



Specification



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PEPPOL Business Interoperability Specifications

Virtual Company Dossier BIS

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1 Introduction

This Business Interoperability Specification (BIS) has been realized within the PEPPOL project [PEPPOL]. It provides a set of specifications for implementing a PEPPOL business process. The document is concerned with clarifying requirements for ensuring interoperability of pan-European Public eProcurement and provides guidelines for supporting these requirements and how to implement them.

1.1 Audience

The audience for this document is organizations and/or ICT-suppliers wishing to be PEPPOL enabled for exchanging electronic qualification information (eAttestations) packaged as VCDs during the tendering phase of public procurement. These may include the following PEPPOL stakeholders:

- ▶▶ PEPPOL Community Governance
- ▶▶ Contracting Authorities
- ▶▶ Economic Operators
- ▶▶ ICT Providers
- ▶▶ Service Providers

In terms of roles it is addressed to:

- ▶▶ Business Experts
- ▶▶ ICT Architects
- ▶▶ ICT Developers
- ▶▶ ICT Governing participants

1.2 PEPPOL BIS overview

A PEPPOL BIS (Business Interoperability Specification) is a set of formal requirements for ensuring the interoperable exchange of documents in a pan-European Public eProcurement scenario.

The specifications enable any company to issue electronic documents that fulfil legal and business processing requirements within the European Union and the EEA. It supports a subset of information that is used by most industries and enables users to issue documents (invoices, orders, etc...) that are valid for cross border trade within the European Union and the EEA¹. It does not support requirements that are specific to certain industries or may be required in other areas.

A PEPPOL BIS can be seen as part of a standardised communication agreement that deals with:

- ▶▶ sequence of document in scope;
- ▶▶ content of documents (data elements);
- ▶▶ business rules that govern the exchange.

¹ EEA is the European Economic Area. Current members are Iceland, Liechtenstein and Norway.

It aims to enable the trading parties to make their business transactions without a prior or bi-lateral agreement or setup.

Starting from the European Interoperability Framework 2.0², PEPPOL identifies 6 interoperability layers (Figure 1).

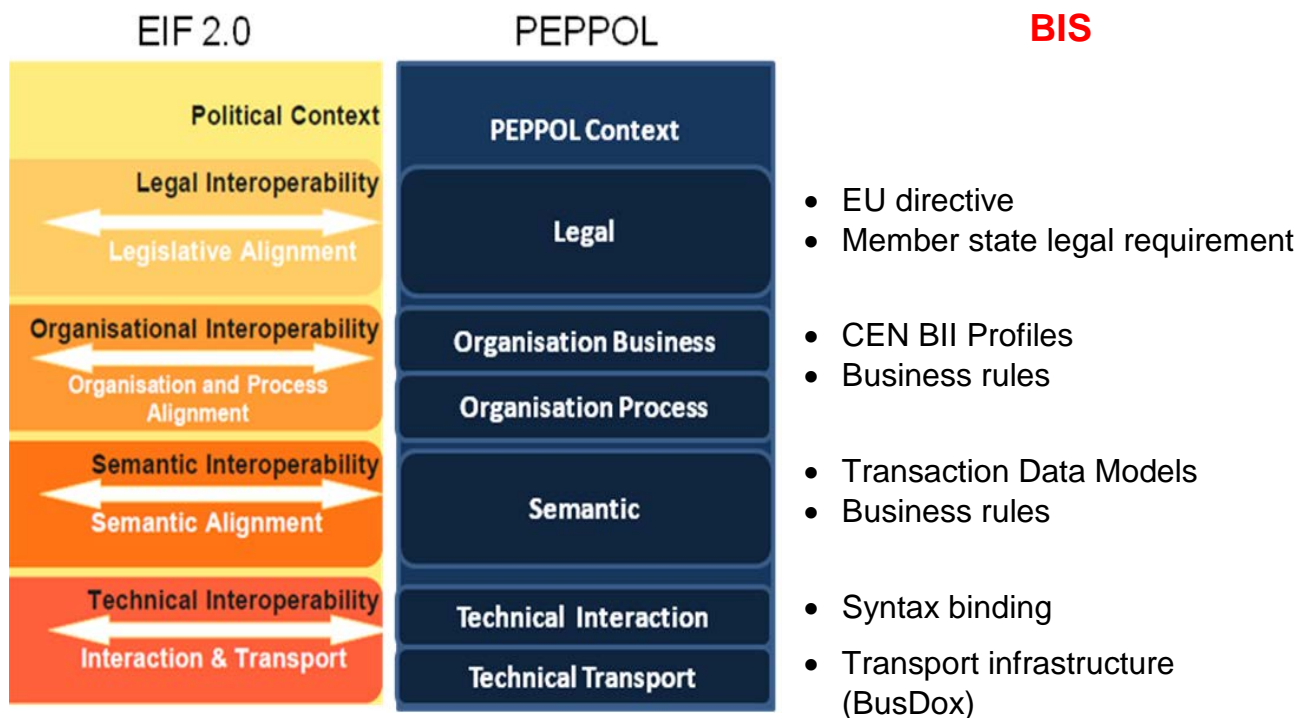


Figure 1 PEPPOL's Interoperability Framework

The BIS specification detects and describes the set of interoperability requirements at each level:

- ▶▶ **Legal:** identifies legal requirements, setting the legal scope of the specification both European and national level.
- ▶▶ **Organisation business:** starting from a CEN ISSS WS/BII Profile [CEN_BII], it identifies business requirements, setting the Organization/Business scope of the specification.
- ▶▶ **Organisation process:** defines the choreography of the business processes covered, i.e. a detailed description of the way the business partners collaborate, play their respective roles and share responsibilities to achieve mutually agreed goals with the support of their respective information systems.
- ▶▶ **Semantic:** defines:
 - ▶ the electronic business transactions exchanged as part of the business process and the sequence in which these transactions are exchanged;
 - ▶ the business rules governing the execution of that business process, as well as any constraints on information elements used in the transaction data models;

² http://europa.eu/index_en.htm

- ▶ the information content of the electronic business transactions exchanged by referencing a common data model for each of the business transactions.
- ▶▶ **Technical interaction:** guides the technical implementation of the business specifications and semantic specifications. In particular, it states the bounding between the common data model and a specific syntax (e.g. UBL, Universal Business Language [UBL]).
- ▶▶ **Technical transport:** states the relationships with PEPPOL e-Signature [PEPPOL_Sign] and PEPPOL Transport Infrastructure [PEPPOL_Trans].

In order to comply with a PEPPOL BIS, it is necessary to comply with each interoperability layer. Conformance with PEPPOL BIS specifications is defined in terms of document instance. A document must conform to series of specifications and business rules that apply to the content.

1.3 VCD BIS

1.3.1 Scope

The PEPPOL VCD BIS is intended as support for the pre-awarding phase of a tendering process involving any Economic Operator and any Contracting Authority in any European country. It supports the Economic Operators in: a) assembling into an electronic package the company information required for proofing its capabilities, b) submitting it electronically to the Contracting Authority.

The VCD BIS assumes that the information the Economic Operator is required to provide already exist somewhere in any admitted electronic format.

Actually PEPPOL has defined two solutions for supporting the Economic Operators in creating a VCD (*Figure 2³*):

- ▶▶ a full support solution, representing the highly advanced and comprehensive one;
- ▶▶ a manual editor support solution, for a quick starting in creation of VCD but with a limited set of functionalities.

Both the solutions are fully compliant to this BIS specification.

The intended scope for this BIS is:

- ▶▶ B2G;
- ▶▶ common business processes for cross border tendering;
- ▶▶ regional tendering within EU and EEA;
- ▶▶ mainly for purchase of goods and services and/or services that can be itemized.

³ Deliverable 2.2: Specification of architecture and components enabling cross-border VCD [D2.2, 2010].

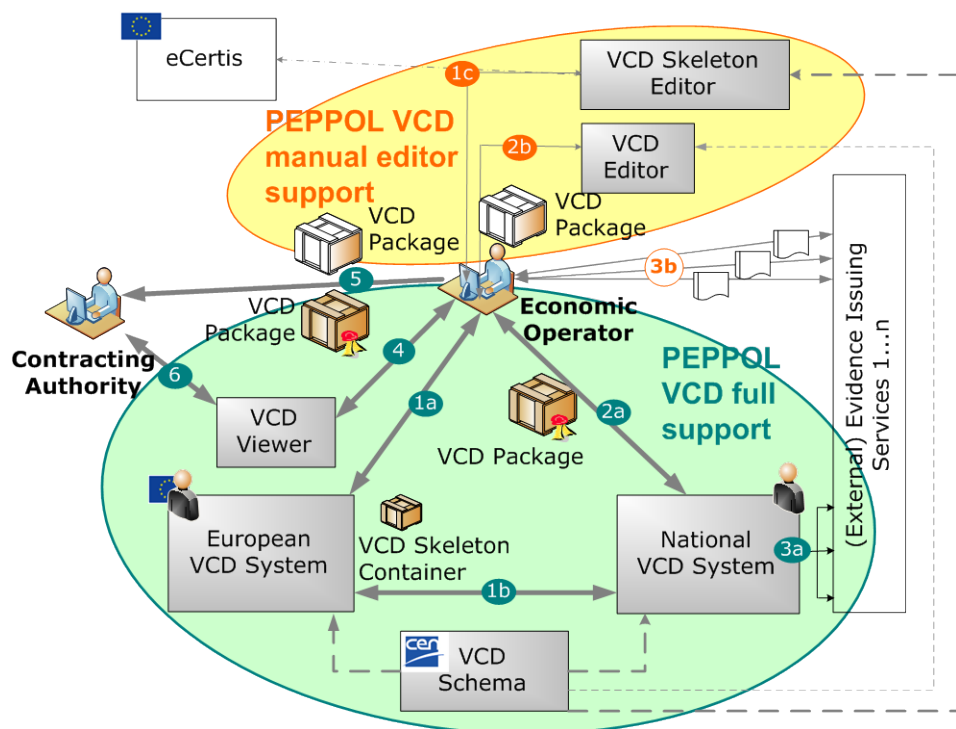


Figure 2 PEPPOL's overall VCD solution: components (in grey rectangles) of the VCD solutions.

1.3.2 Summary

Respect to the layers of the European Interoperability Framework 2.0, the PEPPOL VCD BIS addresses interoperability as follows:

- ▶ Legal:
 - ▶▶ compliance with directive 2004/18/EC (art. 45-52);
 - ▶▶ legal mappings of relevant evidence to national procurement regulations and European regulation requirements;
 - ▶▶ specific National requirements.
- ▶ Organization (Organization/Business):
 - ▶▶ this PEPPOL BIS supports B2G;
 - ▶▶ this PEPPOL BIS supports cross border, regional and domestic tendering in EU and EEA;
 - ▶▶ this PEPPOL BIS can act as a standardized EDI agreement within a community.
- ▶ Organization (Process):
 - ▶▶ this PEPPOL BIS supports the Economic Operator in proofing his capabilities in the tendering process.
- ▶ Semantic:
 - ▶▶ the set of information elements is assumed to be sufficient to support Organizational Business and Processing requirements stated above;
 - ▶▶ this PEPPOL BIS defines a set of Business rules ensuring a common way of processing the information elements. The rules are stated in a way that allows automated validation of

document instances. Economic Operators cannot issue documents that conflict with these rules.

- ▶ Technical Interaction (Process and semantic implementation):
 - ▶▶ binding compatible with OASIS UBL 2.0, see [UBL];
 - ▶▶ ISO/IEC 19757-3 Schematron, for automation of document validation, see [Schematron].
- ▶ Technical Interaction (eSignature Validation):
 - ▶▶ not mandatory in this PEPPOL BIS. Not supported.
- ▶ Technical Transport:
 - ▶▶ PEPPOL has developed a Transport Infrastructure but its use is not mandatory in this PEPPOL BIS;
 - ▶▶ if Economic Operators want to use the PEPPOL Transport Infrastructure to exchange pre-awarding qualification documents complying with this PEPPOL BIS, they must fulfil the approach defined in chapter 8.1 of this PEPPOL BIS.

1.3.3 Benefits

When participating in public tenders the Economic Operators are required to provide proof of fulfilment of the qualitative selection criteria requested by the Contracting Authority.

In this scope, potential benefits of using the VCD PEPPOL BIS are, among others:

- ▶▶ reduce time effort for the preparation and submission of tenders;
- ▶▶ support the creation and submission of a tender;
- ▶▶ identify accurate and suitable evidences easily in order to prove conformance to requested criteria with respect to different national procurement legislations;
- ▶▶ handle complex situations arising from different nationalities and legal environments of the involved actors;
- ▶▶ enable legal interoperability between different national procurement legislations;
- ▶▶ increase transparency of supplier qualifications in electronic tendering;
- ▶▶ improve the quality when submitting qualifications as part of tenders;
- ▶▶ simplify the monitoring and evaluation of received qualifications;
- ▶▶ enable easy processing of qualification information through a standardized electronic data format.

1.3.4 Status

Test Pilot		
Production Pilot		
Production		

1.4 References

[PEPPOL]	http://www.peppol.eu/
[PEPPOL_Transp]	http://www.peppol.eu/peppol_components/-transport-infrastructure
[PEPPOL_Sign]	http://www.peppol.eu/peppol_components/esignature
[CEN_BII]	www.cen.eu/cwa/bii/specs
[UBL]	http://docs.oasis-open.org/ubl
[XML]	http://www.w3.org/XML
[Schematron]	http://www.schematron.com
[Genericode]	http://docs.oasis-open.org/codelist/ns/genericode/1.0/

2 Legal interoperability

In this chapter the legal scope for adopting PEPPOL Virtual Company Dossier (VCD) Business Interoperability Specifications (BIS) is described. It applies to VCD Systems supporting Contracting Authorities (Customers) and Economic Operators (Suppliers) who reside in countries whose eProcurement legal frameworks are aligned with requirements as stated in this specification.

The legal scope here defined is based on:

- ▶ European regulation concerning the criteria for qualitative selection of candidates or tenderers in procedures for the award of public works contracts, public supply contracts and public service contracts (EU Directive 2004/18/EC (art. 45-52));
- ▶ legal mappings of relevant evidence to national procurement regulations and European regulation;
- ▶ specific National requirements.

2.1 EU Directive

In the perspective of VCD Systems, the relevant legal reference at European level is the directive 2004/18/EC (art. 45-52): it provides the criteria for qualitative selection of tenders in procedures for the award of public works contracts, public supply contracts and public service contracts.

▶ Requirement Leg01: art. 45 - Personal situation

Criterion Group	Legal Reference	Subcriteria
Personal situation: absence of conviction (sec. 45 §1 and §2 (c, d, g))	sec. 45 §1 (a)	has been convicted by final judgment of the participation in a criminal organization
	sec. 45 §1 (b)	has been convicted by final judgment of corruption
	sec. 45 §1 (c)	has been convicted by final judgment of fraud
	sec. 45 §1 (d)	has been convicted by final judgment of money laundering
	sec. 45 §2 (c)	has been convicted by a judgment what has the force of res judicata in accordance with the legal provisions of the country of any offence concerning his professional conduct
	sec. 45 §2 (d)	has been guilty of grave professional misconduct proven by any means which the contracting authorities can demonstrate
	sec 45 §2 (g)	is guilty of serious misinterpretation in supplying the information required under this section or has not supplied such information
Personal situation: non-bankruptcy and suspended business	art. 45 § 2 (a) part 1	is bankrupt
	art. 45 § 2 (a) part 2.1	is being wound up, where his affairs are being administered by the court

activities (sec. 45 §2 (a-b))	art. 45 § 2 (a) part 2.2	is being wound up, where he has entered into an arrangement with creditors
	art. 45 § 2 (a) part 2.3	is being wound up, where he has suspended business activities
	art. 45 § 2 (a) part 3	is in any analogous situation arising from a similar procedure under national laws and regulations
	art. 45 § 2 (b) part 1	is the subject of proceedings for a declaration of bankruptcy
	art. 45 § 2 (b) part 2	is the subject of proceedings for an order for compulsory winding up or administration by the court
	art. 45 § 2 (b) part 3	is the subject of proceedings for an order for compulsory arrangement with creditors
	art. 45 § 2 (b) part 4	is the subject of any other similar proceedings under national laws or regulations
Personal situation: compliance with fiscal and social obligations (sec. 45 § 2 (e-f))	art. 45 § 2 (e)	has not fulfilled obligations relating to the payment of social security contributions
	art. 45 § 2 (f)	has not fulfilled obligations relating to the payment of taxes

► **Requirement Leg02: art. 46 - Suitability to pursue the professional activity**

Criterion Group	Legal Reference	Subcriteria
Suitability to pursue professional activity (sec. 46)	art. 46 paragraph 1	has official enrolment on one of the professional or trade registers in its member state
	art. 46 paragraph 2	is member of a particular organisation in order to perform the service

► **Requirement Leg03: art. 47 - Economic and financial standing**

Criterion Group	Legal Reference	Subcriteria
Economic and financial standing (sec. 47 § 1 - § 5)	art. 47 § 1 (a) part 1	has appropriate statement from bank
	art. 47 § 1 (a) part 2	has evidence of professional risk indemnity insurance
	art. 47 § 1 (b)	balance sheet or extracts from it, where publication of the balance-sheets is required under the law of the country in which the economic operator is established
	art. 47 § 1 (c)	undertakings' overall turnover and where appropriate turnover in the area covered by the contract
	art 47 § 2	An economic operator may, where appropriate and for a particular contract, rely on the capacities of other entities, regardless of the legal nature of the links which it has with them. It must in that case prove to the contracting authority

		that it will have at its disposal the resources necessary, for example, by producing an undertaking by those entities to that effect.
	art 47 § 3	Under the same conditions, a group of economic operators as referred to in Article 4 may rely on the capacities of participants in the group or of other entities.

► **Requirement Leg04: art. 48 - Technical and/or professional ability**

Criterion Group	Legal Reference	Subcriteria
Technical and professional ability (sec. 48 § 1 - § 6)	art. 48 §2 (a)	list of works carried out over last five years; principal deliveries effected and main services provided in the past three years
	art. 48 §2 (b)	indication of the technicians or technical bodies involved, especially those responsible for quality control and, in the case of public works contracts, those upon whom the contractor can call in order to carry out the work
	art. 48 §2 (c)	description of technical facilities and measures used by the supplier or service provider for ensuring quality and the undertaking's study and research facilities
	art. 48 §2 (d)	a check carried out by the contracting authorities or on their behalf by a competent official body of the country in which the supplier or service provider is established, subject to that body's agreement, on the production capacities of the supplier or the technical capacity of the service provider and, if necessary, on the means of study and research which are available to it and the quality control measures it will operate
	art. 48 §2 (e)	educational and professional qualifications of the service provider or contractor and/or those of the undertaking's managerial staff and, in particular, those of the person or persons responsible for providing the services or managing the work;
	art. 48 §2 (f)	an indication of the environmental management measures that the economic operator will be able to apply when performing the contract;
	art. 48 §2 (g)	a statement of the average annual manpower of the service provider or contractor and the number of managerial staff for the last three years;
	art. 48 §2 (h)	a statement of the tools, plant or technical equipment available to the service provider or contractor for carrying out the contract
	art. 48 §2 (i)	an indication of the proportion of the contract which the services provider intends possibly to subcontract
	art. 48 §2 (j) part 1	samples, descriptions and/or photographs, the

		authenticity of which must be certified if the contracting authority so requests;
	art. 48 §2 (j) part 2	certificates drawn up by official quality control institutes or agencies of recognised competence attesting the conformity of products clearly identified by references to specifications or standards.
	art. 48 §5	In procedures for awarding public contracts having as their object supplies requiring siting or installation work, the provision of services and/or the execution of works, the ability of economic operators to execute the installation or the work may be evaluated in particular with regard to their skills, efficiency, experience and reliability.
	art. 48 § 3	An economic operator may, where appropriate and for a particular contract, rely on the capacities of other entities, regardless of the legal nature of the link which it has with them. It must in that case prove to the contracting authority that it will have at its disposal the resources necessary for the execution of the contract, for example, by producing an undertaking by those entities to place the necessary resources at the disposal of the economic operator.

► **Requirement Leg05: art. 49 - Quality assurance standards**

Criterion Group	Legal Reference	Subcriteria
Quality assurance standards (sec. 49)	art. 49	certificates drawn up by independent bodies attesting the compliance of the economic operator with certain quality assurance standards

► **Requirement Leg06: art. 50 - Environmental management standards**

Criterion Group	Legal Reference	Subcriteria
Environmental management standards (sec. 50)	art. 50	certificates drawn up by independent bodies attesting the compliance of the economic operator with certain environmental management standards

► **Requirement Leg07: art. 51 - Additional documentation and information**

Criterion Group	Legal Reference	Subcriteria
Additional documentation and information (sec. 51)	art. 51	The contracting authority may invite economic operators to supplement or clarify the certificates and documents submitted pursuant to Articles 45 to 50.

Requirement Leg08: art. 52 - Official lists of approved economic operators and certification by bodies established under public or private law

Criterion Group	Legal Reference	Subcriteria
Official lists of approved economic operators and certification by bodies established under public or private law (sec. 52)	art. 50 § 2	Economic operators registered on the official lists or having a certificate may, for each contract, submit to the contracting authority a certificate of registration issued by the competent authority or the certificate issued by the competent certification body. The certificates shall state the references which enabled them to be registered in the list/to obtain certification and the classification given in that list.
	art. 50 § 5 part 1	For any registration of economic operators of other Member States in an official list or for their certification by the bodies referred to in paragraph 1, no further proof or statements can be required other than those requested of national economic operators and, in any event, only those provided for under Articles 45 to 49 and, where appropriate, Article 50.

2.2 Taxonomy of the term Evidences

In the pre-awarding phase, the Contracting Authority must either specify the documentation that has to be submitted by Economic Operator or the criteria of qualitative selection and exclusion that have to be fulfilled by him.

In order to clarify the criteria editing procedure requirements with regard to evidence types, PEPPOL has made the document "Legal Specification: Clarifying of Evidence types and User stories" (version 0.3, issue date 25.08.2011)⁴. This PEPPOL BIS adopts the "Taxonomy of the term evidence" provided by that legal specification *Figure 3*.

