

English Version

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

Facturation électronique - Partie 5: Lignes directrices pour l'utilisation des extensions de secteur ou de pays conjointement avec la Norme européenne, avec une méthodologie à appliquer dans l'environnement réel

Elektronische Rechnungsstellung - Teil 5: Leitfaden über die Verwendung von branchen- oder länderspezifischen Erweiterungen der EN 16931-1 einschließlich einer im realen Umfeld einzusetzenden Methodik

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European foreword

This document (CEN/TR 16931-5:2017) has been prepared by Technical Committee CEN/TC 434 “Electronic invoicing”, the secretariat of which is held by NEN.

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This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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 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*;
- FprCEN/TR 16931-6:2017, *Electronic invoicing — Part 6: Result of the test of EN 16931-1 with respect to its practical application for an end user*.

Introduction

The European Commission states 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” [1]. Based on this recognition “The Commission wants to see e-invoicing become the predominant method of invoicing by 2020 in Europe [1].”

As a means to achieve this goal, Directive 2014/55/EU [2] on electronic invoicing in public procurement aims at facilitating the use of electronic invoices by economic operators when supplying goods, works and services to public administrations (B2G), as well as the support for trading between economic operators themselves (B2B). In particular, it sets out the legal framework for the establishment and adoption of a European Standard (EN) for the semantic data model of the core elements of an electronic invoice (EN 16931-1).

In line with Directive 2014/55/EU [2], and after publication of the reference to EN 16931-1 in the Official Journal of the European Union, all contracting public authorities and contracting entities in the EU will be obliged to receive and process an e-invoice as long as:

- it is in conformance with the semantic content as described in EN 16931-1;
- it is represented in any of the syntaxes identified in CEN/TS 16931-2, in accordance with the request referred to in Paragraph 1 of Article 3 of Directive 2014/55/EU;
- it is in conformance with the appropriate mapping defined in the applicable subpart of CEN/TS 16931-3 (all parts).

The semantic data model of the core elements of an electronic invoice – the core invoice model – as described in EN 16931-1 is based on the proposition that a limited, but sufficient, set of information elements can be defined that supports generally applicable invoice-related functionalities.

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 need to contain any additional structured information elements. However, 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 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. In these circumstances, it should be possible to define a number of required additional information elements whilst still utilizing the concepts of the core invoice model.

In other situations, additional guidance or restrictions on the use of the information elements already defined in the core invoice model may be required and documented in a core invoice usage specification as outlined in EN 16931-1.

In order to comply with the provisions of Directive 2014/55/EU [2], guidelines on the optional use of extensions to the core invoice model, including a methodology to be applied in the real environment, are needed. This technical report provides this methodology and complies at least with the following criteria:

- it is technologically neutral;
- it is compatible with relevant international standards on electronic invoicing;

- it has regard to the need for personal data protection in accordance with Directive 95/46/EC [3], to a 'data protection by design' approach and to the principles of proportionality, data minimization and purpose limitation;
- it is consistent with the relevant provisions of Directive 2006/112/EC [4];
- it allows for the establishment of practical, user-friendly, flexible and cost-efficient electronic invoicing;
- 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.

The methodology and rules described in this document are based on the following key design principles:

- Extension specifications are used to provide user communities with the ability to add information elements or functions to the core invoice model in order to support their specific business requirements.
- An extension specification is not intended to be used to specify legally required information elements and expected to be mandatory by law. However the further specification of specific legal requirements may be stated in an extension specification in bilateral agreements.
- Information provided in supplementary documents (attachments) to an invoice are not considered to be extensions, as these are an integral part of the core invoice model.
- Extension specifications should not be used to remove information elements from the core invoice model, only to add information elements.
- An extension is defined in an extension specification.
- Extension specifications should be made publicly available in an appropriate repository in order to foster awareness and reuse, as this is expected to foster convergence over time (see 6.7).
- Reuse the syntax binding methodology applied to EN 16931-1.
- The actual implementation and use of an extension specification is subject to agreement between the trading partners.

1 Scope

This Technical Report describes how trading partners may extend the core invoice model and the related business rules and code lists, in order to support business cases that are specific to their trading environment, while at the same time maintaining semantic interoperability with the core invoice model.

This Technical Report does not define a methodology for creation of core invoice usage specification, nor does it describe the detailed process of syntax binding.

