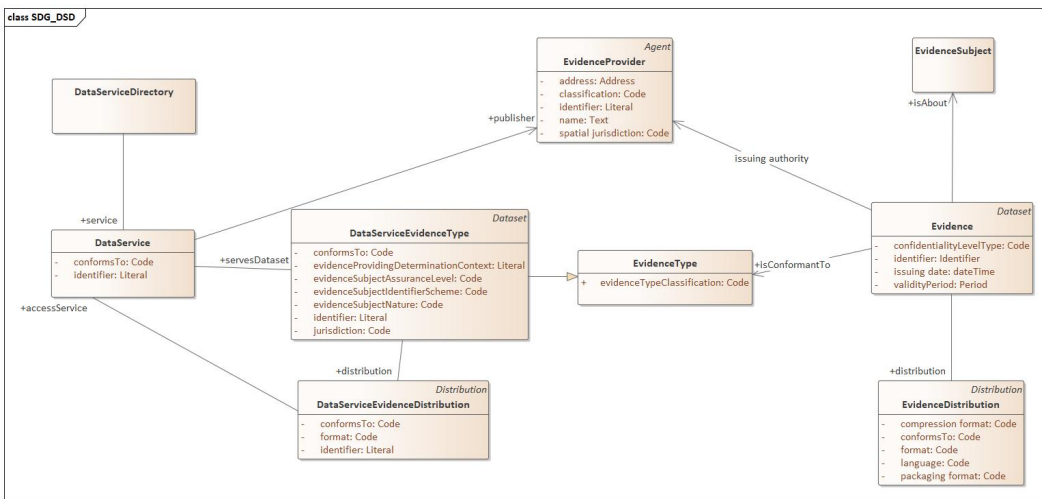
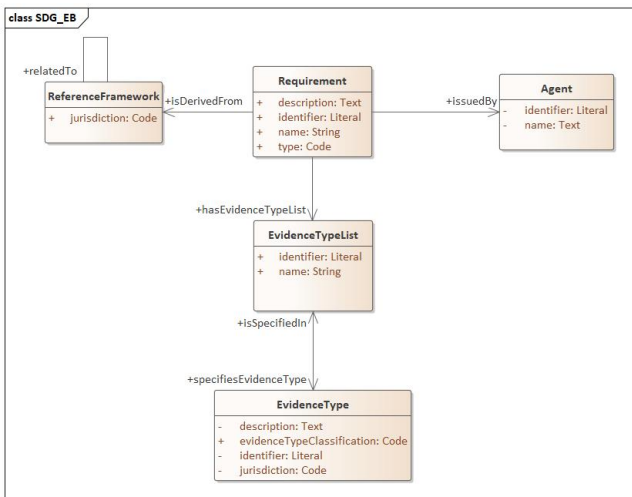


# Generic Metadata Model - OOTS

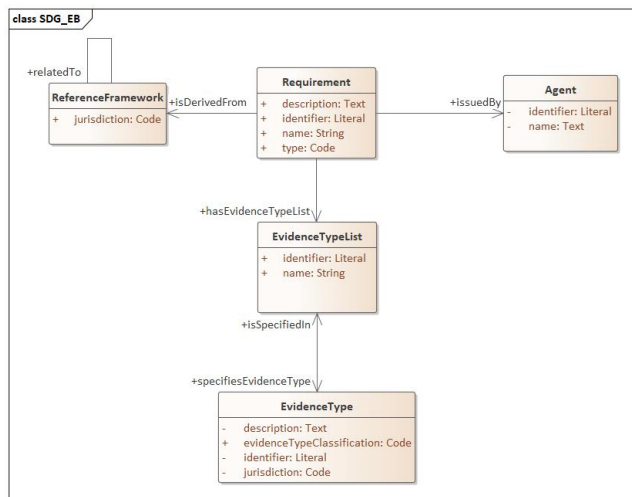
The generic metadata model provides the opportunity to exchange evidences in a light-weight manner. It has been designed specifically to facilitate the automated exchange of unstructured evidences or evidences exchanged on the basis of a national data model which is not aligned with one of the common data models for a specific evidence type. To steer the data exchange the Evidence Broker and the Data Service Directory are needed. Below first a graphical overview of the information that is stored in the [Evidence Broker](#) is shown and further explained in detail in the corresponding tab. The next overview picture shows how information that is stored in the [Data Service Directory](#) is connected with the evidences that are provided by the the Evidence Provider data services. Message specific information are included in the details of the tab, but not in the overview figure.



- [Evidence Broker](#)
- [Data Service Directory](#)
- [Document Request Query](#)
- [Document Request Response](#)
- [Agent](#)
- [Supportive concepts](#)

The Evidence Broker (EB) is a service that publishes which types of evidence Member States can provide to prove a particular requirement of a procedure. The EB is an application profile of CCCEV, more specifically an application profile of the request (requirement) side of CCCEV.

The EB application profile is distinct from, yet connected with the application profile for the evidence request. Through the EB the evidence types that are needed for fulfilling a procedure can be found. Using these evidence types the Data Service Directory (DSD) can be queried to retrieve the data services where the evidences can be requested for the evidence subject.



### **i** Disclaimer

The **Properties** and **Entities** that are included in this application profile are sufficient to address the following base functionalities:

- to find the evidence types that are supplied and accepted by MSs, and
- to find a procedure and the evidence types they require.

Information that is required to create an operational register with coherent and qualitative data is not included, except for the identifiers.

**Ranges** identified as a code reflect the following situation:

- the allowed values are subject to a controlled vocabulary
- the value representation is yet to be decided
- master data management for the controlled vocabulary has to be decided

## Reference Framework

**Correspondence:** *cv:ReferenceFramework*

**Definition:** A source from where Requirements are identified and derived. In the EB restricted to the procedures and their instants at MS

Property	XML tag	URI	Range	Cardinality	Definition	Usage notes
identifier	Identifier	dct:identifier	Literal	1..1	An identifier	N/A
jurisdiction	Jurisdiction	sdg:jurisdiction	Code	1..1	the administrative level in which this reference framework applies	
relatedTo	RelatedTo	dct:relation	Code	0..1	A relationship to a codelist denoting all procedures in the SDGR Annex II	
title	Title	dct:title	Text	0..1	A name to identify in common language the reference framework	
description	Description	dct:description	Text	0..1	A short explanation about the nature, attributes, uses or any other additional information that helps clarify the understanding of the Requirement being instantiated.	

