it. See also CEN/TR 16931-4.

The process models focus on the external activities of the parties and do not describe internal activities. Only the activities of the roles listed in Table 1 are modelled, not those of third parties.

The process model diagrams are presented in the Business Process Model and Notation (BPMN) of the Object Management Group (OMG) [12]. A short legend of the symbols used can be found in Annex D.

The process models included in 5.2 are intended to indicate the business contexts that are supported by the core invoice model. The models do not give a full definition of those processes.

The core invoice model shall include elements that allow the trading parties to represent any invoice transaction according to the EU VAT directives and should support the following types of business processes:

- P1: Invoicing of deliveries of goods and services against purchase orders, based on a contract;
- P2: Invoicing deliveries of goods and services based on a contract;
- P3: Invoicing the delivery of an incidental purchase order;
- P4: Pre-payment;
- P5: Spot payment;
- P6: Payment in advance of delivery;
- P7: Invoices with references to a despatch advice;
- P8: Invoices with references to a despatch advice and a receiving advice;
- P9: Credit notes or invoices with negative amounts, issued for a variety of reasons including the return of empty packaging;
- P10: Corrective invoicing (cancellation/correction of an invoice);
- P11: Partial and final invoicing;

— P12: Self billing.

Other processes are not explicitly supported, but the core invoice model may still be applicable. In more complex or advanced processes, however, extensions to the information content of the core invoice model may be needed (see CEN/TR 16931-5).

5.2.2 Invoicing of deliveries against purchase orders, based on a contract (P1)

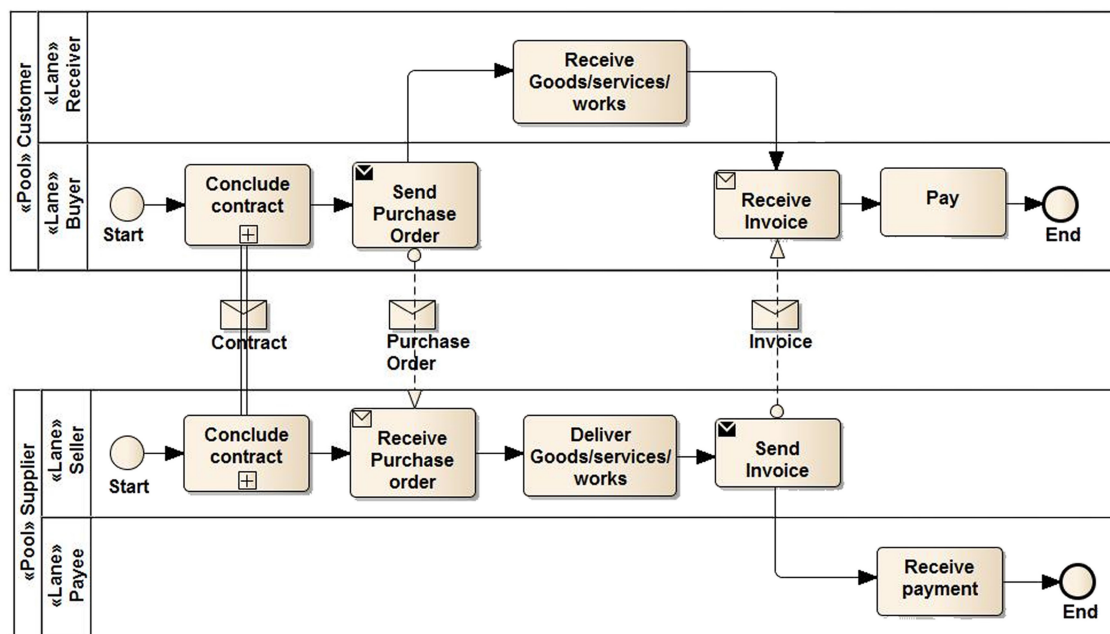


Figure 2 — Invoicing of deliveries against purchase orders, based on a contract

In this process the Buyer and the Seller conclude a formal contract (or there is an assumed contract by legal definition) in which the terms and conditions are stated under which goods and services will be delivered and are paid for. The Buyer orders the goods and services, stating the specifications for goods and services, the quantities and the place and time of delivery. The Seller delivers the ordered goods and services to the Receiver as specified on the purchase order. This delivery is then invoiced by the Seller to the Buyer. Finally, the Buyer pays the Payee.

A purchase order is sent by the Buyer as a single document. Depending on the contract between the Seller and the Buyer the purchase order may be confirmed by the Seller or even be the subject of negotiation between Buyer and Seller (not shown in the diagram). The resulting purchase order then may result in one or more deliveries (e.g. regular monthly or periodic supply with multiple deliveries under one PO). Each delivery results in an invoice. An invoice may only refer to one delivery and one purchase order.

The delivery may include the pick-up and return of returnable packaging from previous deliveries and, for which a payment (deposit) had previously been made by the Buyer and had been received by the Seller. Depending on the agreement between the Seller and Buyer, this deposit may need to be reimbursed to the Buyer using the invoice to account for reimbursement. The invoice may therefore contain lines with a negative amount. Alternatively, credit notes may be used instead.

In a number of national and legal environments, descriptions of products, names and addresses of parties, and locations are obligatory in the electronic messages. Therefore, textual representation of these objects is included in the core invoice model. In other jurisdictions, the Buyer and the Seller may agree on one or more identification schemes for products, locations, parties and other objects. These schemes remove the need for textual based descriptions and

names and addresses of the objects identified. These schemes are usual agreed in advance of the Purchase to Pay process and there are various mechanism used for this. This process is called Master Data Synchronisation. In the core invoice model it is assumed that a Master Data Synchronisation process has not been implemented.

5.2.3 Periodic invoicing of deliveries based on a contract, where no purchase order is required (P2)

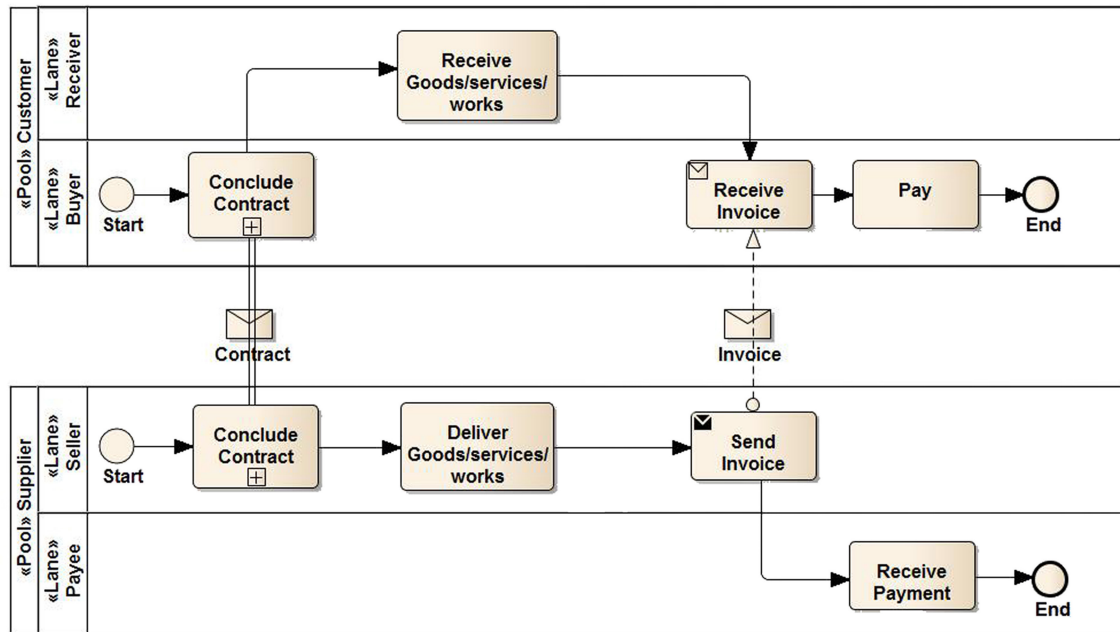


Figure 3 — Periodic invoicing of deliveries based on a contract

In this process the contract directly triggers the delivery. There is no requirement for a purchase order. This scenario is common in the delivery of utilities, but also in delivery of, e.g. food services to offices, schools and hospitals. Invoices are issued to cover a fixed period of time (which can be different per invoice line) and there are continuously instances of the goods and service being delivered. An invoice may only refer to one contract.