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 16931-1:2017, *Electronic Invoicing — Part 1: Semantic Data Model of the Core Elements of an Electronic Invoice*

CEN/TS 16931-3-1, *Electronic invoicing — Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice*

CEN/TS 16931-3-2, *Electronic invoicing — Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note*

CEN/TS 16931-3-3, *Electronic invoicing — Part 3-3: Syntax binding for UN/CEFACT XML Industry Invoice D16B*

CEN/TS 16931-3-4, *Electronic invoicing — Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B*

3 Terms and definitions

For the purposes of this document the terms and definitions given in EN 16931-1:2017 and the following, apply.

3.1

core invoice usage specification

specification that provides additional explanations and examples, as well as (business) rules related to the actual implementation and use of the core invoice model in a specific trading situation

3.2

invoice instance document

individual electronic invoice

3.3

core invoice instance document

instance of an electronic invoice that is compliant to a core invoice usage specification

3.4

extended invoice instance document

electronic invoice instance document that is compliant to an extension specification

Note 1 to entry: An extended invoice instance document is then also conformant to the core invoice model.

3.5**extension specification**

specification that describes the use of additional information elements, i.e. information elements not defined in the core invoice model, or other alterations that add functionality

Note 1 to entry: The resulting invoice model will contain information elements that do not form a strict subset of the core invoice model. An extension specification may also provide additional explanations and examples.

3.6**compliant**

using some features of the core invoice model, but all features that are used are in accordance with the rules of the core invoice model

Note 1 to entry: Based on TOGAF definition of a compliant specification [5].

3.7**conformant**

using all features of the core invoice model in accordance with its rules, and extended with additional features

Note 1 to entry: Based on TOGAF definition of a conformant specification [5].

4 The challenge of interoperability**4.1 Interoperability through standardization**

The core invoice model has been carefully designed to meet the commercial requirements for electronic invoicing in the vast majority of public procurement situations, whilst also meeting the needs for a core invoice instance document in transactions between business enterprises. The core invoice model is expected to meet the needs of EU Member State legal systems for both VAT and other commercial laws and regulations. Information elements will usually be structured and allow for automated processing, although some may only be available in textual form and thus require human intervention.

The core invoice model thus represents the baseline for semantic interoperability in electronic invoicing.

Trading partners are, however, free to organize the use of appropriate extensions comprising additional information elements and functionalities not included in the core invoice model. Such extensions should preferably be created on a community basis.

4.2 The challenge

A key challenge to the goal of semantic interoperability is that industry sectors have industry specific requirements and in specific business processes trading partners may require specific information. Also, if a higher degree of automation is required due to more complex business processes between trading partners or within a sector, that may also require the support of additional requirements.

A core invoice model that would support all possible requirements would be enormous in size and very complex in its business rules, and thus impractical to implement. In order to relieve suppliers from having to support data requirements which are only needed for implementing more complex and specialized invoicing scenarios and to enable as many participants as possible to take part in electronic invoicing (without bilateral arrangements), a focus on the central, cross-industry requirements for the transmission of a core invoice instance document is necessary.

Additional requirements that are not supported in the core invoice model could be analysed and categorized as sector specific, and may be added to the semantic data model as an extension. A sector

extension would then contain information elements that are only a concern to that industry sector or to a specific community.

It should be noted that extended invoice instance documents cannot be expected to be processed by the recipient without prior bilateral arrangement (direct or indirect).

4.3 The purpose of extension specifications

An extension specification is developed with the objective of supporting one or more stated business requirements that are not or not sufficiently supported in the core invoice model. These business requirements may be due to specific needs in a trading relationship, special sectoral requirements, specific legal requirements or any combination thereof.

Each extension specification describes a set of defined additions to the core invoice model and as required to support the business functions or legal requirements that are its objective.

An extension specification is typically a set of additional information elements and/or additional business rules that, when followed, result in an extended invoice instance document that cannot be correctly processed by the receiver by only following the rules defined for the core invoice model. Consequently, it can only be used through an agreement between the sender and the receiver that includes an agreement by the receiver to use a specific extension specification. Through such an agreement the receiver is committed to take those additions into account and process them accordingly.

The main reasons for developing extension specifications include:

- A receiver requires information that is not provided for in the core invoice model.
- A sender or an industry sector defines additional business terms that are relevant to its business for those of its customers who require it.