## Requirement

**Correspondence:** cv:Requirement

**Definition:** A condition or prerequisite that someone requests and someone else has to meet.

In the context of the EB the intent is that requirements are SDG common requirements. MS express the EB registered procedures solely in terms of the SDG common requirements. The definition of these SDG common requirements are done in cocreation with all MSs.

The associated Evidence Type lists express the combinations of evidence types a MS can provide to fulfill the requirement. It is assumed that any associated evidence type lists provided by MS A can be accepted by all other MSs B. Any reason which would block the acceptance of an evidence type list by another MS must be addressed in coordination with the MSs.

### Info

The core vocabulary CCCEV foresees more attributes and relationships for cv:Requirement. Those that are needed for the core functionality of the EB are included in this table.

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Range</b>	<b>Cardi nality</b>	<b>Definition</b>	<b>Usag e note s</b>
id e n t i f i e r	Identifier	dct:identif ier	Literal	1..1	An identifier	
n a m e	Name	skos:prefL abel	String	0..1	A name to identify in common language the Requirement.	
d e s c r i p t i o n	Descripti on	dct:descri ption	Text	0..1	A short explanation about the nature, attributes, uses or any other additional information that helps clarify the understanding of the Requirement being instantiated.	
is s u e d b y	IssuedBy	cv:issuedB y	Agent	0..1	The Agent that has issued the Requirement.	As the Requirements are commonly maintained, this will be the EU

Property	XML tag	URI	Range	Cardinality	Definition	Usage notes
hasEvidenceTypeList	EvidenceTypeList	cv:hasEvidenceTypeList	EvidenceTypeList	0..n	The single or various combinations of Evidence Types for supporting a Requirement. Out of the different Lists, one of them must be satisfied by the response to the Requirement.	The associated evidence type lists are MS specific.
isDerivedFrom	ReferenceFramework	cv:isDerivedFrom	ReferenceFramework	0..n	The Reference Framework that is responsible for the creation/initiation of the Requirement.	

## Evidence Type

**Correspondence:** cv:EvidenceType

**Definition:** . Information about the characteristics of an expected Evidence

The Evidence Type is a kind of evidence that can be provided in a jurisdiction. It is expected that any evidence type present in the EB is further detailed in the DSD to enable automatic retrieval through the OOTS of the evidence.

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Ran ge</b>	<b>Cardi nality</b>	<b>Definition</b>	<b>Usage notes</b>
i d e n t i f i e r	Identi fier	dct:identifier	Lite ral	0..1	An identifier	
e v i d e n c e t y p e c l a s s i f i c a t i o n	Evide nceTy peCla ssifica tion	cv:evidenceTypeCl assification	Cod e	1..1	A classification code to specify the layout and content expected for an Evidence.	

P r o p e r t y	XML tag	URI	Ran ge	Cardi nality	Definition	Usage notes
j u r i s d i c t i o n	Jurisd iction	cv:evidenceTypeJu risdiction	Cod e	0..1	The jurisdiction to which this evidence type applies	

## Evidence Type List

**Correspondence:** cv:EvidenceTypeList

**Definition:** A combination of Evidence Types for each of which a conforming Evidence must be provided.

P r o p e r t y	XML tag	URI	Ran ge	Car din alit y	Definition	Usage notes
id e n t i f i e r	Iden tifie r	dct:ide ntifier	Lite ral	1..1	An identifier	
n a m e	Na me	skos:pr efLabel	Stri ng	0..1	A name to identify in common language element.	

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Ran ge</b>	<b>Car din alit y</b>	<b>Definition</b>	<b>Usage notes</b>
d e s c r i p t i o n	Des c r i p t i o n	dct:des c r i p t i o n	Text	0..1	A short explanation about the nature, attributes, uses or any other additional information that helps clarify the understanding of the Requirement being instantiated.	
s p e c i f i e s E v i d e n c e T y p e	Evid e n c e T y p e	cv:evid e n c e T y p e List	Evid e n c e T y p e	1..n	Indicates one Type of Evidence included in a List of Evidence Types.	

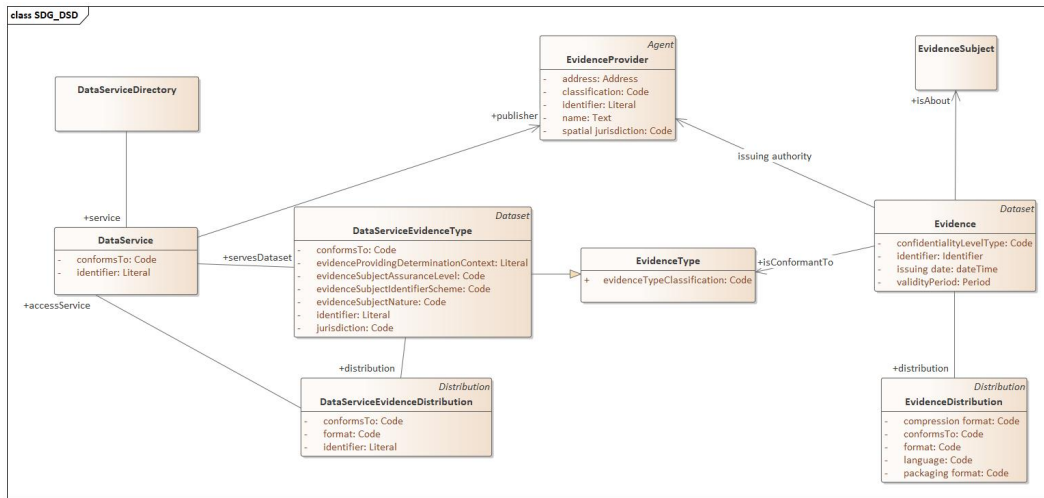
Evidence Broker   [Data Service Directory](#)   Document Request Query   Document Request Response

Agent   Supportive concepts

The Data Service Directory (DSD) is a catalogue of evidence providing data services. The DSD has knowledge about the type of evidences the data service provides and its responsible organisation. The DSD is used in the



Evidence Exchange process by the Evidence Requesters to discover the evidence providing data services that can provide the evidences they need. The DSD is a designed as an application profile of DCAT.



**Disclaimer**

The **Properties** and **Entities** that are included in this application profile are sufficient to address the following base functionalities:

- to find the evidence providing data services based on the kind of evidence they provide, as on the location of the evidence provider, and
- to configure a Document based query request in order to initiate the retrieval of evidences as documents, being structured or unstructured.

