DE4A Digital Europe For All

Information Desk (IDK)
Catalogues for interoperability

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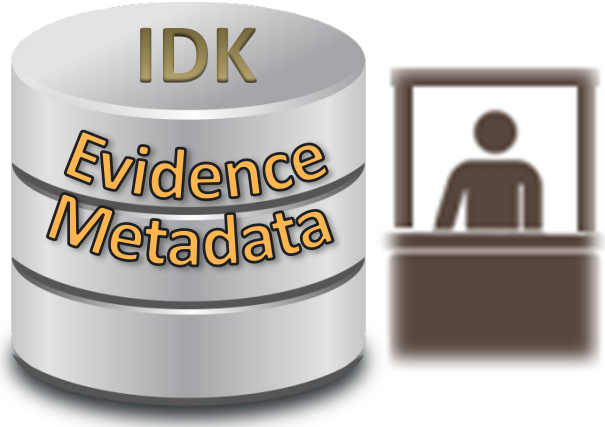
Final Event, April 12, 2023 (online)

DE4A has received funding from the European Union's Horizon 2020 research and innovation programme under GA. No. 870635

What is DE4A IDK



The DE4A IDK is a set of catalogues that offer information (***metadata***) to the participants in the cross-border exchange of evidences to enable this exchange

In accordance to the European Interoperability Framework

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Grounded on practical Semantic Agreements

Common Categorisation

Common Granularity

Common Meaning

Common Syntaxis

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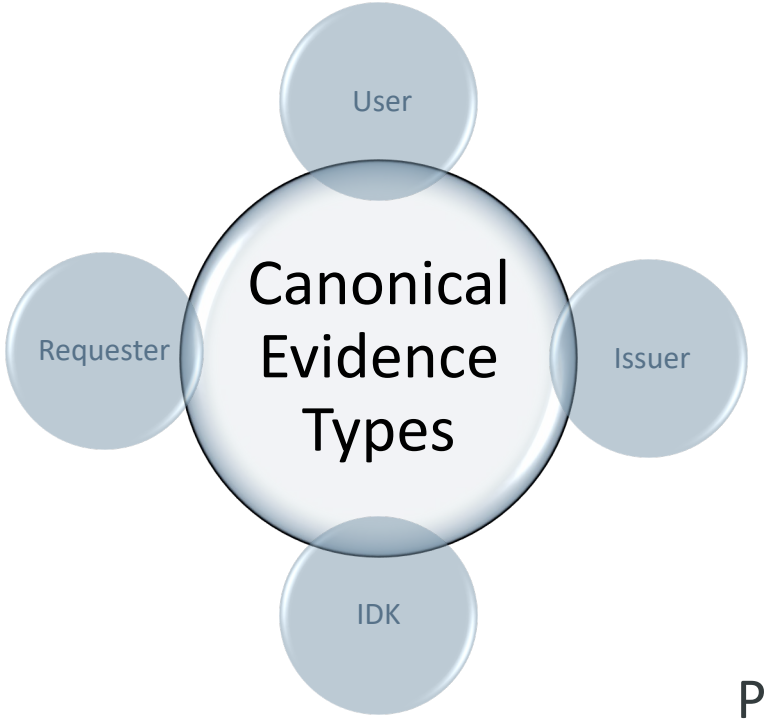
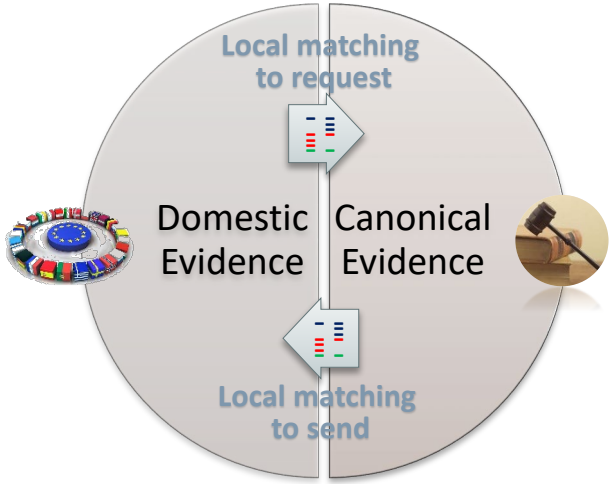
Pillar 1: Semantic interoperability