4.4 Who will develop extension specifications and why?

The creation of an extension specification may be driven by different requirements, including but not limited to the following:

- A buying party who wishes to increase automation in receiving and processing incoming electronic invoices may require certain additional information elements to be used in order to provide information that is needed to drive the automation. Such information may include purchase order identifiers, commodity codes or other details. If the required elements are not within the core invoice model, the buying party may state these requirements as an extension specification that he provides to his suppliers when asking them to engage in electronic invoicing. If the suppliers agree to support these requirements the buying party can implement them in its system according to the specification.
- For an industry that uses information elements that are specific to that industry the relevant community (industry association or a similar party) may initiate a project to define an extension specification that defines how these specific information elements are used in addition to the core invoice model. This specification then describes the specific requirements of the industry and how they are supported by additional information elements. This specification can then be shared by all companies in this industry to support a business process that is common in that industry.
- A service provider who intends to provide invoice related services such as invoice processing or financing may require the purchaser of the service to include information in the invoice that is additional to the core invoice model. The service provider may specify an extension specification that describes these additional requirements and require the user of the service to implement them.

- Extension specifications may be developed with a different functional scope than what is supported in the EN 16931-1 semantic model, e.g. for more advanced support of customs clearance.
- An extension specification may be defined to support a specific function that is common across several industries. As an example: a particular business process where orders and invoices are matched along with a dispatch advice and/or a receiving advice. The extension specification would describe the additional information requirement, but this extension specification may be shared among any party who uses this business process irrespective of its industry.

Extension specifications should preferably not be developed on a bilateral basis, but instead on a multilateral basis, e.g. sector. Whilst bilateral agreements are possible, European-wide collaboration among communities, for example through national standardization bodies, should be encouraged to preserve semantic interoperability.

5 Conformance

5.1 Conforming objects

The conformance to the core invoice model, in the context of using extension specifications, can be measured at three points:

- the conformance of the extension specification itself,
- the conformance of the actual implementation by a given sender or receiver, and
- the conformance of the invoice instance document.

Each of these levels of conformance is discussed in the following subclauses.

5.2 Conformance of the extension specifications

The extension specifications that are used in conjunction with the core invoice model shall themselves adhere 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 in addition to those covered by the core invoice model.
- The specification shall clearly state its publisher and governor.
- The specification shall clearly state in what way it differs from 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 and their version.
- The syntax binding of a specification shall follow the syntax binding methodology defined in CEN/TS 16931-3-1.

A resulting semantic data model is defined as being conformant to the core invoice model if its information elements, together with the business rules defined on them, do not form a subset of the core invoice model but add to it.

5.3 Conformance of sending or receiving party

Directive 2014/55/EU [2] defines the use of electronic invoices and when applied to the use of extension specification those requirements impose the following rules on the relevant parties:

- A receiving party may only claim compliance to the core invoice model if he accepts invoices that comply with the core invoice model, even if he in parallel accepts invoices based on an extension specification.
- A sending party may only claim compliance to the core invoice model if he is able to send invoices that comply with the core invoice model, even if he additionally can provide invoices that are based on an extension specification.

The above implies that parties who process invoices using extension specifications that are conformant to the core invoice model shall in parallel operate processes for invoices that comply with the core invoice model.

5.4 Conformance of an invoice instance document

An invoice instance document is compliant to the core invoice model if it respects all rules defined for the core invoice model and does not contain additional business terms.

An invoice instance document that contains additional information with regard to the core invoice model cannot be processed by a receiver that is not supporting the relevant extension specification. Such invoices are considered conformant as extended invoice instance documents if their deviation from the core invoice specification is within the limits defined in Clause 6 of this document.

An invoice instance document may be extended with additional information elements, but all other content shall still comply with the core invoice model. The part of the invoice instance document that complies with the core invoice model then can be processed as compliant to the core invoice model. The extended invoice instance document shall not violate the specification of the core invoice model, but shall only add to it.

6 Extension specification rules

6.1 Introduction to extension specification rules

To qualify as an extension specification the addition shall be conformant to the core invoice model.

6.2 What may be specified in an extension specification

The reference point for any extension specification is always the underlying specification, the core invoice model as defined in EN 16931-1. The extension specification shall clearly state in what way it differs from the core invoice model.

The following Table 1 lists the type of amendments that can be used in addition to the core invoice model in an extension specification and used in a bilateral agreement.