Information that is required to create an operational register with coherent and qualitative data is not included, expect for the identifiers.

**Ranges** identified as a code reflect the following situation:

- the allowed values are subject to a controlled vocabulary
- the value representation is yet to be decided
- master data management for the controlled vocabulary has to be decided

## Data Service Directory

**Correspondence:** *dcat:Catalog*

**Definition:** A collection of evidences providing data services.

Property	URI	Range	Cardinality	Definition	Usage notes
service	dcat:service	DataService	0..n	The evidence providing data services.	N/A

## Data Service

**Correspondence:** *dcat:DataService*

**Definition:** An evidence providing data service.

**i Info**

No connection or configuration information is required. The SDG OOP will use data service identifier to look up the connection details. When registering a data service into the SDG OOP network, the registered configuration is connected with the identifier of the data service description in the Data Service Directory.

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Range</b>	<b>Cardi nality</b>	<b>Definition</b>	<b>Usag e note s</b>
id e n t i f i e r	Identifier	dct:identif ier	Literal	1..1	An identifier	N/A
c o n f o r m s t o	Conforms To	dct:confor msTo	Code	0..1	The exchange message specification which this service implements. (e.g. a codified value stating that it supports the SDG Regrep v4 profile).	N/A

Property	XML tag	URI	Range	Cardinality	Definition	Usage notes
servesEvidenceType	ServesEvidenceType	dcat:servesDataset	Dataset	1..n	the evidence types that the data service is providing information about.	N/A
publisher	Publisher	dct:publisher	Evidence Provider	1..1	The responsible organisation for issuing evidences via this data service.	

## Data Service Evidence Type

**Correspondence:** *dcat:Dataset*

**Definition:** A dataset of an Evidence Type provided by an Evidence Provider.

### Info

This dataset does not necessarily exist as a physical manifestation. It is a subclass of *cccev:EvidenceType*.

The responsible organisation, i.e. the Evidence provider, for a data service Evidence type is the publisher of the associated data services.

Any data Service Evidence Type is a further detailing of the corresponding Evidence Type in the EB.

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Ran ge</b>	<b>Car din alit y</b>	<b>Definition</b>	<b>Usage notes</b>
id e n t i f i e r	Ident ifier	dct:identifier	Lite ral	0..1	An identifier	
c o n f o r m s t o	Conf orms To	dct:conformsTo	Cod e	1..1	A registered schema or application profile in the semantic repository describing the content of the evidence provided.	

P r o p e r t y	XML tag	URI	Ran ge	Car din alit y	Definition	Usage notes
e v i d e n c e s u b j e c t a s s u r a n c e l e v e l	Evide nceS ubjec tAssu rance Level	sdg:evidenceSubjec tAssuranceLevel	Cod e	0..1	The minimal level of assurance level properties must have in order to be taken into account for the subject record matching by this dataset. Corresponds to the eIDAS abilities.	

P r o p e r t y	XML tag	URI	Ran ge	Car din alit y	Definition	Usage notes
e v i d e n c e s u b j e c t i d e n t i f i e r s c h e m e	Evide nceS ubjec tIden tifier Sche me	sdg:evidenceSubjec tIdentifierScheme	Cod e	0..n	The indication of the identifier schemes are supported by the subject record matching.	

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Ran ge</b>	<b>Car din alit y</b>	<b>Definition</b>	<b>Usage notes</b>
e v i d e n c e s u b j e c t n a t u r e	EvidenceSubjectNature	sdg:evidenceSubjectNature	Code	0..1	The nature of the evidence subject that is taken into account. Corresponds to the eIDAS abilities.	
d i s t r i b u t e d a s	DistributionAs	dcat:distribution	Evidence Type Distribution	1..n	The representations that are supported by the Evidence Type Dataset.	

P r o p e r t y	XML tag	URI	Ran ge	Car din alit y	Definition	Usage notes
e v i d e n c e p r o v i d e r d e t e r m i n a t i o n c o n t e x t	Evide nceP rovid erDet ermin atio nCon text	sdg:evidenceProvid erDeterminationCo ntext	Lite ral	0..1	The information that is required to select the to be used Evidence Provider for this associated Evidence type	Example: <i>"the place of birth"</i> is expressing that the information that a SDG OOP user should use to determine the to-be used Evidence Provider is the evidence subject's place of birth.



P r o p e r t y	XML tag	URI	Ran ge	Car din alit y	Definition	Usage notes
e v i d e n c e t y p e c l a s s i f i c a t i o n	Evide nceT ypeCl assifi cation	cv:evidenceTypeCla ssification	Cod e	0..1	The evidence type that this dataset is supporting.	
ju ri s di ct io n	Juris dictio n	cv:evidenceTypeJur isdiction	Cod e	0..1	The jurisdiction to which this data service evidence type applies	

## Evidence Type Distribution

**Correspondence:** *dcat:Distribution*

**Definition:** A technical format according to which a evidence is being distributed.

Property	XML tag	URI	Range	Cardinality	Definition	Usage note
contentFormat	ContentFormat	dct:contentFormat	URI	0..1	A registered schema or application profile in the semantic repository describing the content of the evidence provided in this representation.	This URI must come from the <a href="#">semantic repository</a> .
format	Format	dct:format	Code	1..1	The technical representation of the evidence.	
dataService	DataService	dcat:accessService	DataService	0..n	A detailing of the relationship serves evidence type ( <i>dcat:servesDataset</i> ).	It enables to express that for one Data Service Evidence Type, the data service A is providing the distribution XML and data service B is providing the distribution JSON.
transformation	Transformation	sdg:transformation	URI	0..n	A transformation that can be applied to this distribution expressed in the form an executable language suited for the format of this distribution.	E.g. If the distribution format is XML, then XSLT is a suited language to express the transformation into.  This URI must come from the <a href="#">semantic repository</a> .

## Evidence Provider

**Correspondence:** *foaf:Agent*

**Definition:** A trusted provider of evidences. An Evidence provider is an organisation which either publishes an evidence providing data service or it is the issuing authority for the evidences that are retrievable via an evidence providing service.