Pillar 2: Actionable evidence exchange

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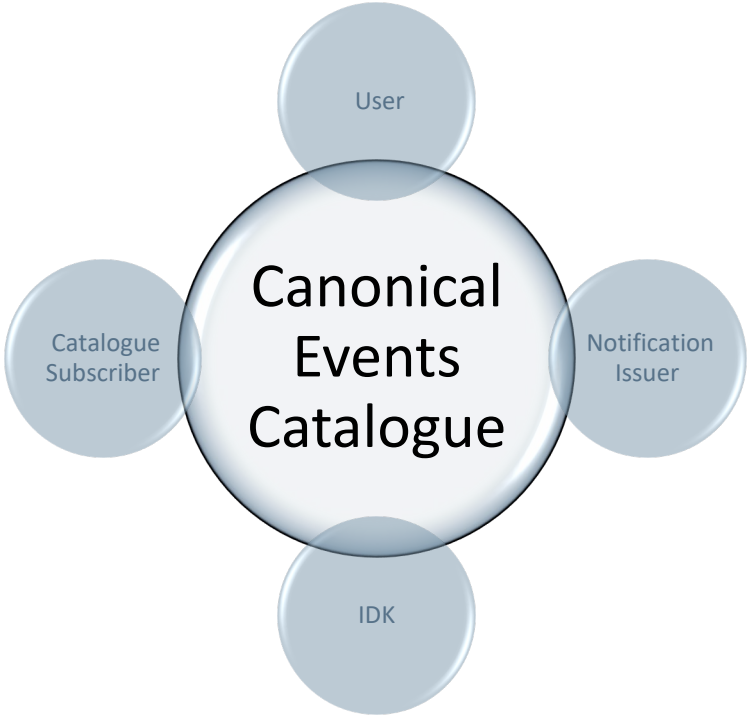
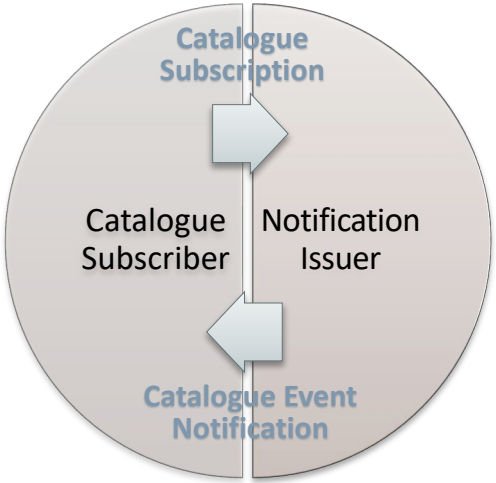
Pillar 1: Semantic interoperability





Pillar 2: Practical event notification

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4 types of information offered by IDK

Issuing Authority Locator

User – Requester interaction

IAL helps to find out the available canonical types and their issuing authority within a particular territorial scope

SDG Evidence Broker

Cross-border Access Authorisation Registry

Before the request/response

CAAR helps to manage authorizations to access canonical types and verify the authorization of requests

[Registry of Authorities]

Evidence Service Locator

User – Requester Interaction
Requester – Issuing Interaction

ESL helps to locate and understand the service to request a canonical type related to a specific issuing authority

SDG Data Service Directory

Multilingual Ontology Repository

Design, Explicit Request, User Preview, Manual processing and Audits

MOR helps to understand canonical evidence attributes and additional parameters, and their labels in the EU langs