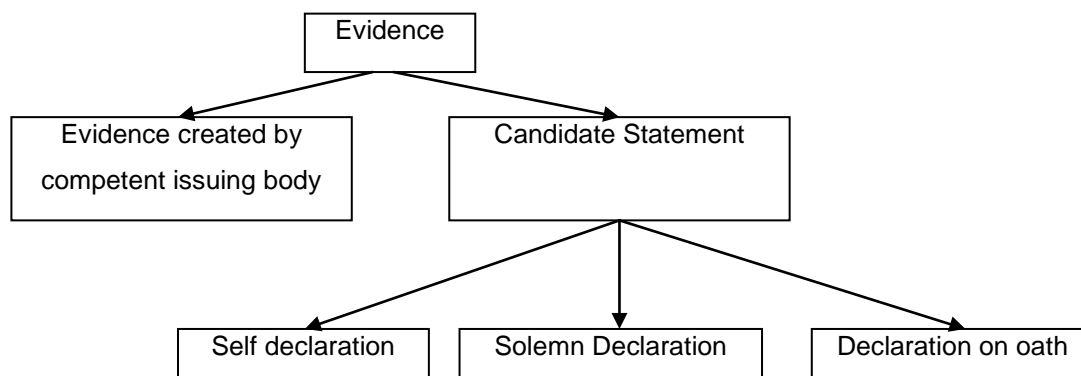


Figure 3 Taxonomy of the term evidence

⁴ <http://bscw.uni-koblenz.de/bscw/bscw.cgi/d1955915/20110909%20Criterion%20Editor%20clarification%20of%20evidence%20types.doc>
x

The taxonomy of the concept “evidence” differentiates between:

- ▶ evidences provided by the candidate himself (e.g. self-declaration, declaration on oath, solemn statement) or
- ▶ evidence where the issues is not the candidate (e.g. certified authorities and/or [authorized/competent] third parties).

2.3 Legal mappings of relevant national procurement regulations and European regulation requirements

In respect of the directive 2004/18/EC, PEPPOL has defined the legal mappings towards the relevant national procurement regulations. This can be considered the PEPPOL position about how the EU directive should be implemented in the different countries.

The mappings representation is constituted of:

- ▶ European and national ontologies⁵ ;
- ▶ national mapping tables⁶ (see an example in Appendix A).

The national mapping tables are based upon a mapping template defined by PEPPOL⁷.

The template reflects rules and principles with regard to mapping between criteria at European and National levels and the corresponding evidences that prove these criteria; it follows the structure indicated in *Figure 4*.

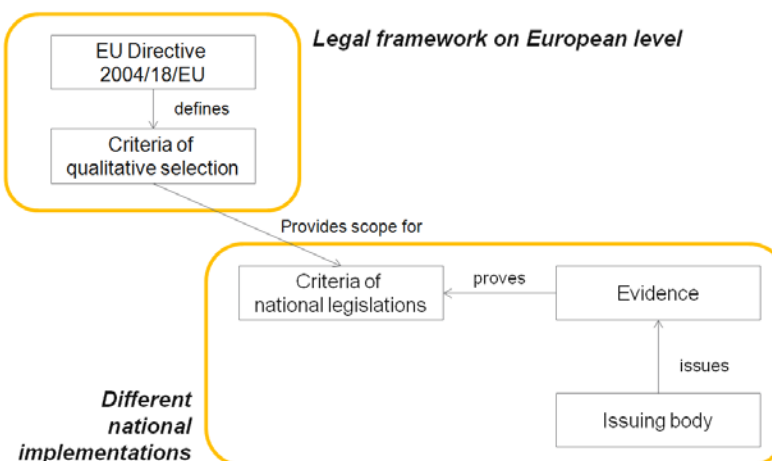


Figure 4 Mapping between different Member State regulations

The mapping template is based upon the European legislation which is interlinked to the national public procurement domains. For every domain a representation of a national index is given; it provides an overview of national criteria demanded in public procurement, and how these are evidenced (i.e. which

⁵ PEPPOL EIA – PreAward - ICT Components_EU Ontology and national ontologies with their mappings

⁶ http://www.peppol.eu/peppol_components/peppol-eia/eia#ict-architecture/pre-award-e-procurement/models

⁷ Deliverable 2.2, Chapter 3.4: Specification of architecture and components enabling cross-border VCD [D2.2, 2010].

attestations and/or statements provide what evidence). In this respect, the European criteria of qualitative selection and non-exclusion criteria, which are derived from the European Directive 2004/18/EC, are considered the reference criteria, while the national criteria which are the basis for individual public tenders in respective countries are considered the local criteria. No new legal rules will be created by the mapping procedure. The mapping is solely based on the existing national and European legal framework.

The mapping of criteria and linking to evidences are a comprehensive legal supporting system which can be used according to the requirements described in a call for tender. The interpretation of the Call for Tender (CfT) with regards to criteria is the Economic Operator's responsibility.

2.3.1 PEPPOL Software Components supporting the Legal Mapping

PEPPOL has developed and made available for using some software components to support Economic Operators in collecting evidences and additional documents suitable to satisfy the criteria defined in a Call for Tender. Thanks to the European and national ontologies, representing in *machine-readable* format the mapping tables described before, the legal mapping is automatically supported by these components.

They major of them⁸ are:

- ▶ the **European VCD System (EVS)**: provides decision support for deriving evidences in order to meet the required criteria defined in Call for Tenders pursuant to the underlying legal rule sets in accordance to European and national procurement legislation. The EVS provides reasoning and makes decision support accessible via system and user interfaces. It is maintained via the **Ontology Management System (OMS)**, which provides the editing and management functionality for the different ontologies. The OMS can be used simultaneously by the different ontology editing teams to keep the legal rule sets up to date;
- ▶ the **National VCD System (NVS)**: provides a full range of VCD functionalities to the Economic Operator - from the initial selection of criteria (via the VCD Designer) to the finalisation of a validated VCD Container (through the VCD Builder). A core functionality of the NVS is to enter data and to upload evidences to a VCD.
- ▶ the **VCD Viewer**: allows users to view the content of VCD Packages. In particular it will support Contracting Authorities in proving eligibility of Economic Operators by using the legal mappings between criteria and evidences that are included in each VCD Package.

2.4 National requirements

This PEPPOL BIS specification defines the core set of legal requirements coming from the European and national regulations and the way for mapping them. This ensures a common understanding and enables Economic Operators and VCD Systems to provide all required information in a tendering process.

⁸ http://www.peppol.eu/peppol_components/peppol-eia/eia#ict-architecture/pre-award-e-procurement/services-components

Nevertheless specific requirements at national level exist but they are out of the scope of this PEPPOL BIS. Here only the normative references are provided. Participants from different countries can develop specific national "extensions" in order to cover their own set of national legal requirements.

An "extension" is a collection of requirements that are not supported by the related BIS and that should be applied in specific context (for example national law). To conform to PEPPOL specifications, an "extension" may not conflict with its BIS, i.e. a message that is valid from the extension perspective must also be valid from the BIS perspective.

3 Organizational - Organization/Business Interoperability

Organisational requirements originate from the context of the pre-award phase of public procurement both for national and cross-border procurements in the European Union. The primary scope of the VCD is the tendering phase in which Economic Operators apply for a public contract that is being awarded by a Contracting Authority to purchase certain products or services. Details about actors and their roles as well as the interaction between them will be described in the subsequent sections.

3.1 Organizational scope

The VCD BIS defines the exchange of qualification documents as part of the tendering process between an Economic Operator (supplier, acting in the role of an applicant) and a Contracting Authority (customer, acting in the role of a qualifier). *Figure 5* provides a general overview about the use case, involved business partners and their roles.

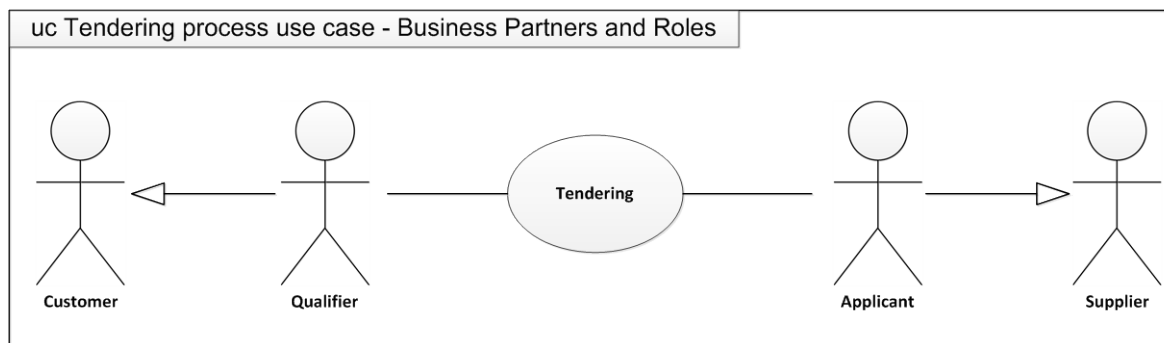


Figure 5 Tendering process use case - Business Partners and Roles

Table 1 and Table 2 describe the partners and respective roles in more detail.

Business partner	Description
Customer	The customer is the legal person or organization that demands a product or service. A customer can be any public buyer or contracting authority that wants to purchase certain products or services.
Supplier	The supplier is the legal person or organization that provides a product or service. A supplier can be any economic operator that sells goods or provides services.

Table 1 Description of Business Partners and Roles

Role / Actor	Description
Qualifier	The party that evaluates qualification information.
Applicant	The party that submits qualification information with the intention to participate in a tender.

Table 2 Description of Business Partners and Roles

In addition to this overview, the use case of the tendering phase can be decomposed into a more detailed use case diagram (*Figure 6*). The single use case “Collect evidences and submit qualification information” (highlighted with green background color) is the main focus of the VCD and this BIS. The other use cases are only mentioned in order to provide a general picture of the tendering phase.

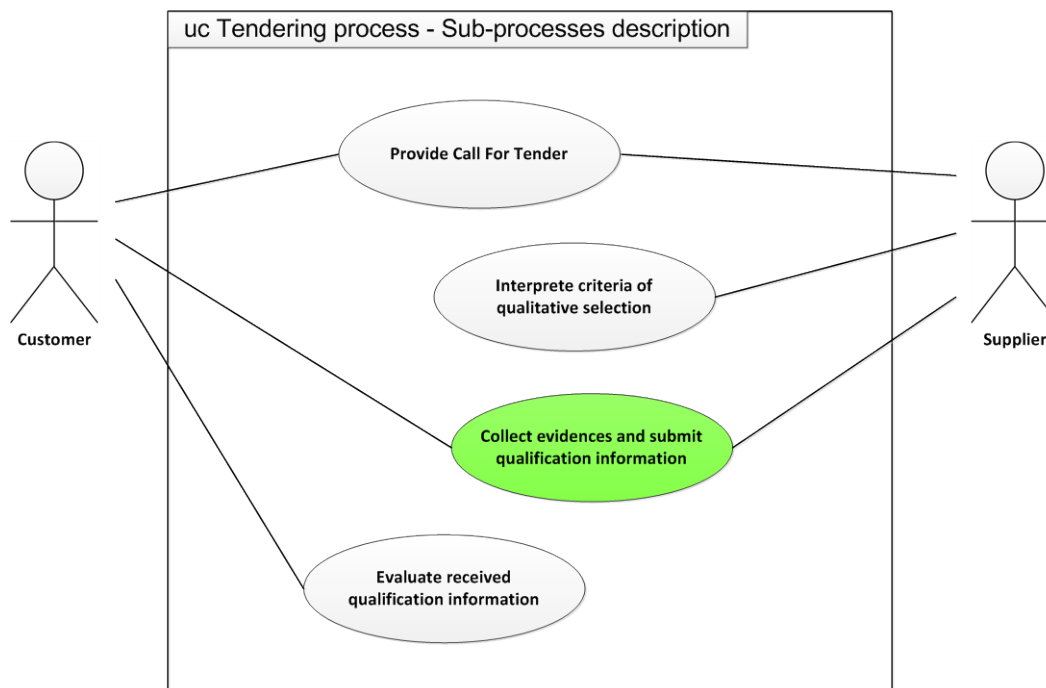


Figure 6 Tendering process use case - Sub-processes description

Starting point is the call for tender that is created by the customer (i.e. the Contracting Authority) which defines, among other things, the requirements that each supplier has to fulfill. This is stated as a list of criteria (criteria of qualitative selection) as defined in Directive 2004/18/EC Art. 45-50 and implemented in national procurement regulations.⁹ To participate in the tender, a supplier has to apply for the award of the contract and has to provide suitable evidences to prove that he complies with the criteria defined in the call for tender. Therefore the supplier has to interpret the criteria of qualitative selection, collect the required evidences and finally submit them as part of his qualification information (i.e. a VCD Package) to the Contracting Authority. The Contracting Authority in turn evaluates the received information.

With the primary scope on the use case “Collect evidences and submit qualification information”, this VCD BIS provides:

- ▶ tips about the way to interpret the criteria of qualitative selection requested by the Contracting Authority;
- ▶ support to collect the required evidences and submit them as part of his qualification information to the Contracting Authority as a VCD Package document.

⁹ A Business Interoperability Specification is existing for the particular use case of defining the criteria of qualitative selection and providing it as an electronic document to the Economic Operator. This BIS is available at PEPPOL EIA PreAward - ICT Models_Criteria Template BIS 100.

3.2 Business requirements

PEPPOL has identified the set of business requirements needed to meet legal requirements and common business needs in exchange of qualification documents as part a tendering process in EU and EEA. This VCD BIS defines how to assemble the qualification documents (VCDs) in an electronic package (VCD Package) satisfying these business requirements.

The business requirements identified, grouped by categories, are the following:

- ▶ **Electronic package's content**

- ▶▶ Org01: Package identification

- The electronic package's identifier and the date and time on which it has been issued must be provided.

- ▶▶ Org02: Main contractor

- The main contractor or the authorized representative (in case of a bidding consortium) should be specified.

- ▶▶ Org03: Additional contractors

- When several companies associate to tender together, the structure of bidding consortia must be specified.

- ▶▶ Org04: Sub-contractors

- Sub-contractors of a main or additional contractor must be identified.

- ▶▶ Org05: Issuing body

- The issuing body of the electronic package must be specified.

- ▶▶ Org06: Call for tender reference

- The contract for which the tender is submitted must be specified.

- ▶▶ Org07: Legal domain

- The legal domain under which legislation it is carried out must be specified.

- ▶▶ Org08: Procurement lots

- The lots of interest must be specified.

- ▶ **Qualification document's content**

- ▶▶ Org09: Qualification document identification

- The qualification document's identifier and the date and time on which it has been issued must be provided.

- ▶▶ Org10: Economic operator criteria

- The criteria that are specifically assigned to an economic operator as a legal entity must be specified.

- ▶▶ Org11: Natural person criteria

- The criteria that are specifically assigned to a natural person (e.g. the authorized representative) must be specified.

- ▶▶ Org12: Issuing body

- The issuing body of the qualification document must be specified.

- ▶▶ Org13: Evidences and certificates
The Qualification document should be able to include evidence documents and certificates which prove the Economic Operator compliance to the requested criteria defined in the call for tender.
- ▶▶ Org14: Additional documentation and information (2004/18/EU Art. 51)
The Qualification document should be able to include any additional documents that are not classified as evidences that prove specific.
- ▶ **Economic Operator's information**
 - ▶▶ Org15: Economic Operator identification
Information needed to identify the Economic Operator should be provided; they are: name, party identification, endpoint ID.
 - ▶▶ Org16: Economic Operator contact information
Information needed to contact the economic operator should be provided; they are: postal address, telephone number, fax number, eMail address.
 - ▶▶ Org17: Economic Operator country of registration
In order to identify relevant evidences and the legal domain for evidence provision, the Economic Operator's country of registration must be provided.
 - ▶▶ Org18: Official list of approved economic operators (Art. 52 2004/18/EU)
Information about the registration in an official list of approved economic operators indicating the classification in this list for the suitability to do certain works or provide certain services should be provided.
- ▶ **Natural Person's information**
 - ▶▶ Org19: Natural person identification
Information needed to identify a natural person should be provided; they are: identifier, name, nationality, address, place of birth, date of birth.
 - ▶▶ Org20: Natural person role
In order to clarify the relevance of the natural person for the tender and whether evidence need to be provided, the role of each natural person should be defined.
 - ▶▶ Org21: Natural person country of registration
In order to identify the relevant evidences and the legal domain of evidence provision, the country where a natural person is registered should be provided.
- ▶ **Contracting authority's information**
 - ▶▶ Org22: Contracting Authority identification
Information needed to identify the Contracting Authority must be provided; they are: name, identification, endpoint id.
 - ▶▶ Org23: Contracting Authority contact information
Information needed to contact a Contracting Authority should be provided; they are: Postal address, telephone number, fax number, eMail address.
- ▶ **Additional documentation**

▶▶ Org24: Issuing body

The issuing body of the additional document must be specified.

▶ **Evidences**

▶▶ Org25: Criteria references

Each evidence has to contain the references of the criteria it is proving.

▶▶ Org26: Reference to call for tender requirements

Each evidence has to contain a reference to the requirements in the call for tender.

▶▶ Org27: Issuing body

The issuing body of the evidence must be specified.

▶ **Criterion's information**

▶▶ Org28: Criterion's information

Each criterion should be described using information such as: Legal reference (EU level, contracting authority national level, economic operator national level), type of criterion (e.g. technical capability, financial standing, etc.), criterion group to which it belongs (according to names of Art. 45-50 of 2004/18/EC).

▶▶ Org29: regulation level

For each criterion the regulation level specifying whether it refers to european regulation, to the regulation of the economic operator's nationalaity/legal domain or to the contracting authoritie's nationalaity/legal domain must be provided.

▶ **Digital signature**

▶▶ Org30: Qualification document signature

The qualification document shall be capable of being signed and containing the signature.

▶▶ Org31: Document signature verification results

The qualification document shall contain information about the validation/verification of signatures of a document that has been attached to it.

4 Organizational - Process Interoperability

4.1 Process model

The VCD Package (containing the qualification documents) needs to be exchanged between the Economic Operator and the Contracting Authority in a specified process that is understood, agreed and supported by both parties. This VCD PEPPOL BIS specifies this process in terms of collaboration (*Figure 7*) and transactions sequence (*Figure 8*) happening under a set of pre and post conditions (*Table 3*).

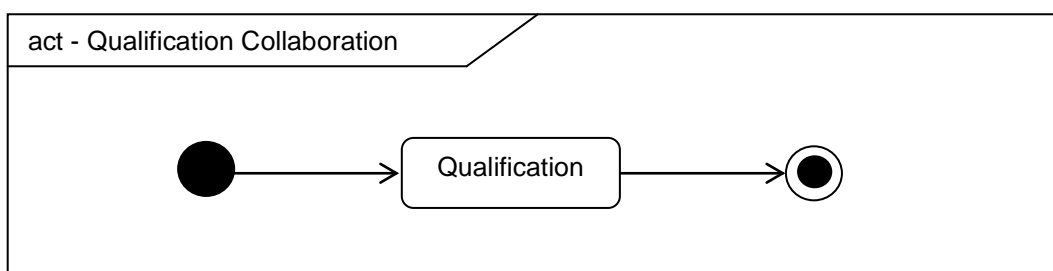


Figure 7 Qualification Collaboration

<i>Description</i>	The Applicant sends an electronic package assembling qualification documents containing the information requested by the Qualifier in the Call for Tender for qualification.
<i>Pre-condition</i>	The Applicant has accessed the Call for Tender documents and decided to submit qualification documents. The Applicant has interpreted the criteria of qualitative selection.
<i>Post-condition</i>	The Qualifier has received an electronic package assembling qualification documents.

Table 3 Collaboration description

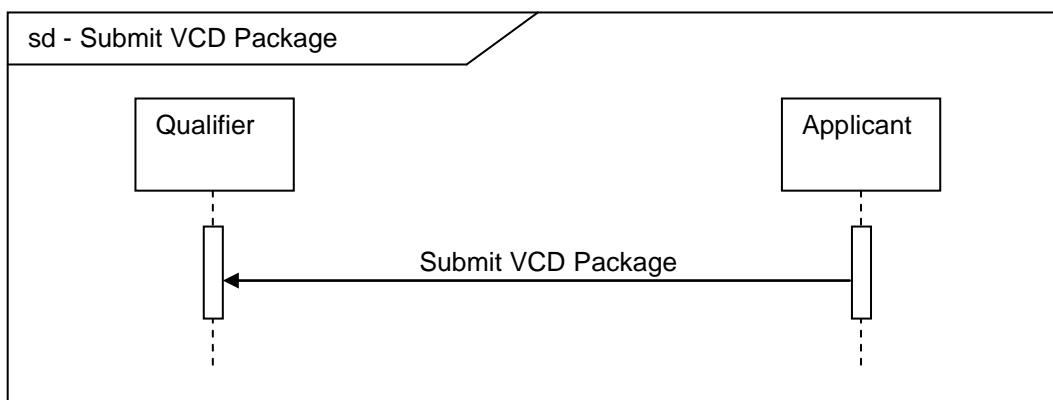


Figure 8 Submit VCD Package Transaction sequence

4.2 Collaboration business rules

- ▶ By carrying out the Qualification collaboration the Economic Operator requests that his tender will be considered for awarding but does not commit to provide a tender.
- ▶ Each Economic Operator can submit only one electronic package (VCD Package) for each Call for Tender.
- ▶ The electronic package includes one or more qualification documents (VCDs), depending on the number of Economic Operators that apply for the contract as a consortium or single tenderer with potential sub-contractors.
- ▶ Each qualification document includes one or more proofing document and can include additional documentation.

5 Semantic Interoperability

5.1 Concept database

All VCD concepts existing in the domain of the VCD System are collected in the VCD concept database. It provides an aggregated list of all concepts that occur in the domain of the VCD and its software components. Furthermore, it defines each concept and specifies the rules for usage and creation of values. In result, the concept data base provides a common specification and understanding of the VCD information model to facilitate semantic interoperability.

Two different versions of the VCD concept database exist (1.3.1 and 2.0). The different versions of the transaction data models for VCD and VCD Package described in chapter 5.2 of this PEPPOL BIS are based on the different versions of the concept data bases.

5.2 Transaction Data Models

This PEPPOL BIS defines how the Economic Operator belonging to the PEPPOL Community submits qualification information in order to participate in a tender in a cross-border context and with stricter adherence to EU directives.

This PEPPOL BIS defines two different versions of transaction data model (1.3.1 and 2.0) for both VCD and VCD Package: one for each concept data base version.

Here only the differences, in terms of supported requirements, between the different versions of the transaction data models are reported (*Table 4*). The full transaction data models are described in the Appendix B.

Requir. ID	Target	Version 1.3.1	Version 2.0
Org01	Package identification	<ul style="list-style-type: none"> - VCD Package. UUID - VCD Package. Compilation Date - VCD Package. Compilation Time 	<ul style="list-style-type: none"> - VCD Package UUID - VCD Package. Compilation Date - VCD Package. Compilation Time
Org02	Main contractor	<ul style="list-style-type: none"> - VCD Package. Bidding Consortium. Leader Single Tenderer 	<ul style="list-style-type: none"> - VCD Package. Bidding Consortium. Leader Single Tenderer
Org03	Additional contractors	<ul style="list-style-type: none"> - VCD Package. Single Tenderer - VCD Package. Bidding Consortium 	<ul style="list-style-type: none"> - VCD Package. Single Tenderer - VCD Package. Bidding Consortium
Org04	Sub-contractors	<ul style="list-style-type: none"> - VCD Package. Bidding Consortium. LeaderSingleTenderer. SubcontractorSingleTenderer - VCD Package. Bidding Consortium. 	<ul style="list-style-type: none"> - VCD Package. Bidding Consortium. LeaderSingleTenderer. SubcontractorSingleTenderer - VCD Package. Bidding Consortium.