**i Info**

In the Data Service Directory only the Evidence Providers has have as role *publisher of a data service* are registered.

property	XML tag	uri	range	cardinality	definition	usage note
identifier	Identifier	dct:identifier	Literal	0..1	a unique identification for the agent	
name	Name	foaf:name	Text	0..1	a short label for the agent	
address	Address	locn:address	Address	0..1	An location of the Evidence Provider in the form of an address.	If the spatial jurisdiction cannot be supplied, the address can be supplied to facilitate the functional requirement for determining the Evidence Provider based in location information.

property	XML tag	uri	range	cardinality	definition	usage note
classification	Classification	org:classification	Code	0..n	A classification of the Evidence Provider.	
jurisdiction	Jurisdiction	cv:spatialJurisdiction	Code	1..1	The spatial jurisdiction of the Evidence Provider w.r.t. the evidence type it is supplying.	<p>The code should reflect the most precise spatial description for the applicable jurisdiction in the used code list. E.g. if the jurisdiction is the city of Vienna, then the code for Vienna should be used and not the code for the country Austria.</p> <p>It is assumed that the used codes are organised in a code list that can support the navigation and search functionalities required by the UI to determine the to-be used Evidence Provider quickly.</p>

Evidence Broker    Data Service Directory    [Document Request Query](#)    Document Request Response

Agent    Supportive concepts

The application profile for the Evidence Request defines the semantic perspective for the Evidence Request Message ([Evidence Request Syntax Mapping - SDG Once-Only Collaborative Space - CEF Digital \(europa.eu\)](#)). The Evidence Request is the message created by the Evidence Requester (ER), containing all the

necessary information requirements for requesting evidences. The Evidence Request is based on the retrieved information from the Data Service Directory and contextual information.

## Evidence Request

**Correspondence:** *sdg:EvidenceRequest*

**Definition:** A request for an evidence to the data service of an evidence provider.

**request specific:** included here to provide a complete semantical description of the information in the Evidence Request message.

Property	URI	Range	Cardinality	Definition	Usage notes
specificatio n	sdg:specificati on	Code	1..1	The specification version according to which this request message is constructed.	For now, the value "oots-edm:v2.1" must be used.
issue date	dct:issued	Literal	1..1	The time of the request.	The value must be according to xsd:dateTime.

## Evidence Requester

**Correspondence:** *foaf:Agent*

**Definition:** The agent that is requesting the evidence.

**request specific:** included here to provide a complete semantical description of the information in the Evidence Request message.

property	XML tag	uri	range	cardinality	definition	usage note
id e n t i f i e r	Ident fier	dct:ident ifier	Lite ral	0..1	a unique identification for the agent	

property	XML tag	uri	range	cardinality	definition	usage note
name	Name	foaf:name	Text	0..1	a short label for the agent	
address	Address	locn:address	Address	0..1	An location of the Evidence Requester in the form of an address.	
location	Location	locn:location	Location	0..1	The location of the Evidence Requester from where the Evidence Requester is operating.	

## Requirement

**Correspondence:** *cv:Requirement*

**Definition:** A requirement is a named set of requests for information that may be made for making a judgment or decision, [see draft implementing act](#).

### Info

The requirement in the Evidence Request is contextual information that can be used to perform legal logging. It is not (yet) expected to be required to determine the evidence for the evidence subject.

The value is obtained by the Evidence Requester from the Evidence Broker while executing a SDG service.

Property	XML tag	URI	Range	Cardinality	Definition	Usage notes
identifier	Identifier	dct:identifier	Literal	1..1	The identifier for the requirement.	
name	Name	skos:prefLabel	Text	0..1	A name to identify in common language the Requirement.	
description	Description	dct:description	Text	0..1	A short explanation about the nature, attributes, uses or any other additional information that helps clarify the understanding of the Requirement being instantiated.	

## Evidence Type

**Correspondence:** *sdg:DataServiceEvidenceType*

**Definition:** The characteristics about the expected Evidence. Only the registered evidence types in the Data Service Directory are considered.

Property	XML tag	URI	Range	Cardinality	Definition	Usage notes
identifier	Identifier	dct:identifier	Literal	1..1	The identifier of the Data Service Evidence Type	It is assumed that every data service implementation is aware of the identifiers that were used to describe the data service in the Data Service Directory.
distribution	Distribution	dcat:distribution	Distribution	1..n	The kind of distributions that are expected as response to this request.	Each distribution describes a format and scheme in which the evidence about the data subject should be provided. The allowed combinations are one of the combinations expressed in the Data Service Directory. So only distributions can be requested that the data service is able to provide.

## Evidence Subject

**Correspondence:** *foaf:Agent*

**Definition:** The subject from whom the evidence is requested to the Data Service.

### Info

For more details about the structure on the Evidence Subjects we refer to the Agents section. The Evidence Subject has a complexity dependent on the nature of the subject and the agreements made in the context of identity record matching.

## Evidence Subject Representative

**Correspondence:** *foaf:Agent*

**Definition:** The representative for the Evidence Subject on whose behalf the Evidence Request is made.

### Info

For more details about the structure on the Evidence Subject Representatives we refer to the Agents section. The Evidence Subject is subject to the same conditions as the Evidence Subject and has thus a complexity dependent on the nature of the subject and the agreements made in the context of identity record matching.

## Requested Evidence Distribution

**Correspondence:** *dcat:Distribution*

**Definition:** The distribution of the evidence that is requested.

### Info

The values correspond to the information available in the Data Service Directory.

Property	XML tag	URI	Range	Cardinality	Definition	Usage notes
conforms to	ConformsTo	dct:conformsTo	URI	0..1	A registered schema or application profile in the semantic repository describing the content of the evidence provided in this representation.	



Property	XML tag	URI	Range	Cardinality	Definition	Usage notes
format	Format	dct:format	Code	1..1	The technical representation of the evidence.	

Evidence Broker   Data Service Directory   Document Request Query   [Document Request Response](#)

Agent   Supportive concepts

The Evidence Response is the response to an Evidence Request from the Evidence Provider (EP) to the Evidence Requester (ER), containing the necessary information for the correlation of the Evidence Response with the respective Evidence Request, the actual data provided and the metadata of the Evidence Provider who is the responder.

## Evidence Response

**Correspondence:** *sdg:EvidenceResponse*

**Definition:** A request for an evidence to the Data Service of an Evidence Provider (EP).

**request specific:** included here to provide a complete semantical description of the information in the Evidence Response message.