SDG Semantic Repository

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Issuing Authority Locator

User – DE interaction

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Users know about territorial units, but they do not need to know about issuing authorities

IAL helps to understand the competence organisation in each country per canonical type to guide users for providing the necessary detail to locate the appropriate issuing authority

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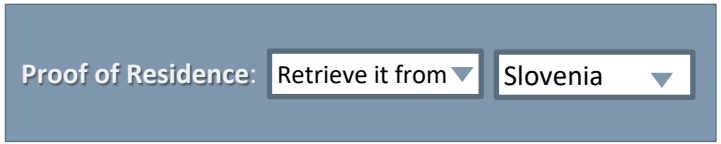
IAL

Issuing Authority Locator

User – Requester interaction

IAL helps to find out the issuing authority for the required canonical type within a particular country



NUTS0

NUTS1 (3)

LAU (8.118)

3EDU (77)

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IAL Preconditions

- Participants know the correspondence between their domestic evidence types and the canonical evidence types, or the composition of canonical events catalogues
- Each canonical type is to be provided by the issuing authority at the highest administrative territorial level that is available.
  - e.g, In Spain, evidence that a person has some university degree is in both registries of the corresponding University and the Ministry, but only this last one is the issuing authority to consider. The registry of the Ministry serves as a single point of access that eases evidence location.
- Every country has registered in the IAL their competence distribution per canonical type when there is an ESL service to provide such a type

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IAL Outcome for evidence request

- The user has specified that the issuing authority for canonical evidence type CET_x is IA_y at the admin territorial unit ATU_n

1. The starting point is the canonical evidence type needed by the Requester
2. The first selection of the User is the issuing country
3. The Requester asks IAL for the authorities issuing CETx in the selected country
   - Issuing authorities are identified in the evidence exchange network by an ID, preferred label and its territorial scope of competences (NUTS0-3/LAU/3EDU code)
4. The User selects the corresponding issuing authority if more than one
   - The Requester can guide the User to select the authority among many through the territorial organisation of the issuing country
   - Administrative territorial levels might differ from country to country (e.g. Spain and Slovenia have not NUTS 1)

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ESL

Evidence Service Locator

User – Requester Interaction
Requester – Issuing Interaction

ESL helps to locate and understand the service to request a canonical type related to a specific issuing authority

Issuing Authority ID
+
Canonical Type URI

Service Metadata:

- Additional parameters (opt)
- Connection details

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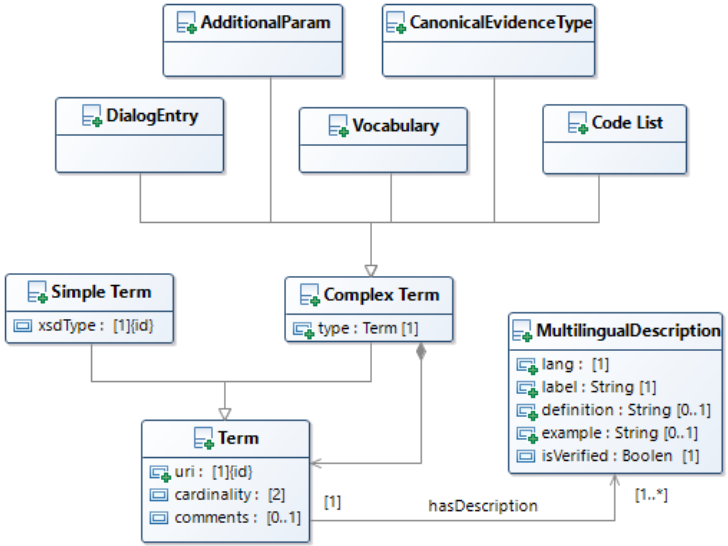
MOR

Multilingual Ontology Repository

Design phase, User Preview, Manual evidence Processing, Audits

MOR helps to understand canonical evidence attributes and additional parameters, and their labels in the EU langs



