CCCEV 2.0

Online webinar #2
27th of April 2021

Webinar practicalities

Click on « connect audio » but please mute your microphones

You can also share your questions for the Q&A session via the chat*

The webinar will be recorded

*One question after each speaker + Q&A discussion at the end

Agenda

1. Welcome
2. CCCEV v1.00 & v2.00
3. Example
4. Discussion points
5. Wrap-up

1. Welcome

Speaker: Pavlina Fragkou

Objectives

- Present the changes related to previous discussions (webinar, GitHub, etc.)
- Discuss and agree on the proposed changes.

SEMIC solutions

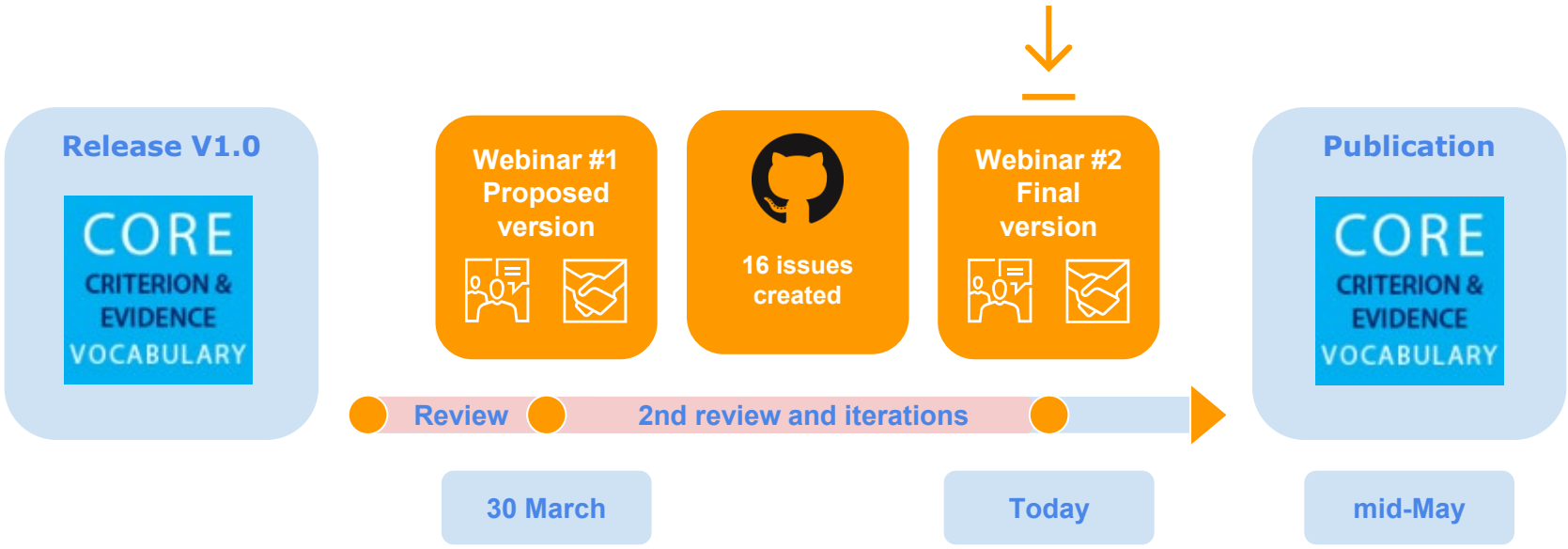
Specifications

- **Core Criterion and Core Evidence**
- Core Person
- Core Business
- Core Location
- Core Public Organisation

Parallel revision process

- DCAT-AP
- GeoDCAT-AP (DCAT-AP extension): latest release Dec 2020
- StatDCAT-AP (DCAT-AP extension)
- ADMS

Revision process of CCCEV



Pronunciation of CCCEV

- **Official pronunciation: CCCEV**
- Alternative options: **C3EV** or **C³EV**

2. CCCEV v1.00 & v2.00

Changes related to CCCEV classes (1/3)

CCCEV 1.0.0 class	CCCEV 2.0.0 class
Formal Framework: Legislation, policy, or policies lying behind the rules that govern a criterion.	**Reference Framework**: A source from where Requirements are identified and derived.
Criterion Requirement: An atomic requirement.	**Requirement**: A condition or prerequisite that someone requests and someone else has to meet.
Criterion: The rule or principle used to judge, evaluate or assess something.	**Criterion**: A condition for evaluation or assessment.
Criterion Requirement: An atomic requirement.	**Information Requirement**: A request for data that is proof of Evidence or that leads to the source of such a proof.
Criterion Requirement: An atomic requirement.	**Constraint**: Limitation applied to requirement(s) or to the concept(s) the requirement is about.

Changes related to CCCEV classes (2/3)

CCCEV 1.0.0 class	CCCEV 2.0.0 class
	Information Concept: A reference to an entity, i.e. a class or a property, which is used to describe information in the Evidence to be provided for the Requirement specified.
	Supported Value: A value for an Information Concept that is supported by an Evidence.
Requirement Group: The set of requirements that must be fulfilled together to validate a criterion.	
Requirement Response: An assertion that responds to a criterion requirement.	
Evidence: Evidence is any resource that can document or support a Requirement response.	**Evidence**: The data proving that a requirement is met or has been fulfilled.

Changes related to CCCEV classes (3/3)

CCCEV 1.0.0 class	CCCEV 2.0.0 class
	Evidence Type List: A combination of Evidence Types for each of which a conforming Evidence must be provided.
	Evidence Type: Information about the characteristics of an expected Evidence.
Document Reference: A reference to the document, attestation or data, usually provided by a party different from the one providing the response, that proves the response.	
Agent: An Organisation or Natural person providing a Requirement response that satisfies a Criterion. The Agent class is a generalisation of the Person and Organisation classes defined in the Core Person Vocabulary and the Organisation Ontology respectively.	**Agent**: Any entity that is able to carry out actions.
	Dataset: A collection of data.

ISA²
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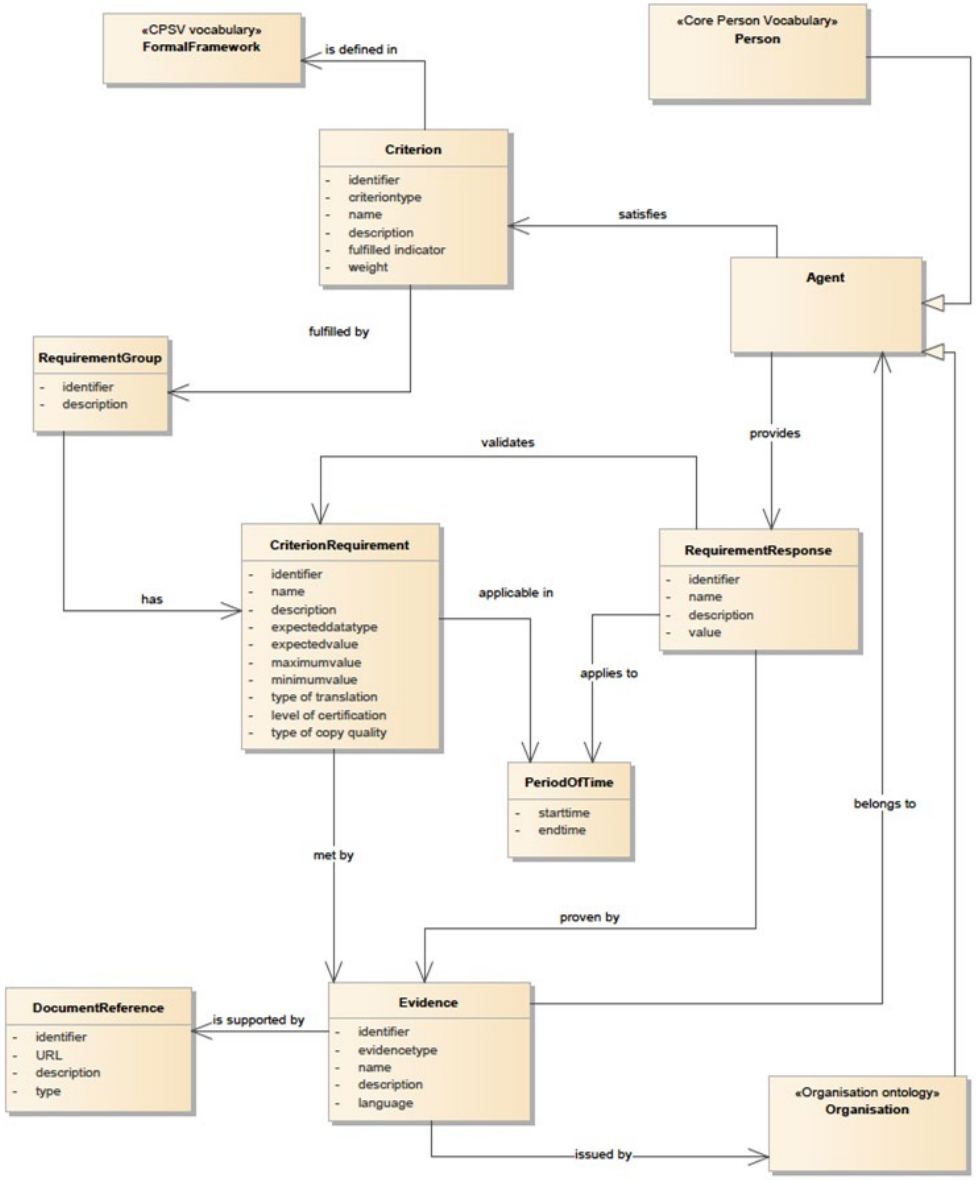
3. Example