		Other Member Single Tenderer. SubcontractorSingleTenderer – VCD Package. Single Tenderer. SubcontractorSingleTenderer	Other Member Single Tenderer. SubcontractorSingleTenderer – VCD Package. Single Tenderer. SubcontractorSingleTenderer
Org05	Issuing body	– VCD Package. Issuing Service	– VCD Package. Issuing Service
Org06	Call for tender reference	– VCD Package. Call For Tender Identifier	– VCD Package. Call For Tender Identifier
Org07	Legal domain	– VCD Package. Ontology Domain	– VCD Package. Legal Domain
Org08	Procurement lots	– VCD Package. Procurement Lot	– VCD Package. Procurement Lot
Org09	Qualification document identification	– VCD. UUID – VCD. Compilation Date – VCD. Compilation Time	– VCD. UUID – VCD. Compilation Date – VCD. Compilation Time
Org10	Economic operator criteria	– VCD. Economic Operator. Criterion	– VCD. Economic Operator. Criterion
Org11	Natural person criteria	– VCD. Relevant VCD Person. Criterion	– VCD. Relevant VCD Person. Criterion
Org12	Issuing body	– VCD. VCD Issuing Service	– VCD. VCD Issuing Service
Org13	Evidences and certificates	– VCD. Evidence	– VCD. Evidence
Org14	Additional documentation and information	– VCD. Additional Document	– VCD. Additional Document
Org15	Economic Operator identification	– VCD. Economic Operator. Party	– VCD. Economic Operator. Party
Org16	Economic Operator contact information	– VCD. Economic Operator. Party	– VCD. Economic Operator. Party
Org17	Economic Operator country of registration	– VCD. Economic Operator. Ontology Domain	– Economic Operator. Legal Domain
Org18	Official list of approved economic operators	<i>Not supported</i>	<i>Not supported</i>

Org19	Natural person identification	– VCD. Relevant VCD Person. Person Details	– VCD. Relevant VCD Person. Person Details
Org20	Natural person role	– VCD. Relevant VCD Person. JobTitle	– VCD. Relevant VCD Person. JobTitle
Org21	Natural person country of registration	– VCD. Relevant VCD Person. Ontology Domain – VCD. Relevant VCD Person. Citizenship Country	– VCD. Relevant VCD Person. Legal Domain – VCD. Relevant VCD Person. Citizenship Country
Org22	Contracting Authority identification	– VCD Package. Contracting Authority Party	– VCD Package. Contracting Authority Party
Org23	Contracting Authority contact information	– VCD Package. Contracting Authority Party	– VCD Package. Contracting Authority Party
Org24	Issuing body	– VCD. Additional Document. Document Reference. Issuer Party	– VCD. Additional Document. Document Reference. Issuer Party – Additional Document. Document Reference. Issuing Service
Org25	Criteria references	– VCD. Evidence. Proves Criterion	– VCD. Evidence. Proves Criterion
Org26	Reference to call for tender requirements	<i>Not supported</i>	<i>Not supported</i>
Org27	Issuing body	– VCD. Evidence. Document Reference. Issuer Party	– VCD. Evidence. Document Reference. Issuer Party – VCD. Evidence. Document Reference. Issuing Service
Org28	Criterion's information	– VCD. Economic Operator. Criterion – VCD. Relevant VCD Person. Criterion	– VCD. Economic Operator. Criterion – VCD. Relevant VCD Person. Criterion
Org29	Regulation level	– VCD. Economic Operator. Criterion. European Regulation – VCD. Economic Operator. Criterion. Economic Operator National Regulation – VCD. Economic Operator. Criterion. Contracting Authority National Regulation – VCD. Relevant VCD Person. Criterion. European Regulation – VCD. Relevant VCD Person. Criterion. Economic Operator	– VCD. Economic Operator. Criterion. European Regulation – VCD. Economic Operator. Criterion. Economic Operator National Regulation – VCD. Economic Operator. Criterion. Contracting Authority National Regulation – VCD. Relevant VCD Person. Criterion. European Regulation – VCD. Relevant VCD Person. Criterion. Economic Operator National

		National Regulation – VCD. Relevant VCD Person. Criterion. Contracting Authority National Regulation	Regulation – VCD. Relevant VCD Person. Criterion. Contracting Authority National Regulation
Org30	Qualification document signature	– VCD. Signature – VCD Package. Signature	– VCD. Signature – VCD Package. Signature
Org31	Document signature verification results	– Document Reference. Result Of Verification	– Document Reference. Result Of Verification

Table 4 Business Requirements and Transaction Data Models

The set of information defined in each transaction data model can be restricted or extended depending of the context by adding business rules and/or refining the semantic of information elements. This means to define an "extension" of this BIS specification.

Possible business rules that constrain the use or value of an information element include:

- ▶ restrictions on cardinality;
- ▶ optional information elements become mandatory;
- ▶ optional information elements become not permitted;

Possible information element restrictions include:

- ▶ precision in semantics of information elements;
- ▶ precision in formats of information elements;
- ▶ choice of Code lists (where not defined);
- ▶ restrictions on values in code list;
- ▶ dependency constraints between values in information elements;

To conform to PEPPOL specifications, an "extension" may not conflict with its BIS, i.e. a message that is valid from the extension perspective must also be valid from the BIS perspective.

5.3 Validation rules

In order to facilitate interoperability in cross border trade, sets of validation rules have been defined.

The validation rules are sets of rules that clarify the content of VCD and VCD Package instances by stating mandatory fields, fixed values (like code lists), dependency between fields in the same object and dependency between different objects.

The rules are grouped into two main sections depending on their scope:

- ▶ rules working on a single object (i.e.: a VCD XML document or a VCD Package XML document);
 - ▶▶ check mandatory fields, fixed values and dependencies between fields;
 - ▶▶ check the use of mandatory set of values on specific fields (code lists);

- ▶ rules working on more than one object (e.g. a VCD Package XML document and a VCD XML document):
 - ▶▶ check information constraints (e.g. file reference checks) including “Multidimensional” checks crossing the barrier between different objects, i.e. metadata versus physical object instances, or “Cross-referencing” checks between the content value (e.g. a VCD that is referenced in a VCD Package XML document by its UUID must exist).

Each rule has an error level that can be stated as:

- ▶ *warning*: offering recommendations to improve the quality of the instance or regain full validity
- ▶ *fatal*: the rule point to a major issue of consistency or data correctness.

5.3.1 Validation rules from VCD concept database 1.3.1

The *Table 5* collects the set of validation rules coming from the concept database 1.3.1 and affecting the VCD 1.3.1 document model elements.

RuleID	Rule	Error level
VCD-V02-R002	The issuing service SHOULD not have an issuing party for the referred documents related to his policy document: the issuing service is himself the party issuing his policy document.	warning
VCD-V02-R004	If all evidences are supplied, the Criterion MUST have references to existing Evidences having proving documents.	warning
VCD-V02-R005	The Evidence MUST have references to existing Criteria.	fatal
VCD-V02-R006	The Criterion MUST have references to existing Evidences.	fatal
VCD-V02-R007	If the relevant VCD Person does not have an ID, then the person's full name, birthdate and place of birth MUST exist.	fatal
VCD-V02-R008	The electronic mail address SHOULD have a valid eMail address value.	warning
VCD-V02-R009	A UUID MUST have the scheme name "UUID Version 4", scheme agency name "ietf" and scheme uri "http://tools.ietf.org/html/rfc4122".	fatal
VCD-V02-R024	The Legal Text element MUST have the attribute LanguageID in order to define the language.	fatal
VCD-V02-R027	The Further Information element MUST have the attribute LanguageID in order to define the language.	fatal
VCD-V02-R028a	The cross-references between Criterion and Evidence MUST be coherent.	fatal
VCD-V02-R028b	The cross-references between Criterion and Evidence MUST be coherent.	fatal
VCD-V02-R029	A VCD SHOULD not contain empty elements.	warning

Table 5 Validation rules affecting VCD 1.3.1 instances

The *Table 6* collects the set of validation rules coming from the concept database and affecting the VCD Package 1.3.1 document model elements.

RuleID	Rule	Error level
VCD-P02-R002	The issuing service SHOULD not have an issuing party for the referred documents related to his policy document: the issuing service is himself the party issuing his policy document.	warning
VCD-P02-R003	EITHER the Single Tenderer OR the Bidding Consortium MUST exist.	fatal
VCD-P02-R008	The electronic mail address SHOULD have a valid eMail address value.	warning
VCD-P02-R009	A UUID MUST have the scheme name "UUID Version 4", scheme agency name "ietf" and scheme uri "http://tools.ietf.org/html/rfc4122".	fatal
VCD-P02-R029	A VCD Package SHOULD not contain empty elements.	warning

Table 6 Validation rules affecting VCD Package 1.3.1 instances

The *Table 7* collects the set of coded values validation rules coming from the concept database 1.3.1 and affecting both VCD and VCD Package 1.3.1 document model elements.

RuleID	Rule	Error level
VCD-02-R012	The OntologyDomainCode MUST have a value that is defined in the OntologyDomainCode code list.	fatal
VCD-02-R013	The MaturityLevelCode MUST have a value that is defined in the MaturityLevelCode code list.	fatal
VCD-02-R014	The DocumentTypeCode MUST have a value that is defined in the DocumentTypeCode code list.	fatal
VCD-02-R015	The MimeCode MUST have a value that is defined in the BinaryObjectMimeCode code list.	fatal
VCD-02-R016	The CharacterSetCode MUST have a value that is defined in the CharacterSetCode code list.	fatal
VCD-02-R018	The ValidateResultCode MUST have a value that is defined in the ValidateResultCode code list.	fatal
VCD-02-R019	The AddressTypeCode MUST have a value that is defined in the AddressTypeCode code list.	fatal
VCD-02-R020	The CountrySubentityCode MUST have a value that is defined in the CountrySubentityCode code list.	fatal

VCD-02-R021	The IdentificationCode of Country MUST have a value that is defined in the CountryIdentificationCode code list.	fatal
VCD-02-R022	The LocalCode of a Language MUST have a value that is defined in the LocaleCode code list.	fatal
VCD-02-R023	The SchemaAgencyName MUST have a value that is defined in the SchemaAgencyCode code list.	fatal
VCD-02-R025	The LanguageID MUST have a value that is defined in the LocaleCode code list.	fatal
VCD-02-R026	The VCDTypeCode MUST have a value that is defined in the VCDTypeCode code list.	fatal

Table 7 Validation rules affecting both VCD and VCD Package 1.3.1 instances

The Table 8 collects the set of rules working on work on more than one object (e.g. a VCD Package XML document 1.3.1 and a VCD XML document 1.3.1).

RuleID	Rule	Error level
VCD-02-R010	A VCD that is referenced in a VCD Package XML document by its UUID MUST exist as a subfolder of the VCD Package folder/zip file having the name "VCD_<uuid>".	fatal
VCD-02-R011	The XML meta-data file of a single VCD MUST exist in the corresponding VCD folder having the name "VCD_<uuid>.xml".	fatal
VCD-02-R017	A file referenced inside a document instance as an external reference MUST either exist inside the VCD-Container in the same folder like the meta data file or it must exist at the remote location (in case a remote file is referenced).	fatal

Table 8 Validation rules working on more than one object

5.3.2 Validation rules from VCD concept database 2.0

The Table 9 collects the set of validation rules coming from the concept database 2.0 and affecting the VCD 2.0 document model elements.

RuleID	Rule	Error level
VCD-V02-R002	The issuing service SHOULD not have an issuing party or service for the referred documents related to his policy document: the issuing service is himself the party issuing his policy document.	warning
VCD-V02-R004	If all evidences are supplied, the Criterion MUST have references to existing Evidences having proving documents.	warning
VCD-V02-R005	The Evidence MUST have references to existing Criteria.	fatal

VCD-V02-R006	The Criterion MUST have references to existing Evidences.	fatal
VCD-V02-R007	If the relevant VCD Person does not have an ID, then the person's full name, birthdate and place of birth MUST exist.	fatal
VCD-V02-R008	The electronic mail address SHOULD have a valid eMail address value.	warning
VCD-V02-R009	A UUID MUST have the scheme name "UUID Version 4", scheme agency name "ietf" and scheme uri "http://tools.ietf.org/html/rfc4122".	fatal
VCD-V02-R024	The Legal Text element MUST have the attribute LanguageID in order to define the language.	fatal
VCD-V02-R027	The Further Information element MUST have the attribute LanguageID in order to define the language.	fatal
VCD-V02-R028a	The cross-references between Criterion and Evidence MUST be coherent.	fatal
VCD-V02-R028b	The cross-references between Criterion and Evidence MUST be coherent.	fatal
VCD-V02-R029	A VCD SHOULD not contain empty elements.	warning

Table 9 Validation rules affecting VCD 2.0 instances

The *Table 10* collects the set of validation rules coming from the concept database 2.0 and affecting the VCD Package 2.0 document model elements.

RuleID	Rule	Error level
VCD-P02-R002	The issuing service SHOULD not have an issuing party or service for the referred documents related to his policy document: the issuing service is himself the party issuing his policy document.	warning
VCD-P02-R003	EITHER the Single Tenderer OR the Bidding Consortium MUST exist.	fatal
VCD-P02-R008	The electronic mail address SHOULD have a valid eMail address value.	warning
VCD-P02-R009	A UUID MUST have the scheme name "UUID Version 4", scheme agency name "ietf" and scheme uri "http://tools.ietf.org/html/rfc4122".	fatal
VCD-P02-R029	A VCD Package SHOULD not contain empty elements.	warning

Table 10 Validation rules affecting VCD Package 2.0 instances

The *Table 11* collects the set of coded values validation rules coming from the concept database 2.0 and affecting both VCD and VCD Package 2.0 document model elements.

RuleID	Rule	Error level
VCD-02-R012	The DomainCode MUST have a value that is defined in the DomainCode code list.	fatal
VCD-02-R013	The MaturityLevelCode MUST have a value that is defined in the MaturityLevelCode code list.	fatal
VCD-02-R014	The DocumentTypeCode MUST have a value that is defined in the DocumentTypeCode code list.	fatal
VCD-02-R015	The MimeCode MUST have a value that is defined in the BinaryObjectMimeCode code list.	fatal
VCD-02-R016	The CharacterSetCode MUST have a value that is defined in the CharacterSetCode code list.	fatal
VCD-02-R018	The ValidateResultCode MUST have a value that is defined in the ValidateResultCode code list.	fatal
VCD-02-R019	The AddressTypeCode MUST have a value that is defined in the AddressTypeCode code list.	fatal
VCD-02-R020	The CountrySubentityCode MUST have a value that is defined in the CountrySubentityCode code list.	fatal
VCD-02-R021	The IdentificationCode of Country MUST have a value that is defined in the CountryIdentificationCode code list.	fatal
VCD-02-R022	The LocalCode of a Language MUST have a value that is defined in the LocaleCode code list.	fatal
VCD-02-R023	The SchemaAgencyName MUST have a value that is defined in the SchemaAgencyCode code list.	fatal
VCD-02-R026	The VCDTypeCode MUST have a value that is defined in the VCDTypeCode code list.	fatal
VCD-02-R039	The TendererRoleCode MUST have a value that is defined in the TendererRoleCode code list.	fatal
VCD-02-R040	The TendererTypeCode MUST have a value that is defined in the TendererTypeCode code list.	fatal
VCD-02-R042	The MinimumSubstitutionLevelCode MUST have a value that is defined in the MinimumSubstitutionLevelCode code list.	fatal

Table 11 Validation rules affecting both VCD and VCD Package 2.0 instances

The Table 12 collects the set of rules working on work on more than one object (e.g. a VCD Package XML document and a VCD XML 2.0 document).

RuleID	Rule	Error level
VCD-02-R010	A VCD that is referenced in a VCD Package XML document by its UUID MUST exist as a subfolder of the VCD Package folder/zip file having the name "VCD_<uuid>".	fatal

VCD-02-R011	The XML meta-data file of a single VCD MUST exist in the corresponding VCD folder having the name "VCD_<uuid>.xml".	fatal
VCD-02-R017	A file referenced inside a document instance as an external reference MUST either exist inside the VCD-Container in the same folder like the meta data file or it must exist at the remote location (in case a remote file is referenced).	fatal

Table 12 Validation rules working on more than one object

5.4 Identifiers

PEPPOL has defined a "Policy for Use of Identifiers" that describes the specific case for Party Identifiers and principles that should be followed in other cases.

About the specific use of identifiers in VCD and VCD Package this PEPPOL BIS states as follows (Table 13):

Identifier	Constraint
Criterion Identifier	At least the following attributes must be specified: schemeName (default value:"UUID Version 4"); schemeAgencyName (default value: "ietf"), schemeURI (default value: "http://tools.ietf.org/html/rfc4122")
Relevant VCD Person Identifier	At least the following attributes must be specified: schemeName, schemeURI, schemeAgencyName.
Call For Tender Identifier	No constraints
Document Group Identifier	No constraints
Ontology Version Identifier	No constraints
Proves Criterion Identifier	No constraints
Proving Evidence Identifier	No constraints
VCD Reference Identifier	No constraints
VCD Schema Version Identifier	No constraints
Document Reference Identifier	At least following attributes must be specified: schemeName, schemeURI, schemeAgencyName.
Party Identifier	POLICY 1, POLICY 2, POLICY 3 from "Peppol Policy for Use of Identifiers"
Person Identifier	No constraints
Signature Identifier	At least following attributes must be specified: schemeName, schemeURI, schemeAgencyName
Endpoint Identifier	POLICY 1, POLICY 2, POLICY 3 from "Peppol Policy for Use of Identifiers"
URI	No constraints
UUID	At least following attributes must be specified: schemeName, schemeURI, schemeAgencyName.

Validator Identifier	At least following attributes must be specified: schemeName, schemeURI, schemeAgencyName.
Language Identifier	The LanguageID MUST have a value that is defined in the LocaleCode code list.

Table 13 VCD and VCD Package Identifiers

5.5 Code lists

A number of information elements values are constrained to be those in a list of codes known as Code Lists; the specific Code Lists used in business transactions must be common between business partners in order to achieve interoperability. *Table 14* lists the code lists identified by PEPPOL to be used in this PEPPOL BIS.

Information elements	Code List	Issuer Agency	Genericcode	Supported in schema version
AddressTypeCode	Address Type Code	PEPPOL	AddressTypeCode_1.0.0.gc	v 1.3.1 v 2.0
BinaryObjectMimeTypeCode	Binary Object Mime Code	IANA	BinaryObjectMimeTypeCode_1.0.0.gc	v 1.3.1 v 2.0
CharacterSetCode	Character Set Code	IANA	CharacterSetCode_1.0.0.gc	v 1.3.1 v 2.0
CountryIdentificationCode	Country Identification Code	ISO	CountryIdentificationCode_1.0.0.gc	v 1.3.1 v 2.0
DocumentTypeCode	Document Type Code	PEPPOL	DocumentTypeCode_1.0.0.gc	v 1.3.1 v 2.0
DomainCode	Domain Code	PEPPOL	DomainCode_1.0.0.gc	v 2.0
HashValidateResultCode	Hash Validate Result Code	PEPPOL	HashValidateResultCode_1.0.0.gc	v 1.3.1 v 2.0
LocaleCode	Locale Code	UNICODE Consortium	LocaleCode_1.0.0.gc	v 1.3.1 v 2.0
MaturityLevelCode	Maturity Level Code	PEPPOL	MaturityLevelCode_1.0.0.gc	v 1.3.1 v 2.0
OntologyDomainCode	Ontology Domain Code	PEPPOL	OntologyDomainCode_1.0.0.gc	v 1.3.1
PartyIDAgencyCode	PartyID Agency Code	PEPPOL	PartyIDAgencyCode_1.0.0.gc	v 1.3.1 v 2.0
SubstituteEvidenceCode	Substitute Evidence Code	PEPPOL	SubstituteEvidenceCode_1.0.0.gc	v 1.3.1 v 2.0
Tenderer Role	Tenderer Role Code	PEPPOL	TendererRoleCode_1.0.0.gc	v 2.0
Tenderer Type	Tenderer Type Code	PEPPOL	TendererTypeCode_1.0.0.gc	v 2.0

ValidateResultCode	Validate Result Code	PEPPOL	ValidateResultCode_1.0.0.gc	v 1.3.1 v 2.0
VCDTypeCode	VCD Type Code	PEPPOL	VCDTypeCode_1.0.0.gc	v 1.3.1 v 2.0

Table 14 VCD Code List

6 Technical Interaction Interoperability – Process and Semantic Implementation

6.1 Syntax mapping to UBL

The VCD and VCD Package transaction data models have been implemented by binding to UBL. However, UBL 2.0 does not define the VCD and VCD Package document types: actually, PEPPOL has defined two document types by re-using and extending the components in the UBL 2.0 Common Library.

As support for implementers, PEPPOL has made available some user-friendly guides showing the UBL implementation of VCD and VCD Package transaction data models.

6.2 Example XML Implementation

This section uses a sample PEPPOL VCD package document instance to demonstrate the physical structure of a VCD Package and the use of the contained information.

6.2.1 VCD Container Structure

A VCD Package is delivered as a zip file (VCD Container) that consists of:

- ▶ a meta-data file named `VCDPackage_*.xml`, i.e. the VCD Package (XML) file, which contains general VCD Package information;
- ▶ zero or more files, i.e. additional documents that have been attached to the VCD Package;
- ▶ one sub-folder for each VCD of an Economic Operator, i.e. the VCD (Folder), each containing:
 - ▶▶ a meta-data file named `VCD_*.xml`, i.e. the VCD (XML), which contains information about the economic operator, criteria of qualitative selection as well as evidence documents;
 - ▶▶ zero or more files representing evidences and additional documents, which have been attached to the VCD.