Property	URI	Range	Cardinality	Definition	Usage notes
specification	sdg:specification	Code	1..1	The specification version according to which this request message is constructed.	For now, the value "oots-edm:v2.1" must be used.
issue date	dct:issued	Literal	1..1	The time when the response is submitted.	The value must be according to xsd:dateTime

## Evidence Provider

**Correspondence:** *foaf:Agent*

**Definition:** The agent that is issuing the evidence.

### Info

This organisation can be the one that is publishing the data service endpoint from which this response comes, but this is not mandatory. In some cases the data services is operated and maintained by one

**i** organisation, while another organisation is responsible for the content, i.e. the evidence. In the Evidence Response this agent only occurs only in the role of a the issuing authority of the evidence.

<b>p r o p e r t y</b>	<b>XML tag</b>	<b>uri</b>	<b>ran ge</b>	<b>cardi nalit y</b>	<b>definition</b>	<b>usage note</b>
id e n t i f i e r	Identifier	dct:identifier	Literal	0..1	a unique identification for the agent	
n a m e	Name	foaf:name	Text	0..1	a short label for the agent	
a d d r e s s	Address	locn:address	Address	0..1	An location of the Evidence Provider in the form of an address.	If the spatial jurisdiction cannot be supplied, the address can be supplied to facilitate the functional requirement for determining the Evidence Provider based in location information.
cl a s s i f i c a t i o n	Classification	org:classification	Code	0..n	A classification of the Evidence Provider.	

property	XML tag	uri	range	cardinality	definition	usage note
jurisdiction	Jurisdiction	cv:spatialJurisdiction	Code	1..1	The spatial jurisdiction of the Evidence Provider w.r.t. the evidence type it is supplying.	<p>The code should reflect the most precise spatial description for the applicable jurisdiction in the used code list. E.g. if the jurisdiction is the city of Vienna, then the code for Vienna should be used and not the code for the country Austria.</p> <p>It is assumed that the used codes are organised in a code list that can support the navigation and search functionalities required by the UI to determine the to-be used Evidence Provider quickly.</p>

## Evidence

**Correspondence:** *cv:Evidence*

**Definition:** Any document or data, including text or sound, visual or audiovisual recording, irrespective of the medium used, required by a competent authority to prove facts or compliance with procedural requirements.

### Info

In the context of the Evidence Response it is the envelope wrapped by the Evidence Provider around the actual evidence data.

An evidence can be provided in different formats. These are called distributions. Common information across all distributions are associated with the Evidence class, while format specific information is associated with the Distribution class.

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Range</b>	<b>Cardin ality</b>	<b>Definition</b>	<b>Usage notes</b>
is a b o u t	IsAbout	cv:isAbout	Evidence Subject	1..1	The evidence subject, namely the agent which the evidence is about.	This can be a person or organisation.
is s u i s s i n g a u t h o r i t y	IssuingAuth ority	cv:issuing Authority	Evidence Provider	1..1	The evidence provider, namely the agent that is issuing the evidence.	This is an organisation.
is c o n f o r m a n t t o	I sConforman tTo	dct:isConf ormantTo	Evidence Type	1..1	The kind of evidence.	The evidence types considered are those that has been registered in the Data Service Directory.
id e n t i f i e r	Identifier	dct:identif ier	Literal	1..1	The identifier of an evidence.	

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Range</b>	<b>Cardin ality</b>	<b>Definition</b>	<b>Usage notes</b>
is s u i n g d a t e	IssuingDate	dct:issued	Literal	1..1	The moment the evidence has been issued by the Evidence Provider.	The value must be unambiguous for interpretation. It either includes the time zone or it is defined as UTC. The value must be according to xsd:dateTime
di st ri b u t i o n	Distribution	dcat:distribution	Distribution	1..n	The distributions that are provided by the Evidence Provider of this evidence.	The returned amount of distributions should correspond to the requested amount in the Evidence Request (Reword XXX)

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>Range</b>	<b>Cardin ality</b>	<b>Definition</b>	<b>Usage notes</b>
v a l i d i t y p e r i o d	ValidityPeriod	cv:validity Period	Period	0..1	The validity period of the evidence ensured by the Evidence Provider.	As long the end date has not surpassed the consumer (Data Requester (DR), Data Evaluator (DE)) can make decisions on this document. When the end date has surpassed the consumer (DR, DE) are expected to discard this evidence and request a new one. Any use beyond the end date is at the risk of the (DR, DE).

## Distribution

**Correspondence:** *dcat:Distribution*

**Definition:** A concrete representation of the Evidence that is transported through the OOP as part of the response to the request.

### Info

In the Evidence Response the data is being transferred along with the below defined descriptive information. Evidence Providers (EP) should follow the guidelines on how include the evidence data and how to relate the below descriptions about the included data with the included data.

<b>P r o p e r t y</b>	<b>XML tag</b>	<b>URI</b>	<b>R a n g e</b>	<b>C a r d i n a l i t y</b>	<b>Description</b>	<b>Usage notes</b>	<b>Codelist</b>
f o r m a t	F o r m a t	<a href="#">dct:MediaTypeOrExtent</a>	C o d e	0.. 1	The format of the evidence.	Restrict the usage to a controlled vocabulary that is under EU control	<a href="#">NAL file-type</a>
p a c k a g i n g f o r m a t	P a c k a g i n g F o r m a t	<a href="#">dct:MediaTypes</a>	C o d e	0.. 1	The format that is used to group the content of the evidence together.	restrict the usage to a controlled vocabulary that is under EU control	<a href="#">NAL file-type</a>
c o m p r e s s i o n f o r m a t	C o m p r e s s i o n F o r m a t	<a href="#">dct:MediaTypes</a>	C o d e	0.. 1	The format that is used to compress the content of the evidence.	Restrict the usage to a controlled vocabulary that is under EU control	<a href="#">NAL file-type</a>

Property	XML tag	URI	Range	Cardinality	Description	Usage notes	Codelist
language	Language	dct:LinguisticSystem	Code	1..n	The language in which the evidence is provided.		NAL language
conformsTo	ConformsTo	dct:Standard	Code	0..1	The specification/schema according to which the distribution is provided.	Restrict to the registered specifications and schemas in the semantic repository.	

## Evidence Subject

**Correspondence:** *foaf:Agent*

**Definition:** The subject from whom the evidence is requested to the Data Service.

Property	URI	Range	Cardinality	Definition	Usage notes
identifier	dct:identifier	Literal	1..1	The identifier about the Evidence Subject.	