CORE
CRITERION & EVIDENCE VOCABULARY

Speaker: Dimitri Schepers

European Commission

Reminder: CCCEV v1.00



Rationale leading to a new version of CCCEV

1. Creating more semantically enriched Requirements

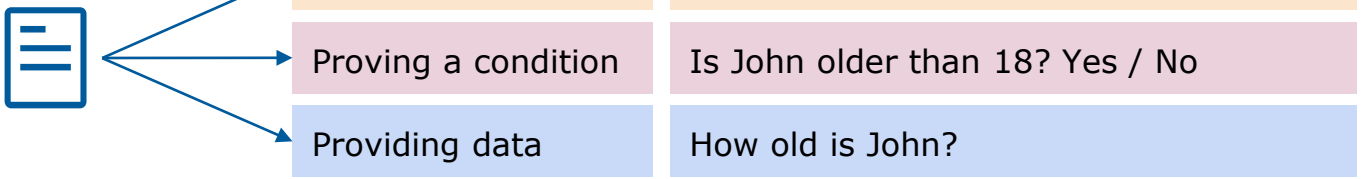
   Possibility to reuse proposed Requirements subclasses or to define your own domain-specific Requirements class to match reality as closely as possible.

2. Enforce machine-readable capabilities

   Information Concept, Supported Value and Requirements classes are all machine-readable.

3. Supporting multiple request-response patterns

   Introducing new classes that enable the machine-processability of Requirements and Evidences



Rationale leading to a new version of CCCEV

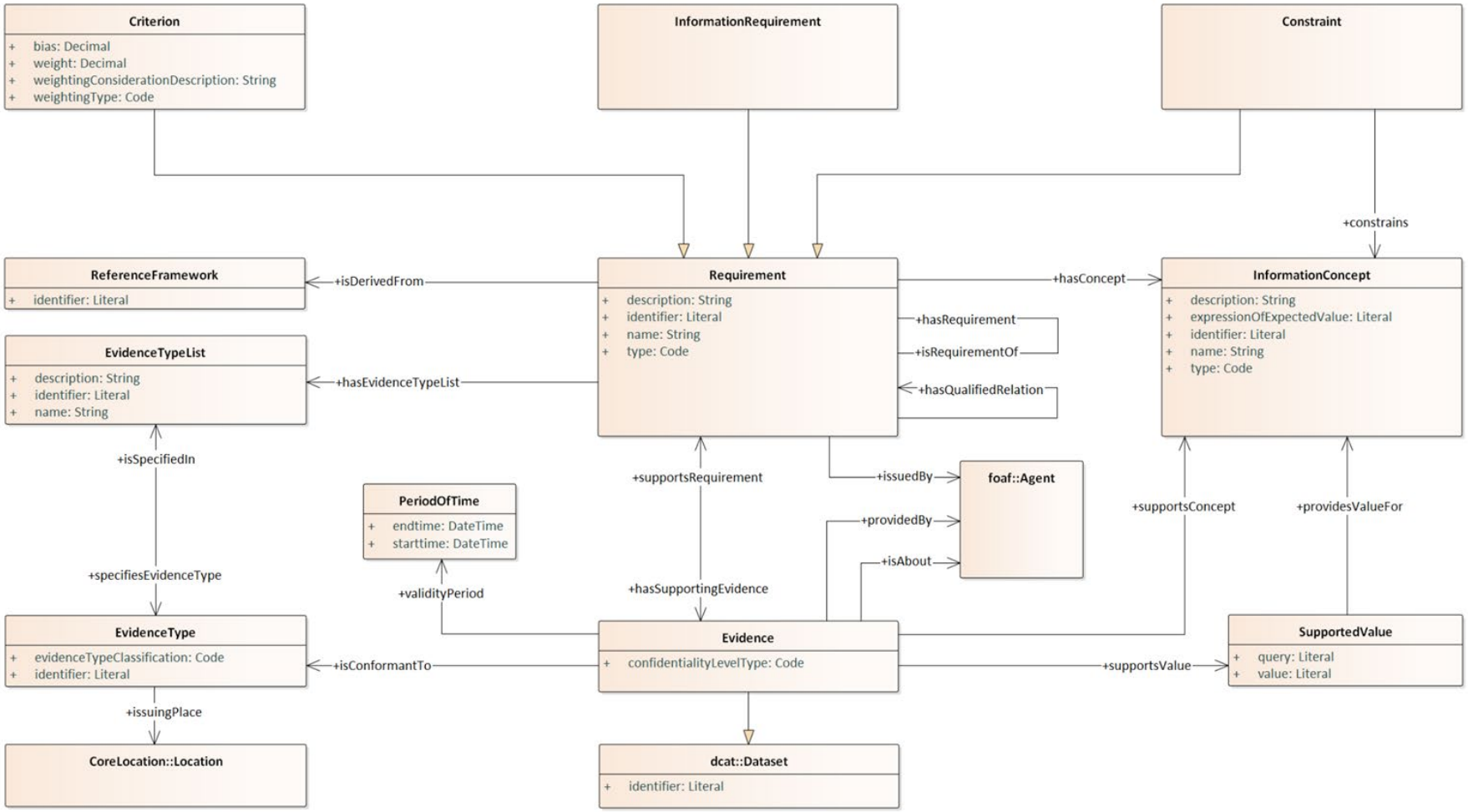
4. Shifting the description of the different possible ways to fulfill a (Criterion) Requirement from the Requirement side to the Evidence side

   Disentangling the use of Evidence in version 1.0.0 as instance and type in two distinct classes: Evidence and EvidenceType. This created a new approach to complete the Criterion class, by using a EvidenceTypeLists (”a collection of types of evidences”).

4. Making Evidence a subclass of dcat:Dataset

   The pattern dcat:Dataset -> dcat:Distribution is a generic pattern that corresponds to the usage of Evidences in practice. It enables to inherit semantical agreements on the description (metadata) of entities.

CCCEV v2.00 (updated version based on previous webinar)



CCCEV 2.0.0 example

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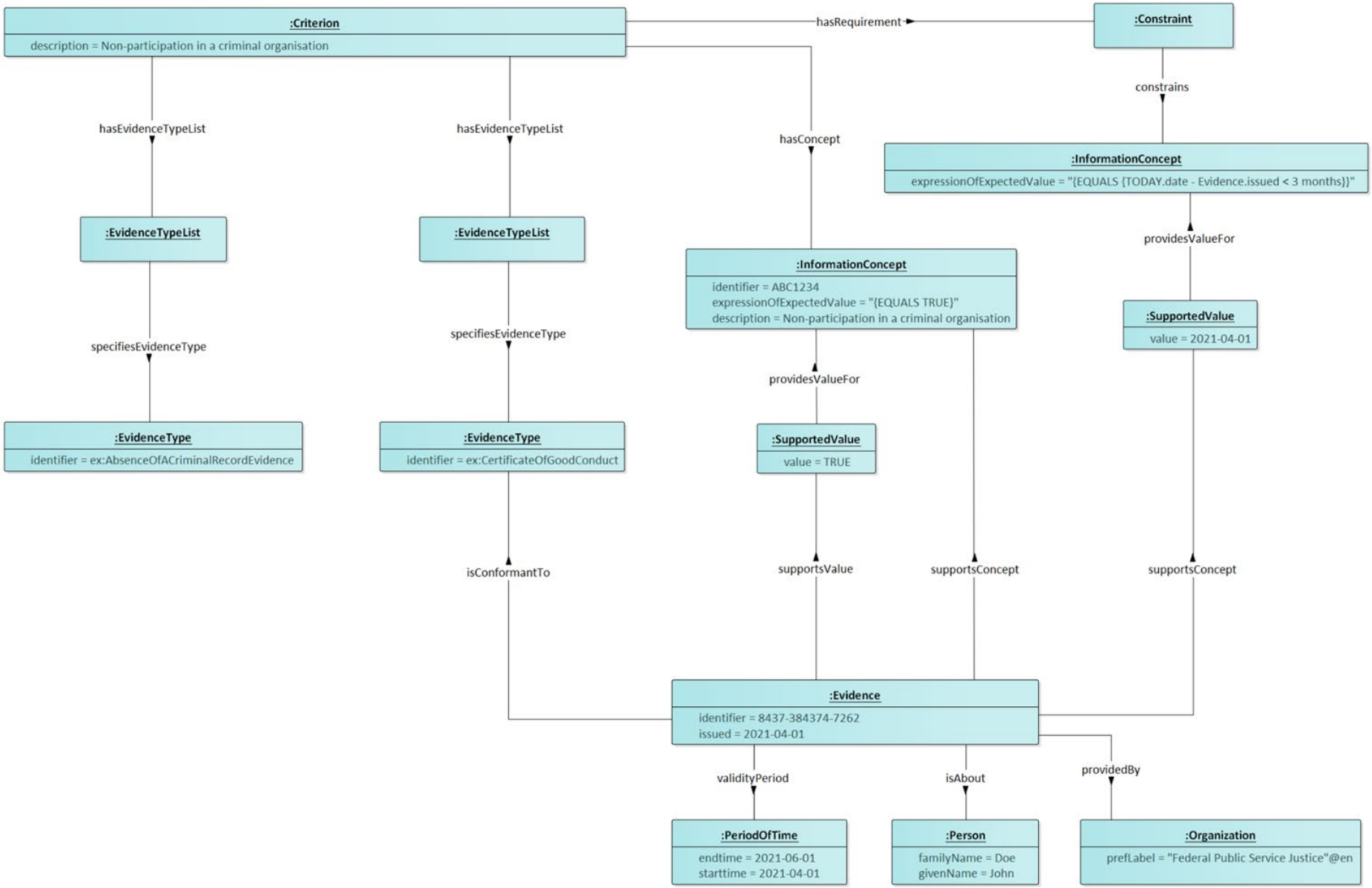
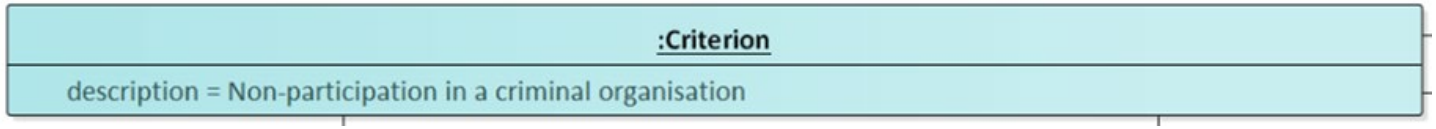