An example folder structure is illustrated in *Figure 9*. For identification purposes, the VCD Package and the contained VCDs as well as attached files have names that contain a universal unique identifier (UUID), which should not be changed. Only the name of the ZIP file itself can be freely chosen by the user.¹⁰

¹⁰ Further information and rules for the VCD Container structure are defined in the VCD Container Structure specification available here (PEPPOL EIA – PreAward - ICT Models_VCD Container Structure 100)

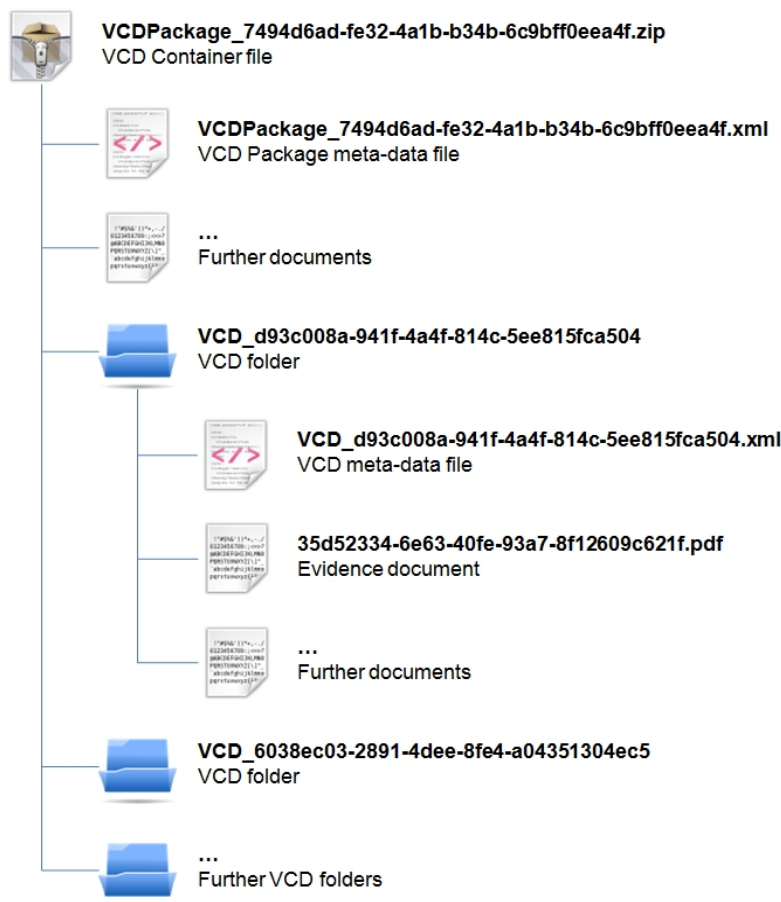


Figure 9 Example folder structure of a VCD Container

6.2.2 VCD Package 1.3.1 XML File

General VCD Package information and further meta-data is stored in the XML file with name VCDPackage_*.xml. The following XML fragment shows the general VCD Package information. A description of each data element is given afterwards (*Table 15*).

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:VCDPackage xmlns="urn:peppol:wp2:schema:xsd:CommonBasicComponents-2"
  xmlns:ns2="urn:peppol:wp2:schema:xsd:CommonAggregateComponents-2"
  xmlns:ns3="urn:peppol:wp2:schema:xsd:VirtualCompanyDossierPackage-1">
  <UUID>8b3f4ae7-3b79-44cd-9297-78f62395745f</UUID>
  <VCDSchemaVersionID>1.3.1</VCDSchemaVersionID>
  <OntologyDomainCode>http://m2n.at/2009/05/peppol/Country583c10bfdbd326ba%3
    A173f24f5%3A124c372bee6%3A-6d3c</OntologyDomainCode>
  <OntologyVersionID>2.0</OntologyVersionID>
  <CompilationDate>2012-05-11</CompilationDate>

```



```
<CompilationTime>13:11:31.000</CompilationTime>
<VCDPackageName>VCD BIS Example</VCDPackageName>
<VCDTypeCode>vcd-package</VCDTypeCode>
...
</ns3:VCDPackage>
```

Element name	Definition
UUID	A universally unique identifier for the VCD Package.
VCDSchemaVersion	Version of the underlying VCD data schema.
OntologyDomainCode ¹¹	The legal domain of the contracting authority, referring to the legal regulation under which the contract will be carried out. The set of allowed values is defined in the code list OntologyDomainCode.
CompilationDate	Date when the VCD Package creation has finished.
CompilationTime	Time when the VCD Package creation has finished.
VCDPackageName	The name given to the VCDPackage.
VCDTypeCode	A code specifying the production status of the VCDPackage. The set of allowed values is defined in the code list VCDTypeCode.

Table 15 VCD Package 1.3.1 XML data elements (1)

Additionally to general information, the VCD Package XML document contains information about the issuing service through which the VCD Package has been created and issued, and the different economic operators that provide their qualification information. The corresponding XML fragment and definition of each data element is given below (Table 16).

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:VCDPackage xmlns="urn:peppol:wp2:schema:xsd:CommonBasicComponents-2"
  xmlns:ns2="urn:peppol:wp2:schema:xsd:CommonAggregateComponents-2"
  xmlns:ns3="urn:peppol:wp2:schema:xsd:VirtualCompanyDossierPackage-1">
  ...
  <ns2:IssuingService>
    <EndpointID>9914:ATU41542700</EndpointID>
    <Name>UPRC VCD Reference Implementation</Name>
    <ns2:ProvidingParty>
      <ns2:PartyName>
        <Name>UPRC VCD Reference Implementation</Name>
      </ns2:PartyName>
    </ns2:ProvidingParty>
    ...
```

¹¹ The term OntologyDomainCode is based on the VCD System architecture and components in which the legal information is maintained and processed through an ontology. See also section 2.2 for further information.

```

</ns2:IssuingService>

<ns2:SingleTenderer>
  <VCDReferenceID>e52e6c27-464c-4e97-b976-
  5c89b9f90eb2</VCDReferenceID>
</ns2:SingleTenderer>
...
</ns3:VCDPackage>

```

Element name	Definition
IssuingService	The IssuingService element contains all information about the service which was used to create and deliver the VCD Package. Inside this element further information about the service provider and its terms and conditions can be included defined.
SingleTenderer	The economic operator(s) that submit their qualification information to the contracting authority with this VCD Package. In this example, only one economic operator is defined. More complex set-ups could foresee several economic operators with sub-contractors. ¹² This element is used to define the tenderer structure and only references to the corresponding VCDs that are contained in the VCD Package ZIP file. Each VCDReferenceID has a matching sub-folder in the ZIP file with the name "VCD_<VCDReferenceID>". Each of these sub-folders contains its own meta-data file.

Table 16 VCD Package 1.3.1 XML data elements (2)

6.2.3 VCD 1.3.1 XML File

As stated before, the VCD Package XML file contains references to the VCDs of each Economic Operator that provides his qualification information. The following XML fragments provide an overview and descriptions of the most relevant data elements of a VCD XML file.

Similar to the VCD Package XML file, each VCD XML file also contains general information and meta-data about the VCD itself (Table 17):

```

<ns3:VCD xmlns="urn:peppol:wp2:schema:xsd:CommonBasicComponents-2"
  xmlns:ns2="urn:peppol:wp2:schema:xsd:CommonAggregateComponents-2"
  xmlns:ns3="urn:peppol:wp2:schema:xsd:VirtualCompanyDossier-1">
  <UUID>e52e6c27-464c-4e97-b976-5c89b9f90eb2</UUID>
  <OntologyVersionID>2.0</OntologyVersionID>

```

¹² In such cases, the element BiddingConsortium may be used instead of the SingleTenderer element. Please be aware of the business rule regarding these two elements which only allows the usage of either SingleTenderer OR BiddingConsortium. This depends on the organisation set-up of the economic operators creating their qualification package.

```
<CompilationDate>2012-05-11</CompilationDate>
<CompilationTime>13:11:31.000</CompilationTime>
<VCDTypeCode>vcd-package</VCDTypeCode>
...
</ns3:VCD>
```

Element name	Definition
UUID	A universally unique identifier for the VCD Package.
OntologyDomainCode	Country (domain) code indicating the legal domain of the contracting authority. It refers to the legal regulation under which the contracting authority acts in the context of this contract. ¹³
CompilationDate	Date when the VCD Package creation has finished.
CompilationTime	Time when the VCD Package creation has finished.
VCDTypeCode	A code specifying the production status of the VCDPackage. The set of allowed values is defined in the code list VCDTypeCode.

Table 17 VCD 1.3.1 XML data elements (1)

The remaining parts of the VCD XML file define details about the issuing service through which the VCD has been created and issued (similar to the VCD Package) as well as details about the economic operators, natural persons representing them as well as criteria and evidence information (Table 18).

```
<ns3:VCD xmlns="urn:peppol:wp2:schema:xsd:CommonBasicComponents-2"
  xmlns:ns2="urn:peppol:wp2:schema:xsd:CommonAggregateComponents-2"
  xmlns:ns3="urn:peppol:wp2:schema:xsd:VirtualCompanyDossier-1">
  ...

  <ns2:VCDIssuingService>...</ns2:VCDIssuingService>
  <ns2:EconomicOperator>
    <OntologyDomainCode>...</OntologyDomainCode>
    <ns2:Criterion>
      <ID>a2a1fe49-8f9d-406a-bfd8-800c41535d3d</ID>
      <ProvingEvidenceID>
        0b991604-0351-4759-af4d-8dd7c85b0f19</ProvingEvidenceID>
      <ns2:CriterionGroupRegulation>...
    </ns2:CriterionGroupRegulation>
```

¹³ This OntologyDomainCode is a copy of the OntologyDomainCode inside the VCD Package XML file. It is used to maintain this information also for the different VCDs, allowing to potentially create and edit each single VCD independently from the VCD Package and the VCD. The ontology domain of the Economic Operator is defined below within the EconomicOperator element.

```

        <ns2:EuropeanRegulation>...</ns2:EuropeanRegulation>
        <ns2:EconomicOperatorNationalRegulation>...
    </ns2:EconomicOperatorNationalRegulation>
    <ns2:ContractingAuthorityNationalRegulation>...
    </ns2:ContractingAuthorityNationalRegulation>
</ns2:Criterion>
</ns2:EconomicOperator>
<ns2:RelevantVCDPerson>
    <OntologyDomainCode>...</OntologyDomainCode>
    <ns2:Criterion>...</ns2:Criterion>
</ns2:RelevantVCDPerson>
<ns2:Evidence>
    <DocumentGroupID>
    0b991604-0351-4759-af4d-8dd7c85b0f19</DocumentGroupID>
    <Title languageID="en">
    Extract from the Register of Companies</Title>
    <ProvesCriterionID>
    a2a1fe49-8f9d-406a-bfd8-800c41535d3d</ProvesCriterionID>
    <ns2:DocumentReference>
        <ns2:Attachment>
            <ns2:ExternalReference>...</ns2:ExternalReference>
        </ns2:Attachment>
    </ns2:DocumentReference>
</ns2:Evidence>
</ns3:VCD>

```

Element name	Definition
VCDIssuingService	The IssuingService element contains all information about the service which was used to create and deliver the VCD. Usually this should be the same as for the VCD Package.
EconomicOperator	The economic operator is the company that provides qualification information. Relevant information about the party, criteria and evidences is defined within this element.
EconomicOperator.OntologyDomainCode	The legal domain (ontology domain code) of the country in which the economic operator is established or registered. It refers to the legal regulation under which the economic operator acts in the context of this contract.
Criterion	Contains information about the criteria that are requested by the contracting authority and which have to be proven by the economic operator.
Criterion.ID	This is an internal identifier of the criterion. It is used for the cross-

	reference between each criterion and the proving evidences (see Criterion.ProvingEvidenceID and Evidence.ProvesCriterionID) being attached to the VCD to prove compliance to the criterion.
Criterion.ProvingEvidenceID	This ID refers to given evidences being provided by the economic operator. It must contain the same value as defined in Evidence.DocumentGroupID (see further down below).
<ul style="list-style-type: none"> – Criterion.CriterionGroupRegulation – Criterion.EuropeanRegulation – Criterion.EconomicOperatorNationalRegulation – Criterion.ContractingAuthorityNationalRegulation 	<p>These elements commonly define the legal information that is related to this criterion. Information contained within each of them states a legal reference (i.e. paragraph or text from a given legal regulation), the legal text itself as well as further descriptions.</p> <p>The different viewpoints (criterion group, EU, economic operator national and contracting authority national) are stated to indicate the mapping between different national laws as described in chapter 2.</p>
RelevantVCDPerson	This element is used to give information about a natural person acting as a legal representative of the economic operator. Similar to the economic operator the RelevantVCDPerson has an OntologyDomainCode and one or more Criteria. Besides that, PersonDetails are used to give personal information (name, address, etc.) about the person. ¹⁴
Evidence	Contains information about the evidences that the economic operator and/or natural persons provide. One evidence element may include several document references (see below), because one evidence may be for instance supplemented by a translation. In such cases, a group of related documents is submitted as one evidence.
Evidenc.DocumentGroupID	The internal identifier for this evidence. This is the counterpart of the aforementioned Criterion.ProvingEvidenceID element.
Evidence.ProvesCriterionID	This ID refers to a given criterion being which is proven by this evidence. It must contain the same value as defined in Criterion. ID (see above) and therefore establishes the cross-reference between a criterion and a corresponding evidence.
Evidence.DocumentReference	Contains information about a document that is submitted as the evidence, i.e. it represents the actual document that gives information about the economic operator/natural person with respect to the requirements stated in the criterion to be fulfilled.
Evidence.DocumentReference. Attachment.ExternalReferences	By definition, the evidence documents are attached to the VCD and packaged inside the VCD Package file (see also section 6.2.1). In this respect, the document is stated in the XML file as an attachment and external reference (external, as the physical document data is not embedded into the XML file). The ExternalReference element then contains the information about the document, e.g. file name and description as well as further technical meta-data (see transaction data model and concept database for further details). It is important to note that the filename must point to the location of the document inside the VCD Package relative to the position of the VCD XML file.

Table 18 VCD 1.3.1 XML data elements (2)

¹⁴ This serves the requirement that contracting authorities may request certain criteria which can only be proven by natural persons by submitting corresponding evidences, e.g. a criminal record can only be issued for a natural person. In these cases, a representative of the economic operator, e.g. the CEO, has to submit corresponding evidences.

The previous tables are providing a simple example for the purpose and usage of most important data elements. For the full set of data elements, definitions and implementation guidelines please see the VCD Concept Database (section 5.1) and the VCD transaction data model (section 5.2 and appendix B).

6.3 Technical validation artefacts

A VCD or VCD Package XML document conforms to this PEPPOL BIS if:

- ▶ it is valid against the VCD Schemas
- and*
- ▶ It is valid against all validation rules provided in this BIS.

In order to perform these validations following artefact are available:

- ▶ VCD XML Schemas;
- ▶ VCD Schematron (checking validation rules on VCD and VCD Package XML documents);
- ▶ Test Systems (checking schema conformance, validation rules, code list rules and information constraints).

Artefact	VCD Version 1.3.1	VCD Version 2.0
<i>XML Schema</i>	PEPPOL EIA – PreAward - ICT Components_VCD Schemas 131	PEPPOL EIA – PreAward - ICT Components_VCD Schemas 200
<i>Schematron</i>	PEPPOL EIA – PreAward - ICT Components_VCD Schematrons 131	PEPPOL EIA – PreAward - ICT Components_VCD Schematrons 200
<i>Test systems</i>	PEPPOL EIA – PreAward - CT Services Components_Conformance Test System 131	

Table 19 Technical validation artefacts references

7 Technical Interaction Interoperability – eSignature Validation

PEPPOL doesn't require the application of digital signatures on the PEPPOL documents, neither this is in the scope of this PEPPOL BIS.

Here only a recommendation is given: use what already exists in PEPPOL if documents must be signed.

What is available on signature:

- ▶ PEPPOL eSignature Validation Infrastructure [PEPPOL_Sign];
- ▶ the use of the Signature inside XML document, as defined by UBL 2.0.

8 Technical Interaction Interoperability - Transport

PEPPOL has defined a transport infrastructure based on a set of standardised communication protocols, known as BusDox (Business Document Exchange), which ensures the interoperable, secure and reliable exchange of electronic documents between Economic Operators and Contracting Authorities within the EU.

PEPPOL requires all post-award business documents to be transported using the PEPPOL Transport Infrastructure, while in the pre-award tendering phase Economic Operators and Contracting Authorities can use their own methods of communication.

If they want to use the PEPPOL Transport Infrastructure to exchange pre-awarding qualification documents complying with this PEPPOL BIS, they must fulfil the approach defined in chapter 8.1 of this PEPPOL BIS.

8.1 Sending electronic qualification documents through PEPPOL Transport Infrastructure

All information about PEPPOL Transport Infrastructure and its use can be found on the PEPPOL EIA

The present paragraph defines the further requirements that are necessary to exchange through the PEPPOL Transport Infrastructure the electronic qualification documents defined according with this PEPPOL BIS.

Currently the PEPPOL Transport Infrastructure supports the exchange of messages as transactions having one UBL 2.0 document as payload.

On the other side, as stated in this PEPPOL BIS, the qualification procedure performed by an Economic Operator requires to submit to the Contracting Authority more than one document using several formats.

In order to solve the problem, this PEPPOL BIS defines an approach that is based on the use of an existing UBL 2.0 document ("*UBL 2.0 Attached Document*") as wrapper for the qualification documents that must be sent:

- ▶ Step01: all electronic documents (VCD Package XML document, VCD XML documents and all evidences and additional documents referred by the VCDs) must be collected into one archive;
- ▶ Step02: an XML document valid against the restricted "*UBL 2.0 Attached Document*" XML Schema¹⁵ must be created. According with the "PEPPOL Policy for use of Identifier", some elements in the document must be set as follows:
 - ▶▶ *cbc:UBLVersionID*: "2.0"
 - ▶▶ *cbc:CustomizationID*:
urn:www.cenbii.eu:transaction:biicoretrdm992:ver0.1:#urn:www.peppol.eu:bis:peppol992a:ver1.0::0.1""
 - ▶▶ *cbc:ProfileID*: "urn:www.cenbii.eu:profile:bii992:ver0.1"

¹⁵ <http://bscw.uni-koblenz.de/bscw/bscw.cgi/d2132460/UBL-AttachedDocument-2.0-RestrictedSchema.zip>

- ▶ Step03: the archive from "Step01" must be embedded as "*Base64 encoded data*" into the document from Step02;
- ▶ Step04: the document from "Step03" can be sent through PEPPOL Transport Infrastructure.

A. National Mapping Tables

Figure 10 shows a screenshot of the table containing the mapping between European criteria and national criteria.

On the white table the Criteria on EU Level are split up into different Criterion Groups (in this case Personal situation – absence of conviction sec. 45 § 1 and § 2 (c,d,g)) each of which has several atomic legal references to the Directive 2004/18/EC assigned including their textual description.

On the green table the correlating German criteria that are taken from the German national procurement act (VOL/A) can be found. The first row for example is connecting the European criteria “has been convicted by final judgment of participation in a criminal organization” (sec. 45 § 1 (a) of the European directive) to the equivalent German criteria “Bildung krimineller oder terroristischer Vereinigung im In- oder Ausland” (§ 7a Nr. 2 Absatz 1 lit. a VOL/A).

On the yellow table the links between the criteria identified on the national level to the evidences issued by competent (national) issuing bodies. In Germany, the European criteria introduced in the tables above (sec. 45 § 1 (a-d)) are typically proven by the “Auszug aus dem Bundeszentralregister” which is equivalent to a criminal record. The number “1” displayed in the table indicates two distinct aspects:

- ▶ first, the document is a valid proof for a specific (national) criterion;
- ▶ second, the document has to be handled as first priority evidence (category 1).

Documents issued by competent issuing bodies are category 1 documents. It is possible that two different documents provide equivalent proof in a country. In this case, it has to be assessed whether both documents have the same validity (in this case both should be category 1 evidences) or whether one document is being preferred or favoured for proofing a specific criterion (in this case, document 1 and document 2 should be distinguished in terms of priority).

Criteria on EU Level			Criteria on National/Local Level			Evidences issued by competent issuing body		
						Defintion: A document issued by an authoritiy or trusted third party (public and private) that has the competence for providing statements in this particular domain.		
Criterion Group	Legal Reference	Subcriteria	Criterion Group	Legal Reference	Subcriteria	Auszug aus dem Bundeszentralregister	Auszug aus dem Gewerbezentralregister	...
Personal situation >absence of conviction < (sec. 45 §1 and §2 (c, d, g))	sec. 45 §1 (a)	has been convicted by final judgment of the participation in a criminal organization	rechtskräftige Verurteilung wegen:	§ 7a Nr. 2 Absatz 1 lit. a VOL/A	Bildung krimineller oder terroristischer Vereinigungen im In- oder Ausland	1		
	sec. 45 §1 (b)	has been convicted by final judgment of corruption		§ 7a Nr. 2 Absatz 1 lit. e, f VOL/A	Bestechung, Bestechung ausländischer Abgeordneter	1		
	sec. 45 §1 (c)	has been convicted by final judgment of fraud		§ 7a Nr. 2 Absatz 1 lit. c, d VOL/A	Betrug, Subventionsbetrug	1		
	sec. 45 §1 (d)	has been convicted by final judgment of money laundering		§ 7a Nr. 2 Absatz 1 lit. b VOL/A	Geldwäsche, Verschleierung unrechtmäßig erlangter Vermögenswerte	1		
	sec. 45 §2 (c)	has been convicted by a judgment what has the force of res judicata in accordance with the legal provisions of the country of any offence concerning his professional conduct		Auffangtatbestand nicht explizit umgesetzt, höchstens § 97 Abs 4 GWB	gesetzzestreue Bieter	1		
	sec. 45 §2 (d)	has been guilty of grave professional misconduct proven by any means which the contracting authorities can demonstrate		§ 7 Nr. 5 lit. c iVm § 25 Nr. 1 Abs. 2 lit b VOL/A	nachweislich schwere Verfehlung, die die Zuverlässigkeit des Bewerbes in Frage stellen		1	
	sec 45 §2 (g)	is gultiy of serious misinterpretation in supplying the information required under this section or has not supplied such information		7 Nr. 5 lit. e; § 21 Nr. 1 Abs.1 Satz 1	vorsätzlich unzutreffende Erklärungen in bezug auf (..) Zuverlässigkeit			

Figure 10 Example of national mapping table - Small fragment of German (VOL) Mapping Table

B. Transactions data models

i. VCD 1.3.1

The *Table 20* shows the elements in a VCD version 1.3.1. Columns description:

- ▶ first two columns show the Cardinality of the element.
- ▶ the second column shows the element name (element preceded with a "+" sign is a class, the rest are simple elements. Element followed by a "G" sign an element having the same structure of one of its ancestor; its structure is not showed, take the ancestor's structure as reference).
- ▶ the third column states business requirements, business rules or code list that may apply to the field;
- ▶ the last column states if the element is part of the core data model or not (the core data model is the set of elements that the receiver must be able to process). Elements in core data model are marked with "X".

NOTE: the order of elements when used in VCD must follow the order stated in the below list.