Table 1 — Allowed amendments in an extension specification

Type of change	Example/remark/explanation
Business Terms	
Add new information elements	To conform to the core invoice model, the receiver shall be able to receive and process all information elements as defined in the core invoice model. If an information element is added to the data model the receiver shall take that term into account and decide on how to process it. In order to ensure that the additional information elements are processed correctly a bilateral agreement shall exist, see 7.1.
Make semantic definition wider	If a semantic definition is made wider, the meaning of the exchanged data will be beyond what the core invoice model has defined. That

	<p>requires the receiver to modify his processing to take that additional meaning into account.</p> <p>Rather than extending the semantic definition of an element it is preferable to add a new element with the required semantic meaning.</p>
Cardinality	
Increase number of repetitions (x..1 - > x..n)	If an invoice instance document contains more repetitions of information elements than what is defined in the core invoice model and thus expected by the receiver, the receiver shall in his processing take into consideration the added repetitions.
Codes and identifiers	
Add a new list	If a new code list is added, the receiver shall be able to understand the business meaning of the codes in that list requiring him to modify his processing.
Add values to a defined list	By extending the content of an existing list code values are added that the receiver shall understand, requiring him to modify his processing.
Business Rules	Care should be taken to ensure that any alteration to business rules preserve the semantic interoperability to the core invoice model.
Remove an existing Business Rule.	Business rules are defined in order to control the integrity and consistency of the data values allowing the receiver to design his processing accordingly. If rules are removed that may require redesign of the processing.
Make an existing business rule less restrictive.	By making a business rule less restrictive it will allow values that the receiver may not have planned for.
Value domain for an element	Care should be taken to ensure that any alteration of a value domain for an element preserves the semantic interoperability to the core invoice model. Rather than amending the value domains it should be considered to add a new element with the required value domain.
Increase element length.	<p>If maximum lengths are removed, the invoice instance document may include data strings that are longer than what the receiver has designed for.</p> <p>Reducing maximum lengths would not affect the processing and is not considered as an extension. Maximum lengths are generally set if there are field length restrictions in databases so extending them would require change of database structure and any interfaces that display that data field in the given system. Increasing length is thus likely to impose significant changes and other ways of exchanging the added data should be preferred such as by using attachments.</p>
Change structure definition of values.	<p>If values have defined structure the receiver can process or parse that value accordingly. If that structure is changed such processing may need to be modified.</p> <p>Defined structuring of data are most common for identifiers, dates and times the exact structure may differ per syntax. It should be preferred to restructure the data itself so that it fits into the defined structure instead of changing the defined structure to fit the data.</p>
Increase allowed fraction digits.	If the number of allowed digits is increased beyond what is defined in the core invoice model, the receiver may need to modify his processing.

For example, to avoid rounding issues.
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6.3 Documentation of extension specifications

An extension specification shall always be documented with clear reference to the core invoice model and the version of that model. It may be documented either as changes only, or as a full specification. If documented as a full specification, it shall be clear in what way the specification differs from its underlying specification and from the core invoice model.

6.4 Publication of specifications

It is recommended that extension specifications are documented and made publicly available in an appropriate repository for retrieval and sharing. The availability of such a repository is expected to foster convergence over time.

It can also be expected that most business cases that require extensions will fall into groups that share similarities and can be solved in an identical way. It is therefore expected that over time implementers will have the option of using shared extension specification instead of creating their own specific extension specifications. Such shared extension specifications may themselves even become a standard for solving a specific business case. Sharing of extension specifications and attempting to reuse existing extension specifications rather than creating new ones will foster such convergence. Such convergence through sharing requires the publication of the extension specifications in searchable repositories.

6.5 Mapping to syntax

An extension specification is implemented through a syntax and each specification may be mapped to one or more syntaxes.

For clarity and to avoid confusion, extension specifications should have the same “look and feel” and use identical notation and terminology as is used for the core invoice model itself.

Additions and changes documented in an extension specification shall be mapped to the relevant syntax in accordance to the same syntax binding methodology as is used for the core invoice model.

The syntax representation of any additional information elements defined by an extension specification shall follow the syntax binding methodology defined in CEN/TS 16931-3 (all parts).

6.6 Relation between extension specifications

An extension specification may build on another extension specification or on a core invoice usage specification.

A given sector in a particular country may wish to build its extension specification upon an existing extension specification or a core invoice usage specification. In order to emphasize that not all changes are driven by the sector and also to take advantage of the fact that most trading parties in that country can be expected to be supporting the core invoice usage guideline specification already.

When extension specifications are built upon other specifications they shall clearly state how they vary from their underlying specification as well as how they vary from the core invoice model.

6.7 Governance of extension specifications

Each extension specification shall be governed by an identified entity that is responsible for its evolution. A governing entity can be of any type including but not limited to private entities, public organizations, trade associations, standard developing organizations or open source organizations.

Extension specifications that are developed by using other extension specifications as a base shall be published as new extension specifications with a new governing entity.

6.8 Identification of extension specification

For clear referencing and identification in processing each extension specification and its version shall be clearly identified and have an assigned identifier.

It is recommended that the invoice instance document itself carries the assigned identifier in the business term “Specification identification”. This will allow the receiver of the invoice instance document to apply processing of the document according to the rules under which it was generated.