5.2.4 Invoicing the delivery against an incidental purchase order (P3)

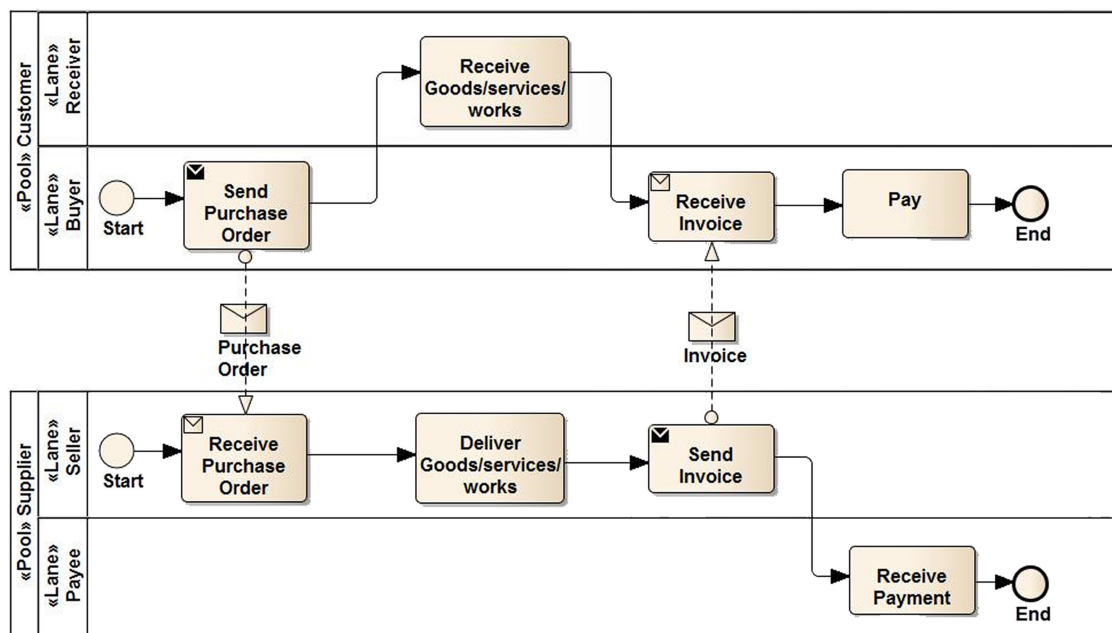


Figure 4 — Invoicing the delivery against an incidental purchase order

In this process, a separate contract does not exist. Purchase orders are placed over the telephone, using internet or over the counter. The purchase order serves as the contract and triggers the delivery. Each delivery results in an invoice. The purchase order may be confirmed by the Seller (not shown in the diagram).

5.2.5 Pre-payment (P4)

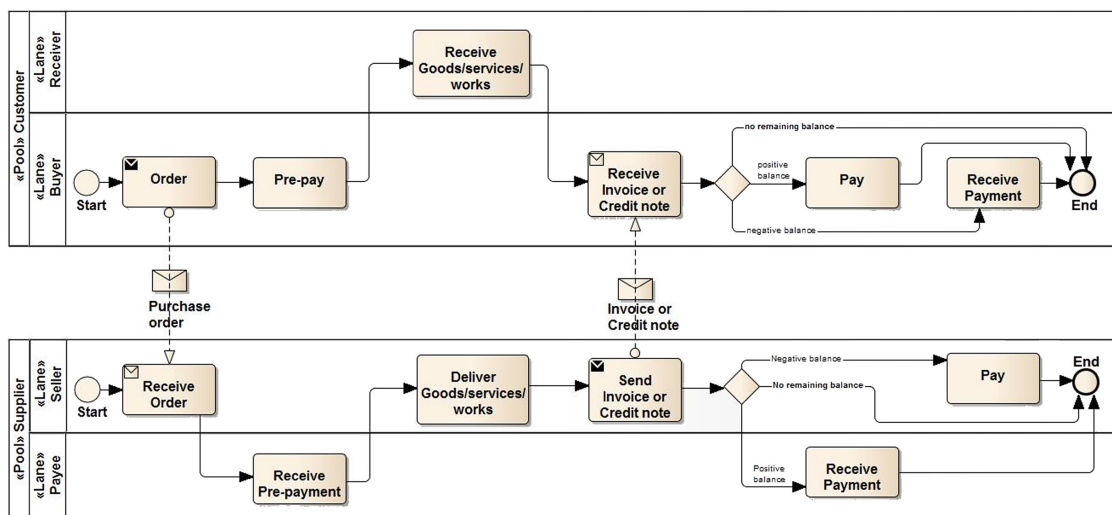


Figure 5 — Pre-payment

The Buyer orders goods and services. Full payment or part-payment is made in advance of the invoice. The invoice states the amount paid in advance and the amount now due for payment by deducting the amount paid in advance from the invoice total, i.e. the balance. If the balance is positive, there is still an amount of money outstanding to the Seller and a final payment is made. If the balance is negative, an invoice with a negative amount due for payment is sent, or a credit

note. The Seller then pays the balance to the Buyer. Each delivery results in an invoice. An invoice may only refer to one delivery and one purchase order.

5.2.6 Spot payment (P5)

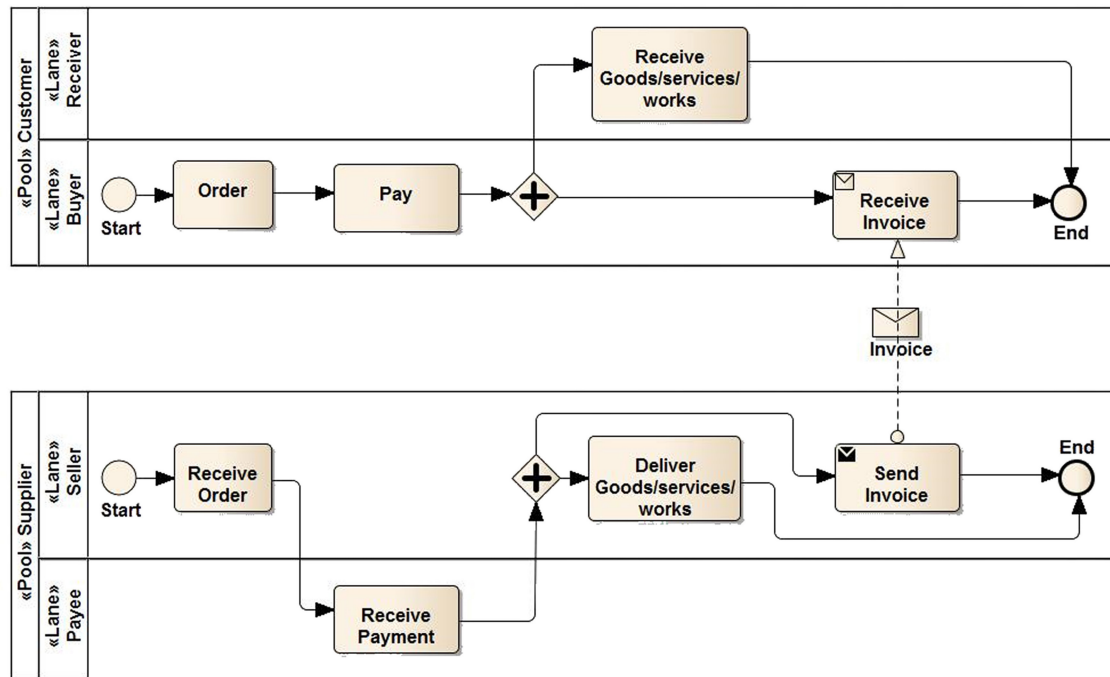


Figure 6 — Spot-payment

The Buyer purchases goods and services without any prior purchase order or contract (e.g. by ordering over the telephone, internet or over the counter). Payment is made in advance of the invoice, e.g. by means of a credit, debit or payment card or through a payment service provider. Note that sufficient business controls should be present in the administrations of both parties given the absence of written purchase orders. Invoicing may take place before, after or at the same time as the delivery. The invoice refers to the account or card number used for payment and states the amount paid in advance. An invoice may only refer to one delivery.