CCCEV 2.0.0 example: evidence requester



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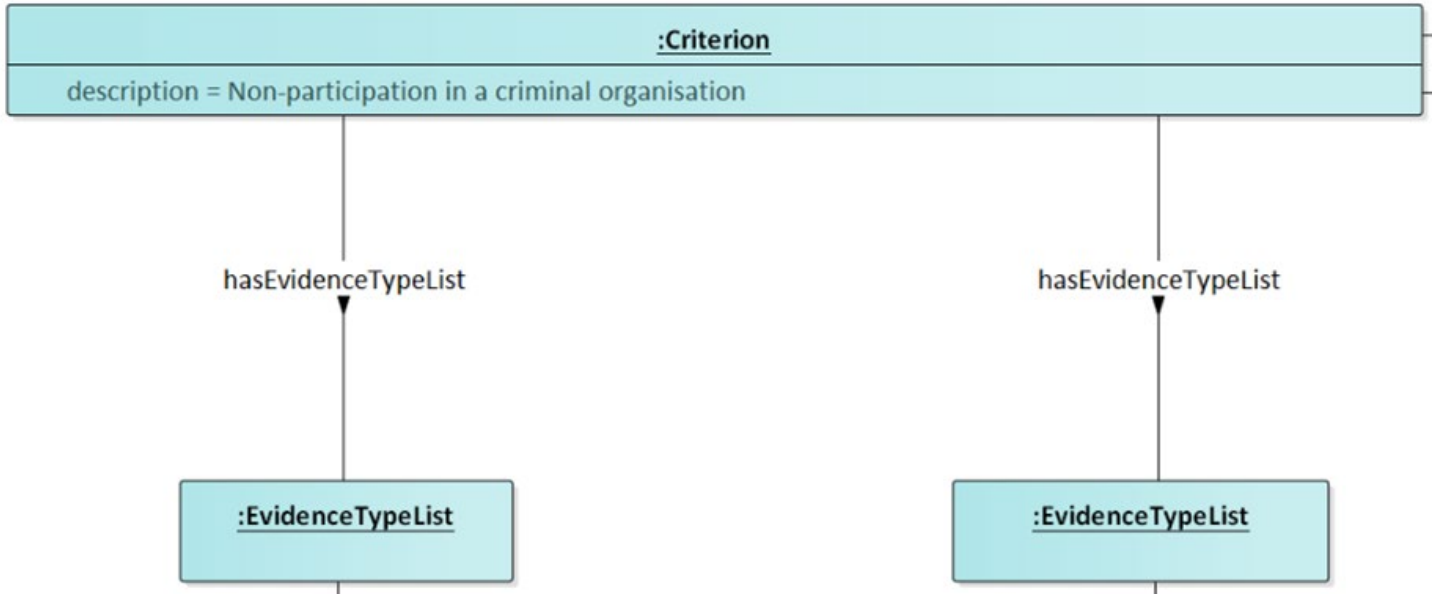

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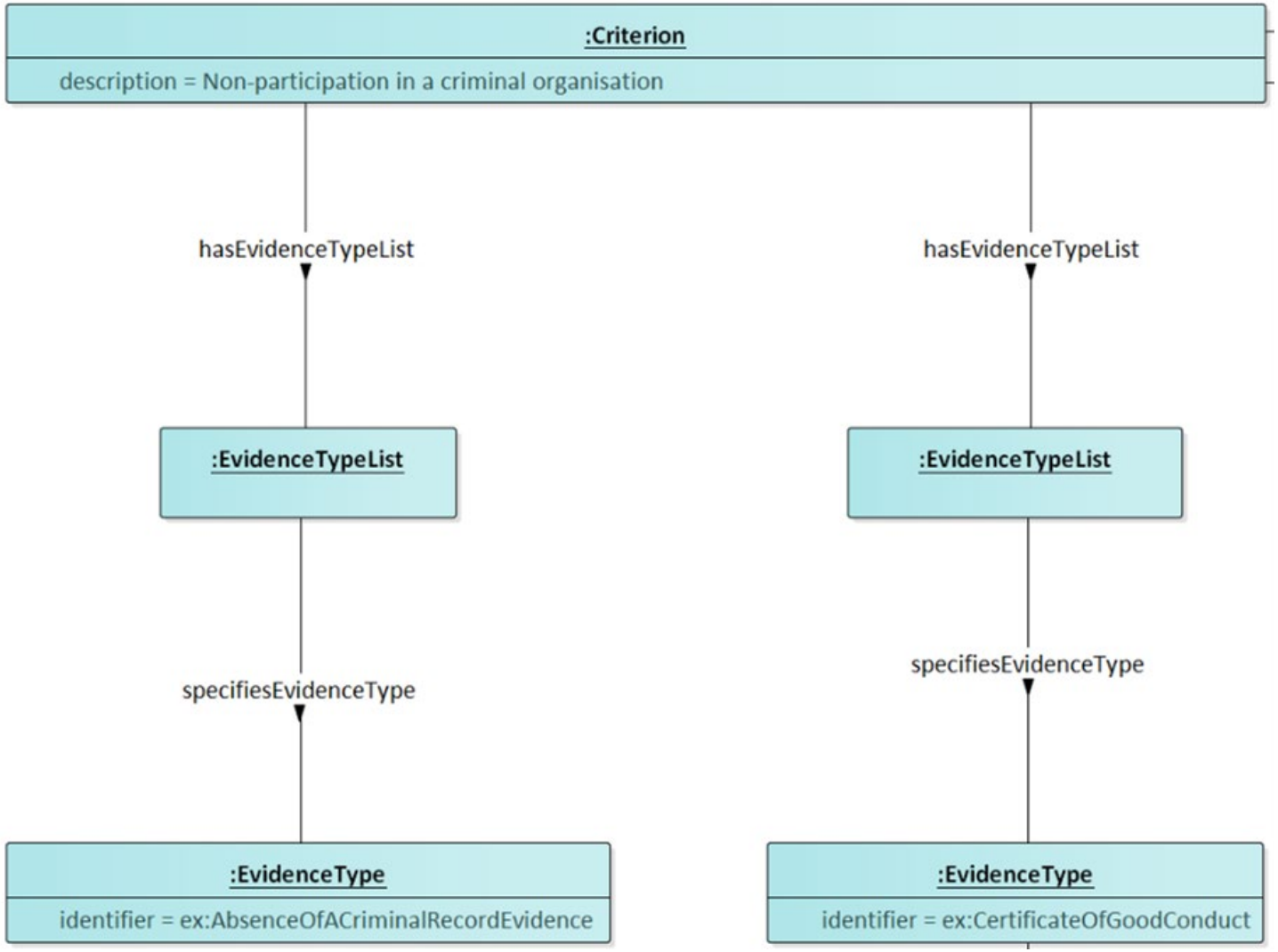

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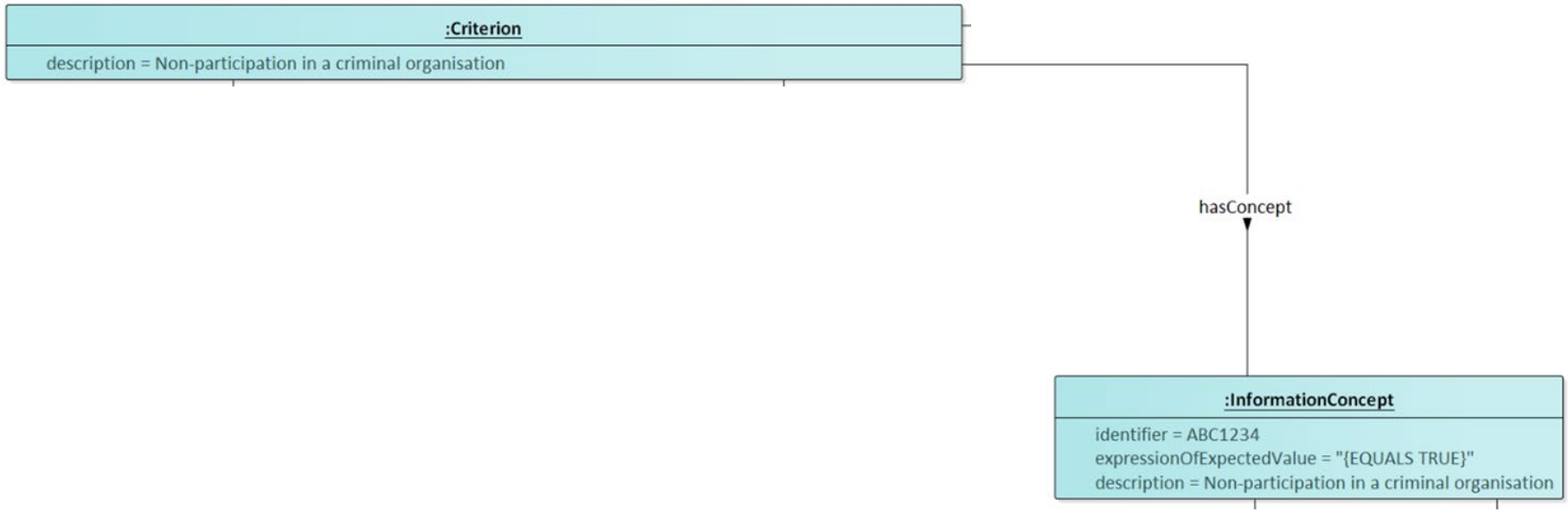