[Evidence Broker](#)   [Data Service Directory](#)   [Document Request Query](#)   [Document Request Response](#)

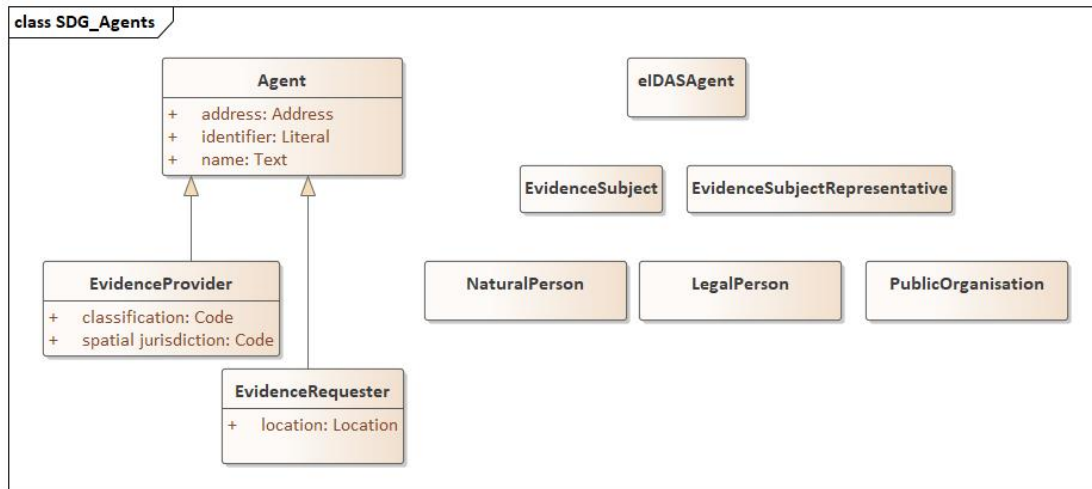
[Agent](#)   [Supportive concepts](#)

This section offers a generic perspective on agents in the SDG OOTS. The usage context of the information is not taken into account in this section. The objective of this section is

- to provide an insight in the information that is/might be required to operate the SDG OOTS in the vast majority of cases, and
- to provide insight in the typical SDG OOTS agent roles.



## Overview



## SDG OOTS agent roles

The following roles are involved in the Evidence exchange of the SDG OOTS.

role	definition	usage note
evidence provider	the agent that is responsible for providing, supplying evidences	<p>This is a organisation. Mostly it is a public organisation, however in some MS for some evidence types businesses have been accredited to supply them.</p> <p>An evidence provider must be registered in the Data Service Directory in order to be activated in the SDG OOTS.</p>
evidence subject	the agent about whom the evidence is provided/requested	<p>The agent nature can a natural person or an organisation.</p> <p>The profile is dependent on the SDG OOTS record matching agreements. The provided values are primely bound to the eIDAS agreements.</p>
evidence subject representative	the agent that is acting on behalf of the evidence subject to request the evidence	<p>The agent nature can a natural person or an organisation.</p> <p>The profile is dependent on the SDG OOTS record matching agreements. The provided values are primely bound to the eIDAS agreements.</p>

role	definition	usage note
evidence requester	the agent that is requesting the evidence on behalf of the evidence subject	<p>This is the portal/organisation that initiates the SDG OOP requests.</p> <p>No central registry of evidence requesters is required. The details provided as minimal to enable legal logging or facilitate the processing of the evidence request.</p>

The detailed profiles of these SDG OOTS agent roles is found at the bottom of this document.

## Generic Agent profiles

The Core Vocabularies define data models for the 3 natures of agents: natural persons (Core Person), businesses (Core Business) and public organisations (Core Public Organisation). For each agent nature a set of properties in accordance with the respectively Core Vocabulary is listed. The tables below do not express the need to provide or use these properties; compared to the core vocabulary the tables add cardinality constraints.

In some cases the detailed nature of the agent is irrelevant, for instance for the evidence requester. In that case a more abstract profile is applied.

### Agent (foaf:Agent)

property	XML tag	uri	range	cardinality	definition	usage note
identifier	Identifier	dct:identifier	Literal	0..1	a unique identification for the agent	
name	Name	foaf:name	Text	0..n	a short label for the agent	to be used if-and-only-if no more precise Agent profile is being used.

### Natural Person (person:Person)

From Core Person (<https://semiceu.github.io/Core-Person-Vocabulary/releases/2.00/#Person>)

An individual person who may be dead or alive, but not imaginary.

Full name of the Person given upon their birth.

property	XML tag	uri	range	cardinality	definition	usage note
identifier	Identifier	dct:identifier	Literal	0..1	a unique identification for the agent	
alternative name	AlternativeName	dct:alternative	Text	0..n	Any name by which an individual is known other than their full name	
birth name	BirthName	person:BirthName	Text		Full name of the Person given upon their birth.	
citizenship	Citizenship	dct:citizenship	Jurisdiction	0..n	The citizenship relationship links a Person to a Jurisdiction that has conferred citizenship rights on the individual such as the right to vote, to receive certain protection from the community or the issuance of a passport.	
country of birth	CountryOfBirth	person:countryOfBirth	Location	0..1	The country in which a Person was born.	
country of death	CountryOfDeath	person:countryOfDeath	Location	0..1	The country in which a Person died.	
date of birth	DateOfBirth	schema:birthDate	Literal with type xsd:dateTime	0..1	The day on which the Person was born.	
date of death	DateOfDeath	schema:deathDate	Literal with type xsd:dateTime	0..1	The day on which the Person died.	
family name	FamilyName	foaf:familyName	Text	0..1	A family name is usually shared by members of a family.	
full name	FullName	foaf:name	Text	0..1	The full name contains the complete name of a person as one string.	

property	XML tag	uri	range	cardinality	definition	usage note
gender	Gender	schema:gender	Code	0..1	Gender of the Person.	
given name	GivenName	foaf:givenName	Text	0..1	A given name, or multiple given names, are the denominator(s) that identify an individual within a family.	
patronymic name	PatronymicName	person:patronymicName	Text	0..1	Name based on the given name of the Person's father.	
place of birth	PlaceOfBirth	person:placeOfBirth	Location	0..1	The Location where the Person was born.	
place of death	PlaceOfDeath	person:placeOfDeath	Location	0..1	The Location where the Person died.	
residency	Residency	person:	Jurisdiction	0..n	Residency typically provides an individual with a subset of the rights of a citizen.	