5.2.7 Payment in advance of delivery, based on a purchase order (P6)

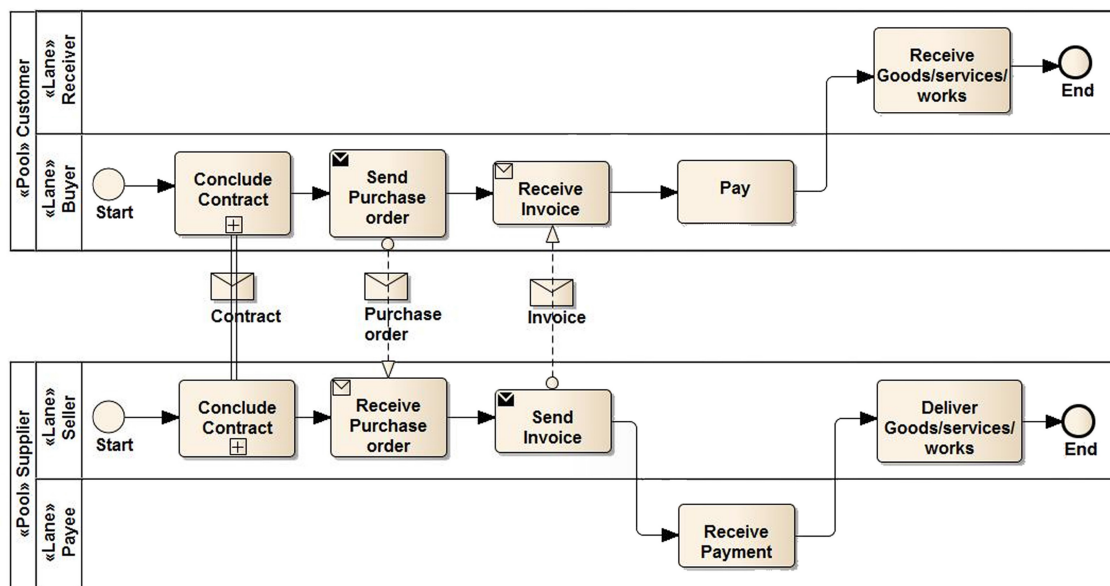


Figure 7 — Payment in advance of delivery, based on a purchase order

A Purchase Order is exchanged between the Buyer and the Seller, but it is agreed that invoicing and payment are made in advance of delivery. An invoice may only refer to one purchase order.

5.2.8 Invoices with references to a despatch advice (P7)

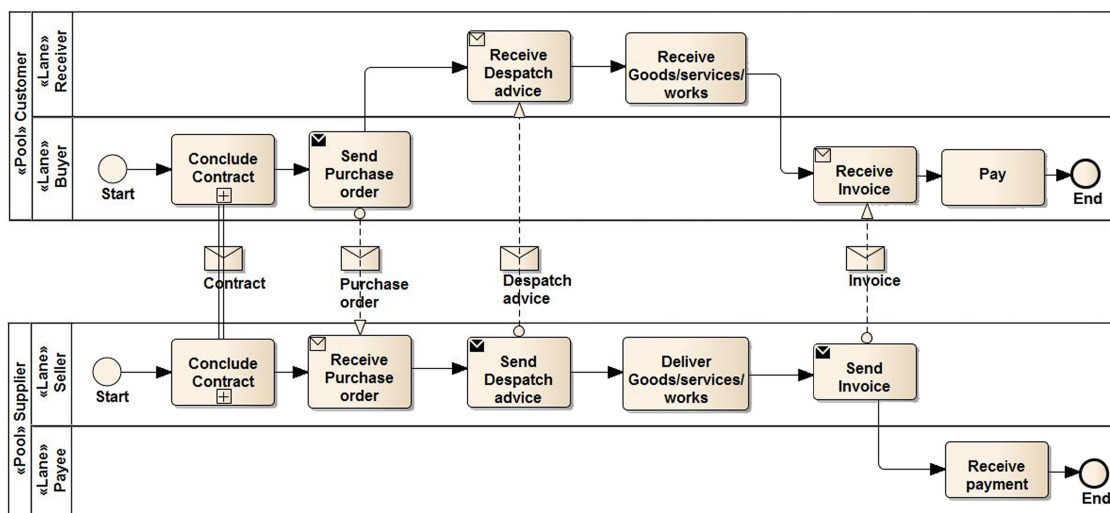


Figure 8 — Invoices with references to a despatch advice

After receipt of the purchase order the Seller sends a despatch advice in advance of the delivery. The despatch advice specifies one delivery. In the invoice a reference is made to the relevant despatch advice. The invoice content should reflect the content of despatch advice which it refers to. An invoice may only refer to one purchase order and one despatch advice.

5.2.9 Invoices with references to a despatch advice and a receiving advice (P8)

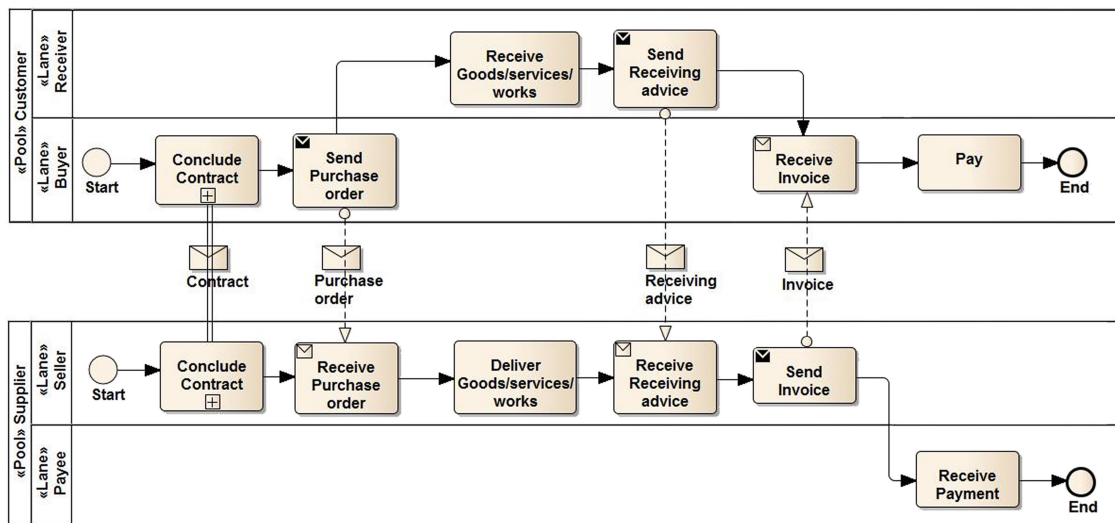


Figure 9 — Invoices with references to a despatch advice and a receiving advice

After delivery and before the invoice is issued, the Seller waits for a receiving advice from the Receiver, in which the Receiver acknowledges that the goods and services have been received and if there are any issues with the delivery. The Seller bases the invoice on information contained in the receiving advice. The invoice may refer to one despatch advice, one receiving advice and may also refer to only one purchase order.

5.2.10 Credit Note or negative invoicing (P9)

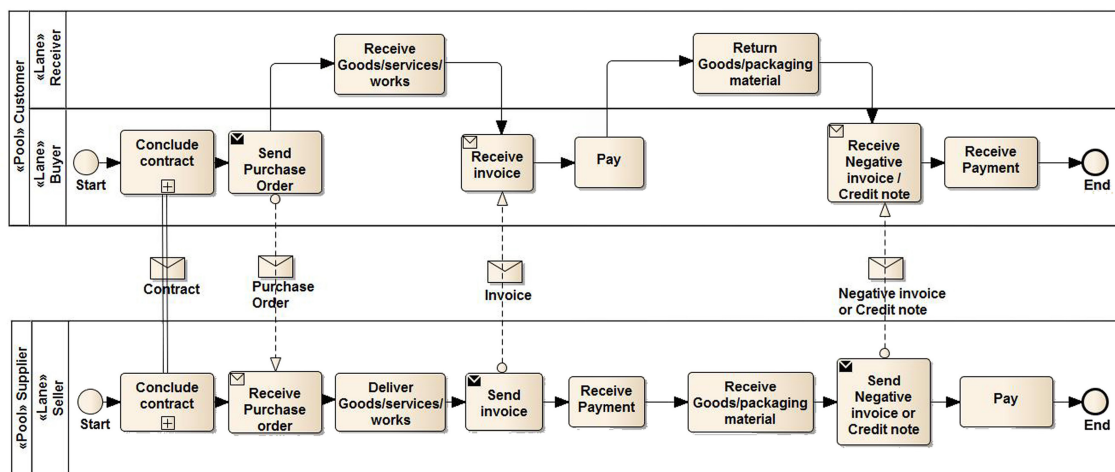


Figure 10 — Credit Note or negative invoicing

In the case of reimbursement of packaging material or returns, the total amount to be invoiced may be negative. In this case a credit note with a positive total amount may be sent instead of an invoice. The Seller will reimburse the Buyer, either by means of a negative invoice or by means of a credit note. The invoice or credit note may refer to one delivery, one purchase order, one contract and one preceding invoice.

On the basis of a commercial agreement the Seller may apply a quarterly or yearly reimbursement (not shown in the diagram). A credit note may also be used in such case.