An extension specification identifier shall be structured as follows:

SourceSpec[#Conformance#TargetSpec]

- SourceSpec shall be the core invoice model.
- Conformance states how the changes relate to the SourceSpec, using TOGAF terminology.
- TargetSpec are the identifiers for the extension specification itself and the extension specification or core invoice usage specification that it builds on.

The TargetSpec and the SourceSpec shall be identified by giving a uniform resource name (urn) [6]. The identifier for the European Norm is to include its EN number (EN 16931:2017)

For clarity, the main parts of the identifier shall be separated with a hash mark. Hash marks shall only be used before and after the conformance type.

Following conformance types are allowed:

- conformant.
- compliant.

Following examples show how the identifier is used in different situations.

A core invoice instance document is identified as follows:

urn:cen.eu:en16931:2017

An extended invoice instance document that is conformant to the core invoice model, where the extension specification's identifier is “extensionid” and the governing body's urn is “userdomain.com” is identified as follows:

urn:cen.eu:en16931:2017#conformant#urn:userdomain.com:extensionid

An extended invoice instance document that is based on an extension specification that is conformant to the extension specification described in the previous example and still conforms to the core invoice model, where the new extension specification's identifier is “extensionid2” and its governing body's urn is “userdomain2.com” this invoice instance document, is identified as follows.

urn:cen.eu:en16931:2017#conformant#urn:userdomain.com:extensionid#conformant#urn:userdomain2.com:extensionid2

6.9 Validation

For consistent implementation and operation of an extension specification it is necessary to express its rules with processable artefacts. Examples of such artefacts are xml schemas and schematron. The type of artefacts selected depends on the syntax that is used in the implementation.

The creation of the validation artefacts can be done in two main ways.

- By modifying the validation artefacts from the underlying specification. In this case the invoice instance document may be validated with a single set of artefacts in one run.
- By creating a new set of validation artefacts that only tests for the differences that are defined by the extension specification.

Although both approaches may be used, their technical feasibility depends on the nature of the extensions. When both approaches are feasible the second one is preferred since the differences between the extension specification and its underlying specification can be better monitored when these two sets are run sequentially. This also reduces the risk that the extension specification that is created, results in not-conformant invoice instances without that being identified until the extension specification is in full production.

7 The methodology

7.1 How do parties agree on using an extension

The use of an extension specification shall always be agreed on by the trading parties. I.e. the sending party cannot expect the receiver to process and understand information different from the core invoice model unless the receiver has agreed to do so.

Such an agreement can be reached by several means.