## Legal Person (legal:LegalEntity)

From Core Business (<https://semiceu.github.io/Core-Business-Vocabulary/releases/2.00/#Legal%20Entity>)

property	XML tag	uri	range	cardinality	definition	usage note
identifier	Identifier	dct:identifier	Literal	0..1	a unique identification for the agent	
legal identifier	LegalIdentifier	legal:legalIdentifier	Identifier	0..1	The legal status of a business is conferred on it by an authority within a given jurisdiction. The legal identifier is therefore a fundamental relationship between a Legal Entity and the authority with which it is registered	

property	XML tag	uri	range	cardinality	definition	usage note
legal name	LegalName	<a href="http://www.w3.org/ns/legal#legalName">http://www.w3.org/ns/legal#legalName</a>	Text	0..1	The legal name of the business.	
registered address	RegisteredAddress	<a href="http://www.w3.org/ns/legal#registeredAddress">http://www.w3.org/ns/legal#registeredAddress</a>	Address	0..1	In almost all jurisdictions, Legal Entities must register a public address. This may or may not be the actual address at which the Legal Entity does its business, it is commonly the address of their lawyer or accountant, but it is the address to which formal communications can be sent.	
alternative name	AlternativeName	dct:alternative	Text	0..n	Some jurisdictions recognise concepts such as a trading name or alternative forms of a legal entity's name. The alternative name property can be used to record such names but should not be used to record translations of the primary legal name.	

## Public Organisation (cv:PublicOrganisation)

Any organisation that is defined as being part of the public sector by a legal framework at any level.

property	XML tag	uri	range	cardinality	definition	usage note
identifier	Identifier	dct:identifier	Literal	0..1	a unique identification for the agent	
address	Address	locn:address	Address	0..1	A property to link a public organisation to its address.	

property	XML tag	uri	range	cardinality	definition	usage note
alternative label	Alternative Label	skos:altLabel	Text	0..n	An alternative or informal name, irrespective of language.	
preferred label	PreferredLabel	skos:prefLabel	Text	0..1	An preferred label is used to provide the primary, legally recognised name of the organisation	
resulted from	ResultedFrom	org:resultedFrom	FoundationEvent	0..1	Public Organizations are formed and changed in response to events. This may be the result of new legislation, new policies, taking on new obligations etc. The Foundation Event describes the event that initiated the public organisation in the context of a formal framework.	

## Address (locn:Address)

Defined in Core Location, an Address is a spatial object that in a human-readable way identifies a fixed location of a property.

It is included in this section as its use in the context of the SDG OOTS Evidence exchange limited to a usage in the context of agents.

property	XML tag	uri	range	cardinality	definition	usage note
identifier	Identifier	dct:identifier	Literal	0..1	a unique identification for the address	
administrative unit level 1	AdministrativeUnitLevel1	locn:administrativeUnitL1	Code	0..1	The name or names of a unit of administration related to the exercise of jurisdictional rights, for local, regional and national governance. Level 1 refers to the uppermost administrative unit for the address, almost always a country.	

property	XML tag	uri	range	cardinality	definition	usage note
administrative unit level 2	AdministrativeUnitLevel2	locn:adminUnitL2	Code	0..1	The name or names of a unit of administration related to the exercise of jurisdictional rights, for local, regional and national governance. Level 2 referst to the region of the address, usually a county, state or other such area that typically encompasses several localities.	
full address	FullAddress	locn:fullAddress	Text	0..1	The complete address written as a formatted string.	
locator designator	LocatorDesignator	locn:locatorDesignator	String	0..1	A number or a sequence of characters which allows a user or an application to interpret, parse and format the locator within the relevant scope. A locator may include more locator designators.	
locator name	LocatorName	locn:locatorName	Text	0..1	Proper noun(s) applied to the real world entity identified by the locator.	
post code	PostCode	locn:postCode	String	0..1	The post/zip code of an address. (INSPIRE's definition is "A code created and maintained for postal purposes to identify a subdivision of addresses and postal delivery points.")	

property	XML tag	uri	range	cardinality	definition	usage note
post city name	PostCityName	locn:postName	Text	0..1	The key postal division of the address, usually the city. (INSPIRE's definition is "One or more names created and maintained for postal purposes to identify a subdivision of addresses and postal delivery points.") For example, "Paris".	
post office box	PostOfficeBox	locn:poBox	String	0..1	The Post Office Box number.	
thoroughfare	Thoroughfare	locn:thoroughfare	Text	0..1	An address component that represents the name or names of a passage or way through from one location to another. A thoroughfare is not necessarily a road, it might be a waterway or some other feature.	
address area	AddressArea	locn:addressArea	Text	0..1	The name or names of a geographic area or locality that groups a number of addressable objects for addressing purposes, without being an administrative unit.	

## Location (dct:Location)

Defined in Core Location, a Location is an identifiable geographic place or named place.

It is included in this section as its use in the context of the SDG OOTS Evidence exchange limited to a usage in the context of agents.



property	XML tag	uri	range	cardinality	definition	usage note
geographic identifier	Geographic Identifier	rdfs:seeAlso	Code	0..1	A code (URI) that identifies the Location.	Not any URI will be allowed, since the usage objective is to be able to organise and aid a user to find the connected entities via the location. For a good UI experience a code list is required.
geographic name	Geographic Name	locn:geographicName	Text	0..1	A geographic name is a proper noun applied to a spatial object	

## Jurisdiction

Several entities include the Jurisdiction to which the entity applies. Ideally there is a code list that is organized and managed by all MSs expressing the administrative organisation of each MS to the level that for that MS is required in the context of the SDG OOTS. Some MSs suffice with one level, while others have a much more elaborated structure. To a large extent this is covered by combining existing codelists such as NUTS and LAU into a coherent structure. If the integrated codelist cannot be realized the jurisdiction can be expressed by using a structure consisting of distinct properties *administrative unit level* for each necessary level having an appropriate codelist.

## eIDAS agent profiles

Since eIDAS is the identity provision service in the SDG OOP, these profiles have an important impact on the information that is available. In particular the roles evidence subject and the evidence subject representative are impacted by the available information through eIDAS.