Min	Max	VCD elements	Business Requirements/ Rules	Core
1	1	VCD. UUID. Identifier	Org09 VCD-V02-R009	X
0	1	VCD. Ontology Domain. Code	VCD-02-R012	X
0	1	VCD. Ontology Version Identifier. Identifier		X
1	1	VCD. Compilation Date. Date	Org09	X
1	1	VCD. Compilation Time. Time	Org09	X
0	1	VCD. VCD Type Code. Code	VCD-02-R022	X
0	1	+ VCD. Requester Party. Party		
0	1	Party. Endpoint Identifier. Identifier		
0	n	+Party. Party Identification		
1	1	Party Identification. Identifier		
0	n	+ Party. Party Name		
1	1	Party Name. Name		
0	1	+ Party. Postal Address. Address		
0	1	Address. Address Type Code. Code	VCD-02-R019	
0	1	Address. Room. Text		
0	1	Address. Street Name. Name		

0	1		Address. Building Name. Name		
0	1		Address. Building Number. Text		
0	1		Address. City Name. Name		
0	1		Address. Postal Zone. Text		
0	1		Address. Country Subentity. Text		
0	1		Address. Country Subentity Code. Code	VCD-02-R020	
0	n		+ Address. Address Line		
1	1		Address Line. Line. Text		
0	1		+ Address. Country		
0	1		Country. Identification Code. Code	VCD-02-R021	
0	1		Country. Name		
0	1		+ Party. Contact		
0	1		Contact. Name		
0	1		Contact. Telephone. Text		
0	1		Contact. Telefax. Text		
0	1		Contact. Electronic Mail. Text	VCD-V02-R008	
0	n		Contact. Note. Text		
0	n		+ Party. Person		
0	1		Person. First Name. Name		
0	1		Person. Family Name. Name		
0	1		Person. Middle Name. Name		
0	1		Person. Job Title. Text		
0	1		+ VCD. VCD Issuing Service. Issuing Service	Org12 VCD-V02-R002	x
1	1		Issuing Service. Endpoint Identifier. Identifier		x
1	1		Issuing Service. Name. Text		x
1	1		+ Issuing Service. Providing Party. Party		x
0	1		Party. Endpoint Identifier. Identifier		
0	n		+ Party. Party Identification		x
1	1		Party Identification. Identifier		x
0	n		+Party. Party Name		x

1	1			Party Name. Name		X
0	1			+ Party. Postal Address. Address		X
0	1			Address. Address Type Code. Code	VCD-02-R019	X
0	1			Address. Room. Text		X
0	1			Address. Street Name. Name		X
0	1			Address. Building Name. Name		X
0	1			Address. Building Number. Text		X
0	1			Address. City Name. Name		X
0	1			Address. Postal Zone. Text		X
0	1			Address. Country Subentity. Text		X
0	1			Address. Country Subentity Code. Code	VCD-02-R020	X
0	n			+ Address. Address Line		X
1	1			Address Line. Line. Text		X
0	1			+ Address. Country		X
0	1			Country. Identification Code. Code	VCD-02-R021	X
0	1			Country. Name		X
0	1			+ Party. Contact		X
0	1			Contact. Name		X
0	1			Contact. Telephone. Text		X
0	1			Contact. Telefax. Text		X
0	1			Contact. Electronic Mail. Text	VCD-V02-R008	X
0	n			Contact. Note. Text		X
0	n			+ Party. Person		X
0	1			Person. First Name. Name		X
0	1			Person. Family Name. Name		X
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
0	1			+ Issuing Service. Policy Document. Document		X
1	1			Document. Document Group Identifier. Identifier		X
1	1			Document. Title. Text		X

1	n				+ Document. Document Reference		x
1	1				Document Reference. Identifier		x
0	1				Document Reference. Issue Date. Date		x
0	1				Document Reference. Issue Time. Time		x
0	1				Document Reference. Document Type Code. Code	VCD-02-R014	x
0	1				Document Reference. Document Type. Text		x
0	1				+ Document Reference. Attachment		x
0	1				Attachment. Embedded Document. Binary Object		
0	1				+ Attachment. External Reference		x
0	1				External Reference. URI. Identifier		x
0	1				External Reference. Document Hash. Text		x
0	n				External Reference. Hash Algorithm Method. Text		x
0	1				External Reference. Expiry Date. Date		x
0	1				External Reference. Expiry Time. Time		x
0	1				External Reference. Mime Code. Code	VCD-02-R015	
0	1				External Reference. Format Code. Code		
0	1				External Reference. Encoding Code. Code		
0	1				External Reference. Character Set Code. Code	VCD-02-R016	
0	1				External Reference. File Name. Name		x
0	n				External Reference. Description. Text		x
0	n				+ Document Reference. Result Of Verification		x
0	1				Result Of Verification. Validator Identifier. Identifier		x
0	1				Result Of Verification. Validate Result Code. Code	VCD-02-R018	x
0	1				Result Of Verification. Validation Date. Date		x
0	1				Result Of Verification. Validation Time. Time		x
0	1				Result Of Verification. Validate Process. Text		x
0	1				Result Of Verification. Validate Tool. Text		x
0	1				Result Of Verification. Validate Tool Version. Text		x
0	1				+ Result Of Verification. Signatory Party. Party		x
0	1				Party. Endpoint Identifier. Identifier		

0	n						+ Party. Party Identification		x
1	1						Party Identification. Identifier		x
0	n						+ Party. Party Name		x
1	1						Party Name. Name		x
0	1						+ Party. Postal Address. Address		
0	1						Address. Address Type Code. Code	VCD-02-R019	
0	1						Address. Room. Text		
0	1						Address. Street Name. Name		
0	1						Address. Building Name. Name		
0	1						Address. Building Number. Text		
0	1						Address. City Name. Name		
0	1						Address. Postal Zone. Text		
0	1						Address. Country Subentity. Text		
0	1						Address. Country Subentity Code. Code	VCD-02-R020	
0	n						+ Address. Address Line		
1	1						Address Line. Line. Text		
0	1						+ Address. Country		
0	1						Country. Identification Code. Code	VCD-02-R021	
0	1						Country. Name		
0	1						+ Party. Contact		x
0	1						Contact. Name		x
0	1						Contact. Telephone. Text		x
0	1						Contact. Telefax. Text		x
0	1						Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n						Contact. Note. Text		x
0	n						+ Party. Person		x
0	1						Person. First Name. Name		x
0	1						Person. Family Name. Name		x
0	1						Person. Middle Name. Name		
0	1						Person. Job Title. Text		

0	n				+ Document Reference. Language		x
0	1				Language. Identifier		x
0	1				Language. Name		x
0	1				Language. Locale Code. Code	VCD-02-R022	x
1	1				+ VCD. Economic Operator		x
0	1				Economic Operator. Sole Proprietorship. Indicator		x
1	1				Economic Operator. Ontology Domain. Code	Org17 VCD-02-R012	x
1	1				+ Economic Operator. Party	Org15	x
0	1				Party. Endpoint Identifier. Identifier		
0	n				+Party. Party Identification		x
1	1				Party Identification. Identifier		x
0	n				+Party. Party Name		x
1	1				Party Name. Name		x
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+Party. Contact	Org16	
0	1				Contact. Name		

0	1			Contact. Telephone. Text		
0	1			Contact. Telefax. Text		
0	1			Contact. Electronic Mail. Text	VCD-V02-R008	
0	n			Contact. Note. Text		
0	n			+ <i>Party. Person</i>	Org16	
0	1			Person. First Name. Name		
0	1			Person. Family Name. Name		
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
1	n			+ <i>Economic Operator. Criterion</i>	Org10, Org28	x
1	1			Criterion. Identifier		x
1	1			Criterion. Requested Indicator. Indicator		x
0	1			Criterion. All Evidences Supplied Indicator. Indicator		x
0	1			Criterion. Proven Indicator. Indicator		x
0	n			Criterion. Proving Evidence. Identifier	VCD-V02-R004 VCD-V02-R006 VCD-V02-R0028a	x
0	1			+ <i>Criterion. Criterion Group Regulation. Regulation</i>		x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information. Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ <i>Criterion. European Regulation. Regulation</i>	Org29	x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text		x

0	n			Regulation. Further Information. Text		x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ Criterion. Economic Operator National Regulation. Regulation	Org29	x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information. Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ Criterion. Contracting Authority National Regulation. Regulation	Org29	x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text		x
0	n			Regulation. Further Information. Text		x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
0	1			+ Economic Operator. Person Details	VCD-V02-R007	
1	1			Person Details. Identifier		
0	1			Person Details. First Name. Name		
0	1			Person Details. Family Name. Name		
0	1			Person Details. Middle Name. Name		
0	1			Person Details. Job Title. Text		
0	1			Person Details. Birth Date. Date		

0	1			Person Details. Place Of Birth. Text		
0	1			+ <i>Person Details. Residence Address.Address</i>		
0	1			Address. Address Type Code. Code	VCD-02-R019	
0	1			Address. Room. Text		
0	1			Address. Street Name. Name		
0	1			Address. Building Name. Name		
0	1			Address. Building Number. Text		
0	1			Address. City Name. Name		
0	1			Address. Postal Zone. Text		
0	1			Address. Country Subentity. Text		
0	1			Address. Country Subentity Code. Code	VCD-02-R020	
0	n			+ <i>Address. Address Line</i>		
1	1			Address Line. Line. Text		
0	1			+ <i>Address. Country</i>		
0	1			Country. Identification Code. Code	VCD-02-R021	
0	1			Country. Name		
0	1			+ <i>Person Details. Citizenship Country.Country</i>		
0	1			Country. Identification Code. Code		
0	1			Country. Name		
0	n			+ <i>VCD. Relevant VCD Person</i>		x
0	1			VCD Person. UUID. Identifier	VCD-V02-R009	x
0	1			VCD Person. Ontology Domain. Code	VCD-02-R012	x
1	n			+ <i>VCD Person. Criterion</i>	Org11, Org28	x
1	1			Criterion. Identifier		x
1	1			Criterion. Requested Indicator. Indicator		x
0	1			Criterion. All Evidences Supplied Indicator. Indicator		x
0	1			Criterion. Proven Indicator. Indicator		x
0	n			Criterion. Proving Evidence. Identifier	VCD-V02-R004 VCD-V02-R006 VCD-V02-R0028a	x
0	1			+ <i>Criterion. Criterion Group Regulation. Regulation</i>		x

1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information. Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ Criterion. European Regulation. Regulation	Org29	x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information. Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ Criterion. Economic Operator National Regulation. Regulation	Org29	x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information. Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ Criterion. Contracting Authority National Regulation. Regulation	Org29	x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x

0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information . Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ VCD Person. Person Details	Org19 VCD-V02-R007	x
1	1			Person Details. Identifier		x
0	1			Person Details. First Name. Name		x
0	1			Person Details. Family Name. Name		x
0	1			Person Details. Middle Name. Name		x
0	1			Person Details. Job Title. Text	Org20	x
0	1			Person Details. Birth Date. Date		x
0	1			Person Details. Place Of Birth. Text		x
0	1			+ Person Details. Residence Address. Address		x
0	1			Address. Address Type Code. Code	VCD-02-R019	x
0	1			Address. Room. Text		x
0	1			Address. Street Name. Name		x
0	1			Address. Building Name. Name		x
0	1			Address. Building Number. Text		x
0	1			Address. City Name. Name		x
0	1			Address. Postal Zone. Text		x
0	1			Address. Country Subentity. Text		x
0	1			Address. Country Subentity Code. Code	VCD-02-R020	x
0	n			+ Address. Address Line		x
1	1			Address Line. Line. Text		x
0	1			+ Address. Country		x
0	1			Country. Identification Code. Code	VCD-02-R021	x
0	1			Country. Name		x
0	1			+ Person Details. Citizenship Country. Country	Org21	x
0	1			Country. Identification Code. Code		x

0	1				Country. Name		x	
0	n	+ VCD. Evidence					Org13	x
1	1		Evidence. Maturity Level Code. Code				VCD-02-R013	x
1	1		Evidence. Document Group Identifier. Identifier					x
1	n		Evidence. Title. Text					x
1	n		Evidence. Proves Criterion. Identifier				Org25 VCD-V02-R005 VCD-V02-R028b	x
0	1		+ Evidence. Ontology Definition Regulation. Regulation					x
1	n			Regulation. Name. Text				x
0	1			Regulation. Legal Reference. Text				x
0	1			Regulation. URI. Identifier				x
0	n			Regulation. Legal Text. Text			VCD-V02-R024	x
0	n			Regulation. Further Information. Text			VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text				x
0	1			Regulation. Minimum Substitute Evidence Level Code. Code				x
0	1			Regulation. Substitute Evidence Description. Text				x
1	n		+ Evidence. Document Reference					x
1	1			Document Reference. Identifier				x
0	1			Document Reference. Issue Date. Date				x
0	1			Document Reference. Issue Time. Time				x
0	1			Document Reference. Document Type Code. Code			VCD-02-R014	x
0	1			Document Reference. Document Type. Text				x
0	1		+ Document Reference. Attachment					x
0	1				Attachment. Embedded Document. BinaryObject			
0	1				+Attachment. External Reference			x
0	1					External Reference. URI. Identifier		x
0	1					External Reference. Document Hash. Text		x
0	n					External Reference. Hash Algorithm Method. Text		x
0	1					External Reference. Expiry Date. Date		x
0	1					External Reference. Expiry Time. Time		x

0	1				External Reference. Mime Code. Code	VCD-02-R015	
0	1				External Reference. Format Code. Code		
0	1				External Reference. Encoding Code. Code		
0	1				External Reference. Character Set Code. Code	VCD-02-R016	
0	1				External Reference. File Name. Name		x
0	n				External Reference. Description. Text		x
0	n				+ Document Reference. Result Of Verification	Org31	x
0	1				Result Of Verification. Validator Identifier. Identifier		x
0	1				Result Of Verification. Validate Result Code. Code	VCD-02-R018	x
0	1				Result Of Verification. Validation Date. Date		x
0	1				Result Of Verification. Validation Time. Time		x
0	1				Result Of Verification. Validate Process. Text		x
0	1				Result Of Verification. Validate Tool. Text		x
0	1				Result Of Verification. Validate Tool Version. Text		x
0	1				+ Result Of Verification. Signatory Party. Party		x
0	1				Party. Endpoint Identifier. Identifier		
0	n				+ Party. Party Identification		x
1	1				Party Identification. Identifier		x
0	n				+ Party. Party Name		x
1	1				Party Name. Name		x
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	

0	n						+ Address. Address Line		
1	1						Address Line. Line. Text		
0	1						+ Address. Country		
0	1						Country. Identification Code. Code	VCD-02-R021	
0	1						Country. Name		
0	1						+ Party. Contact		x
0	1						Contact. Name		x
0	1						Contact. Telephone. Text		x
0	1						Contact. Telefax. Text		x
0	1						Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n						Contact. Note. Text		x
0	n						+ Party. Person		x
0	1						Person. First Name. Name		x
0	1						Person. Family Name. Name		x
0	1						Person. Middle Name. Name		
0	1						Person. Job Title. Text		
0	1						+ Document Reference. Issuer Party. Party	Org27	x
0	1						Party. Endpoint Identifier. Identifier		
0	n						+ Party. Party Identification		x
1	1						Party Identification. Identifier		x
0	n						+ Party. Party Name		x
1	1						Party Name. Name		x
0	1						+ Party. Postal Address. Address		
0	1						Address. Address Type Code. Code	VCD-02-R019	
0	1						Address. Room. Text		
0	1						Address. Street Name. Name		
0	1						Address. Building Name. Name		
0	1						Address. Building Number. Text		
0	1						Address. City Name. Name		
0	1						Address. Postal Zone. Text		

0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ Party. Contact		x
0	1				Contact. Name		x
0	1				Contact. Telephone. Text		x
0	1				Contact. Telefax. Text		x
0	1				Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n				Contact. Note. Text		x
0	n				+ Party. Person		x
0	1				Person. First Name. Name		x
0	1				Person. Family Name. Name		x
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	n				+ Document Reference. Language		x
0	1				Language. Identifier		x
0	1				Language. Name		x
0	1				Language. Locale Code. Code	VCD-02-R022	x
0	n				+ VCD. Additional Document. Document	Org14	
1	1				Document. Document Group Identifier. Identifier		
1	1				Document. Title. Text		
1	n				+ Document. Document Reference		
1	1				Document Reference. Identifier		
0	1				Document Reference. Issue Date. Date		
0	1				Document Reference. Issue Time. Time		
0	1				Document Reference. Document Type Code. Code	VCD-02-R014	

0	1			Document Reference. Document Type. Text		
0	1			+ <i>Document Reference. Attachment</i>		
0	1			Attachment. Embedded Document. Binary Object		
0	1			+ <i>Attachment. External Reference</i>		
0	1			External Reference. URI. Identifier		
0	1			External Reference. Document Hash. Text		
0	n			External Reference. Hash Algorithm Method. Text		
0	1			External Reference. Expiry Date. Date		
0	1			External Reference. Expiry Time. Time		
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		
0	n			External Reference. Description. Text		
0	n			+ <i>Document Reference. Result Of Verification</i>		
0	1			Result Of Verification. Validator Identifier. Identifier		
0	1			Result Of Verification. Validate Result Code. Code	VCD-02-R018	
0	1			Result Of Verification. Validation Date. Date		
0	1			Result Of Verification. Validation Time. Time		
0	1			Result Of Verification. Validate Process. Text		
0	1			Result Of Verification. Validate Tool. Text		
0	1			Result Of Verification. Validate Tool Version. Text		
0	1			+ <i>Result Of Verification. Signatory Party. Party</i>		
0	1			Party. Endpoint Identifier. Identifier		
0	n			+ <i>Party. Party Identification</i>		
1	1			Party Identification. Identifier		
0	n			+ <i>Party. Party Name</i>		
1	1			Party Name. Name		
0	1			+ <i>Party. Postal Address. Address</i>		

0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		
0	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-V02-R008	
0	n					Contact. Note. Text		
0	n					+ Party. Person		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Document Reference. Issuer Party. Party	Org24	
0	1					Party. Endpoint Identifier. Identifier		
0	n					+ Party. Party Identification		
1	1					Party Identification. Identifier		
0	n					+ Party. Party Name		

1	1				Party Name. Name		
0	1				+ <i>Party. Postal Address. Address</i>		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ <i>Address. Address Line</i>		
1	1				Address Line. Line. Text		
1	1				+ <i>Address. Country</i>		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ <i>Party. Contact</i>		
0	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-V02-R008	
0	n				Contact. Note. Text		
0	n				+ <i>Party. Person</i>		
0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	n				+ <i>Document Reference. Language</i>		
0	1				Language. Identifier		
0	1				Language. Name		

0	1			Language. Locale Code. Code	VCD-02-R022	
0	1	+ VCD. Signature			Org30	x
1	1			Signature. Identifier		x
0	1			Signature. Note. Text		x
0	1			Signature. Canonicalization Method. Text		x
0	1			Signature. Signature Method. Text		x
1	1	+ Signature. Signatory Party. Party				x
0	1			Party. Endpoint Identifier. Identifier		
0	n	+ Party. Party Identification				x
1	1			Party Identification. Identifier		x
0	n	+ Party. Party Name				x
1	1			Party Name. Name		x
0	1	+ Party. Postal Address. Address				
0	1			Address. Address Type Code. Code	VCD-02-R019	
0	1			Address. Room. Text		
0	1			Address. Street Name. Name		
0	1			Address. Building Name. Name		
0	1			Address. Building Number. Text		
0	1			Address. City Name. Name		
0	1			Address. Postal Zone. Text		
0	1			Address. Country Subentity. Text		
0	1			Address. Country Subentity Code. Code	VCD-02-R020	
0	n	+ Address. Address Line				
1	1			Address Line. Line. Text		
0	1	+ Address. Country				
0	1			Country. Identification Code. Code	VCD-02-R021	
0	1			Country. Name		
0	1	+ Party. Contact				x
0	1			Contact. Name		x
0	1			Contact. Telephone. Text		x

0	1			Contact. Telefax. Text		x
0	1			Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n			Contact. Note. Text		x
0	n			+ Party. Person		x
0	1			Person. First Name. Name		x
0	1			Person. Family Name. Name		x
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
0	1			+ Signature. Digital Signature Attachment. Attachment		x
0	1			Attachment. Embedded Document. Binary Object		
0	1			+ Attachment. External Reference		x
0	1			External Reference. URI. Identifier		x
0	1			External Reference. Document Hash. Text		x
0	n			External Reference. Hash Algorithm Method. Text		x
0	1			External Reference. Expiry Date. Date		x
0	1			External Reference. Expiry Time. Time		x
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		x
0	n			External Reference. Description. Text		x
0	1			+ Signature. Original Document Reference. Document Reference		
1	1			Document Reference. Identifier		
0	1			Document Reference. Issue Date. Date		
0	1			Document Reference. Issue Time. Time		
0	1			Document Reference. Document Type Code. Code	VCD-02-R014	
0	1			Document Reference. Document Type. Text		
0	1			+ Document Reference. Attachment		
0	1			Attachment. Embedded Document. Binary Object		

0	1				+Attachment. External Reference		
0	1				External Reference. URI. Identifier		
0	1				External Reference. Document Hash. Text		
0	n				External Reference. Hash Algorithm Method. Text		
0	1				External Reference. Expiry Date. Date		
0	1				External Reference. Expiry Time. Time		
0	1				External Reference. Mime Code. Code	VCD-02-R015	
0	1				External Reference. Format Code. Code		
0	1				External Reference. Encoding Code. Code		
0	1				External Reference. Character Set Code. Code	VCD-02-R016	
0	1				External Reference. File Name. Name		
0	n				External Reference. Description. Text		
0	n				+ Document Reference. Result Of Verification		
0	1				Result Of Verification. Validator Identifier. Identifier		
0	1				Result Of Verification. Validate Result Code. Code	VCD-02-R018	
0	1				Result Of Verification. Validation Date. Date		
0	1				Result Of Verification. Validation Time. Time		
0	1				Result Of Verification. Validate Process. Text		
0	1				Result Of Verification. Validate Tool. Text		
0	1				Result Of Verification. Validate Tool Version. Text		
0	1				+ Result Of Verification. Signatory Party. Party		
0	1				Party. Endpoint Identifier. Identifier		
0	n				+ Party. Party Identification		
1	1				Party Identification. Identifier		
0	n				+ Party. Party Name		
1	1				Party Name. Name		
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		

0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		
0	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-V02-R008	
0	n					Contact. Note. Text		
0	n					+ Party. Person		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Document Reference. Issuer Party. Party		
0	1					Party. Endpoint Identifier. Identifier		
0	n					+ Party. Party Identification		
1	1					Party Identification. Identifier		
0	n					+ Party. Party Name		
1	1					Party Name. Name		
0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	

0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ Party. Contact		
0	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-V02-R008	
0	n				Contact. Note. Text		
0	n				+ Party. Person		
0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	n				+ Document Reference. Language		
0	1				Language. Identifier		
0	1				Language. Name		
0	1				Language. Locale Code. Code	VCD-02-R022	

Table 20 Elements in a VCD version 1.3.1

ii. VCD Package 1.3.1

The *Table 21* shows the elements in a VCD Package version 1.3.1. Columns description:

- ▶ first two columns show the Cardinality of the element.
- ▶ the second column shows the element name (element preceded with a "+" sign is a class, the rest are simple elements. Element followed by a "6" sign an element having the same structure of one of its ancestor; its structure is not showed, take the ancestor's structure as reference);
- ▶ the third column states business requirements, business rules or code list that may apply to the field;
- ▶ the last column states if the element is part of the core data model or not (the core data model is the set of elements that the receiver must be able to process). Elements in core data model are marked with "x".

NOTE: the order of elements when used in VCD must follow the order stated in the below list.