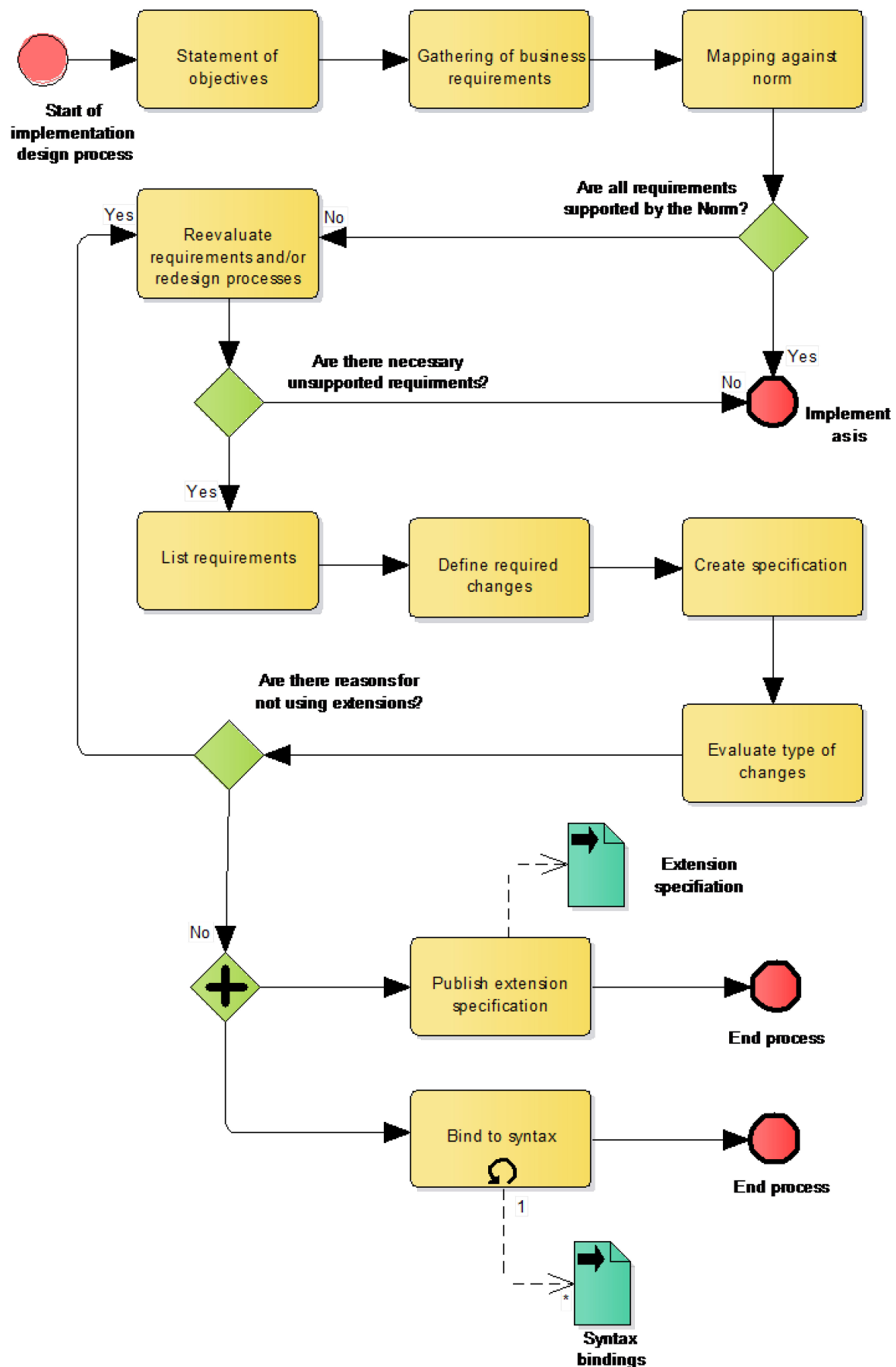
- Parties can directly agree between them e.g. in a contract, to use a specific extension specification.
- A party may unilaterally claim that it supports a specific extension specification and the counter party can be considered to agree on the specification by using it. As an example, a receiving party may state that he will process invoice instance documents based on the core invoice model and using stated extension specification. If a supplier sends an extended invoice instance document, he has accepted the receiver's proposal and indirectly entered an agreement.
- An association or user group may specify and adopt an extension specification that applies to the members of the association or user group. That extension specification would then place additional requirements on both sender and receiver. A party who joins the association or user group can be considered to agree to the association's use of extension specifications.

7.2 Process for defining extensions

The process as illustrated in Figure 1 and elaborated on the below subclauses is recommended as part of the methodology of defining extensions. The process is designed to facilitate the following:

- Extensions are clearly based on business requirements that are not supported in underlying specification.
- Requirements are always analysed with a clear reference to the underlying specification.
- Any additions are defined with a clear reference to the underlying specification.
- The implementer can at any point in the process identify if a requirement can sufficiently be supported by the underlying specifications by redefining the requirement and thus make the extension unnecessary.

An overview of the process is given in the below diagram and individual steps in the process are then elaborated on in the following clauses.