The current eIDAS agent profiles are defined in [eIDAS eID Profile](#). More information on the SDG OOTS guidelines w.r.t. evidence subject identification and record matching are documented [User Identification, Authentication and Record Matching - OOTS - SDG Once-Only Collaborative Space - CEF Digital \(europa.eu\)](#)

## SDG OOTS agent profile details

### Evidence provider (foaf:Agent)

<b>p r o p e r t y</b>	<b>XML tag</b>	<b>uri</b>	<b>ran ge</b>	<b>cardi nalit y</b>	<b>definition</b>	<b>usage note</b>
id e n t i f i e r	Identi fier	dct:ident ifier	Lite ral	0..1	a unique identification for the agent	
n a m e	Name	foaf:nam e	Tex t	0..1	a short label for the agent	
a d d r e s s	Addre ss	locn:add ress	Add ress	0..1	An location of the Evidence Provider in the form of an address.	If the spatial jurisdiction cannot be supplied, the address can be supplied to facilitate the functional requirement for determining the Evidence Provider based in location information.
cl a s s i f i c a t i o n	Classi ficatio n	org:classi fication	Cod e	0..n	A classification of the Evidence Provider.	

<b>p r o p e r t y</b>	<b>XML tag</b>	<b>uri</b>	<b>ran ge</b>	<b>cardi nalit y</b>	<b>definition</b>	<b>usage note</b>
ju ri s di ct io n	Jurisd iction	cv:spatia lJurisdic tion	Cod e	1..1	The spatial jurisdiction of the Evidence Provider w.r.t. the evidence type it is supplying.	<p>The code should reflect the most precise spatial description for the applicable jurisdiction in the used code list. E.g. if the jurisdiction is the city of Vienna, then the code for Vienna should be used and not the code for the country Austria.</p> <p>It is assumed that the used codes are organised in a code list that can support the navigation and search functionalities required by the UI to determine the to-be used Evidence Provider quickly.</p>

## Evidence Requester (foaf:Agent)

<b>p r o p e r t y</b>	<b>XML tag</b>	<b>uri</b>	<b>ran ge</b>	<b>cardi nalit y</b>	<b>definition</b>	<b>usage note</b>
id e n t i f i e r	Identi fier	dct:ident ifier	Lite ral	0..1	a unique identification for the agent	

property	XML tag	uri	range	cardinality	definition	usage note
name	Name	foaf:name	Text	0..1	a short label for the agent	
address	Address	locn:address	Address	0..1	An location of the Evidence Requester in the form of an address.	
location	Location	locn:location	Location	0..1	The location of the Evidence Requester from where the Evidence Requester is operating.	

## Evidence Subject & Evidence Subject Representative

Use the generic agent profile according to the nature of the agent: so a NaturalPerson, LegalPerson or PublicOrganisation.

[Evidence Broker](#)   [Data Service Directory](#)   [Document Request Query](#)   [Document Request Response](#)

[Agent](#)   [Supportive concepts](#)

The generic metadata model is built on top of generic supportive agreements.

## Primitive Types

### dateTime

Whenever time information is required, there is need to refer to the time unambiguously. This can be done by including the time zone information or recording the information as UTC time.

## Language aware Text and String

Whenever a string value is language aware the primitive type Text is used. When the primitive type String is used, then the value is normally language agnostic. It means that the value is just a sequence of characters e.g. an identifier or a code.

## Identifiers

A semantical model connects information through identifiers into a knowledge graph. In some use cases, meta information about the identifier, such as the registry that maintains the identifier or the encoding schema are required. When these identifiers are dereferenceable inside the ecosystem, meaning there is a dereferencing service available that would return key information about a given identifier, then the data shared can be based on those identifiers.

These expectations are expressed by mapping one of the following semantical patterns:

- **mapping on `dct:identifier`**

The identifier is a value without any meta data requirement:

Property-URI	Range	Notes
<a href="#">dct:identifier</a>	rdfs:Literal	

The identifier is a value according to a known encoding schema:

Property-URI	Range	Notes
<a href="#">dct:identifier</a>	rdfs:Literal	With type <a href="http://www.w3.org/2001/XMLSchema#anyURI">http://www.w3.org/2001/XMLSchema#anyURI</a> . This constraint imposes that the identifier value must be a URI.

- **mapping on `adms:identifier`**

The identifier is a value with metadata requirement:

Property-URI	Range	Notes
<a href="#">adms:identifier</a>	<a href="#">adms:Identifier</a>	

[adms:Identifier](#) ([Asset Description Metadata Schema \(ADMS\) \(w3.org\)](#))

Property	Property-URI	Range	Description	Notes
notation	skos:notation	rdfs:Literal with type S	the value of the identifier encoded according to the schema S. If no schema is assumed or mentioned the type is per default string.	(part of adms)
assigned by	dct:creator	rdfs:Resource	the agent that has assigned the identifier	(part of adms)
assigned by	<a href="#">adms:schemaAgency</a>	rdfs:Literal	the name of the agent that has assigned the identifier	(part of adms)
issuing date	dct:issued	xsd:dateTime or xsd:date	the moment that the identifier has been assigned	(part of adms)

## Codes and Codelists

A controlled vocabulary, or commonly referred to as codelist, is an authoritative list of terms to be used in indexing. Controlled vocabularies do not necessarily have any structure or relationship between terms within the list. By default, code lists should follow the [SKOS principles](#), be published with persistent identifiers and management by an authoritative organisation, ideally the Publications Office.

## Assurance Level

In the SDG OOTS there is need to express the level of assurance a data provider gives to a value. For instance, if the first name of a person is retrieved from an official citizen register, the trust is high, but if it has been the result of entering the name in a UI then this information has a lower trust.

In particular to do subject record matching, i.e. determining the identity of a subject by an evidence provider this difference in assurance may play a role. In eIDAS this annotation has been introduced, and this is here made into a more generic approach for the whole SDG OOTS data models.

Instead of incorporating this as a part of the semantical data models and so changing the structures, an annotation approach is proposed.

property	uri	range	definition	usage note
assurance level	sdg:assurranceLevel	Code	the level of assurance a data provider assigned to the value	normal – assurance level: high

## XML Design

Mapping the semantical application profile on an XML structure is a design activity. Both have their own style guides; sometimes they are coinciding, but sometimes there is no one-to-one mapping possible.

The XML structures that are derived from the application profile follow the next basic design rules:

- tag names are uppercamelcase strings based on the entity (class/property) names
- application profile classes are defined as complex types in which entities are sequences of properties
- tag names are defined in a sdg namespace which will be mapped to the appropriate application profile entity