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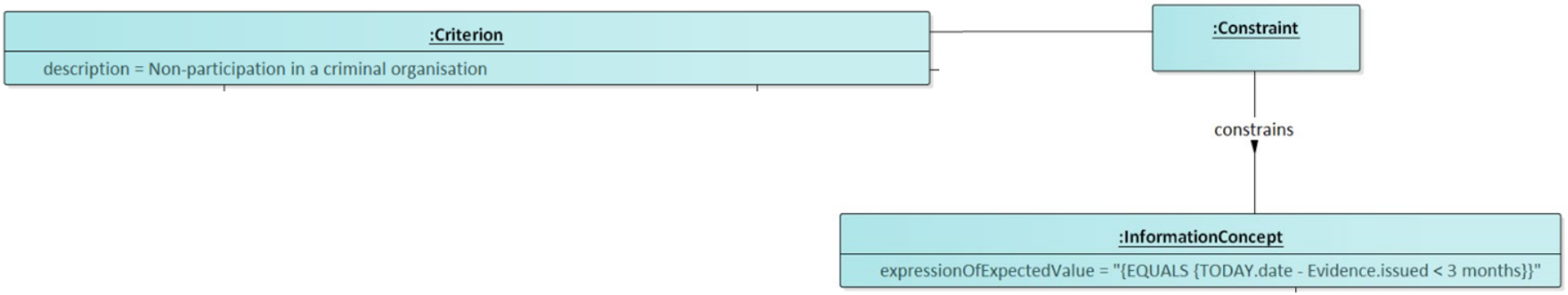

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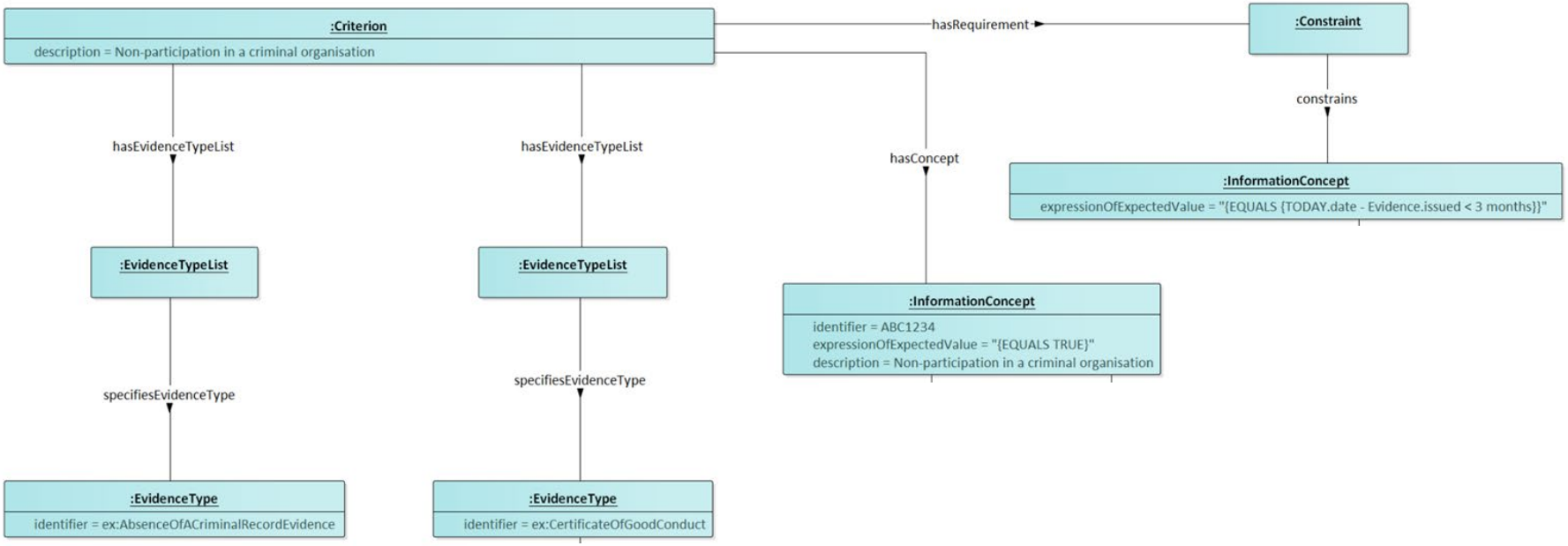
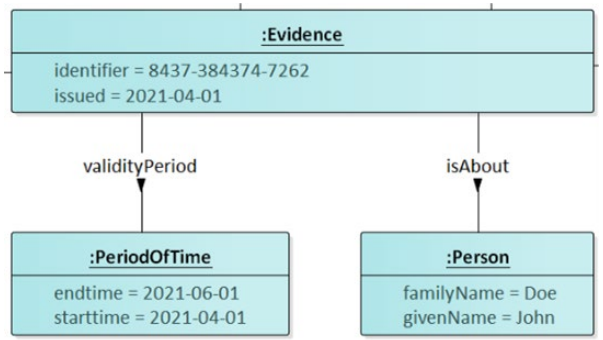


CCCEV 2.0.0 example: evidence provider



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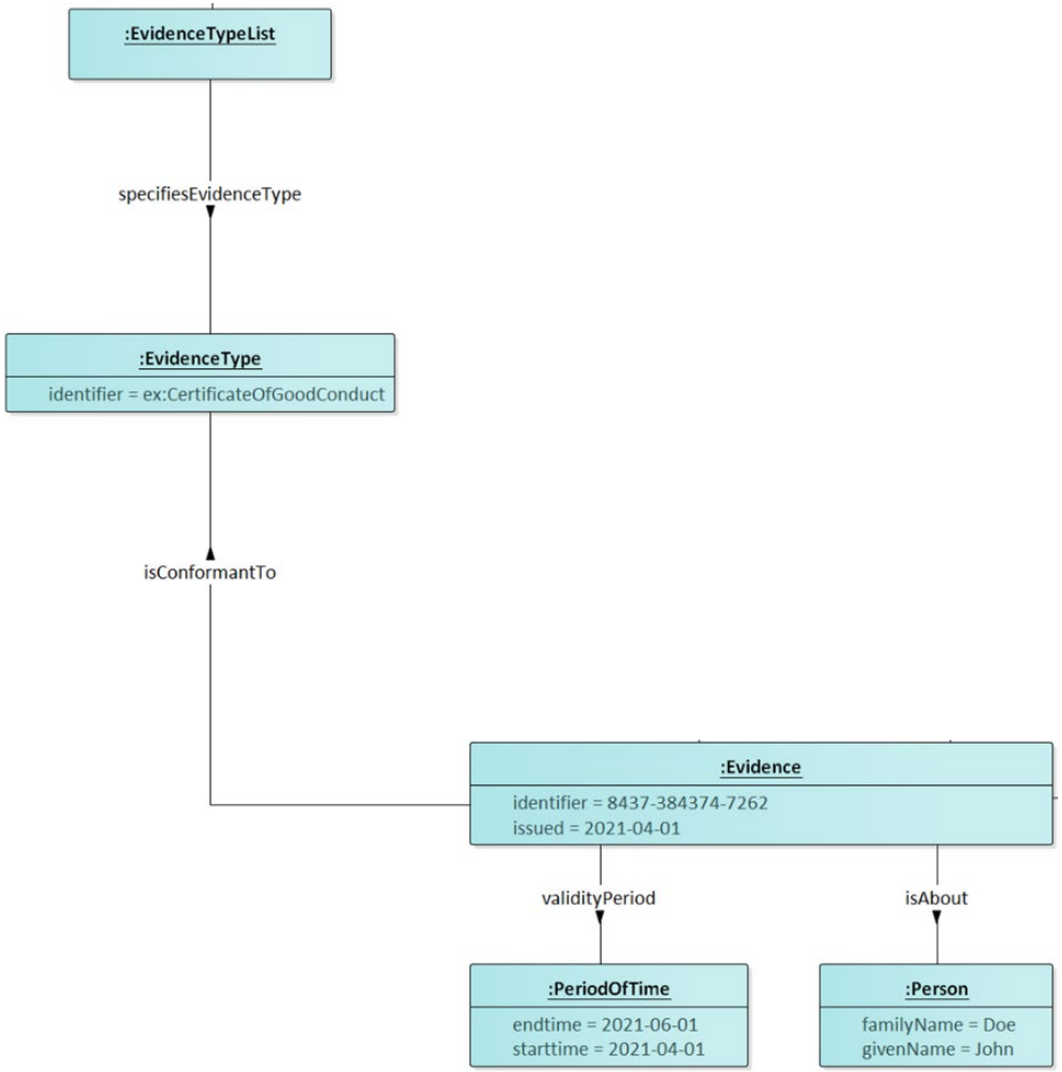