Key

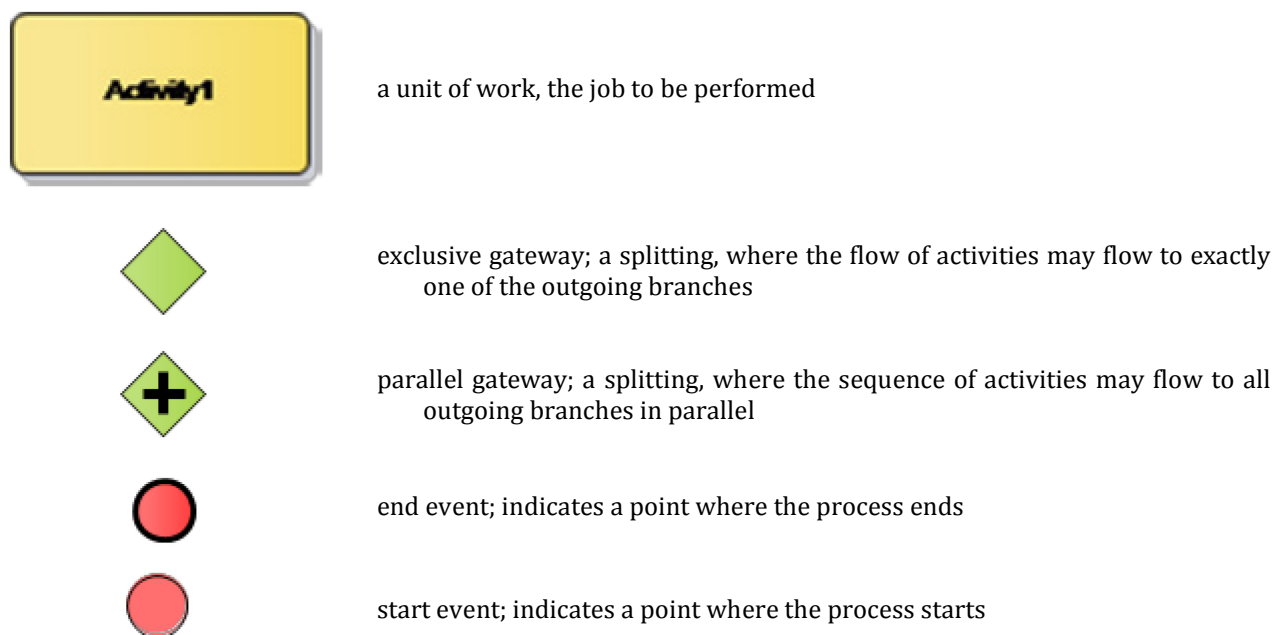


Figure 1 — Process flow diagram

7.3 Statement of objectives

At the start of the process its objectives shall be clearly stated. The objectives should include a description of the business benefits they aim to achieve as well as who are the users of the resulting implementation.

7.4 Gathering of business requirements

In line with the objectives the business requirements should be collected ensuring that the identified requirements are relevant for the whole user group and not only to those who directly participate in the requirements gathering. It is recommended that the business requirements are listed with an identifier and their relation to the objectives documented.

7.5 Mapping against norm

Individual requirements should be mapped against the underlying specification to identify if and how they are supported. It is recommended that a documentation of how requirements are supported is kept for later reference and not only to document requirements that are not supported. This allows later confirmation that a requirement was considered as well as why and how it is supported.

7.6 Re-evaluate requirements and/or re-evaluate processes

If all requirements are determined to be supported by the underlying specification, then the underlying specification should be implemented as is and the process of defining extensions aborted.

If not all requirements are determined to be supported by the underlying specification it is recommend that the requirements should be re-evaluated by two criteria.

- Can the requirement be redefined in a way that allows it to be supported by the underlying specification.

- Are the remaining unsupported requirements significant enough to justify defining and implementing an extension or a core invoice usage specification.

If, following this re-evaluation, there are no unsupported requirement that justify the creation of an extension the process should be aborted.

7.7 List requirements

The unsupported requirements should be listed as they become part of the documentation of the difference between the extension and its underlying specification.

7.8 Define required changes

The necessary changes to the underlying specification are defined with a clear reference to the requirements so that it can be traced what is changed or added and why.

To avoid duplication of work and facilitate general alignment of electronic trading processes it is recommended to:

- Search repositories to see if the same or identical requirements have been addressed by other implementers.
- Align the terminology with relevant source vocabularies such as the e-Government Core Vocabularies [7], the UN Trade Data Element Directory (UNTD ED) [8], the UN/CEFACT Core Component Library (UN/CCL) [9] or the UN/EDIFACT Data element directory (UN/EDIFACT EDED) [10].

7.9 Create specification

Document the specification as follows (referring to 5.2):

- The specification shall clearly state what business functions and or legal requirements it is intended to support in addition to those covered by the core invoice model.
- The specification shall clearly state its publisher and governor (the community).
- The specification shall clearly state in what way it differs from 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.

7.10 Evaluate type of changes

When the specification has been created, it should be evaluated if all of the changes made are to be classified as extensions to the underlying specification, or if the resulting specification only requires adjustments that are within the elements and optimality of the underlying specification. If there is a single change that is classified as an extension, then the specification as whole shall be published as an extension specification. If however all the changes are within the allowed options of the underlying specification then the document may be published as a core invoice usage specification.

In some circumstances there may be legal or policy regulations that restrict the use of extensions. If that is the case it may be necessary to re-evaluate the business requirements that call for extensions and repeat part of this process.

Further processing and publication of a core invoice usage specification guideline is not covered by this technical report.

7.11 Publish extension specification

The resulting specification should be published as an extension specification. It is recommended that any extension is registered in common registries to provide for reuse and alignment in general electronic invoicing.

7.12 Bind to syntax

A semantic specification shall be bound to a syntax so that it can be implemented. The syntax binding of an extension shall follow the methodology specified in CEN/TS 16931-3-1.