5.2.11 Corrective invoicing (P10)

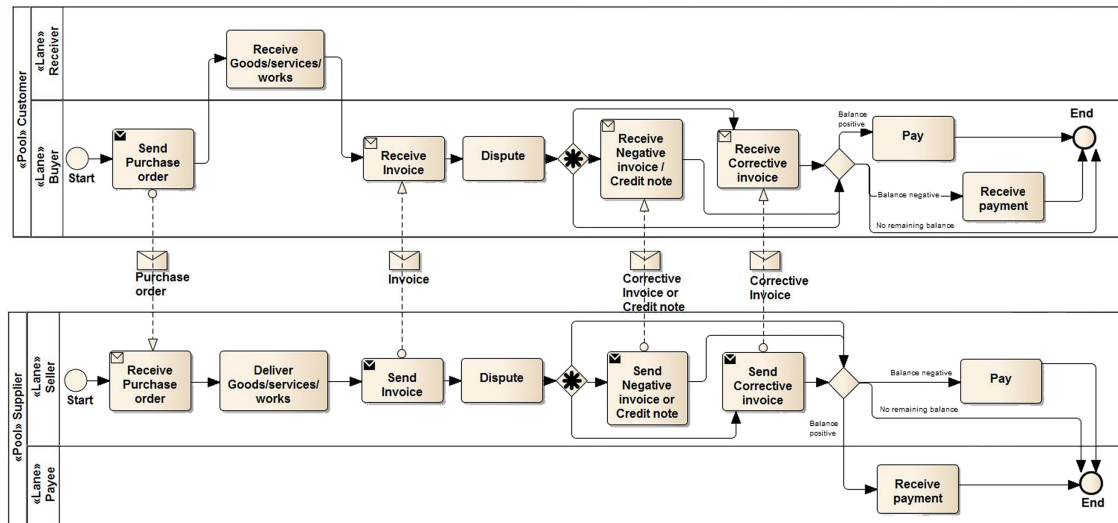


Figure 11 — Corrective invoicing

Many cases exist where an invoice is disputed and/or may need to be corrected. Product descriptions may be wrong, invoiced quantities may differ from delivered quantities, VAT rates may have changed, etc.

A disputed invoice may be corrected by means of the following mechanisms:

1. the disputed invoice may be replaced completely by first sending an identical credit note or an invoice in which the quantities and thus the line and total amounts have been made negative and then sending the correct invoice
2. alternatively an invoice, credit note or negative invoice may be sent with the difference in quantities and amounts between the correct invoice and the disputed invoice. Such a differential corrective invoice or credit note may contain lines that completely compensate lines in the disputed invoice with the corrected lines.

Corrective invoices and credit notes shall refer to the original invoice.

See Annex A for examples of these correction mechanisms.

5.2.12 Partial and final invoicing (P11)

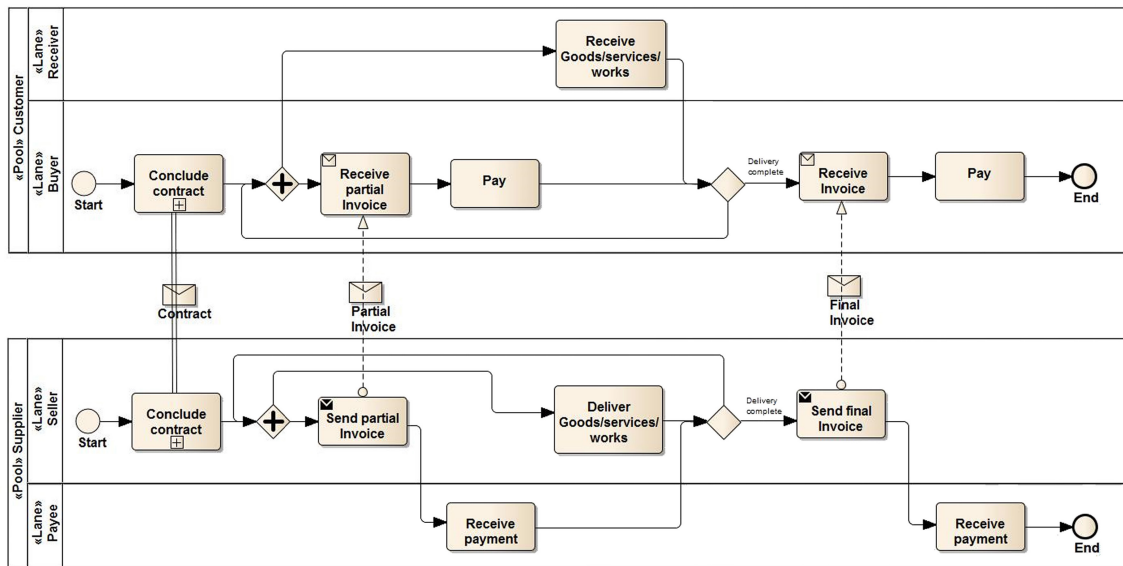


Figure 12 — Partial and final invoicing

In some industries, such as Construction and Utilities, during the period of delivery one or more partial invoices are sent before the final invoice. Partial invoices may be estimates of consumption or requests for pre-payment. In some cases, the pre-payment requests do not state the VAT amounts; those are then only stated on the final invoice.

The final invoice shall refer to the partial invoices.

Note that partial invoices without VAT are not allowed in some member states.

5.2.13 Self-billing (P12)

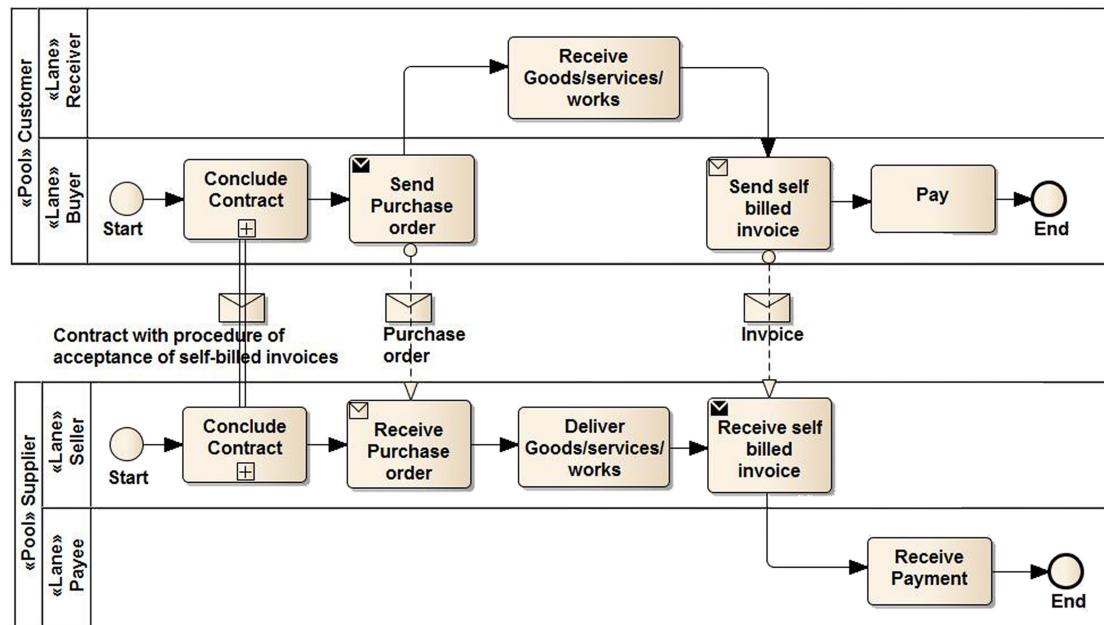


Figure 13 — Self-billing

In a self-billing process, the Buyer sends the invoice to the Seller. Both Buyer and Seller keep their responsibilities, so the invoice is still issued on behalf of the Seller. According to directive 2006/112/EC, the invoice shall be labelled as being a self-billed invoice and the requirements mentioned in article 224 of this directive shall be met. Self-billing may be introduced only if there is a prior agreement between the two parties and provided that a procedure exists for the acceptance of each invoice by the taxable person supplying the goods or services.

In case of self-billing, the Invoice type code shall be Self-billed invoice or Self-billed credit note. In this case the buyer will have legal responsibility for the invoice.

5.3 Invoicing functionality supported

5.3.1 Introduction

An invoice may support functions related to a number of related (internal) business processes. The core invoice model shall support the following functions:

- Accounting;
- Invoice verification against the contract, the purchase order and the goods and service delivered;
- VAT reporting;
- Auditing;
- Payment.

In this subclause 5.3, an assessment is made of what information is needed for each of the functions listed above and whether it is in scope or out of scope for the core invoice model. Functions that are in scope and thus are supported by the model have been assigned an identifier (e.g. R1) and have been given a description.

Explicit support for the following functions (but not limited to) is out of scope for the core invoice model although information elements in the core invoice model may provide some support for these functions:

- Inventory management;
- Delivery processes;
- Customs clearance;
- Marketing;
- Reporting.

The requirement identifiers are not necessarily consecutive or in sequence.

5.3.2 Accounting

Recording a business transaction into the financial accounts of an organization is one of the main objectives of the invoice. According to financial accounting best practice and VAT rules every Taxable person shall keep accounts in sufficient detail for VAT to be applied and its application checked by the tax authorities. For that reason, an invoice shall provide for the information at document and line level that enables booking on both the debit and the credit side.