Min	Max	VCD Package elements	Business Requirements/ Rules	Core
1	1	VCD Package. UUID. Identifier	Org01 VCD-P02-R009	x
0	1	VCD Package. Call For Tender Identifier. Identifier	Org06	x
0	n	VCD Package. Procurement Lot Identifier. Identifier	Org08	x
1	1	VCD Package. VCD Schema Version Identifier. Identifier		x
0	1	VCD Package. Ontology Domain. Code	Org07 VCD-02-R012	x
1	1	VCD Package. Ontology Version Identifier. Identifier		x
1	1	VCD Package. Compilation Date. Date	Org01	x
1	1	VCD Package. Compilation Time. Time	Org01	x
0	1	VCD Package. VCD Package Name. Name		x
0	1	VCD Package. VCD Type. Code		x
0	1	+ VCD Package. Contracting Authority Party. Party	Org22, Org23	x
0	1	Party. Endpoint Identifier. Identifier		
0	n	+Party. Party Identification		x
1	1	Party Identification. Identifier		x
0	n	+ Party. Party Name		x
1	1	Party Name. Name		x
0	1	+ Party. Postal Address. Address		x

0	1		Address. Address Type Code. Code	VCD-02-R019	X
0	1		Address. Room. Text		X
0	1		Address. Street Name. Name		X
0	1		Address. Building Name. Name		X
0	1		Address. Building Number. Text		X
0	1		Address. City Name. Name		X
0	1		Address. Postal Zone. Text		X
0	1		Address. Country Subentity. Text		X
0	1		Address. Country Subentity Code. Code	VCD-02-R020	X
0	n		+ Address. Address Line		X
1	1		Address Line. Line. Text		X
0	1		+ Address. Country		X
0	1		Country. Identification Code. Code	VCD-02-R021	X
0	1		Country. Name		X
0	1		+ Party. Contact		X
0	1		Contact. Name		X
0	1		Contact. Telephone. Text		X
0	1		Contact. Telefax. Text		X
0	1		Contact. Electronic Mail. Text	VCD-P02-R008	X
0	n		Contact. Note. Text		X
0	n		+ Party. Person		X
0	1		Person. First Name. Name		X
0	1		Person. Family Name. Name		X
0	1		Person. Middle Name. Name		X
0	1		Person. Job Title. Text		X
0	1		+ VCD Package. Requester Party. Party		X
0	1		Party. Endpoint Identifier. Identifier		
0	n		+Party. Party Identification		X
1	1		Party Identification. Identifier		X

0	n		+ Party. Party Name		x
1	1		Party Name. Name		x
0	1		+ Party. Postal Address. Address		x
0	1		Address. Address Type Code. Code	VCD-02-R019	x
0	1		Address. Room. Text		x
0	1		Address. Street Name. Name		x
0	1		Address. Building Name. Name		x
0	1		Address. Building Number. Text		x
0	1		Address. City Name. Name		x
0	1		Address. Postal Zone. Text		x
0	1		Address. Country Subentity. Text		x
0	1		Address. Country Subentity Code. Code	VCD-02-R020	x
0	n		+ Address. Address Line		x
1	1		Address Line. Line. Text		x
0	1		+ Address. Country		x
0	1		Country. Identification Code. Code	VCD-02-R021	x
0	1		Country. Name		x
0	1		+ Party. Contact		x
0	1		Contact. Name		x
0	1		Contact. Telephone. Text		x
0	1		Contact. Telefax. Text		x
0	1		Contact. Electronic Mail. Text	VCD-P02-R008	x
0	n		Contact. Note. Text		x
0	n		+ Party. Person		x
0	1		Person. First Name. Name		x
0	1		Person. Family Name. Name		x
0	1		Person. Middle Name. Name		x
0	1		Person. Job Title. Text		x
0	1		+ VCD Package. Issuing Service. IssuingService	Org05	x

					VCD-P02-R002	
1	1			Issuing Service. Endpoint Identifier. Identifier		x
1	1			Issuing Service. Name. Text		x
1	1			+ Issuing Service. Providing Party. Party		x
0	1			Party. Endpoint Identifier. Identifier		
0	n			+ Party. Party Identification		x
1	1			Party Identification. Identifier		x
0	n			+ Party. Party Name		x
1	1			Party Name. Name		x
0	1			+ Party. Postal Address. Address		x
0	1			Address. Address Type Code. Code	VCD-02-R019	x
0	1			Address. Room. Text		x
0	1			Address. Street Name. Name		x
0	1			Address. Building Name. Name		x
0	1			Address. Building Number. Text		x
0	1			Address. City Name. Name		x
0	1			Address. Postal Zone. Text		x
0	1			Address. Country Subentity. Text		x
0	1			Address. Country Subentity Code. Code	VCD-02-R020	x
0	n			+ Address. Address Line		x
1	1			Address Line. Line. Text		x
0	1			+ Address. Country		x
0	1			Country. Identification Code. Code	VCD-02-R021	x
0	1			Country. Name		x
0	1			+Party. Contact		x
0	1			Contact. Name		x
0	1			Contact. Telephone. Text		x
0	1			Contact. Telefax. Text		x
0	1			Contact. Electronic Mail. Text	VCD-P02-R008	x

0	n			Contact. Note. Text		x
0	n			+ <i>Party. Person</i>		x
0	1			Person. First Name. Name		x
0	1			Person. Family Name. Name		x
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
0	1			+ <i>Issuing Service. Policy Document. Document</i>		x
1	1			Document. Document Group Identifier. Identifier		x
1	1			Document. Title. Text		x
1	n			+ <i>Document. Document Reference</i>		x
1	1			Document Reference. Identifier		x
0	1			Document Reference. Issue Date. Date		x
0	1			Document Reference. Issue Time. Time		x
0	1			Document Reference. Document Type Code. Code	VCD-02-R014	x
0	1			Document Reference. Document Type. Text		x
0	1			+ <i>Document Reference. Attachment</i>		x
0	1			Attachment. Embedded Document. Binary Object		
0	1			+ <i>Attachment. External Reference</i>		x
0	1			External Reference. URI. Identifier		x
0	1			External Reference. Document Hash. Text		x
0	n			External Reference. Hash Algorithm Method. Text		x
0	1			External Reference. Expiry Date. Date		x
0	1			External Reference. Expiry Time. Time		x
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		x
0	n			External Reference. Description. Text		x

0	n					+ Document Reference. Result Of Verification		X
0	1					Result Of Verification. Validator Identifier. Identifier		X
0	1					Result Of Verification. Validate Result Code. Code	VCD-02-R018	X
0	1					Result Of Verification. Validation Date. Date		X
0	1					Result Of Verification. Validation Time. Time		X
0	1					Result Of Verification. Validate Process. Text		X
0	1					Result Of Verification. Validate Tool. Text		X
0	1					Result Of Verification. Validate Tool Version. Text		X
0	1					+ Result Of Verification. Signatory Party. Party		X
0	1					Party. Endpoint Identifier. Identifier		X
0	n					+ Party. Party Identification		X
1	1					Party Identification. Identifier		X
0	n					+ Party. Party Name		X
1	1					Party Name. Name		X
0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		X

0	1						Contact. Name		X
0	1						Contact. Telephone. Text		X
0	1						Contact. Telefax. Text		X
0	1						Contact. Electronic Mail. Text	VCD-P02-R008	X
0	n						Contact. Note. Text		X
0	n						+ Party. Person		X
0	1						Person. First Name. Name		X
0	1						Person. Family Name. Name		X
0	1						Person. Middle Name. Name		
0	1						Person. Job Title. Text		
0	1						+ Document Reference. Issuer Party. Party		X
0	1						Party. Endpoint Identifier. Identifier		
0	n						+ Party. Party Identification		X
1	1						Party Identification. Identifier		X
0	n						+ Party. Party Name		X
1	1						Party Name. Name		X
0	1						+ Party. Postal Address. Address		
0	1						Address. Address Type Code. Code	VCD-02-R019	
0	1						Address. Room. Text		
0	1						Address. Street Name. Name		
0	1						Address. Building Name. Name		
0	1						Address. Building Number. Text		
0	1						Address. City Name. Name		
0	1						Address. Postal Zone. Text		
0	1						Address. Country Subentity. Text		
0	1						Address. Country Subentity Code. Code	VCD-02-R020	
0	n						+ Address. Address Line		
1	1						Address Line. Line. Text		
0	1						+ Address. Country		
0	1						Country. Identification Code. Code	VCD-02-R021	

0	1						Country. Name		
0	1						+ Party. Contact		
0	1						Contact. Name		
0	1						Contact. Telephone. Text		
0	1						Contact. Telefax. Text		
0	1						Contact. Electronic Mail. Text	VCD-P02-R008	
0	n						Contact. Note. Text		
0	n						+ Party. Person		
0	1						Person. First Name. Name		
0	1						Person. Family Name. Name		
0	1						Person. Middle Name. Name		
0	1						Person. Job Title. Text		
0	n						+ Document Reference. Language		x
0	1						Language. Identifier		x
0	1						Language. Name		x
0	1						Language. Locale Code. Code	VCD-02-R022	x
0	1						+ VCD Package. Single Tenderer	Org03	x
1	1						Single Tenderer. VCD Reference Identifier. Identifier		x
0	n						+ Single Tenderer. Subcontractor Single Tenderer. Single Tenderer 6	Org04	x
0	1						+ VCD Package. Bidding Consortium	Org03	x
1	1						Bidding Consortium. VCD Reference Identifier. Identifier		x
1	1						+ Bidding Consortium. Leader Single Tenderer. Single Tenderer	Org02	x
1	1						Single Tenderer. VCD Reference Identifier. Identifier		x
0	n						+ Single Tenderer. Subcontractor Single Tenderer. Single Tenderer 6	Org04	x
1	n						+ Bidding Consortium. Other Member Single Tenderer. Single Tenderer		x
1	1						Single Tenderer. VCD Reference Identifier. Identifier		x
0	n						+ Single Tenderer. Subcontractor Single Tenderer. Single Tenderer 6	Org04	x
0	1						+ VCD Package. Signature	Org30	x
1	1						Signature. Identifier		x

0	1		Signature. Note. Text			X
0	1		Signature. Canonicalization Method. Text			X
0	1		Signature. Signature Method. Text			X
1	1		+ Signature. Signatory Party. Party			X
0	1		Party. Endpoint Identifier. Identifier			X
0	n		+ Party. Party Identification			X
1	1		Party Identification. Identifier			X
0	n		+ Party. Party Name			X
1	1		Party Name. Name			X
0	1		+ Party. Postal Address. Address			
0	1		Address. Address Type Code. Code	VCD-02-R019		
0	1		Address. Room. Text			
0	1		Address. Street Name. Name			
0	1		Address. Building Name. Name			
0	1		Address. Building Number. Text			
0	1		Address. City Name. Name			
0	1		Address. Postal Zone. Text			
0	1		Address. Country Subentity. Text			
0	1		Address. Country Subentity Code. Code	VCD-02-R020		
0	n		+ Address. Address Line			
1	1		Address Line. Line. Text			
0	1		+ Address. Country			
0	1		Country. Identification Code. Code	VCD-02-R021		
0	1		Country. Name			
0	1		+ Party. Contact			X
0	1		Contact. Name			X
0	1		Contact. Telephone. Text			X
0	1		Contact. Telefax. Text			X
0	1		Contact. Electronic Mail. Text	VCD-P02-R008		X

0	n			Contact. Note. Text		x
0	n			+ <i>Party. Person</i>		x
0	1			Person. First Name. Name		x
0	1			Person. Family Name. Name		x
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
0	1			+ <i>Signature. Digital Signature Attachment.Attachment</i>		x
0	1			Attachment. Embedded Document. BinaryObject		
0	1			+ <i>Attachment. External Reference</i>		x
0	1			External Reference. URI. Identifier		x
0	1			External Reference. Document Hash. Text		x
0	n			External Reference. Hash Algorithm Method. Text		x
0	1			External Reference. Expiry Date. Date		x
0	1			External Reference. Expiry Time. Time		x
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		x
0	n			External Reference. Description. Text		x
0	1			+ <i>Signature. Original Document Reference. Document Reference</i>		
1	1			Document Reference. Identifier		
0	1			Document Reference. Issue Date. Date		
0	1			Document Reference. Issue Time. Time		
0	1			Document Reference. Document Type Code. Code	VCD-02-R014	
0	1			Document Reference. Document Type. Text		
0	1			+ <i>Document Reference. Attachment</i>		
0	1			Attachment. Embedded Document. BinaryObject		
0	1			+ <i>Attachment. External Reference</i>		

0	1					External Reference. URI. Identifier		
0	1					External Reference. Document Hash. Text		
0	n					External Reference. Hash Algorithm Method. Text		
0	1					External Reference. Expiry Date. Date		
0	1					External Reference. Expiry Time. Time		
0	1					External Reference. Mime Code. Code	VCD-02-R015	
0	1					External Reference. Format Code. Code		
0	1					External Reference. Encoding Code. Code		
0	1					External Reference. Character Set Code. Code	VCD-02-R016	
0	1					External Reference. File Name. Name		
0	n					External Reference. Description. Text		
0	n					+ Document Reference. Result Of Verification		
0	1					Result Of Verification. Validator Identifier. Identifier		
0	1					Result Of Verification. Validate Result Code. Code	VCD-02-R018	
0	1					Result Of Verification. Validation Date. Date		
0	1					Result Of Verification. Validation Time. Time		
0	1					Result Of Verification. Validate Process. Text		
0	1					Result Of Verification. Validate Tool. Text		
0	1					Result Of Verification. Validate Tool Version. Text		
0	1					+ Result Of Verification. Signatory Party. Party		
0	1					Party. Endpoint Identifier. Identifier		
0	n					+ Party. Party Identification		
1	1					Party Identification. Identifier		
0	n					+ Party. Party Name		
1	1					Party Name. Name		
0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		

0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		
0	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-P02-R008	
0	n					Contact. Note. Text		
0	n					+ Party. Person		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Document Reference. Issuer Party. Party		
0	1					Party. Endpoint Identifier. Identifier		
0	n					+ Party. Party Identification		
1	1					Party Identification. Identifier		
0	n					+ Party. Party Name		
1	1					Party Name. Name		
0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		

0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ Party. Contact		
0	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-P02-R008	
0	n				Contact. Note. Text		
0	n				+ Party. Person		
0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	n				+ Document Reference. Language		
0	1				Language. Identifier		
0	1				Language. Name		
0	1				Language. Locale Code. Code	VCD-02-R022	

Table 21 Elements in a VCD Package version 1.3.1

iii. VCD 2.0

The Table 22 shows the elements in a VCD version 2.0. Columns description:

- ▶ First two columns show the Cardinality of the element.
- ▶ The element name (element preceded with a “+” sign is a class, the rest are simple elements. Element followed by a “6” sign an element having the same structure of one of its ancestor; its structure is not showed, take the ancestor's structure as reference).
- ▶ the third column states business requirements, business rules or code list that may apply to the field;
- ▶ the last column states if the element is part of the core data model or not (the core data model is the set of elements that the receiver must be able to process). Elements in core data model are marked with “x”.

NOTE: the order of elements when used in VCD must follow the order stated in the below list.

Min	Max	VCD elements	Business Requirements/ Rules	Core
1	1	VCD. UUID. Identifier	Org09 VCD-V02-R009	x
0	1	VCD. Ontology Version Identifier. Identifier		x
1	1	VCD. Compilation Date. Date	Org09	x
1	1	VCD. Compilation Time. Time	Org09	x
0	1	VCD. VCD Type Code. Code	VCD-02-R022	x
0	1	+ VCD. Legal Domain		x
0	1	Legal Domain. Ontology URI. Identifier		x
1	1	Legal Domain. Domain Code. Code	VCD-02-R012	x
1	1	Legal Domain. Domain. Text		x
0	1	+ VCD. Requester Party. Party		
0	1	Party. Endpoint Identifier. Identifier		
0	n	+Party. Party Identification		
1	1	Party Identification. Identifier		
0	n	+ Party. Party Name		
1	1	Party Name. Name		
0	1	+ Party. Postal Address. Address		
0	1	Address. Address Type Code. Code	VCD-02-R019	
0	1	Address. Room. Text		

0	1		Address. Street Name. Name		
0	1		Address. Building Name. Name		
0	1		Address. Building Number. Text		
0	1		Address. City Name. Name		
0	1		Address. Postal Zone. Text		
0	1		Address. Country Subentity. Text		
0	1		Address. Country Subentity Code. Code	VCD-02-R020	
0	n		+ Address. Address Line		
1	1		Address Line. Line. Text		
0	1		+ Address. Country		
0	1		Country. Identification Code. Code	VCD-02-R021	
0	1		Country. Name		
0	1		+ Party. Contact		
1	1		Contact. Name		
0	1		Contact. Telephone. Text		
0	1		Contact. Telefax. Text		
0	1		Contact. Electronic Mail. Text	VCD-V02-R008	
0	n		Contact. Note. Text		
0	n		+ Party. Person		
0	1		Person. First Name. Name		
0	1		Person. Family Name. Name		
0	1		Person. Middle Name. Name		
0	1		Person. Job Title. Text		
0	1		+ VCD. VCD Issuing Service. IssuingService	Org12 VCD-V02-R002	x
1	1		Issuing Service. Endpoint Identifier. Identifier		x
1	1		Issuing Service. Name. Text		x
1	1		+ Issuing Service. Providing Party. Party		x
0	1		Party. Endpoint Identifier. Identifier		
0	n		+ Party. Party Identification		x
1	1		Party Identification. Identifier		x

0	n			+ <i>Party. Party Name</i>		x
1	1			Party Name. Name		x
0	1			+ <i>Party. Postal Address. Address</i>		x
0	1			Address. Address Type Code. Code	VCD-02-R019	x
0	1			Address. Room. Text		x
0	1			Address. Street Name. Name		x
0	1			Address. Building Name. Name		x
0	1			Address. Building Number. Text		x
0	1			Address. City Name. Name		x
0	1			Address. Postal Zone. Text		x
0	1			Address. Country Subentity. Text		x
0	1			Address. Country Subentity Code. Code	VCD-02-R020	x
0	n			+ <i>Address. Address Line</i>		x
1	1			Address Line. Line. Text		x
0	1			+ <i>Address. Country</i>		x
0	1			Country. Identification Code. Code	VCD-02-R021	x
0	1			Country. Name		x
0	1			+ <i>Party. Contact</i>		x
1	1			Contact. Name		x
0	1			Contact. Telephone. Text		x
0	1			Contact. Telefax. Text		x
0	1			Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n			Contact. Note. Text		x
0	n			+ <i>Party. Person</i>		
0	1			Person. First Name. Name		x
0	1			Person. Family Name. Name		x
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
0	1			+ <i>Issuing Service. Policy Document. Document</i>		x
1	1			Document. Document Group Identifier. Identifier		x

1	1			Document. Title. Text		x
1	n			+ Document. Document Reference		x
1	1			Document Reference. Identifier		x
0	1			Document Reference. Issue Date. Date		x
0	1			Document Reference. Issue Time. Time		x
0	1			Document Reference. Document Type Code. Code	VCD-02-R014	x
0	1			Document Reference. Document Type. Text		x
0	1			+ Document Reference. Attachment		x
0	1			Attachment. Embedded Document. Binary Object		
0	1			+ Attachment. External Reference		x
0	1			External Reference. URI. Identifier		x
0	1			External Reference. Document Hash. Text		x
0	n			External Reference. Hash Algorithm Method. Text		x
0	1			External Reference. Expiry Date. Date		x
0	1			External Reference. Expiry Time. Time		x
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		x
0	n			External Reference. Description. Text		x
0	n			+ Document Reference. Result Of Verification		x
0	1			Result Of Verification. Validator Identifier. Identifier		x
1	1			Result Of Verification. Validate Result Code. Code	VCD-02-R018	x
0	1			Result Of Verification. Validation Date. Date		x
0	1			Result Of Verification. Validation Time. Time		x
0	1			Result Of Verification. Validate Process. Text		x
0	1			Result Of Verification. Validate Tool. Text		x
0	1			Result Of Verification. Validate Tool Version. Text		x
0	1			+ Result Of Verification. Signatory Party. Party		x

0	1						Party. Endpoint Identifier. Identifier		x
0	n						+ Party. Party Identification		x
1	1						Party Identification. Identifier		x
0	n						+ Party. Party Name		x
1	1						Party Name. Name		x
0	1						+ Party. Postal Address. Address		
0	1						Address. Address Type Code. Code	VCD-02-R019	
0	1						Address. Room. Text		
0	1						Address. Street Name. Name		
0	1						Address. Building Name. Name		
0	1						Address. Building Number. Text		
0	1						Address. City Name. Name		
0	1						Address. Postal Zone. Text		
0	1						Address. Country Subentity. Text		
0	1						Address. Country Subentity Code. Code	VCD-02-R020	
0	n						+ Address. Address Line		
1	1						Address Line. Line. Text		
0	1						+ Address. Country		
0	1						Country. Identification Code. Code	VCD-02-R021	
0	1						Country. Name		
0	1						+ Party. Contact		x
1	1						Contact. Name		x
0	1						Contact. Telephone. Text		x
0	1						Contact. Telefax. Text		x
0	1						Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n						Contact. Note. Text		x
0	n						+ Party. Person		x
0	1						Person. First Name. Name		x
0	1						Person. Family Name. Name		x
0	1						Person. Middle Name. Name		

0	1					Person. Job Title. Text		
0	n					+ Document Reference. Language		x
0	1					Language. Name		x
0	1					Language. Locale Code. Code	VCD-02-R022	x
1	1					+ VCD. Economic Operator		x
1	1					Economic Operator. Tenderer Role Code.Code		x
1	1					Economic Operator. Tenderer Type Code.Code		x
1	1					+ Economic Operator. Legal Domain	Org17	x
0	1					Legal Domain. Ontology URI.Identifier		x
1	1					Legal Domain. Domain Code. Code	VCD-02-R012	x
1	1					Legal Domain. Domain. Text		x
1	1					+ Economic Operator. Party	Org15 Org16	x
0	1					Party. Endpoint Identifier. Identifier		
0	n					+Party. Party Identification		x
1	1					Party Identification. Identifier		x
0	n					+Party. Party Name		x
1	1					Party Name. Name		x
0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		

0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				<i>+Party. Contact</i>		
1	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-V02-R008	
0	n				Contact. Note. Text		
0	n				<i>+ Party. Person</i>		
0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
1	n				<i>+ Economic Operator. Criterion</i>	Org10, Org28	x
1	1				Criterion. Identifier		x
1	1				Criterion. Requested Indicator. Indicator		x
1	1				Criterion. Suggested Indicator. Indicator		x
0	1				Criterion. All Evidences Supplied Indicator. Indicator		x
0	1				Criterion. Proven Indicator. Indicator		x
0	n				Criterion. Proving Evidence. Identifier	VCD-V02-R004 VCD-V02-R006 VCD-V02-R0028a	x
0	1				<i>+ Criterion. Criterion Group Regulation. Regulation</i>		x
1	n				Regulation. Name. Text		x
0	1				Regulation. Legal Reference. Text		x
0	1				Regulation. URI. Identifier		x
0	n				Regulation. Legal Text. Text	VCD-V02-R024	x
0	n				Regulation. Further Information. Text	VCD-V02-R027	x
0	1				Regulation. Requirement Description. Text		x
0	1				Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1				Regulation. Substitute Evidence Description. Text		x