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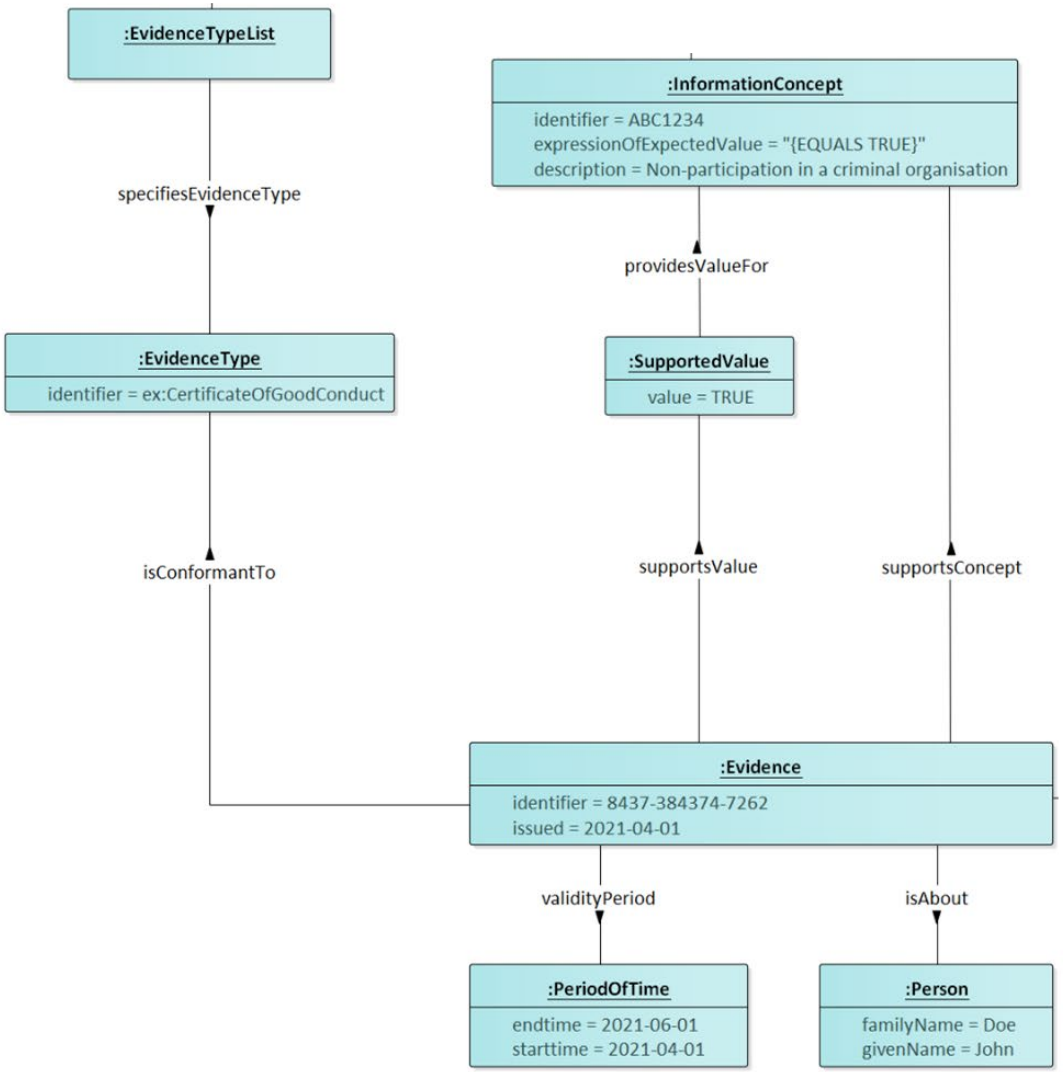

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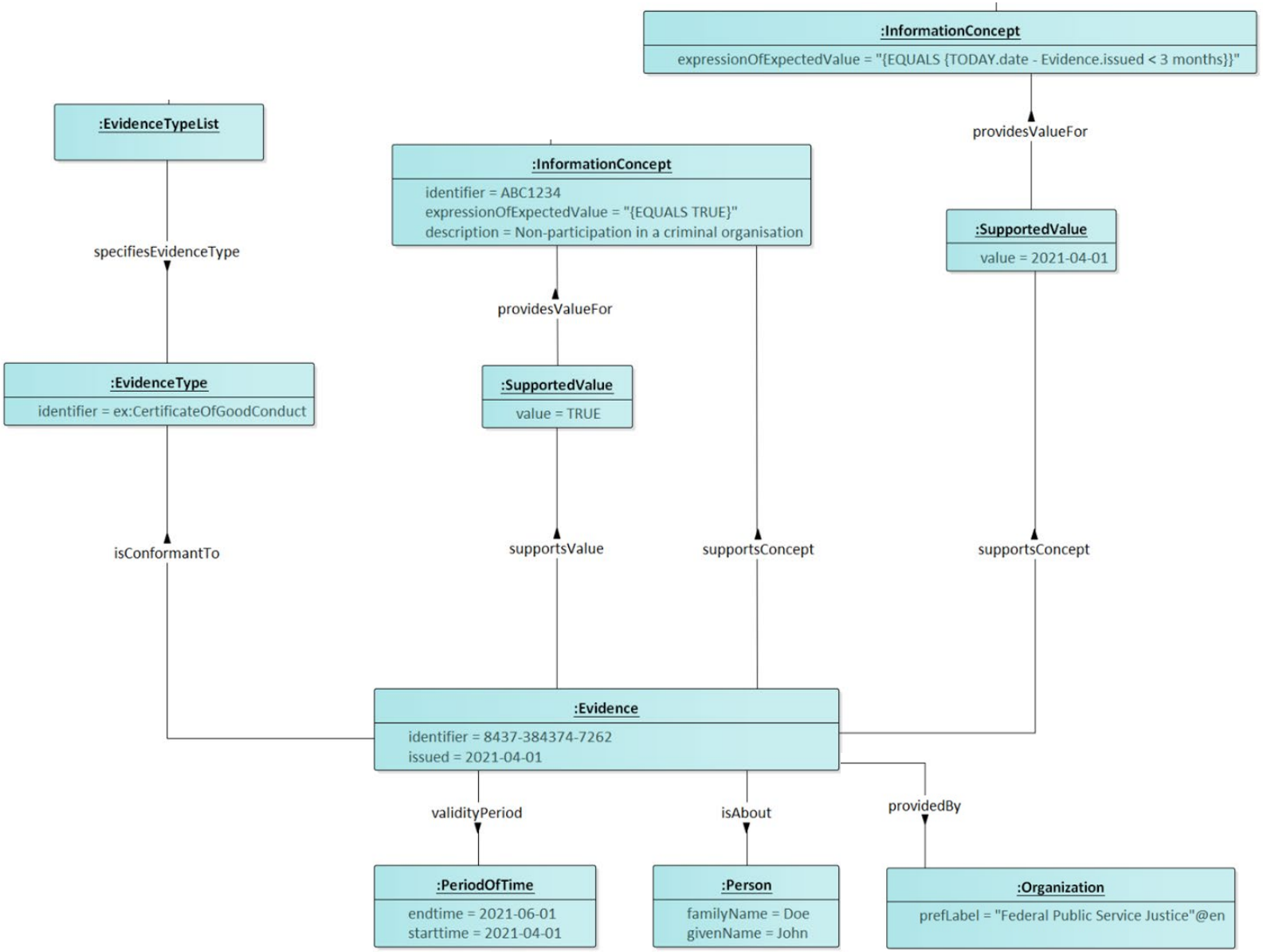