In scope for the core invoice model:

- R1 information at document level that enables the identification of the Payee, if different from the Seller (all processes, except P9);
- R2 information at document level that enables booking on both the debit and the credit side (all processes);
- R3 information at invoice line level that enables booking on the debit side (all processes);
- R4 Buyer-specific booking information (account numbers) (all processes).

Out of scope for the core invoice model:

- invoice sub-lines;
- booking information at sub-line level.

5.3.3 Invoice verification

This process forms part of the Buyer's internal business controls. The invoice shall refer to an authentic commercial transaction. Support for invoice verification is a key function of an invoice. The invoice should provide sufficient information to look up relevant existing documentation, electronic or paper, for example, and as applicable to the models detailed above:

- the relevant purchase order;
- the contract;
- the call for tenders, that was the basis for the contract;
- the Buyer's reference;

— the confirmed receipt of the goods or services.

An invoice should also contain sufficient information that allows the received invoice to be transferred to a responsible authority, person or department, for verification and approval.

In scope for the core invoice model:

- R5 information to trace to a single related purchase order from the document level (all processes, except P2 and P5);
- R6 information to trace to a single related purchase order line from the invoice line (all processes, except P2 and P5);
- R7 information to trace to a single contract and the underlying call for tenders from the document level (all processes, except P3 and P5);
- R8 a reference supplied by the Buyer at document level (all processes);
- R9 information to trace to a single despatch advice from the document level (processes P7 and P8);
- R10 information to trace to a single receiving advice from the document level (process P8);
- R11 information to trace to a related invoice to be corrected from the document level (process P10);
- R12 reference to multiple part-invoices from a final invoice (process P12);
- R13 information to allow an invoice and related documents to be transferred to a responsible authority, entity, person or department, for verification and approval (all processes);
- R14 information about net price and the quantity on which the price is based at invoice line level, additional information such as gross price and price discount may be added (all processes);
- R15 descriptive and coded information about allowances and charges at both document level and at invoice line level (all processes);
- R16 information about charges, (non-VAT-)taxes, duties and levies, with their VAT information, that are not included in the line amounts at document level (all processes);
- R17 information about charges, (non-VAT-)taxes, duties and levies that compose the taxable amount and are not included in the unit price at separate invoice lines, with a proper identification and/or description (all processes);
- R18 information about charges at invoice line level as part of the line amount (all processes);
- R19 the amounts of allowances and charges at document and invoice line level (all processes);
- R20 textual descriptions of invoiced goods and services at invoice line level (all processes);
- R21 identification of invoiced goods and services by means of a Seller's item number at invoice line level (all processes);
- R22 identification of invoiced goods and services by means of a Buyer's item number at invoice line level (all processes);
- R23 identification of invoiced goods and services by means of a qualified general item identifier at invoice line level as agreed by the Buyer and the Seller (all processes);
- R24 classification of invoiced goods and services by means of applicable classification identifiers and schema reference as agreed between the Seller and the Buyer at invoice line level (all processes);
- R25 information about returned and credited returnable assets or packages, such as pallets,

- and package charges, stated as normal invoice lines (all processes);
- R26 information about returnable asset charges, stated as normal invoice lines (all processes);
- R27 information about returned goods, stated as normal invoice lines (all processes);
- R28 descriptive information about attributes of goods and services at invoice line level (all processes);
- R29 information about the country of origin of goods and services at invoice line level (all processes);
- R30 an invoice line period at invoice line level (process P2, P11);
- R31 one delivery date at document level (all processes);
- R32 one delivery location or address at document level (all processes);
- R33 identification of the invoiced object at document and line level (process P2);
- R34 a delivery/invoice period at document level (process P2, P11);
- R35 attached documents of a limited set of file types (all processes);
- R36 multiple attached or referenced documents at document level (all processes);
- R37 a VAT category and rate at invoice line level (all processes);
- R38 VAT totals per category at document level (all processes);
- R39 a quantity and a net amount (exclusive of VAT) at invoice line level (all processes);
- R40 all amounts at document and invoice line level that make up the invoice total amount and the amount due for payment (all processes);
- R41 Reference to a sales order, issued by the Seller at document level (all processes);
- R42 Allowance/charge percentage and base amount at document and invoice line level (all processes);
- R44 Information to allow automated validation of a received electronic invoice (all processes).

Out of scope for the core invoice model:

- reference to multiple related purchase orders;
- reference to one or more related purchase order lines on header level;
- reference to multiple related purchase order lines on line level;
- reference to multiple contracts;
- reference to one or more price lists;
- reference to more than one despatch advice or shipping note;
- reference to the exact time of delivery;
- reference to one or more delivery notes, shipping notices or despatch advices or -lines at invoice line level;
- reference to more than one receiving advice;

- reference to one or more receiving advice lines at invoice line level;
- reference to supporting documents at invoice line level;
- reference to one or more consumption reports or performance records;
- reference to one or more invoices for payment in advance;
- reference to multiple sales orders (issued by the Seller);
- sub-lines of allowances and charges;
- delivered quantities of goods and services if different from invoiced quantities;
- ordered quantities of goods and services if different from invoiced quantities;
- back-ordered quantities of goods and services if different from invoiced quantities;
- coded attributes of goods and services;
- specific coded quality information of goods or services;
- structured metered values;
- lot numbers of goods and services (except in free text);
- serial numbers or other identification numbers (e.g. of the person rendering the services) (except in free text);
- reference to multiple deliveries;
- reference to a delivery at invoice line level.

5.3.4 VAT reporting

The invoice is used to carry VAT related information from the Seller to the Buyer to enable the Buyer and Seller to correctly handle VAT booking and reporting. An invoice should contain sufficient information to enable the Buyer and any auditor to determine whether the invoice is correct from a VAT point of view.

The invoice shall allow the determination of the VAT regime, the calculation and description of the tax, in accordance with the European Directive 2006/112/EC [2] and subsequent amendments. VAT reporting applies to all processes.

In scope for the core invoice model:

- R45 information to determine the requirements of the applicable VAT legislation in force and the calculation and reporting thereof;
- R46 information on the date the VAT is liable at document level;
- R47 the necessary elements for national legal VAT requirements that apply for invoices issued to national and foreign Buyers, such as the legal registration status of the Seller;
- R48 information to support the following VAT use cases:
 - Invoices for supplies for which VAT is charged;
 - Invoices for supplies for which VAT is not charged based on an exemption reason;

- Invoices for supplies for which the Seller's goods and services are exempt from VAT at line level;
 - Invoices for supplies that are issued under reverse charge;
 - Invoices for exempt intra-community supplies for which an intra-community acquisition has to be done;
 - Invoices for supplies outside the scope of the Directive 2006/112/EC [2] (non-VAT invoices);
- R49 the total VAT amount at document level;
- R50 total taxable amount per VAT rate at document level;
- R51 any additional information required to support the exemption evidence in case VAT is not charged based on an exemption reason at document and at invoice line level;
- R52 the legal registration number and the VAT registration number of the Seller and Buyer and the VAT registration number of the Tax representative of the Supplier;
- R53 the official postal address of the Buyer, Seller and Tax representative of the Supplier and their place of business and registered office;
- R54 the invoice currency and the VAT accounting currency at document level if different from the invoice currency;
- R55 codes for exemption reasons at document and invoice line level.

Out of scope for the core invoice model:

- refund applications (Directive 2008/9/EC [5]);
- structured information that is commonly provided in page footnote of business documents, such as:
 - share Capital Amount of the Seller;
 - legal form of the Seller.

5.3.5 Auditing

Companies audit themselves as means of internal control or they may be audited by external parties as part of a legal obligation. Accounting is a regular, ongoing process whereas an audit is a separate review process to ensure that the accounting has been carried out correctly. The auditing process places certain information requirements on an invoice. These requirements are mainly related to enable verification of authenticity and integrity of the accounting transaction. Auditing requirements apply to all of the above processes.

Invoices, conformant to the core invoice model support the auditing process by providing sufficient information for:

- identification of the relevant Buyer and Seller;
- identification of the products and services traded, including description, value and quantity;
- information for connecting the invoice to its payment;

- information for connecting the invoice to relevant documents such as a contract and a purchase order.

In scope for the core invoice model:

- R56 sufficient information to support the auditing process with regard to:
- identification of the invoice;
 - identification of the date of issue of the invoice;
 - identification of the products and services traded, including their description, value and quantity;
 - information for relating the invoice to its settlement;
 - information for relating the invoice to relevant documents such as a contract, a purchase order and a despatch advice;
 - information about the reason for invoice correction (process P10);
- R57 identification of the parties that fulfil the following roles at the invoice level, including their legal name and address:
- the Seller (including the Seller's trade name);
 - the Buyer;
 - the Deliver to party (if different from the Buyer);
 - the Payee (if different from the Seller);
 - the Tax representative of the Supplier;

Out of scope for the core invoice model:

- identification of:
 - the carrier;
 - the creditor (if different from Payee);
 - the debtor (if different from Buyer);
 - the identification of the service or business unit of the Seller, issued by the Buyer;
 - subtotals for part of the lines.