1	1				+ Criterion. European Regulation. Regulation	Org29	x
1	n				Regulation. Name. Text		x
0	1				Regulation. Legal Reference. Text		x
0	1				Regulation. URI. Identifier		x
0	n				Regulation. Legal Text. Text	VCD-V02-R024	x
0	n				Regulation. Further Information. Text	VCD-V02-R027	x
0	1				Regulation. Requirement Description. Text		x
0	1				Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1				Regulation. Substitute Evidence Description. Text		x
1	1				+ Criterion. Economic Operator National Regulation. Regulation	Org29	x
1	n				Regulation. Name. Text		x
0	1				Regulation. Legal Reference. Text		x
0	1				Regulation. URI. Identifier		x
0	n				Regulation. Legal Text. Text	VCD-V02-R024	x
0	n				Regulation. Further Information. Text	VCD-V02-R027	x
0	1				Regulation. Requirement Description. Text		x
0	1				Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1				Regulation. Substitute Evidence Description. Text		x
1	1				+ Criterion. Contracting Authority National Regulation. Regulation	Org29	x
1	n				Regulation. Name. Text		x
0	1				Regulation. Legal Reference. Text		x
0	1				Regulation. URI. Identifier		x
0	n				Regulation. Legal Text. Text	VCD-V02-R024	x
0	n				Regulation. Further Information. Text	VCD-V02-R027	x
0	1				Regulation. Requirement Description. Text		x
0	1				Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1				Regulation. Substitute Evidence Description. Text		x
0	1				+ Economic Operator. Person Details	VCD-V02-R007	
0	1				Person Details. Identifier		

0	1			Person Details. First Name. Name		
0	1			Person Details. Family Name. Name		
0	1			Person Details. Middle Name. Name		
0	1			Person Details. Job Title. Text		
0	1			Person Details. Birth Date. Date		
0	1			Person Details. Place Of Birth. Text		
0	1			+ <i>Person Details. Residence Address.Address</i>		
0	1			Address. Address Type Code. Code	VCD-02-R019	
0	1			Address. Room. Text		
0	1			Address. Street Name. Name		
0	1			Address. Building Name. Name		
0	1			Address. Building Number. Text		
0	1			Address. City Name. Name		
0	1			Address. Postal Zone. Text		
0	1			Address. Country Subentity. Text		
0	1			Address. Country Subentity Code. Code	VCD-02-R020	
0	n			+ <i>Address. Address Line</i>		
1	1			Address Line. Line. Text		
0	1			+ <i>Address. Country</i>		
0	1			Country. Identification Code. Code	VCD-02-R021	
0	1			Country. Name		
0	1			+ <i>Person Details. Citizenship Country.Country</i>		
0	1			Country. Identification Code. Code		
0	1			Country. Name		
0	n			+ <i>VCD. Relevant VCD Person</i>		x
0	1			VCD Person. UUID. Identifier	VCD-V02-R009	x
0	1			+ <i>VCD Person. Legal Domain</i>	Org21	x
0	1			Legal Domain. Ontology URI.Identifier		x
1	1			Legal Domain. Domain Code. Code	VCD-02-R012	x
1	1			Legal Domain. Domain. Text		x

0	n		+ VCD Person. Criterion	Org11, Org28	x
1	1		Criterion. Identifier		x
1	1		Criterion. Requested Indicator. Indicator		x
1	1		Criterion. Suggested Indicator. Indicator		x
0	1		Criterion. All Evidences Supplied Indicator. Indicator		x
0	1		Criterion. Proven Indicator. Indicator		x
0	n		Criterion. Proving Evidence. Identifier	VCD-V02-R004 VCD-V02-R006 VCD-V02-R0028a	x
0	1		+ Criterion. Criterion Group Regulation. Regulation		x
1	n		Regulation. Name. Text		x
0	1		Regulation. Legal Reference. Text		x
0	1		Regulation. URI. Identifier		x
0	n		Regulation. Legal Text. Text	VCD-V02-R024	x
0	n		Regulation. Further Information. Text	VCD-V02-R027	x
0	1		Regulation. Requirement Description. Text		x
0	1		Regulation. Minimum Substitute Evidence Level. Code		x
0	1		Regulation. Substitute Evidence Description. Text		x
1	1		+ Criterion. European Regulation. Regulation	Org29	x
1	n		Regulation. Name. Text		x
0	1		Regulation. Legal Reference. Text		x
0	1		Regulation. URI. Identifier		x
0	n		Regulation. Legal Text. Text	VCD-V02-R024	x
0	n		Regulation. Further Information. Text	VCD-V02-R027	x
0	1		Regulation. Requirement Description. Text		x
0	1		Regulation. Minimum Substitute Evidence Level. Code		x
0	1		Regulation. Substitute Evidence Description. Text		x
1	1		+ Criterion. Economic Operator National Regulation. Regulation	Org29	x
1	n		Regulation. Name. Text		x
0	1		Regulation. Legal Reference. Text		x
0	1		Regulation. URI. Identifier		x

0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information. Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ Criterion. Contracting Authority National Regulation. Regulation	Org29	x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information . Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	1			+ VCD Person. Person Details	Org19 VCD-V02-R007	x
0	1			Person Details. Identifier		x
0	1			Person Details. First Name. Name		x
0	1			Person Details. Family Name. Name		x
0	1			Person Details. Middle Name. Name		x
0	1			Person Details. Job Title. Text	Org20	x
0	1			Person Details. Birth Date. Date		x
0	1			Person Details. Place Of Birth. Text		x
0	1			+ Person Details. Residence Address. Address		x
0	1			Address. Address Type Code. Code	VCD-02-R019	x
0	1			Address. Room. Text		x
0	1			Address. Street Name. Name		x
0	1			Address. Building Name. Name		x
0	1			Address. Building Number. Text		x
0	1			Address. City Name. Name		x
0	1			Address. Postal Zone. Text		x

0	1			Address. Country Subentity. Text		x
0	1			Address. Country Subentity Code. Code	VCD-02-R020	x
0	n			+ Address. Address Line		x
1	1			Address Line. Line. Text		x
0	1			+ Address. Country		x
0	1			Country. Identification Code. Code	VCD-02-R021	x
0	1			Country. Name		x
0	1			+ Person Details. Citizenship Country. Country	Org21	x
0	1			Country. Identification Code. Code		x
0	1			Country. Name		x
0	n			+ VCD. Evidence	Org13	x
1	1			Evidence. Maturity Level Code. Code	VCD-02-R013	x
1	1			Evidence. Document Group Identifier. Identifier		x
1	n			Evidence. Title. Text		x
1	n			Evidence. Proves Criterion. Identifier	Org25 VCD-V02-R005 VCD-V02-R028b	x
0	1			Evidence. Additional Information. Text		x
0	1			+ Evidence. Ontology Definition Regulation. Regulation		x
1	n			Regulation. Name. Text		x
0	1			Regulation. Legal Reference. Text		x
0	1			Regulation. URI. Identifier		x
0	n			Regulation. Legal Text. Text	VCD-V02-R024	x
0	n			Regulation. Further Information. Text	VCD-V02-R027	x
0	1			Regulation. Requirement Description. Text		x
0	1			Regulation. Minimum Substitute Evidence Level Code. Code		x
0	1			Regulation. Substitute Evidence Description. Text		x
1	n			+ Evidence. Document Reference		x
1	1			Document Reference. Identifier		x
0	1			Document Reference. Issue Date. Date		x
0	1			Document Reference. Issue Time. Time		x

0	1			Document Reference. Document Type Code. Code	VCD-02-R014	x
0	1			Document Reference. Document Type. Text		x
0	1			+ Document Reference. Attachment		x
0	1			Attachment. Embedded Document. Binary Object		
0	1			+ Attachment. External Reference		x
0	1			External Reference. URI. Identifier		x
0	1			External Reference. Document Hash. Text		x
0	n			External Reference. Hash Algorithm Method. Text		x
0	1			External Reference. Expiry Date. Date		x
0	1			External Reference. Expiry Time. Time		x
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		x
0	n			External Reference. Description. Text		x
0	n			+ Document Reference. Result Of Verification	Org31	x
0	1			Result Of Verification. Validator Identifier. Identifier		x
1	1			Result Of Verification. Validate Result Code. Code	VCD-02-R018	x
0	1			Result Of Verification. Validation Date. Date		x
0	1			Result Of Verification. Validation Time. Time		x
0	1			Result Of Verification. Validate Process. Text		x
0	1			Result Of Verification. Validate Tool. Text		x
0	1			Result Of Verification. Validate Tool Version. Text		x
0	1			+ Result Of Verification. Signatory Party. Party		x
0	1			Party. Endpoint Identifier. Identifier		
0	n			+ Party. Party Identification		x
1	1			Party Identification. Identifier		x
0	n			+ Party. Party Name		x
1	1			Party Name. Name		x

0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		x
1	1					Contact. Name		x
0	1					Contact. Telephone. Text		x
0	1					Contact. Telefax. Text		x
0	1					Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n					Contact. Note. Text		x
0	n					+ Party. Person		x
0	1					Person. First Name. Name		x
0	1					Person. Family Name. Name		x
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Document Reference. Issuer Party. Party	Org27	x
0	1					Party. Endpoint Identifier. Identifier		
0	n					+ Party. Party Identification		x
1	1					Party Identification. Identifier		x

0	n				+ <i>Party. Party Name</i>		x
1	1				Party Name. Name		x
0	1				+ <i>Party. Postal Address. Address</i>		x
0	1				Address. Address Type Code. Code	VCD-02-R019	x
0	1				Address. Room. Text		x
0	1				Address. Street Name. Name		x
0	1				Address. Building Name. Name		x
0	1				Address. Building Number. Text		x
0	1				Address. City Name. Name		x
0	1				Address. Postal Zone. Text		x
0	1				Address. Country Subentity. Text		x
0	1				Address. Country Subentity Code. Code	VCD-02-R020	x
0	n				+ <i>Address. Address Line</i>		x
1	1				Address Line. Line. Text		x
0	1				+ <i>Address. Country</i>		x
0	1				Country. Identification Code. Code	VCD-02-R021	x
0	1				Country. Name		x
0	1				+ <i>Party. Contact</i>		x
1	1				Contact. Name		x
0	1				Contact. Telephone. Text		x
0	1				Contact. Telefax. Text		x
0	1				Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n				Contact. Note. Text		x
0	n				+ <i>Party. Person</i>		x
0	1				Person. First Name. Name		x
0	1				Person. Family Name. Name		x
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	1				+ <i>Document Reference. Issuing Service</i>	Org27	
1	1				Issuing Service. Endpoint Identifier.Identifier		

1	1				Issuing Service. Name. Text		
1	1				+ Issuing Service. Providing Party.Party		
0	1				Party. Endpoint Identifier.Identifier		
0	n				+ Party. Party Identification		
1	1				Party Identification. Identifier		
0	n				+ Party. Party Name		
1	1				Party Name. Name		
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code.Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		
0	1				Country. Identification Code.Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ Party. Contact		
1	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-V02-R008	
0	n				Contact. Note. Text		
0	n				+ Party. Person		
0	1				Person. First Name. Name		

0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Issuing Service. Policy Document. Document		
1	1					Document. Document Group Identifier. Identifier		
1	1					Document. Title. Text		
1	n					+ Document. Document Reference 6		
0	n					+ Document Reference. Language		
0	1					Language. Name		
0	1					Language. Locale Code. Code	VCD-02-R022	
0	n					+ VCD. Additional Document. Document	Org14	
1	1					Document. Document Group Identifier. Identifier		
1	1					Document. Title. Text		
1	n					+ Document. Document Reference		
1	1					Document Reference. Identifier		
0	1					Document Reference. Issue Date. Date		
0	1					Document Reference. Issue Time. Time		
0	1					Document Reference. Document Type Code. Code	VCD-02-R014	
0	1					Document Reference. Document Type. Text		
0	1					+ Document Reference. Attachment		
0	1					Attachment. Embedded Document. Binary Object		
0	1					+ Attachment. External Reference		
0	1					External Reference. URI. Identifier		
0	1					External Reference. Document Hash. Text		
0	n					External Reference. Hash Algorithm Method. Text		
0	1					External Reference. Expiry Date. Date		
0	1					External Reference. Expiry Time. Time		
0	1					External Reference. Mime Code. Code	VCD-02-R015	
0	1					External Reference. Format Code. Code		
0	1					External Reference. Encoding Code. Code		

0	1				External Reference. Character Set Code. Code	VCD-02-R016	
0	1				External Reference. File Name. Name		
0	n				External Reference. Description. Text		
0	n				+ Document Reference. Result Of Verification		
0	1				Result Of Verification. Validator Identifier. Identifier		
1	1				Result Of Verification. Validate Result Code. Code	VCD-02-R018	
0	1				Result Of Verification. Validation Date. Date		
0	1				Result Of Verification. Validation Time. Time		
0	1				Result Of Verification. Validate Process. Text		
0	1				Result Of Verification. Validate Tool. Text		
0	1				Result Of Verification. Validate Tool Version. Text		
0	1				+ Result Of Verification. Signatory Party. Party		
0	1				Party. Endpoint Identifier. Identifier		
0	n				+ Party. Party Identification		
1	1				Party Identification. Identifier		
0	n				+ Party. Party Name		
1	1				Party Name. Name		
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		

0	1						Country. Identification Code. Code	VCD-02-R021	
0	1						Country. Name		
0	1						<i>+ Party. Contact</i>		
1	1						Contact. Name		
0	1						Contact. Telephone. Text		
0	1						Contact. Telefax. Text		
0	1						Contact. Electronic Mail. Text	VCD-V02-R008	
0	n						Contact. Note. Text		
0	n						<i>+ Party. Person</i>		
0	1						Person. First Name. Name		
0	1						Person. Family Name. Name		
0	1						Person. Middle Name. Name		
0	1						Person. Job Title. Text		
0	1						<i>+ Document Reference. Issuer Party. Party</i>	Org24	
0	1						Party. Endpoint Identifier. Identifier		
0	n						<i>+ Party. Party Identification</i>		
1	1						Party Identification. Identifier		
0	n						<i>+ Party. Party Name</i>		
1	1						Party Name. Name		
0	1						<i>+ Party. Postal Address. Address</i>		
0	1						Address. Address Type Code. Code	VCD-02-R019	
0	1						Address. Room. Text		
0	1						Address. Street Name. Name		
0	1						Address. Building Name. Name		
0	1						Address. Building Number. Text		
0	1						Address. City Name. Name		
0	1						Address. Postal Zone. Text		
0	1						Address. Country Subentity. Text		
0	1						Address. Country Subentity Code. Code	VCD-02-R020	
0	n						<i>+ Address. Address Line</i>		

1	1					Address Line. Line. Text		
1	1					+ Address. Country		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		
1	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-V02-R008	
0	n					Contact. Note. Text		
0	n					+ Party. Person		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	n					+ Document Reference. Issuing Service	Org24	
1	1					Issuing Service. Endpoint Identifier. Identifier		
1	1					Issuing Service. Name. Text		
1	1					+ Issuing Service. Providing Party. Party		
0	1					Party. Endpoint Identifier.Identifier		
0	n					+Party. Party Identification		
1	1					Party Identification. Identifier		
0	n					+Party. Party Name		
1	1					Party Name. Name		
0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		

0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code.Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code.Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		
1	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-V02-R008	
0	n					Contact. Note. Text		
0	n					+ Party. Person		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Issuing Service. Policy Document. Document 6		
0	n					+ Document Reference. Language		
0	1					Language. Name		
0	1					Language. Locale Code. Code	VCD-02-R022	
0	1					+ VCD. Signature	Org30	x
1	1					Signature. Identifier		x
0	1					Signature. Note. Text		x
0	1					Signature. Canonicalization Method. Text		x
0	1					Signature. Signature Method. Text		x
1	1					+ Signature. Signatory Party. Party		x

0	1			Party. Endpoint Identifier. Identifier		x
0	n			+ Party. Party Identification		x
1	1			Party Identification. Identifier		x
0	n			+ Party. Party Name		x
1	1			Party Name. Name		x
0	1			+ Party. Postal Address. Address		
0	1			Address. Address Type Code. Code	VCD-02-R019	
0	1			Address. Room. Text		
0	1			Address. Street Name. Name		
0	1			Address. Building Name. Name		
0	1			Address. Building Number. Text		
0	1			Address. City Name. Name		
0	1			Address. Postal Zone. Text		
0	1			Address. Country Subentity. Text		
0	1			Address. Country Subentity Code. Code	VCD-02-R020	
0	n			+ Address. Address Line		
1	1			Address Line. Line. Text		
0	1			+ Address. Country		
0	1			Country. Identification Code. Code	VCD-02-R021	
0	1			Country. Name		
0	1			+ Party. Contact		x
1	1			Contact. Name		x
0	1			Contact. Telephone. Text		x
0	1			Contact. Telefax. Text		x
0	1			Contact. Electronic Mail. Text	VCD-V02-R008	x
0	n			Contact. Note. Text		x
0	n			+ Party. Person		x
0	1			Person. First Name. Name		x
0	1			Person. Family Name. Name		x
0	1			Person. Middle Name. Name		

0	1			Person. Job Title. Text		
0	1			+ Signature. Digital Signature Attachment. Attachment		x
0	1			Attachment. Embedded Document. Binary Object		
0	1			+ Attachment. External Reference		x
0	1			External Reference. URI. Identifier		x
0	1			External Reference. Document Hash. Text		x
0	n			External Reference. Hash Algorithm Method. Text		x
0	1			External Reference. Expiry Date. Date		x
0	1			External Reference. Expiry Time. Time		x
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		x
0	n			External Reference. Description. Text		x
0	1			+ Signature. Original Document Reference. Document Reference		
1	1			Document Reference. Identifier		
0	1			Document Reference. Issue Date. Date		
0	1			Document Reference. Issue Time. Time		
0	1			Document Reference. Document Type Code. Code	VCD-02-R014	
0	1			Document Reference. Document Type. Text		
0	1			+ Document Reference. Attachment		
0	1			Attachment. Embedded Document. Binary Object		
0	1			+ Attachment. External Reference		
0	1			External Reference. URI. Identifier		
0	1			External Reference. Document Hash. Text		
0	n			External Reference. Hash Algorithm Method. Text		
0	1			External Reference. Expiry Date. Date		
0	1			External Reference. Expiry Time. Time		
0	1			External Reference. Mime Code. Code	VCD-02-R015	

0	1				External Reference. Format Code. Code		
0	1				External Reference. Encoding Code. Code		
0	1				External Reference. Character Set Code. Code	VCD-02-R016	
0	1				External Reference. File Name. Name		
0	n				External Reference. Description. Text		
0	n				+ Document Reference. Result Of Verification		
0	1				Result Of Verification. Validator Identifier. Identifier		
1	1				Result Of Verification. Validate Result Code. Code	VCD-02-R018	
0	1				Result Of Verification. Validation Date. Date		
0	1				Result Of Verification. Validation Time. Time		
0	1				Result Of Verification. Validate Process. Text		
0	1				Result Of Verification. Validate Tool. Text		
0	1				Result Of Verification. Validate Tool Version. Text		
0	1				+ Result Of Verification. Signatory Party. Party		
0	1				Party. Endpoint Identifier. Identifier		
0	n				+ Party. Party Identification		
1	1				Party Identification. Identifier		
0	n				+ Party. Party Name		
1	1				Party Name. Name		
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		

1	1						Address Line. Line. Text		
0	1						+ Address. Country		
0	1						Country. Identification Code. Code	VCD-02-R021	
0	1						Country. Name		
0	1						+ Party. Contact		
1	1						Contact. Name		
0	1						Contact. Telephone. Text		
0	1						Contact. Telefax. Text		
0	1						Contact. Electronic Mail. Text	VCD-V02-R008	
0	n						Contact. Note. Text		
0	n						+ Party. Person		
0	1						Person. First Name. Name		
0	1						Person. Family Name. Name		
0	1						Person. Middle Name. Name		
0	1						Person. Job Title. Text		
0	1						+ Document Reference. Issuer Party. Party		
0	1						Party. Endpoint Identifier. Identifier		
0	n						+ Party. Party Identification		
1	1						Party Identification. Identifier		
0	n						+ Party. Party Name		
1	1						Party Name. Name		
0	1						+ Party. Postal Address. Address		
0	1						Address. Address Type Code. Code	VCD-02-R019	
0	1						Address. Room. Text		
0	1						Address. Street Name. Name		
0	1						Address. Building Name. Name		
0	1						Address. Building Number. Text		
0	1						Address. City Name. Name		
0	1						Address. Postal Zone. Text		
0	1						Address. Country Subentity. Text		

0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ Party. Contact		
1	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-V02-R008	
0	n				Contact. Note. Text		
0	n				+ Party. Person		
0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	n				+ Document Reference. Issuing Service		
1	1				Issuing Service. Endpoint Identifier. Identifier		
1	1				Issuing Service. Name. Text		
1	1				+ Issuing Service. Providing Party.Party		
0	1				Party. Endpoint Identifier.Identifier		
0	n				+ Party. Party Identification		
1	1				Party Identification. Identifier		
0	n				+ Party. Party Name		
1	1				Party Name. Name		
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		


0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code.Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code.Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		
1	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-V02-R008	
0	n					Contact. Note. Text		
0	n					+ Party. Person		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Issuing Service. Policy Document.Document		
1	1					Document. Document Group Identifier.Identifier		
1	1					Document. Title. Text		
1	n					+ Document. Document Reference 		
0	n					+ Document Reference. Language		
0	1					Language. Name		
0	1					Language. Locale Code. Code	VCD-02-R022	

Table 22 Elements in a VCD version 2.0

iv. VCD Package 2.0

The Table 23 shows the elements in a VCD Package version 2.0. Columns description:

- ▶ first two columns show the Cardinality of the element.
- ▶ the second column shows the element name (element preceded with a "+" sign is a class, the rest are simple elements. Element followed by a "6" sign an element having the same structure of one of its ancestor; its structure is not showed, take the ancestor's structure as reference).
- ▶ the third column states business requirements, business rules or code list that may apply to the field;
- ▶ the last column states if the element is part of the core data model or not (the core data model is the set of elements that the receiver must be able to process). Elements in core data model are marked with "x".

NOTE: the order of elements when used in VCD Package must follow the order stated in the below list.