CCCEV 2.0.0 example

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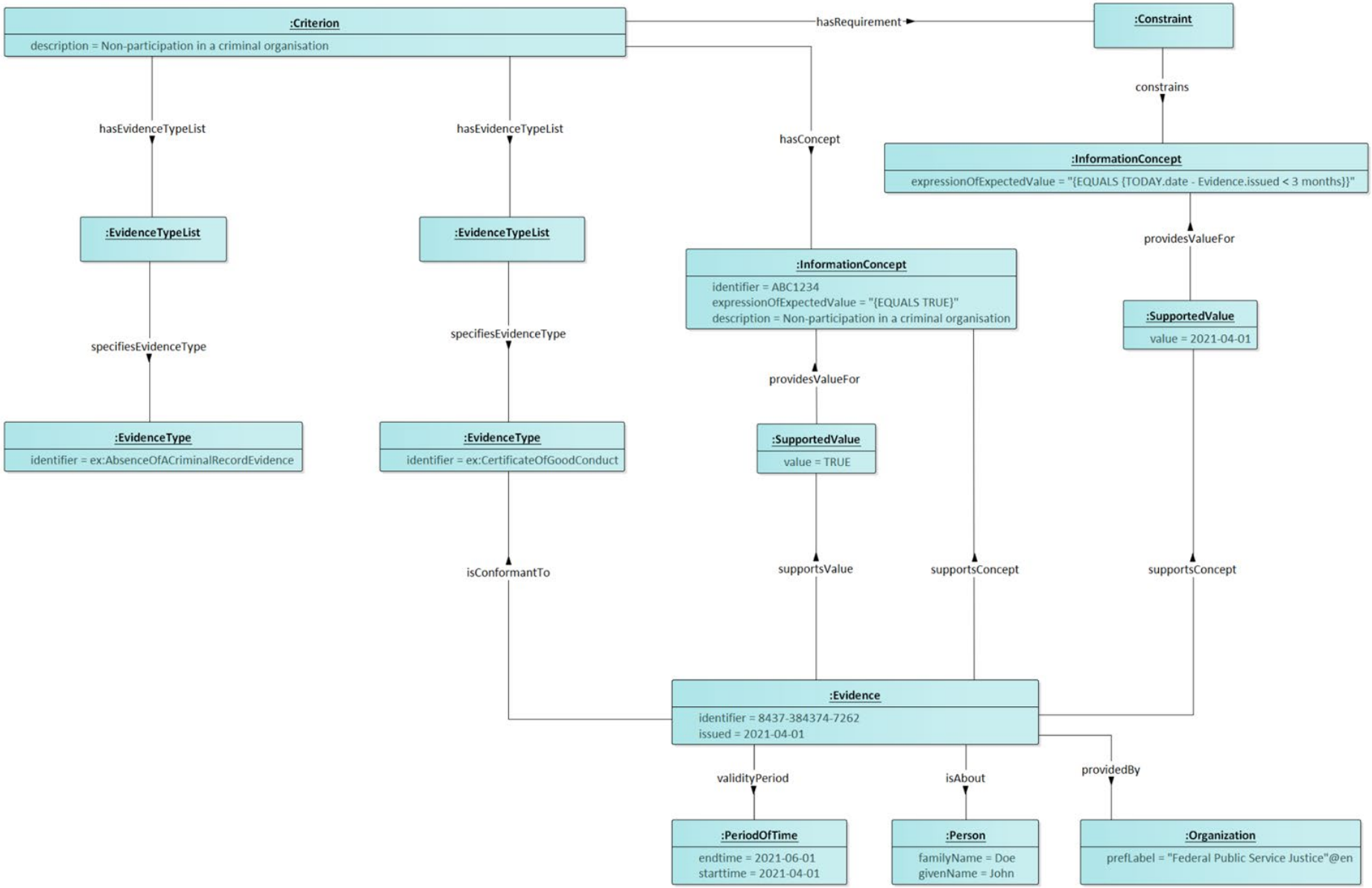

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4. Discussion points

CORE CRITERION & EVIDENCE VOCABULARY

Speakers: Bert Van Nuffelen
Dimitri Schepers

European Commission

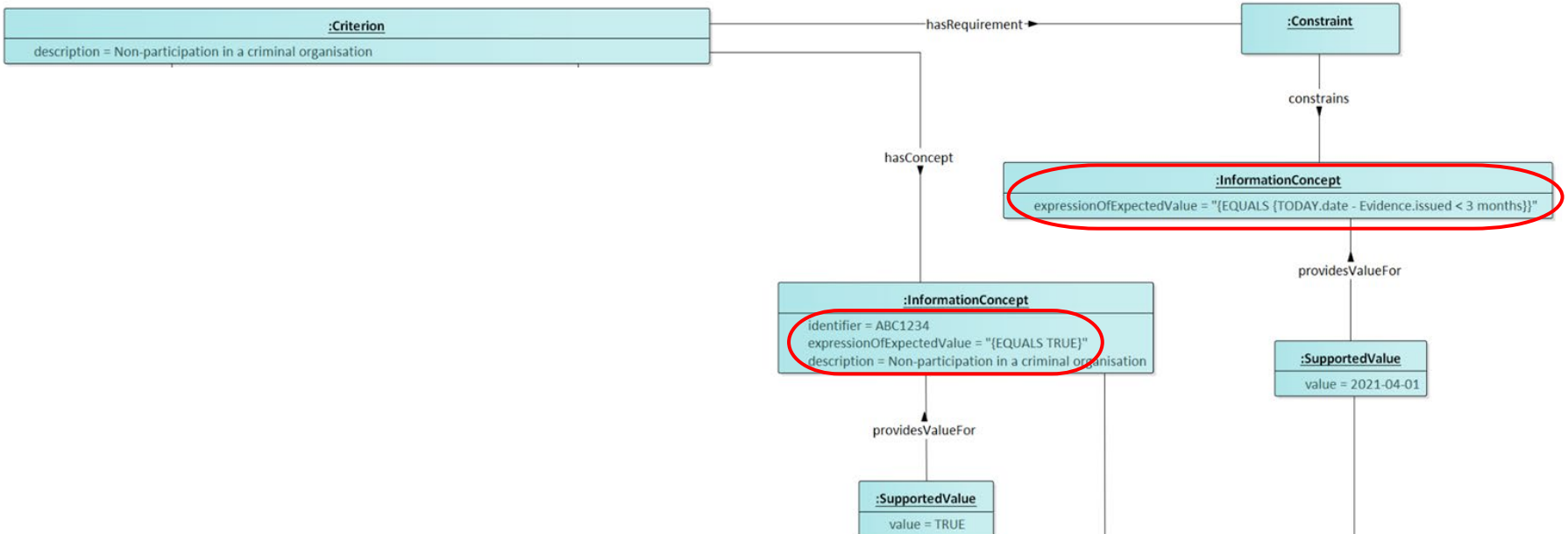
Expressing expected values - (1/2)

next

Issue

Besides a description, there was no possibility to express an Information Concept of a Requirement (here expressed as Criterion and Constraint) **as a value**.

This is required in order to make the comparison between the Supported Value provided by the Evidence and the expression of the Expected Value related to a machine-processable Requirement.



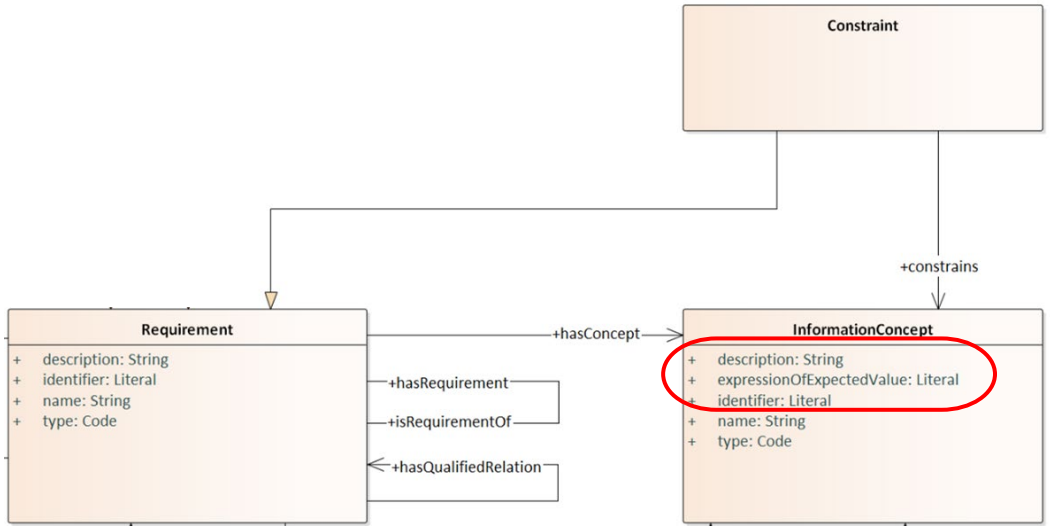
Expressing expected values - (2/2)

Proposition

We have added a property "expression Of Expected Value" (as a function) in the Information Concept class to make the Requirement machine-processable.

We leave the expression language for this property open. The current example is in a non-existent language: `{EQUALS {TODAY.date - Evidence.issued < 3 months}}`.

Examples of common programming languages for defining such functions are xPath, javascript, OCL constraints (UML), or RIF.



Temporal information (issue #30) - (1/2)