5.3.6 Payment

An invoice represents a claim for payment. The issuance of an invoice may take place either before or after the payment is carried out. When an invoice is issued before payment it represents a request to the Buyer to pay, in which case the invoice commonly contains information that enables the Buyer, in the role of a debtor, to correctly initiate the transfer of the payment, unless that information is already agreed in prior contracts or by means of payment instructions separately lodged with the Buyer.

If an invoice is issued after payment, such as when the order process included payment instructions or when paying with a credit card, online or telephonic purchases, the invoice may contain information about the payment made in order to facilitate invoice to payment reconciliation on the Buyer side. An invoice may be partially paid before issuing such as when a pre-payment is made to confirm an order.

Invoices, conformant with the core invoice model should identify the means of payment for settlement of the invoice and clearly state what payment amount is requested. They should

provide necessary details to support bank transfers in accordance with the Single Euro Payments Area (SEPA) for payments in Euro and the relevant national payment practices for other currencies. Payments by means of Credit Transfer, Direct debit, and Payment Card are in scope for making payments of invoices conformant with the core invoice model.

Payment information is needed in all processes.

In scope for the core invoice model:

- R58 identification of the means of settlement;
- R59 the requested amount due for payment;
- R60 the date on which payment is due;
- R61 necessary details to support bank transfers in accordance with SEPA and national systems;
- R62 a reference number and any additional reference data to be included in the payment;
- R63 reference number and any additional reference data to be included in the payment, in order to relate the payment to the invoice;
- R64 information for relating an invoice to a payment card used for settlement;
- R65 basic information to support national payment systems for use in domestic trade;
- R66 information about the amount that was pre-paid;
- R67 invoices that have a total amount of zero;
- R68 invoices that have an amount to pay of zero;
- R69 necessary details to support direct debits.
- R70 pre-payment invoices

Out of scope for the core invoice model:

- instalments;
- references to pre-payments;
- early-payment allowances in a structured way;
- late-payment penalty schemes in a structured way;
- quoted or referenced structured payment terms.

5.3.7 Inventory

Invoices are sometimes used by the Buyer for placing goods into inventory, as replacement of more appropriate documents such as despatch advices or packing lists. Support for inventory management is not in scope of the core invoice model, although it is recognized that information provided for other processes, supported in the core invoice model, may be used for placing goods into inventory.

Out of scope for the core invoice model:

- information to support inventory management.

5.3.8 Delivery process

Invoices may be used by the business partners involved for: order picking, delivery instructions and receipt; as a replacement for more appropriate documents such as: Instructions to despatch, transport documents or packing lists. Specific support for delivery processes is however not in scope for the core invoice model and other appropriate electronic documents should be used.

Out of scope for the core invoice model:

- information to support the delivery process;
- delivery terms.

5.3.9 Customs clearance

When goods are cleared through customs, important information about the goods being cleared may be extracted from the invoice. Customs clearing may also require special information such as the origin of the items, materials used and other issues that may affect the classification and the calculation of import duties and taxes. For customs purposes an invoice may also contain the customs classification itself.

The core invoice model is not intended to specifically support customs clearance in general although information provided for other processes supported in the invoice may be used for customs purposes.

Out of scope for the core invoice model:

- specific support for customs clearance.

5.3.10 Marketing

Invoices may be used to deliver marketing messages to the Buyer in the form of text or as images, but no specific marketing information is within scope of the core invoice model.

Out of scope for the core invoice model:

- specific support for marketing.

5.3.11 Reporting

Invoices, such as utility invoices, frequently contain detailed information about usage of services that provide a breakdown of the total quantity in the invoice itself. No specific reporting information is within scope of the core invoice model itself but such information can be provided e.g. with attachments.

Out of scope for the core invoice model:

- specific reporting information.

5.4 The core invoice model in relation to other documents in the procurement process

An invoice, compliant with the core invoice model may reference only one purchase order and one delivery explicitly. Such an invoice may still be used if only general, unqualified references to multiple purchase orders and/or deliveries suffice. For automatic processing of invoices, however, usually explicit, qualified references are needed. The core invoice model would need to be supplemented with use of an extension to support a process where multiple purchase orders and deliveries are to be invoiced with one invoice. Alternatively, steps could be taken to change the business process and send one invoice per purchase order or delivery. This is especially in view of the convenience of electronic initiation for generating higher frequency invoicing.

The relationships between the invoice and other documents and events are depicted in Figure 14. The listed documents should be interpreted in the scope of the relevant business processes, modelled in 5.2.

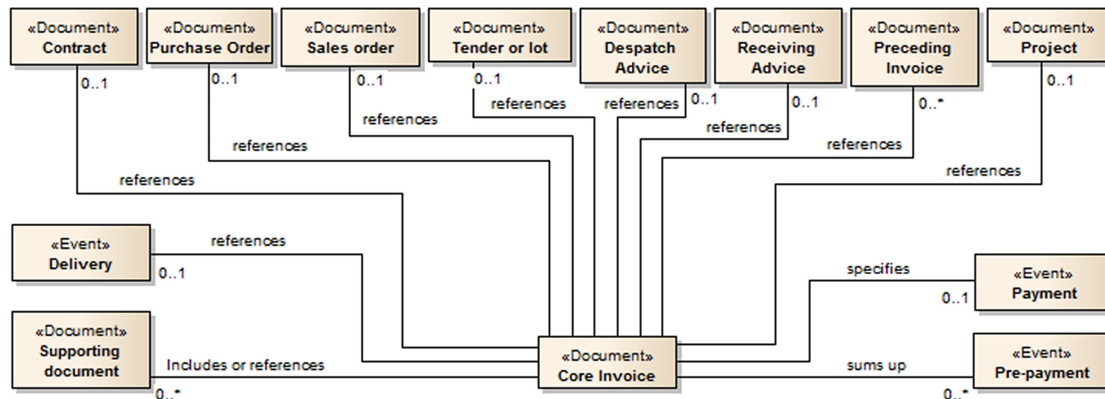


Figure 14 — Invoice relations

NOTE 1 A Purchase order is an object that may be the result of exchanging a number of documents, such as confirmations and purchase order changes.

NOTE 2 An invoice does, according to the core invoice model, not refer to each pre-payment event, but merely cites the total pre-paid amount.

6 The semantic data model of the core elements of an electronic invoice and credit note

6.1 Introduction

This Clause 6 describes the information elements, and groups of information elements, that constitutes the semantic data model of the core elements of an electronic Invoice, as well as their relationship and the business rules required to ensure the integrity and consistency in the data provided in a compliant instance document (an individual Invoice).

For an instance document to be compliant to the core invoice model, it shall respect all rules defined in this Clause 6.