The syntax binding activity shall be repeated for each of the syntaxes that will be offered for implementation.

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Waarom betaalt u voor een norm?

Normen zijn afspraken voor en door de markt, zo ook deze norm. NEN begeleidt het gehele normalisatieproces. Van het bijeenbrengen van partijen, het maken en vastleggen van de afspraken en het bieden van hulp bij de toepassing van de normen. Om deze diensten te kunnen bekostigen betalen alle belanghebbende partijen die aan tafel zitten voor het normalisatieproces, en u als gebruiker voor normen en trainingen. NEN is een stichting en heeft geen winstoogmerk.

Wat is nu precies de toegevoegde waarde van normen?

Stelt u zich eens voor ... u wilt in het buitenland geld pinnen, maar uw bankpas past niet. Of uw nieuwe telefoon herkent uw simkaart niet. De samenstelling van de benzine over de grens is anders waardoor u niet kunt tanken. Het dagelijks leven zou zonder goede afspraken over producten, processen en diensten een stuk complexer zijn.

Het maken en vastleggen van afspraken door belanghebbende partijen noemen we het normalisatieproces. Normalisatie had vanouds betrekking op techniek en producten. Nu worden steeds vaker normen voor diensten ontwikkeld. Zo zijn er afspraken op het gebied van gezondheidszorg, schuldhelpverlening, kennisintensieve dienstverlening, externe veiligheid en MVO.

Normen zorgen voor verbetering van producten, diensten en processen; qua veiligheid, gezondheid, efficiëntie, kwaliteit en duurzaamheid. Dit ziet u op de werkvloer, in de omgang met elkaar en in de samenleving als geheel. Organisaties die normalisatie onderdeel van hun strategie maken, vergroten hun professionaliteit, betrouwbaarheid en concurrentiekracht.

Wat doet NEN?

NEN ondersteunt in Nederland het normalisatieproces. Als een partij zich tot NEN richt met de vraag om een afspraak tot stand te brengen, gaan wij aan de slag. We onderzoeken in hoeverre normalisatie mogelijk is en er interesse voor bestaat. Wij nodigen vervolgens alle belanghebbende partijen uit om deel te nemen. Een breed draagvlak is een randvoorwaarde. De afspraken komen op basis van consensus tot stand en worden vastgelegd in een document. Dit is meestal een norm. Afspraken die in een NEN-norm zijn vastgelegd mogen niet conflicteren met andere geldige NEN-normen. NEN-normen vormen samen een coherent geheel. Een belanghebbende partij kan een producent, ondernemer, dienstverlener, gebruiker, maar ook de overheid of een consumenten- of onderzoeksorganisatie zijn. De vraag is niet altijd om een norm te ontwikkelen. Vanuit de overheid komt regelmatig het verzoek om te onderzoeken of er binnen een bepaalde sector of op een bepaald terrein normalisatie mogelijk is. NEN doet dan onderzoek en start afhankelijk van de uitkomsten een project. Deelname staat open voor alle belanghebbende partijen. NEN beheert ruim 30.000 normen. Dit zijn de in Nederland aanvaarde internationale (ISO, IEC), Europese (EN) en nationale normen (NEN). In totaal zijn er ruim 800 normcommissies actief met in totaal bijna 5.000 normcommissieleden. Een goed beheer van de omvangrijke normencollectie en de afstemming tussen nationale, Europese en internationale normcommissies vereisen dan ook een zeer goede infrastructuur.

Betalen kleine organisaties net zoveel als grote organisaties?

Het uitgangspunt is dat alle partijen die deelnemen aan het normalisatieproces een evenredig deel betalen. De normcommissieleden kunnen onderling andere afspraken maken. Zo worden er wel eens afspraken gemaakt dat de grote partijen een groter deel betalen dan de kleinere bedrijven. De prijzen voor normen zijn voor iedereen gelijk. De kosten voor licenties zijn afhankelijk van de omvang van een organisatie en het aantal gebruikers.

Voordelen van normalisatie en normen

Gegarandeerde kwaliteit | Veiligheid geborgd | Bevordert duurzaamheid | Opschalen en vermarkten van nieuwe innovatieve producten | Meer (internationale) handelsmogelijkheden | Verhoogde effectiviteit en efficiëntie | Onderscheidend in de markt.

Voordelen van deelname

Invloed op de (internationale en Europese) afspraken | Als eerste op de hoogte van veranderingen | Netwerk; ook op Europees en internationaal niveau | Kennisvergroting.