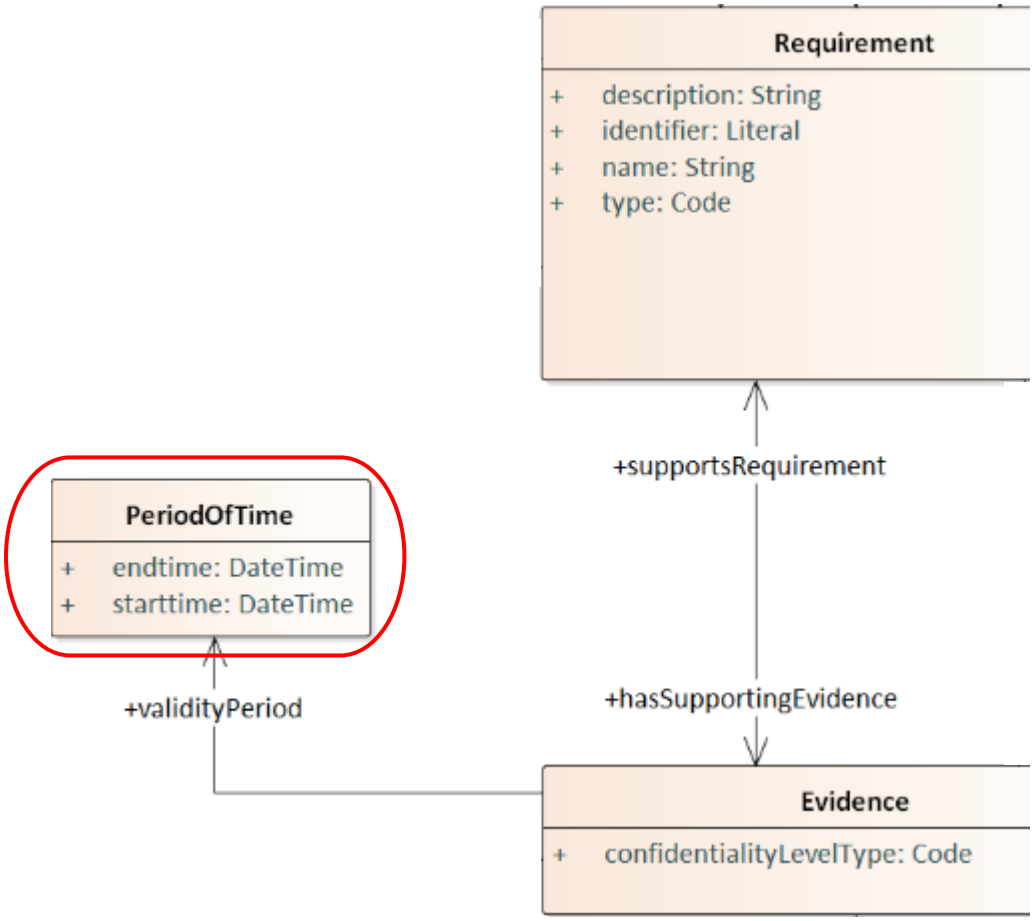
next

During the previous webinar, there was a general agreement from the Working Group to include temporal information within CCCEV v2.0.0.

More specifically, a suggestion was made to add two things to the model:

- a Requirement should be able to ask some validity period on the Evidence (e.g. a certificate of good conduct cannot be issued more than 3 months ago);
- an Evidence should be able to contain an expiration date / validity period.

Temporal information (issue #30) - (2/2)



Quite a number of Evidences have a validity or expiration date: driving licenses, ID cards, passports, etc.

Proposition

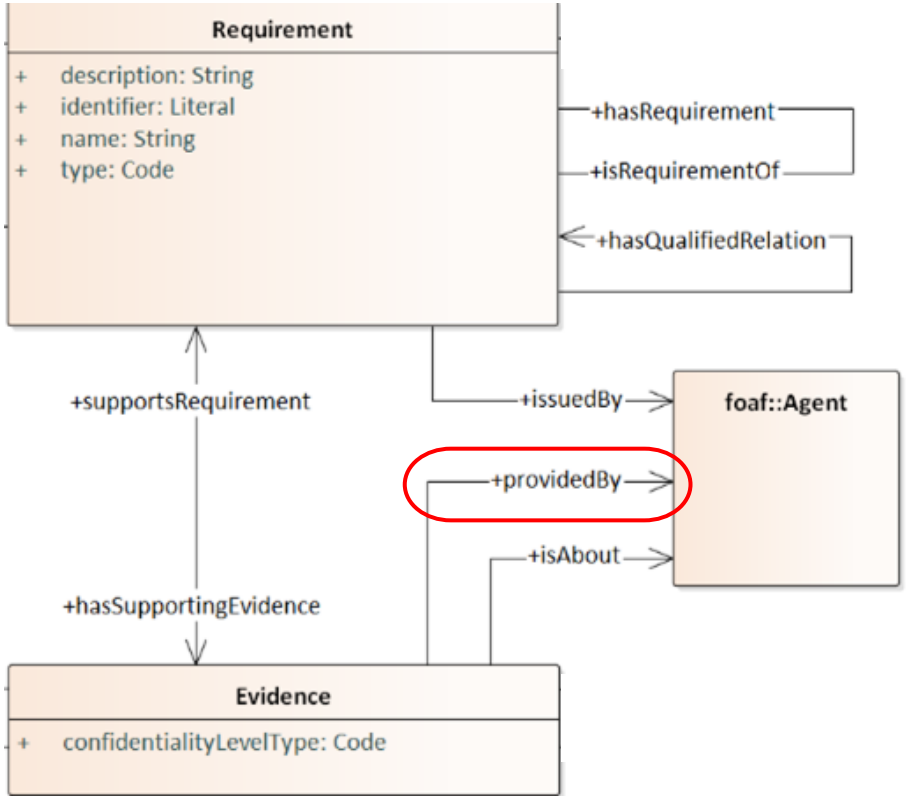
For certain proof to be valid, it is necessary to provide an Evidence with a validity period.

This information is conveyed via the Period Of Time class.

Agent roles (issue #29) - (1/2)

next

During the previous webinar, the suggestion was made to include a {Evidence **providedBy** Agent} relationship.



This relationship captures the fact that an Evidence is provided By an Agent (e.g. an Organisation or a Person).

In the domain of procurement, for example, you have intermediaries who provide the evidence, which can be different from the ones who have issued it.

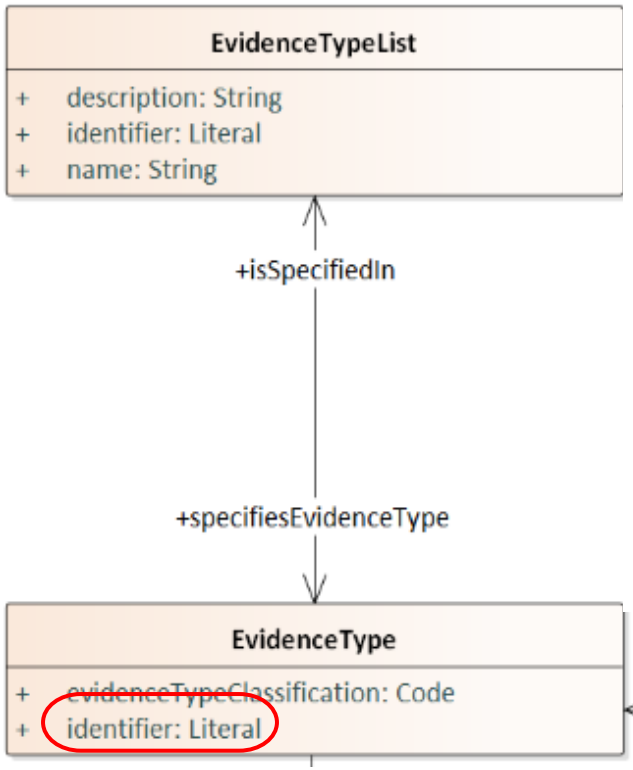
Agent roles (issue #29) - (2/2)

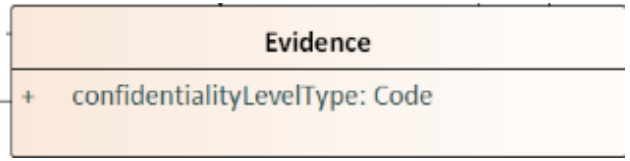
Proposed definition for provided By

"The Agent that certifies and/or provides the trust that the Evidence is genuine."

Evidence Type has no ID (issue #31)

It seems that the Evidence Type class does not contain an identifier or, if it does, this is implicit and/or optional.





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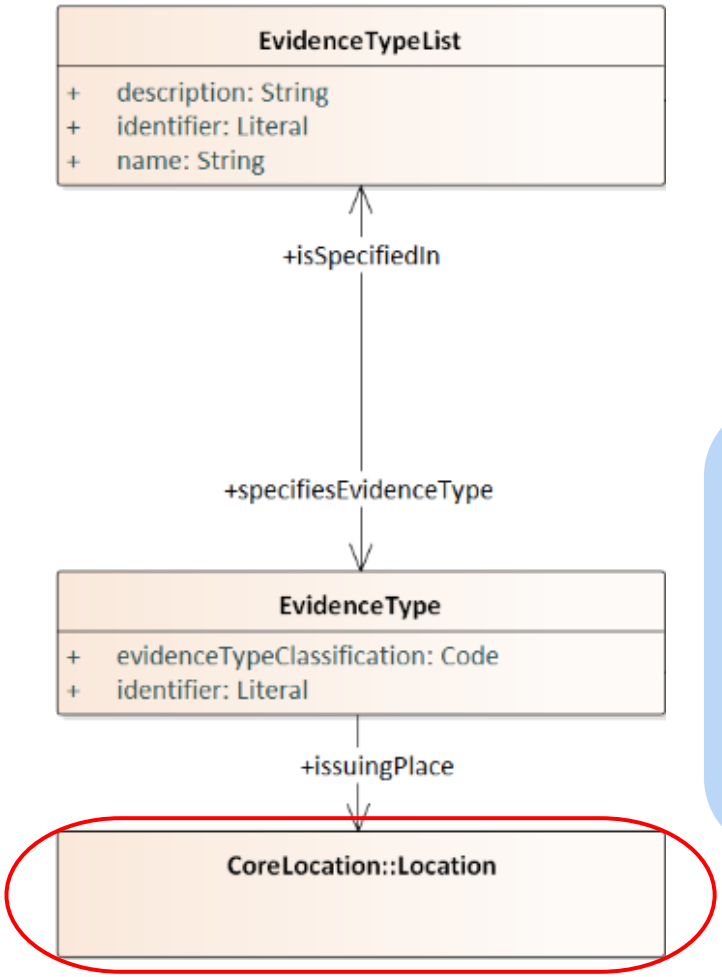
Proposition

We have added the identifier property on the Evidence Type class.