Based on the Multilingual Standard Forms of the Regulation (EU) 2016/1911 on Public Documents

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MOR characteristics

- Complex Terms inherit the description of the Term set as their type
- Complex Terms can be defined overloading inherited descriptions
- Only description in English is mandatory and requires to be verified by domain experts on English terms
- Descriptions in other languages are automatically translated from the English description and tagged as “non-verified”
- Domain experts on non-verified terms and their language can verify the automatic translation, then tagging the term as “verified”
- Verified terms may avoid the need of legal translations
  - Verified translations of labels and descriptions provide a means for the proper understanding of canonical evidence attributes by people
  - Other than code lists, such as proper names, titles, addresses and numbers, are the only values of canonical evidence that are not translated

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MOR client-side GUI components

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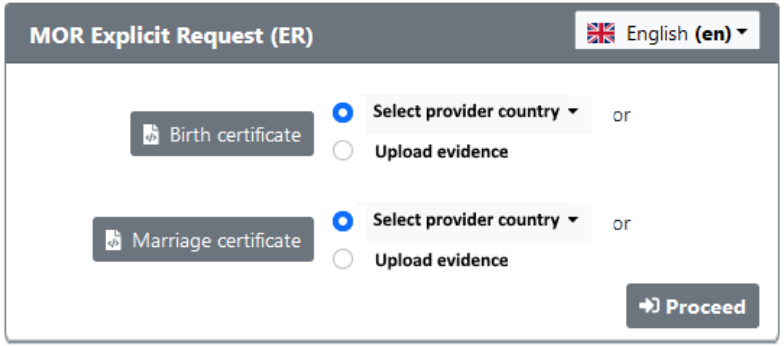
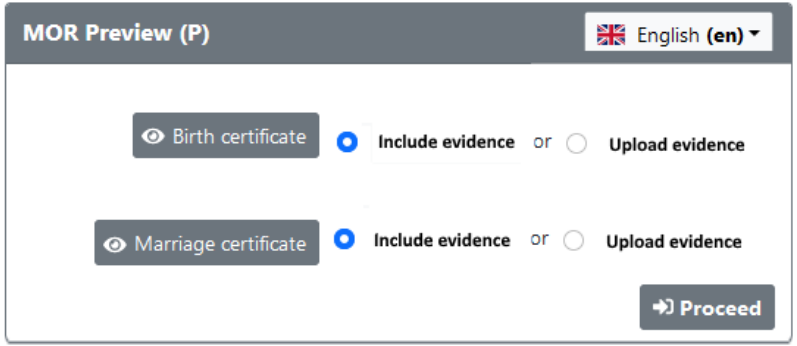
MOR supports common GUI client-side services for explicit request (IAL), [additional parameters (ESL)] and evidence preview





and web-semantic functionality for existing pages

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CAAR

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Cross-border Access Authorisation Registry

Before the request/response

CAAS helps to manage authorizations to access canonical types and verify the authorization of requests

CAAR helps to represent multi/bilateral agreements with Issuing authorities for accessing their canonical types or by-law authorisations

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CAAR Logic

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Attribute-Based Access Control (ABAC) from the REQUEST message attributes

Authorisation Registry		
Procedure		{ (SDG-Categ) + | *}
Requester		{ (DE-URN) + | *}
Provision	Issuer	{ (DO-URN)+ | *}
	Canonical Type	{ (C-Evidence-Type) + | (C-Catalogue) + | *}

IEMRequestMessage

Procedure Category	SDGR Annex II & Art.14 Directives
Data Requester	Agent URN
Data Issuer	Agent URN
Requested Item	Canonical Evidence Type Canonical Catalogue
Request Grounds	Event Notification Law ELI Permanent Link Explicit User Request

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Light and easy APIs for the IDK consultation

- Open Data
- RESTful Web Services
- Open API specification
- JSON / XML response

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Thank you for your attention

Any questions?

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