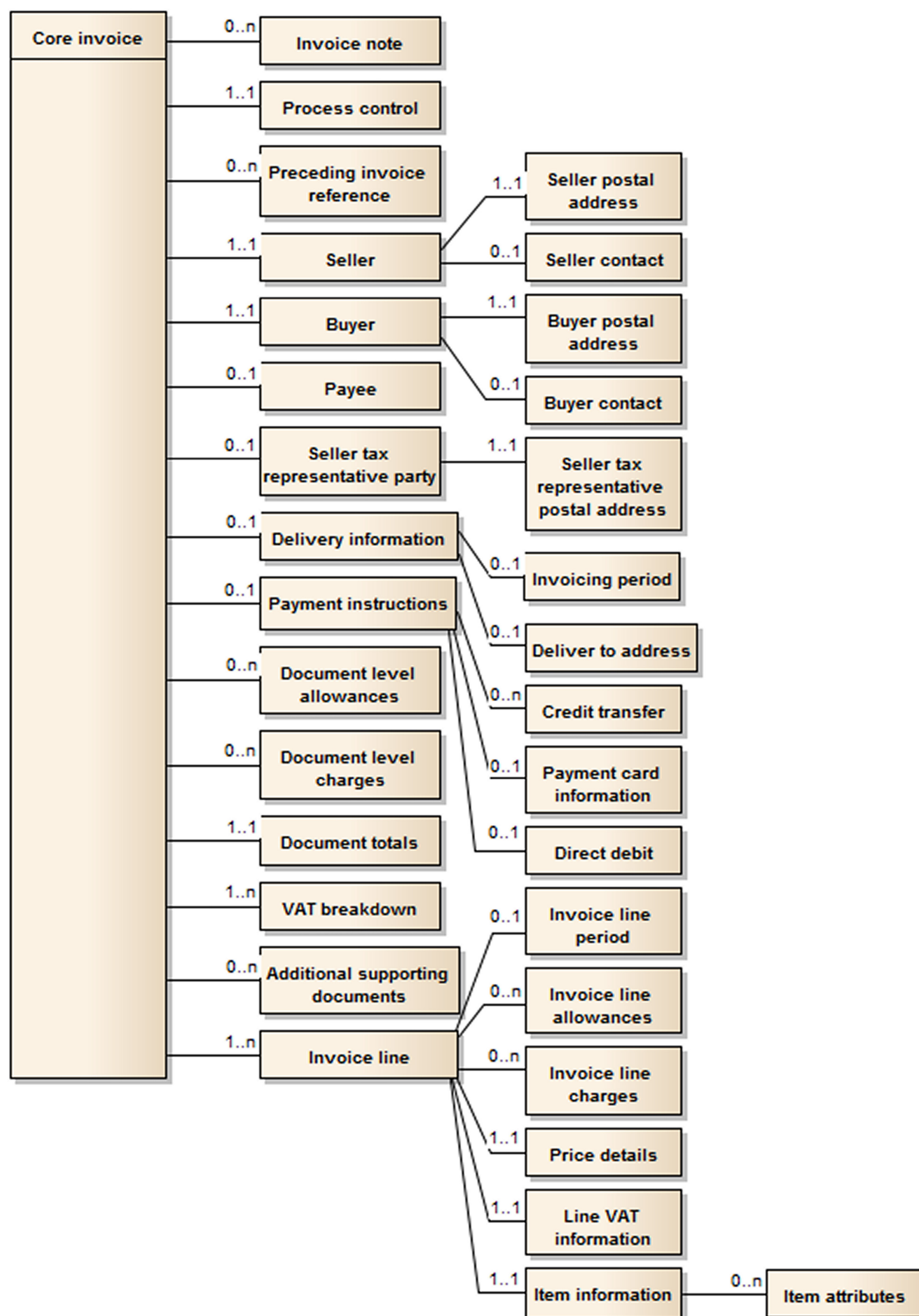
It is the responsibility of the invoice issuer to ensure that an Invoice respects any rules defined by relevant legislation, including requirements related to personal data protection, as well as rules stated as part of a trading relationship between the Seller and the Buyer. An Invoice conforming to the rules of the semantic data model of the core elements of an electronic Invoice as described in this Clause 6 does not guarantee its legal compliance OR compliance to contractual obligations.

An overview of the groups of information elements contained in the semantic model is provided in Figure 15. Each of these groups and their detailed content is explained in detail in 6.2.

The business rules defined in order to ensure the integrity and consistency in the data provided in a compliant instance document can be found in 6.3.

The semantic data type assigned to individual information elements in the core invoice model to specify data format and metadata requirements that apply are detailed in 6.4.

Calculation examples are provided in 6.5.



NOTE The figure only shows the information element groups. Individual information elements are not shown.

Figure 15 — Overview of the semantic model

6.2 Legend

Each information element, as well as groups of information elements, that constitutes the semantic data model of the core elements of an electronic Invoice is described as a row in the table documented in 6.3 where the following information is provided:

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type
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ID: An identifier for the information element (BT - Business Term) and group of information elements (BG - Business terms Group). The identifiers are not necessarily consecutive or in sequence.

Level: Indicates on which level in the model the information element occurs:

- +: The first level of the model;
- ++: The second level of the model. The information element (or the group of information elements) is part of a group of information elements which is defined at the first level of the model;
- +++: The third level of the model. The information element (or the group of information elements) is part of a group of information elements which is defined at the second level of the model;
- ++++: The fourth level of the model. The information element is part of a group of information elements which is defined at the third level of the model.

Cardinality: Also known as multiplicity is used to indicate if an information element (or group of information elements) is mandatory or conditional, and if it is repeatable. The cardinality shall always be analysed in the context of where the information element is used. Example: the Payee Name is mandatory in the core invoice model, but only when a Payee is stated and is relevant.

The following cardinalities exist:

- 1..1: Mandatory, minimum 1 occurrence and maximum 1 occurrence of the information element (or group of information elements) shall be present in any compliant instance document;

- 1..n: Mandatory and repeatable, minimum 1 occurrence and unbounded upper maximum occurrences of the information element (or group of information elements) shall be present in any compliant instance document;
- 0..1: Conditional, minimum 0 occurrences and maximum 1 occurrence of the information element (or group of information elements) may be present in any compliant instance document; it's use depends on business rules stated as well as the regulatory, commercial and contractual conditions that applies to the business transaction;
- 0..n: Conditional and repeatable, minimum 0 occurrences and unbounded upper maximum occurrences of the information element (or group of information elements) may be present in any compliant instance document; it's use depends on business rules stated as well as the regulatory, commercial and contractual conditions that applies to the business transaction.

Business Term: The name of the information element used in the core invoice model or the name of a coherent group of related information elements, provided to give logical meaning.

Description: A description of the semantic meaning of the information element.

Usage Note: Clarifying information on how the information element shall or may be used (such as calculation rules).

Req. ID: The requirement identifier, provided to show the traceability of the information element with the corresponding requirement defined in Clause 5.

Semantic data type: The data format that applies to the information element (see 6.5).

Supplementary components or attributes are specified with the Business Term they belong to.

Note that in the naming of business terms, in descriptions and in usage notes, the term “invoice” also applies to Credit notes, unless mentioned otherwise.

6.3 The semantic model

Table 2 — Semantic data model of the core elements of an electronic invoice

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-1	+	1..1	Invoice number	A unique identification of the Invoice.	The sequential number required in Article 226(2) of the directive 2006/112/EC [2], to uniquely identify the Invoice within the business context, time-frame, operating systems and records of the Seller. It may be based on one or more series of numbers, which may include alphanumeric characters. No identification scheme is to be used.	R56	Identifier
BT-2	+	1..1	Invoice issue date	The date when the Invoice was issued.		R56	Date
BT-3	+	1..1	Invoice type code	A code specifying the functional type of the Invoice.	Commercial invoices and credit notes are defined according the entries in UNTDID 1001 [6]. Other entries of UNTDID 1001 [6] with specific invoices or credit notes may be used if applicable.	R44	Code

³ The suffix ".Type" has been deleted for readability.

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-5	+	1..1	Invoice currency code	The currency in which all Invoice amounts are given, except for the Total VAT amount in accounting currency.	Only one currency shall be used in the Invoice, except for the Invoice total VAT amount in accounting currency (BT-111) in accordance with article 230 of Directive 2006/112/EC on VAT [2]. The lists of valid currencies are registered with the ISO 4217 Maintenance Agency "Codes for the representation of currencies and funds". Shall be used in combination with the Invoice total VAT amount in accounting currency (BT-111) when the VAT accounting currency code differs from the Invoice currency code.	R54, R47	Code
BT-6	+	0..1	VAT accounting currency code	The currency used for VAT accounting and reporting purposes as accepted or required in the country of the Seller.	The lists of valid currencies are registered with the ISO 4217 Maintenance Agency "Codes for the representation of currencies and funds". Please refer to Article 230 of the Council Directive 2006/112/EC [2] for more information.	R54	Code
BT-7	+	0..1	Value added tax point date	The date when the VAT becomes accountable for the Seller and for the Buyer in so far as that date can be determined and differs from the date of issue of the invoice, according to the VAT directive.	The tax point is usually the date goods were supplied or services completed (the 'basic tax point'). There are some variations. Please refer to Article 226 (7) of the Council Directive 2006/112/EC [2] for more information. This element is required if the Value added tax point date is different from the Invoice issue date. Both Buyer and Seller should use the Tax Point Date when provided by the Seller. The use of BT-7 and BT-8 is mutually exclusive.	R45 R46	Date

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-8	+	0..1	Value added tax point date code	The code of the date when the VAT becomes accountable for the Seller and for the Buyer.	The code shall distinguish between the following entries of UNTDID 2005 [6]: - Invoice document issue date - Delivery date, actual - Paid to date The Value added tax point date code is used if the Value added tax point date is not known when the invoice is issued. The use of BT-8 and BT-7 is mutually exclusive.	R45 R46	Code
BT-9	+	0..1	Payment due date	The date when the payment is due.	The payment due date reflects the due date of the net payment. For partial payments it states the first net due date. The corresponding description of more complex payment terms can be stated in BT-20 Payment terms.	R60	Date
BT-10	+	0..1	Buyer reference	An identifier assigned by the Buyer used for internal routing purposes.	The identifier is defined by the Buyer (e.g. contact ID, department, office id, project code), but provided by the Seller in the Invoice.	R8	Text
BT-11	+	0..1	Project reference	The identification of the project the invoice refers to		R44	Document reference
BT-12	+	0..1	Contract reference	The identification of a contract.	The contract identifier should be unique in the context of the specific trading relationship and for a defined time period.	R7	Document reference
BT-13	+	0..1	Purchase order reference	An identifier of a referenced purchase order, issued by the Buyer.		R5, R56	Document reference
BT-14	+	0..1	Sales order reference	An identifier of a referenced sales order, issued by the Seller.		R41	Document reference