Evidence Type needs to have a Jurisdiction issuing location (issue #32)



The Evidence Type needs a location property pointing to its issuing location. Specific Evidence Types can only be issued in a specific country/state/city/municipality and this should be a field in the Evidence Type class.

Proposition

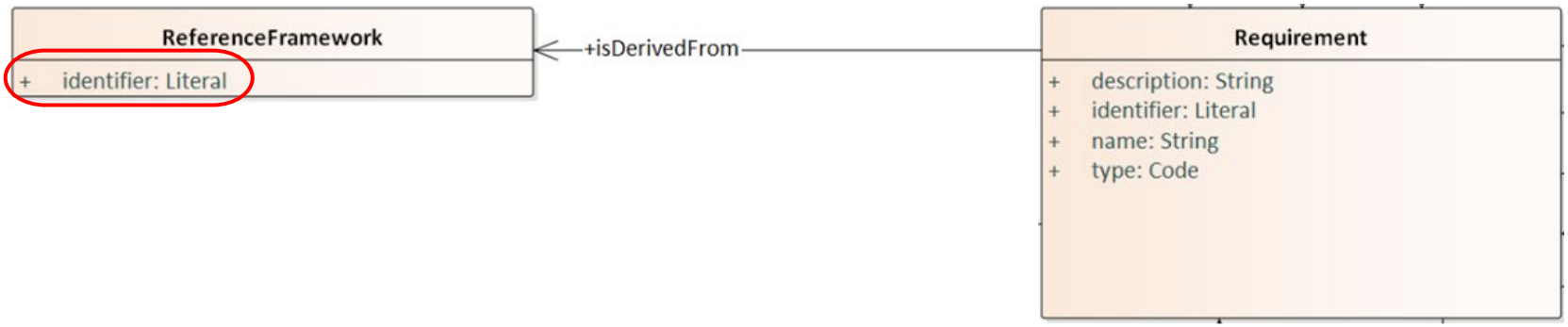
Insertion of the Location class that can be used to relate Evidence Types to their issuing place.

Question

How should we call this property? “issuing Place”, “available In”?

Reference Framework

This class has no properties.



Propositions

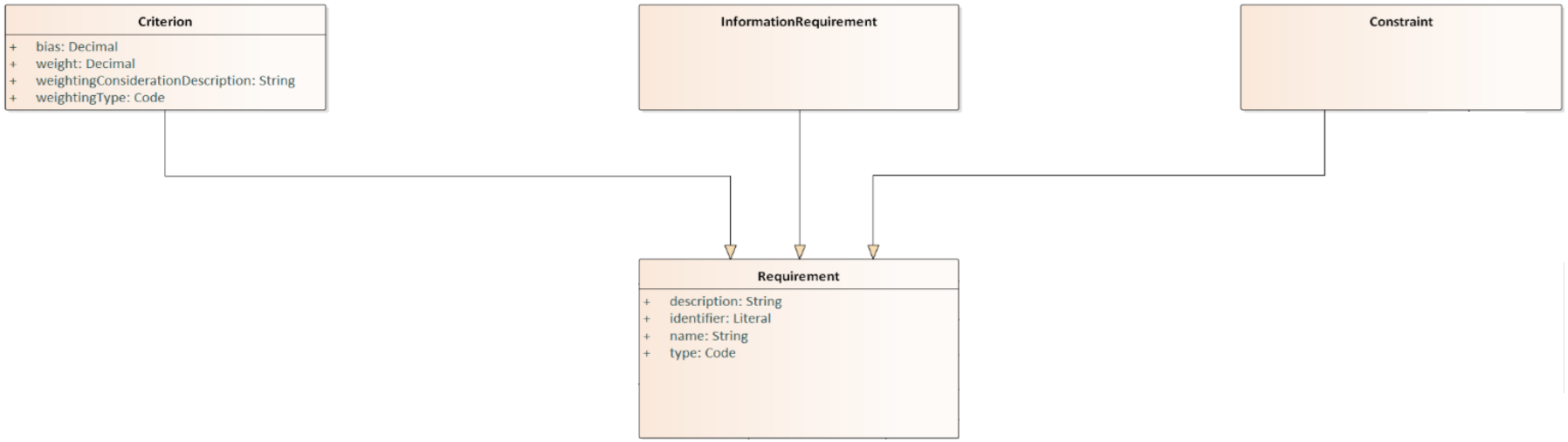
- We have added the identifier property.
- Do you have other properties you wish to add?

Flow of Requirements (issue #36) - (1/2)

next

In the example presented during the webinar dd. 2021-03-30, the following flow of Requirements was given:

- Criterion: The applicant is an adult.
- Information Requirement: The age of the applicant.
- Constraint: The applicant must be at least 18 years of age.



Flow of Requirements (issue #36) - (2/2)

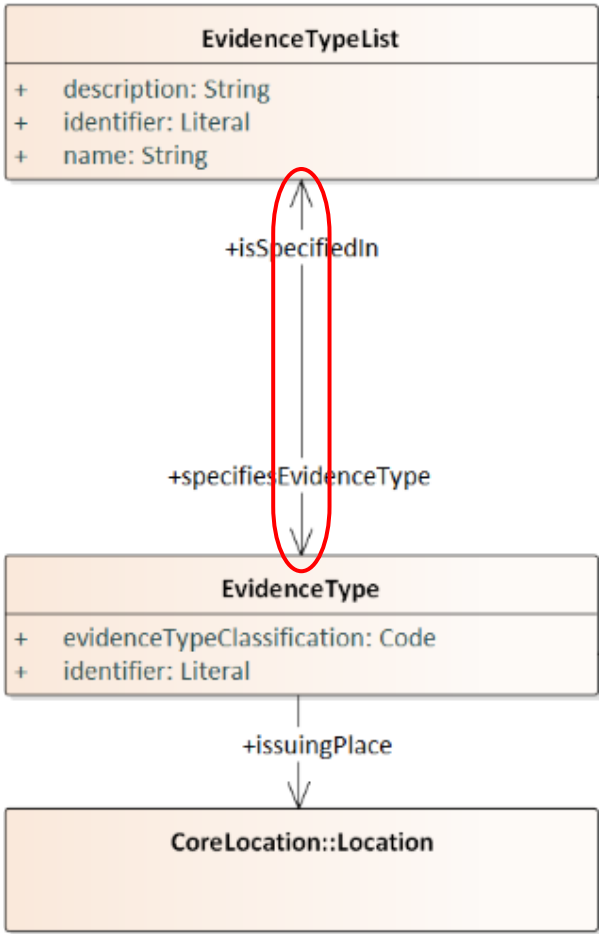
The question was asked to the Working Group whether all these steps in the flow of Requirements are always required.

Agreed resolution

During the previous webinar, most participants agreed that this decision should be left to the application/implementation and thus to keep it flexible within the Core Vocabulary.

Disjointness of the three Requirement subclasses is currently also not stated explicitly and thus also left to the implementor.

Bidirectional relationships (issue #34)



There are use cases where the queries might go in two directions and there is no generally preferred direction, e.g. start from atomic requirements and go up versus start from general requirements and drill down.

Bidirectional relationships are however not needed from a purely semantic perspective.

Proposition

Do you agree to keep the bidirectional relationships where the preferred direction is not clearly defined?

Mapping with W3C's Verifiable Credentials (issue #37)

During the previous webinar, the question was raised how CCCEV relates to other endeavours that standardize similar concepts, most notably, W3C's Verifiable Credentials.

Short analysis

https://github.com/SEMICeu/CCCEV/blob/master/releases/2.00/mappings/VerifiableCredentialsMapping.md

- Two of W3C VC's core concepts are 'claim' and 'credential'. These two notions are related to Evidence and Supported Value.
- VC offers an approach to address the challenges that are related to establishing trust in data about a subject in a distributed context which is not part of CCCEV. In order to combine both, a dedicated application profile of CCCEV for VC has to be created to limit the interpretation options.

Proposition

Investigate the integration of trust, security and privacy approaches with semantic data standards in the future more extensively.

- Do you agree with this approach?

Transformation for structured evidence (issue #33)

As part of the Single Digital Gateway, it would be useful if the Evidence Type could be associated with a *transformation* that filters the structure such that the output is limited (or customized) to the Requirement.

Example

It may be relevant to know whether a natural person is an adult at a particular point in time. This fact can be proven by a birth certificate, but this could have irrelevant information, such as the identities of the parents, place of birth, or the exact date of birth is not relevant. A transformation could change a structure like "2000-01-01" to "true".

Proposition

This is an important request targeting data minimization in the SDG OOP. We propose to look into this as part of the specific needs of the SDG.

- Do you agree with this approach?

Align with CPSV-AP (issue #5)

In CCCEV 2.0.0, Formal Framework has been adapted to Reference Framework. It represents a source from where Requirements are identified and derived. Reference Frameworks are legal **and** non-legal specifications. Examples include procedures, tendering legislation, etc.

We therefore differentiate a Reference Framework from the Legal Resource from ELI used in CPSV-AP.

- Do you agree with this distinction?
- Can Legal Resource be seen as a subclass of Reference Framework?

CCCEV : your feedback

Do you have any other points you would like to discuss or raise?

8. Wrap-up

Next steps

- Closure of issues on GitHub
- Finalisation of the specification and publication of the distribution in multiple formats

ISA² programme

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ISA² Programme

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