Min	Max	VCD Package elements	Business Requirements/ Rules	Core
1	1	VCD Package. UUID. Identifier	Org01 VCD-P02-R009	x
0	1	VCD Package. Call For Tender Identifier. Identifier	Org06	x
0	n	VCD Package. Procurement Lot Identifier. Identifier	Org08	x
1	1	VCD Package. VCD Schema Version Identifier. Identifier		x
1	1	VCD Package. Ontology Version Identifier. Identifier		x
1	1	VCD Package. Compilation Date. Date	Org01	x
1	1	VCD Package. Compilation Time. Time	Org01	x
0	1	VCD Package. VCD Package Name. Name		x
0	1	+ VCD Package. Legal Domain	Org07	x
0	1	Legal Domain. Ontology URI. Identifier		x
1	1	Legal Domain. Domain Code. Code	VCD-02-R012	x
1	1	Legal Domain. Domain. Text		x
0	1	+ VCD Package. Criteria Template Document Reference. Document Reference		x
1	1	Document Reference. Identifier		x
0	1	Document Reference. Issue Date. Date		x
0	1	Document Reference. Issue Time. Time		x

0	1		Document Reference. Document Type Code. Code	VCD-02-R014	X
0	1		Document Reference. Document Type. Text		X
0	1		+ Document Reference. Attachment		X
0	1		Attachment. Embedded Document. BinaryObject		
0	1		+ Attachment. External Reference		X
0	1		External Reference. URI. Identifier		X
0	1		External Reference. Document Hash. Text		X
0	n		External Reference. Hash Algorithm Method. Text		X
0	1		External Reference. Expiry Date. Date		X
0	1		External Reference. Expiry Time. Time		X
0	1		External Reference. Mime Code. Code	VCD-02-R015	
0	1		External Reference. Format Code. Code		
0	1		External Reference. Encoding Code. Code		
0	1		External Reference. Character Set Code. Code	VCD-02-R016	
0	1		External Reference. File Name. Name		X
0	n		External Reference. Description. Text		X
0	n		+ Document Reference. Result Of Verification		
0	1		Result Of Verification. Validator Identifier. Identifier		
1	1		Result Of Verification. Validate Result Code. Code	VCD-02-R018	
0	1		Result Of Verification. Validation Date. Date		
0	1		Result Of Verification. Validation Time. Time		
0	1		Result Of Verification. Validate Process. Text		
0	1		Result Of Verification. Validate Tool. Text		
0	1		Result Of Verification. Validate Tool Version. Text		
0	1		+ Result Of Verification. Signatory Party. Party		
0	1		Party. Endpoint Identifier. Identifier		
0	n		+ Party. Party Identification		
1	1		Party Identification. Identifier		
0	n		+ Party. Party Name		

1	1					Party Name. Name		
0	1					+ <i>Party. Postal Address. Address</i>		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ <i>Address. Address Line</i>		
1	1					Address Line. Line. Text		
0	1					+ <i>Address. Country</i>		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ <i>Party. Contact</i>		
1	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-P02-R008	
0	n					Contact. Note. Text		
0	n					+ <i>Party. Person</i>		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ <i>Document Reference. Issuer Party. Party</i>		
0	1					Party. Endpoint Identifier. Identifier		
0	n					+ <i>Party. Party Identification</i>		

1	1				Party Identification. Identifier		
0	n				+ <i>Party. Party Name</i>		
1	1				Party Name. Name		
0	1				+ <i>Party. Postal Address. Address</i>		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ <i>Address. Address Line</i>		
1	1				Address Line. Line. Text		
0	1				+ <i>Address. Country</i>		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ <i>Party. Contact</i>		
1	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-P02-R008	
0	n				Contact. Note. Text		
0	n				+ <i>Party. Person</i>		
0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	1				+ <i>Document Reference. Issuing Service</i>	Org05	

1	1			Issuing Service. Endpoint Identifier. Identifier		
1	1			Issuing Service. Name. Text		
1	1			+ Issuing Service. Providing Party. Party		
0	1			Party. Endpoint Identifier. Identifier		
0	n			+Party. Party Identification		
1	1			Party Identification. Identifier		
0	n			+Party. Party Name		
1	1			Party Name. Name		
0	1			+ Party. Postal Address. Address		
0	1			Address. Address Type Code. Code	VCD-02-R019	
0	1			Address. Room. Text		
0	1			Address. Street Name. Name		
0	1			Address. Building Name. Name		
0	1			Address. Building Number. Text		
0	1			Address. City Name. Name		
0	1			Address. Postal Zone. Text		
0	1			Address. Country Subentity. Text		
0	1			Address. Country Subentity Code. Code	VCD-02-R020	
0	n			+ Address. Address Line		
1	1			Address Line. Line. Text		
0	1			+ Address. Country		
0	1			Country. Identification Code. Code	VCD-02-R021	
0	1			Country. Name		
0	1			+ Party. Contact		
1	1			Contact. Name		
0	1			Contact. Telephone. Text		
0	1			Contact. Telefax. Text		
0	1			Contact. Electronic Mail. Text	VCD-P02-R008	
0	n			Contact. Note. Text		
0	n			+ Party. Person		

0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	1				+ Issuing Service. Policy Document. Document		
1	1				Document. Document Group Identifier. Identifier		
1	1				Document. Title. Text		
1	n				+ Document. Document Reference 6		
0	n				+ Document Reference. Language		
0	1				Language. Name		
0	1				Language. Locale Code. Code		
0	1				+ VCD Package. Contracting Authority Party. Party	Org22, Org23	x
0	1				Party. Endpoint Identifier. Identifier		
0	n				+Party. Party Identification		x
1	1				Party Identification. Identifier		x
0	n				+ Party. Party Name		x
1	1				Party Name. Name		x
0	1				+ Party. Postal Address. Address		x
0	1				Address. Address Type Code. Code	VCD-02-R019	x
0	1				Address. Room. Text		x
0	1				Address. Street Name. Name		x
0	1				Address. Building Name. Name		x
0	1				Address. Building Number. Text		x
0	1				Address. City Name. Name		x
0	1				Address. Postal Zone. Text		x
0	1				Address. Country Subentity. Text		x
0	1				Address. Country Subentity Code. Code	VCD-02-R020	x
0	n				+ Address. Address Line		x
1	1				Address Line. Line. Text		x

0	1			+ Address. Country		X
0	1			Country. Identification Code. Code	VCD-02-R021	X
0	1			Country. Name		X
0	1			+ Party. Contact		X
1	1			Contact. Name		X
0	1			Contact. Telephone. Text		X
0	1			Contact. Telefax. Text		X
0	1			Contact. Electronic Mail. Text	VCD-P02-R008	X
0	n			Contact. Note. Text		X
0	n			+ Party. Person		X
0	1			Person. First Name. Name		X
0	1			Person. Family Name. Name		X
0	1			Person. Middle Name. Name		X
0	1			Person. Job Title. Text		X
0	1			+ VCD Package. Requester Party. Party		
0	1			Party. Endpoint Identifier. Identifier		
0	n			+Party. Party Identification		
1	1			Party Identification. Identifier		
0	n			+ Party. Party Name		
1	1			Party Name. Name		
0	1			+ Party. Postal Address. Address		
0	1			Address. Address Type Code. Code	VCD-02-R019	
0	1			Address. Room. Text		
0	1			Address. Street Name. Name		
0	1			Address. Building Name. Name		
0	1			Address. Building Number. Text		
0	1			Address. City Name. Name		
0	1			Address. Postal Zone. Text		
0	1			Address. Country Subentity. Text		

0	1		Address. Country Subentity Code. Code	VCD-02-R020	
0	n		+ Address. Address Line		
1	1		Address Line. Line. Text		
0	1		+ Address. Country		
0	1		Country. Identification Code. Code	VCD-02-R021	
0	1		Country. Name		
0	1		+ Party. Contact		
1	1		Contact. Name		
0	1		Contact. Telephone. Text		
0	1		Contact. Telefax. Text		
0	1		Contact. Electronic Mail. Text	VCD-P02-R008	
0	n		Contact. Note. Text		
0	n		+ Party. Person		
0	1		Person. First Name. Name		
0	1		Person. Family Name. Name		
0	1		Person. Middle Name. Name		
0	1		Person. Job Title. Text		
0	1		+ VCD Package. Issuing Service. Issuing Service	Org05 VCD-P02-R002	x
1	1		Issuing Service. Endpoint Identifier. Identifier		x
1	1		Issuing Service. Name. Text		x
1	1		+ Issuing Service. Providing Party. Party		x
0	1		Party. Endpoint Identifier. Identifier		
0	n		+ Party. Party Identification		x
1	1		Party Identification. Identifier		x
0	n		+ Party. Party Name		x
1	1		Party Name. Name		x
0	1		+ Party. Postal Address. Address		x
0	1		Address. Address Type Code. Code	VCD-02-R019	x
0	1		Address. Room. Text		x
0	1		Address. Street Name. Name		x

0	1			Address. Building Name. Name		X
0	1			Address. Building Number. Text		X
0	1			Address. City Name. Name		X
0	1			Address. Postal Zone. Text		X
0	1			Address. Country Subentity. Text		X
0	1			Address. Country Subentity Code. Code	VCD-02-R020	X
0	n			+ Address. Address Line		X
1	1			Address Line. Line. Text		X
0	1			+ Address. Country		X
0	1			Country. Identification Code. Code	VCD-02-R021	X
0	1			Country. Name		X
0	1			+Party. Contact		X
1	1			Contact. Name		X
0	1			Contact. Telephone. Text		X
0	1			Contact. Telefax. Text		X
0	1			Contact. Electronic Mail. Text	VCD-P02-R008	X
0	n			Contact. Note. Text		X
0	n			+ Party. Person		X
0	1			Person. First Name. Name		X
0	1			Person. Family Name. Name		X
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
0	1			+ Issuing Service. Policy Document. Document		X
1	1			Document. Document Group Identifier. Identifier		X
1	1			Document. Title. Text		X
1	n			+ Document. Document Reference		X
1	1			Document Reference. Identifier		X
0	1			Document Reference. Issue Date. Date		X
0	1			Document Reference. Issue Time. Time		X

0	1				Document Reference. Document Type Code. Code	VCD-02-R014	X
0	1				Document Reference. Document Type. Text		X
0	1				+ Document Reference. Attachment		X
0	1				Attachment. Embedded Document. BinaryObject		
0	1				+Attachment. External Reference		X
0	1				External Reference. URI. Identifier		X
0	1				External Reference. Document Hash. Text		X
0	n				External Reference. Hash Algorithm Method. Text		X
0	1				External Reference. Expiry Date. Date		X
0	1				External Reference. Expiry Time. Time		X
0	1				External Reference. Mime Code. Code	VCD-02-R015	
0	1				External Reference. Format Code. Code		
0	1				External Reference. Encoding Code. Code		
0	1				External Reference. Character Set Code. Code	VCD-02-R016	
0	1				External Reference. File Name. Name		X
0	n				External Reference. Description. Text		X
0	n				+ Document Reference. Result Of Verification		X
0	1				Result Of Verification. Validator Identifier. Identifier		X
1	1				Result Of Verification. Validate Result Code. Code	VCD-02-R018	X
0	1				Result Of Verification. Validation Date. Date		X
0	1				Result Of Verification. Validation Time. Time		X
0	1				Result Of Verification. Validate Process. Text		X
0	1				Result Of Verification. Validate Tool. Text		X
0	1				Result Of Verification. Validate Tool Version. Text		X
0	1				+ Result Of Verification. Signatory Party. Party		X
0	1				Party. Endpoint Identifier. Identifier		X
0	n				+ Party. Party Identification		X
1	1				Party Identification. Identifier		X
0	n				+ Party. Party Name		X

1	1							Party Name. Name		X
0	1							+ Party. Postal Address. Address		
0	1							Address. Address Type Code. Code	VCD-02-R019	
0	1							Address. Room. Text		
0	1							Address. Street Name. Name		
0	1							Address. Building Name. Name		
0	1							Address. Building Number. Text		
0	1							Address. City Name. Name		
0	1							Address. Postal Zone. Text		
0	1							Address. Country Subentity. Text		
0	1							Address. Country Subentity Code. Code	VCD-02-R020	
0	n							+ Address. Address Line		
1	1							Address Line. Line. Text		
0	1							+ Address. Country		
0	1							Country. Identification Code. Code	VCD-02-R021	
0	1							Country. Name		
0	1							+ Party. Contact		X
1	1							Contact. Name		X
0	1							Contact. Telephone. Text		X
0	1							Contact. Telefax. Text		X
0	1							Contact. Electronic Mail. Text	VCD-P02-R008	X
0	n							Contact. Note. Text		X
0	n							+ Party. Person		X
0	1							Person. First Name. Name		X
0	1							Person. Family Name. Name		X
0	1							Person. Middle Name. Name		
0	1							Person. Job Title. Text		
0	1							+ Document Reference. Issuer Party. Party		X
0	1							Party. Endpoint Identifier. Identifier		
0	n							+ Party. Party Identification		X

1	1					Party Identification. Identifier		X
0	n					+ Party. Party Name		X
1	1					Party Name. Name		X
0	1					+ Party. Postal Address. Address		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ Address. Address Line		
1	1					Address Line. Line. Text		
0	1					+ Address. Country		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ Party. Contact		
1	1					Contact. Name		
0	1					Contact. Telephone. Text		
0	1					Contact. Telefax. Text		
0	1					Contact. Electronic Mail. Text	VCD-P02-R008	
0	n					Contact. Note. Text		
0	n					+ Party. Person		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ Document Reference. Issuing Service 6		

0	n				+ Document Reference. Language		x
0	1				Language. Name		x
0	1				Language. Locale Code. Code		x
0	1				+ VCD Package. Single Tenderer	Org03	x
1	1				Single Tenderer. VCD Reference Identifier. Identifier		x
0	n				+ Single Tenderer. Subcontractor Single Tenderer. Single Tenderer 6		x
0	1				+ VCD Package. Bidding Consortium	Org03	x
1	1				Bidding Consortium. VCD Reference Identifier. Identifier		x
1	1				+ Bidding Consortium. Leader Single Tenderer. Single Tenderer	Org02	x
1	1				Single Tenderer. VCD Reference Identifier. Identifier		x
0	n				+ Single Tenderer. Subcontractor Single Tenderer. Single Tenderer 6	Org04	x
1	n				+ Bidding Consortium. Other Member Single Tenderer. Single Tenderer		x
1	1				Single Tenderer. VCD Reference Identifier. Identifier		x
0	n				+ Single Tenderer. Subcontractor Single Tenderer. Single Tenderer 6	Org04	x
0	1				+ VCD Package. Signature	Org30	x
1	1				Signature. Identifier		x
0	1				Signature. Note. Text		x
0	1				Signature. Canonicalization Method. Text		x
0	1				Signature. Signature Method. Text		x
1	1				+ Signature. Signatory Party. Party		x
0	1				Party. Endpoint Identifier. Identifier		x
0	n				+ Party. Party Identification		x
1	1				Party Identification. Identifier		x
0	n				+ Party. Party Name		x
1	1				Party Name. Name		x
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		

0	1			Address. Building Name. Name		
0	1			Address. Building Number. Text		
0	1			Address. City Name. Name		
0	1			Address. Postal Zone. Text		
0	1			Address. Country Subentity. Text		
0	1			Address. Country Subentity Code. Code	VCD-02-R020	
0	n			+ Address. Address Line		
1	1			Address Line. Line. Text		
0	1			+ Address. Country		
0	1			Country. Identification Code. Code	VCD-02-R021	
0	1			Country. Name		
0	1			+ Party. Contact		x
1	1			Contact. Name		x
0	1			Contact. Telephone. Text		x
0	1			Contact. Telefax. Text		x
0	1			Contact. Electronic Mail. Text	VCD-P02-R008	x
0	n			Contact. Note. Text		x
0	n			+ Party. Person		x
0	1			Person. First Name. Name		x
0	1			Person. Family Name. Name		x
0	1			Person. Middle Name. Name		
0	1			Person. Job Title. Text		
0	1			+ Signature. Digital Signature Attachment.Attachment		x
0	1			Attachment. Embedded Document. BinaryObject		
0	1			+ Attachment. External Reference		x
0	1			External Reference. URI. Identifier		x
0	1			External Reference. Document Hash. Text		x
0	n			External Reference. Hash Algorithm Method. Text		x
0	1			External Reference. Expiry Date. Date		x

0	1			External Reference. Expiry Time. Time		X
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		X
0	n			External Reference. Description. Text		X
0	1			<i>+ Signature. Original Document Reference. Document Reference</i>		
1	1			Document Reference. Identifier		
0	1			Document Reference. Issue Date. Date		
0	1			Document Reference. Issue Time. Time		
0	1			Document Reference. Document Type Code. Code	VCD-02-R014	
0	1			Document Reference. Document Type. Text		
0	1			<i>+ Document Reference. Attachment</i>		
0	1			Attachment. Embedded Document. BinaryObject		
0	1			<i>+ Attachment. External Reference</i>		
0	1			External Reference. URI. Identifier		
0	1			External Reference. Document Hash. Text		
0	n			External Reference. Hash Algorithm Method. Text		
0	1			External Reference. Expiry Date. Date		
0	1			External Reference. Expiry Time. Time		
0	1			External Reference. Mime Code. Code	VCD-02-R015	
0	1			External Reference. Format Code. Code		
0	1			External Reference. Encoding Code. Code		
0	1			External Reference. Character Set Code. Code	VCD-02-R016	
0	1			External Reference. File Name. Name		
0	n			External Reference. Description. Text		
0	n			<i>+ Document Reference. Result Of Verification</i>		
0	1			Result Of Verification. Validator Identifier. Identifier		
1	1			Result Of Verification. Validate Result Code. Code	VCD-02-R018	

0	1				Result Of Verification. Validation Date. Date		
0	1				Result Of Verification. Validation Time. Time		
0	1				Result Of Verification. Validate Process. Text		
0	1				Result Of Verification. Validate Tool. Text		
0	1				Result Of Verification. Validate Tool Version. Text		
0	1				+ Result Of Verification. Signatory Party. Party		
0	1				Party. Endpoint Identifier. Identifier		
0	n				+ Party. Party Identification		
1	1				Party Identification. Identifier		
0	n				+ Party. Party Name		
1	1				Party Name. Name		
0	1				+ Party. Postal Address. Address		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ Address. Address Line		
1	1				Address Line. Line. Text		
0	1				+ Address. Country		
0	1				Country. Identification Code. Code	VCD-02-R021	
0	1				Country. Name		
0	1				+ Party. Contact		
1	1				Contact. Name		
0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		

0	1					Contact. Electronic Mail. Text	VCD-P02-R008	
0	n					Contact. Note. Text		
0	n					+ <i>Party. Person</i>		
0	1					Person. First Name. Name		
0	1					Person. Family Name. Name		
0	1					Person. Middle Name. Name		
0	1					Person. Job Title. Text		
0	1					+ <i>Document Reference. Issuer Party. Party</i>		
0	1					Party. Endpoint Identifier. Identifier		
0	n					+ <i>Party. Party Identification</i>		
1	1					Party Identification. Identifier		
0	n					+ <i>Party. Party Name</i>		
1	1					Party Name. Name		
0	1					+ <i>Party. Postal Address. Address</i>		
0	1					Address. Address Type Code. Code	VCD-02-R019	
0	1					Address. Room. Text		
0	1					Address. Street Name. Name		
0	1					Address. Building Name. Name		
0	1					Address. Building Number. Text		
0	1					Address. City Name. Name		
0	1					Address. Postal Zone. Text		
0	1					Address. Country Subentity. Text		
0	1					Address. Country Subentity Code. Code	VCD-02-R020	
0	n					+ <i>Address. Address Line</i>		
1	1					Address Line. Line. Text		
0	1					+ <i>Address. Country</i>		
0	1					Country. Identification Code. Code	VCD-02-R021	
0	1					Country. Name		
0	1					+ <i>Party. Contact</i>		
1	1					Contact. Name		

0	1				Contact. Telephone. Text		
0	1				Contact. Telefax. Text		
0	1				Contact. Electronic Mail. Text	VCD-P02-R008	
0	n				Contact. Note. Text		
0	n				+ <i>Party. Person</i>		
0	1				Person. First Name. Name		
0	1				Person. Family Name. Name		
0	1				Person. Middle Name. Name		
0	1				Person. Job Title. Text		
0	1				+ <i>Document Reference. Issuing Service</i>		
1	1				Issuing Service. Endpoint Identifier. Identifier		
1	1				Issuing Service. Name. Text		
1	1				+ <i>Issuing Service. Providing Party. Party</i>		
0	1				Party. Endpoint Identifier. Identifier		
0	n				+ <i>Party. Party Identification</i>		
1	1				Party Identification. Identifier		
0	n				+ <i>Party. Party Name</i>		
1	1				Party Name. Name		
0	1				+ <i>Party. Postal Address. Address</i>		
0	1				Address. Address Type Code. Code	VCD-02-R019	
0	1				Address. Room. Text		
0	1				Address. Street Name. Name		
0	1				Address. Building Name. Name		
0	1				Address. Building Number. Text		
0	1				Address. City Name. Name		
0	1				Address. Postal Zone. Text		
0	1				Address. Country Subentity. Text		
0	1				Address. Country Subentity Code. Code	VCD-02-R020	
0	n				+ <i>Address. Address Line</i>		
1	1				Address Line. Line. Text		

0	1						+ Address. Country		
0	1						Country. Identification Code. Code	VCD-02-R021	
0	1						Country. Name		
0	1						+ Party. Contact		
1	1						Contact. Name		
0	1						Contact. Telephone. Text		
0	1						Contact. Telefax. Text		
0	1						Contact. Electronic Mail. Text	VCD-P02-R008	
0	n						Contact. Note. Text		
0	n						+ Party. Person		
0	1						Person. First Name. Name		
0	1						Person. Family Name. Name		
0	1						Person. Middle Name. Name		
0	1						Person. Job Title. Text		
0	1						+ Issuing Service. Policy Document. Document		
1	1						Document. Document Group Identifier. Identifier		
1	1						Document. Title. Text		
1	n						+ Document. Document Reference 		
0	n						+ Document Reference. Language		
0	1						Language. Name		
0	1						Language. Locale Code. Code		

Table 23 Elements in a VCD Package version 2.0

v. Differences between v. 1.3.1 and v. 2.0 of the transaction data models

Table 24 shows the differences between v. 1.3.1 and v. 2.0 of the transaction data models.

Changed element	v1.3.1	v2.0
Contact. Name	Present (0..1)	Present (1..1)
Criterion. Suggested Indicator.Indicator	Not present (0..0)	Present (1..1)
Document Reference. Issuing Service	Not present (0..0)	Present (0..1)
Economic Operator. Sole Proprietorship.Indicator	Present (0..1)	Not present (0..0)
Economic Operator. Tenderer Role Code.Code	Not present (0..0)	Present (1..1)
Economic Operator. Tenderer Type Code.Code	Not present (0..0)	Present (1..1)
Economic Operator. Legal Domain	Not present (0..0)	Present (1..1)
Economic Operator. Ontology Domain.Code	Present (1..1)	Not present (0..0)
Evidence. Additional Information.Text	Not present (0..0)	Present (0..1)
Language. Identifier	Present (0..1)	Not present (0..0)
Legal Domain	Not present	Present (new element)
Person Details. Identifier	Present (1..1)	Present (0..1)
Result Of Verification. Validate Result Code.Code	Present (0..1)	Present (1..1)
VCD. Legal Domain	Not present (0..0)	Present (0..1)
VCD. Ontology Domain. Code	Present (0..1)	Not present (0..0)
VCDPackage. Legal Domain	Not present (0..0)	Present (0..1)
VCD Package. VCD Type. Code	Present (0..1)	Not present (0..0)
VCDPackage. Ontology Domain. Code	Present (0..1)	Not present (0..0)
VCD Person. Ontology Domain. Code	Present (0..1)	Not present (0..0)
VCD Person. Criterion	Present (1..n)	Present (0..n)
VCD Person. Legal Domain	Not present (0..0)	Present (0..1)
VCD Package. Criteria Template Document Reference. Document Reference	Not present (0..0)	Present (0..1)

Table 24 Differences between v. 1.3.1 and v. 2.0 of the transaction data models