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-15	+	0..1	Receiving advice reference	An identifier of a referenced receiving advice.		R10, R56	Document reference
BT-16	+	0..1	Despatch advice reference	An identifier of a referenced despatch advice.		R9, R56	Document reference
BT-17	+	0..1	Tender or lot reference	The identification of the call for tender or lot the invoice relates to.	In some countries a reference to the call for tender that has led to the contract shall be provided.	R7, R4	Document reference
BT-18	+	0..1	Invoiced object identifier	An identifier for an object on which the invoice is based, given by the Seller.	It may be a subscription number, telephone number, meter point, vehicle, person etc., as applicable.	R33	Identifier
		0..1	Scheme identifier	The identification scheme identifier of the Invoiced object identifier.	If it may be not clear for the receiver what scheme is used for the identifier, a conditional scheme identifier should be used that shall be chosen from the UNTDID 1153 code list [6] entries.		
BT-19	+	0..1	Buyer accounting reference	A textual value that specifies where to book the relevant data into the Buyer's financial accounts.		R2, R4	Text
BT-20	+	0..1	Payment terms	A textual description of the payment terms that apply to the amount due for payment (Including description of possible penalties).	This element may contain multiple lines and multiple terms.	R60	Text
BG-1	+	0..n	INVOICE NOTE	A group of business terms providing textual notes that are relevant for the invoice, together with an indication of the note subject.		R56	
BT-21	++	0..1	Invoice note subject code	The subject of the textual note in BT-22.	To be chosen from the entries in UNTDID 4451 [6].	R56	 Code 
BT-22	++	1..1	Invoice note	A textual note that gives unstructured information that is relevant to the Invoice as a whole.	Such as the reason for any correction or assignment note in case the invoice has been factored	R56	Text

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BG-2	+	1.1	PROCESS CONTROL	A group of business terms providing information on the business process and rules applicable to the Invoice document.		R44	
BT-23	++	0.1	Business process type	Identifies the business process context in which the transaction appears, to enable the Buyer to process the Invoice in an appropriate way.	To be specified by the Buyer.	R44	Text
BT-24	++	1.1	Specification identifier	An identification of the specification containing the total set of rules regarding semantic content, cardinalities and business rules to which the data contained in the instance document conforms.	This identifies compliance or conformance to this document. Compliant invoices specify: urn:cen.eu:en16931:2017. Invoices, compliant to a user specification may identify that user specification here. No identification scheme is to be used.	R44	Identifier
BG-3	+	0..n	PRECEDING INVOICE REFERENCE	A group of business terms providing information on one or more preceding Invoices.	To be used in case: - a preceding invoice is corrected - preceding partial invoices are referred to from a final invoice - preceding pre-payment invoices are referred to from a final invoice	R11 R12	
BT-25	++	1.1	Preceding Invoice reference	The identification of an Invoice that was previously sent by the Seller.		R11 R12	Document reference
BT-26	++	0.1	Preceding Invoice issue date	The date when the Preceding Invoice was issued.	The Preceding Invoice issue date shall be provided in case the Preceding Invoice identifier is not unique.	R11 R12	Date
BG-4	+	1.1	SELLER	A group of business terms providing information about the Seller.		R48	

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-27	++	1..1	Seller name	The full formal name by which the Seller is registered in the national registry of legal entities or as a Taxable person or otherwise trades as a person or persons.		R48	Text
BT-28	++	0..1	Seller trading name	A name by which the Seller is known, other than Seller name (also known as Business name).	This may be used if different from the Seller name.	R48	Text
BT-29	++	0..n	Seller identifier	An identification of the Seller.	For many systems, the Seller identifier is a key piece of information. Multiple Seller identifiers may be assigned or specified. They may be differentiated by using various identification schemes. If no scheme is specified, it should be known by Buyer and Seller, e.g. a previously exchanged Buyer assigned identifier of the Seller.	R57	Identifier
BT-30	++	0..1	Seller legal registration identifier	An identifier issued by an official registrar that identifies the Seller as a legal entity or person.	If used, the identification scheme identifier shall be chosen from the entries of the list published by the ISO/IEC 6523 maintenance agency.	R52	Identifier
BT-31	++	0..1	Seller VAT identifier	The Seller's VAT identifier (also known as Seller VAT identification number).	If used, the identification scheme shall be chosen from the entries of the list published by the ISO/IEC 6523 maintenance agency. VAT number prefixed by a country code. A VAT registered Supplier shall include his VAT ID, except when he uses a tax representative.	R52	Identifier

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-32	++	0..1	Seller tax registration identifier	The local identification (defined by the Seller's address) of the Seller for tax purposes or a reference that enables the Seller to state his registered tax status.	This information may affect how the Buyer settles the payment (such as for social security fees). E.g. in some countries, if the Seller is not registered as a tax paying entity then the Buyer is required to withhold the amount of the tax and pay it on behalf of the Seller.	R47	Identifier
BT-33	++	0..1	Seller additional legal information	Additional legal information relevant for the Seller.	Such as share capital.	R47	Text
BT-34	++	0..1	Seller electronic address	Identifies the Seller's electronic address to which the application level response to the invoice may be delivered.		R13, R57	Identifier
		1..1	Scheme identifier	The identification scheme identifier of the Seller electronic address.	The scheme identifier shall be chosen from a list to be maintained by the Connecting Europe Facility.		
BG-5	++	1..1	SELLER POSTAL ADDRESS	A group of business terms providing information about the address of the Seller.	Sufficient components of the address are to be filled to comply with legal requirements.	R53	
BT-35	+++	0..1	Seller address line 1	The main address line in an address.	Usually the street name and number or post office box.	R53	Text
BT-36	+++	0..1	Seller address line 2	An additional address line in an address that can be used to give further details supplementing the main line.		R53	Text

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-162	+++	0..1	Seller address line 3	An additional address line in an address that can be used to give further details supplementing the main line.		R53	Text
BT-37	+++	0..1	Seller city	The common name of the city, town or village, where the Seller address is located.		R53	Text
BT-38	+++	0..1	Seller post code	The identifier for an addressable group of properties according to the relevant postal service.	Such as a ZIP code or a post code.	R53	Text
BT-39	+++	0..1	Seller country subdivision	The subdivision of a country.	Such as a region, a county, a state, a province, etc.	R53	Text
BT-40	+++	1..1	Seller country code	A code that identifies the country.	If no tax representative is specified, this is the country where VAT is liable. The lists of valid countries are registered with the EN ISO 3166-1 Maintenance agency, "Codes for the representation of names of countries and their subdivisions".	R53	Code
BG-6	++	0..1	SELLER CONTACT	A group of business terms providing contact information about the Seller.		R57	
BT-41	+++	0..1	Seller contact point	A contact point for a legal entity or person.	Such as person name, contact identification, department or office identification.	R57	Text
BT-42	+++	0..1	Seller contact telephone number	A phone number for the contact point.		R57	Text
BT-43	+++	0..1	Seller contact email address	An e-mail address for the contact point.		R57	Text
BG-7	+	1..1	BUYER	A group of business terms providing information about the Buyer.		R57	
BT-44	++	1..1	Buyer name	The full name of the Buyer.		R57	Text

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type ³
BT-45	++	0..1	Buyer trading name	A name by which the Buyer is known, other than Buyer name (also known as Business name).	This may be used if different from the Buyer name.	R57	Text
BT-46	++	0..1	Buyer identifier	An identifier of the Buyer.	If no scheme is specified, it should be known by Buyer and Seller, e.g. a previously exchanged Seller assigned identifier of the Buyer.	R57	Identifier
BT-47	++	0..1	Scheme identifier	The identification scheme identifier of the Buyer identifier.	If used, the identification scheme shall be chosen from the entries of the list published by the ISO/IEC 6523 maintenance agency.	R47, R52, R57	Identifier
BT-48	++	0..1	Buyer VAT registration identifier	An identifier issued by an official registrar that identifies the Buyer as a legal entity or person.	If no identification scheme is specified, it should be known by Buyer and Seller, e.g. the identifier that is exclusively used in the applicable legal environment.	R45, R52, R57	Identifier
BT-49	++	0..1	Buyer VAT identifier	The identification scheme identifier of the Buyer legal registration identifier.	If used, the identification scheme shall be chosen from the entries of the list published by the ISO/IEC 6523 maintenance agency.	R45, R52, R57	Identifier
BT-49	++	0..1	Buyer electronic address	The Buyer's VAT identifier (also known as Buyer VAT identification number).	VAT number prefixed by a country code based on EN ISO 3166-1 "Codes for the representation of names of countries and their subdivisions"	R13, R57	Identifier
BT-49	++	1..1	Scheme identifier	Identifies the Buyer's electronic address to which the invoice is delivered.	The scheme identifier shall be chosen from a list to be maintained by the Connecting Europe Facility.		