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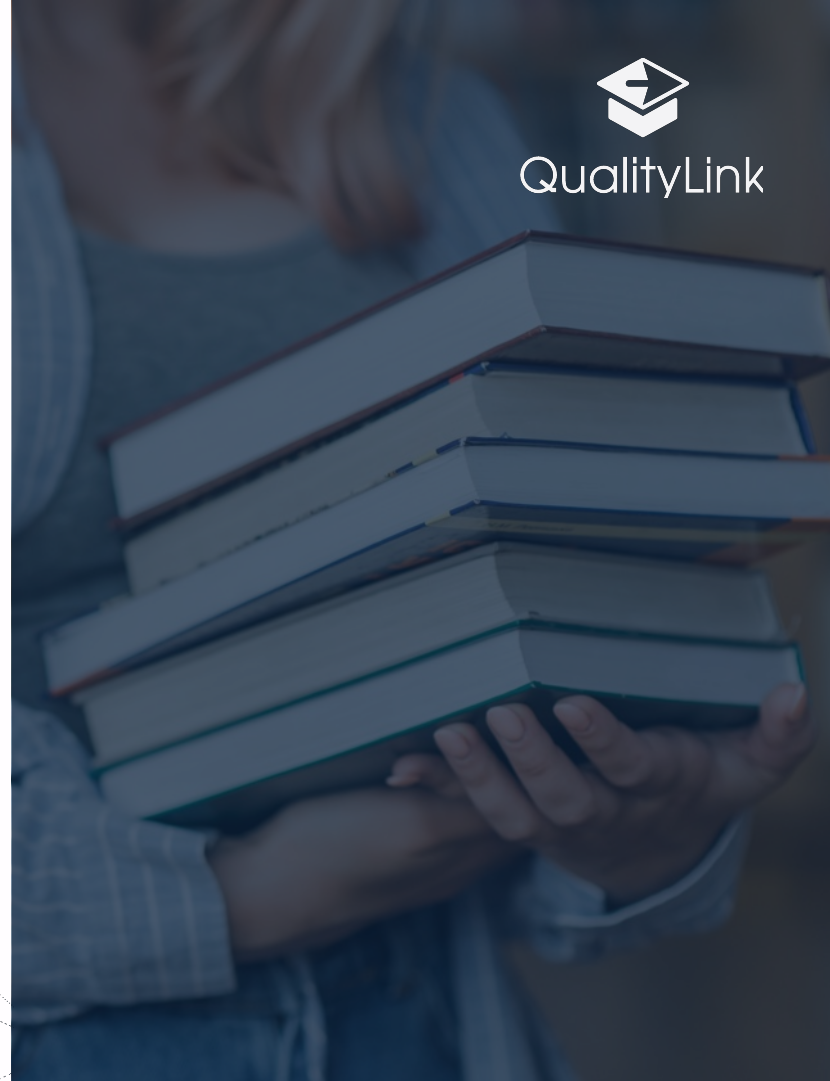
QualityLink

Exchanging Quality Data – Technical and Semantic Challenges

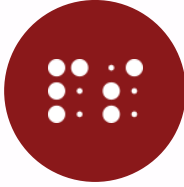
EUNIS 2025 Congress, Belfast
Precon Mobility & Digital Credentials

3 June 2025

Colin Tück (KIC)



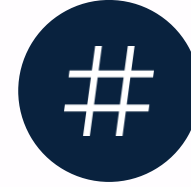
Challenges QualityLink tries to tackle:



Diversity of micro-credentials and other short courses



Other data (ratings, recognition history, certifications, ...) rarely published using open standards



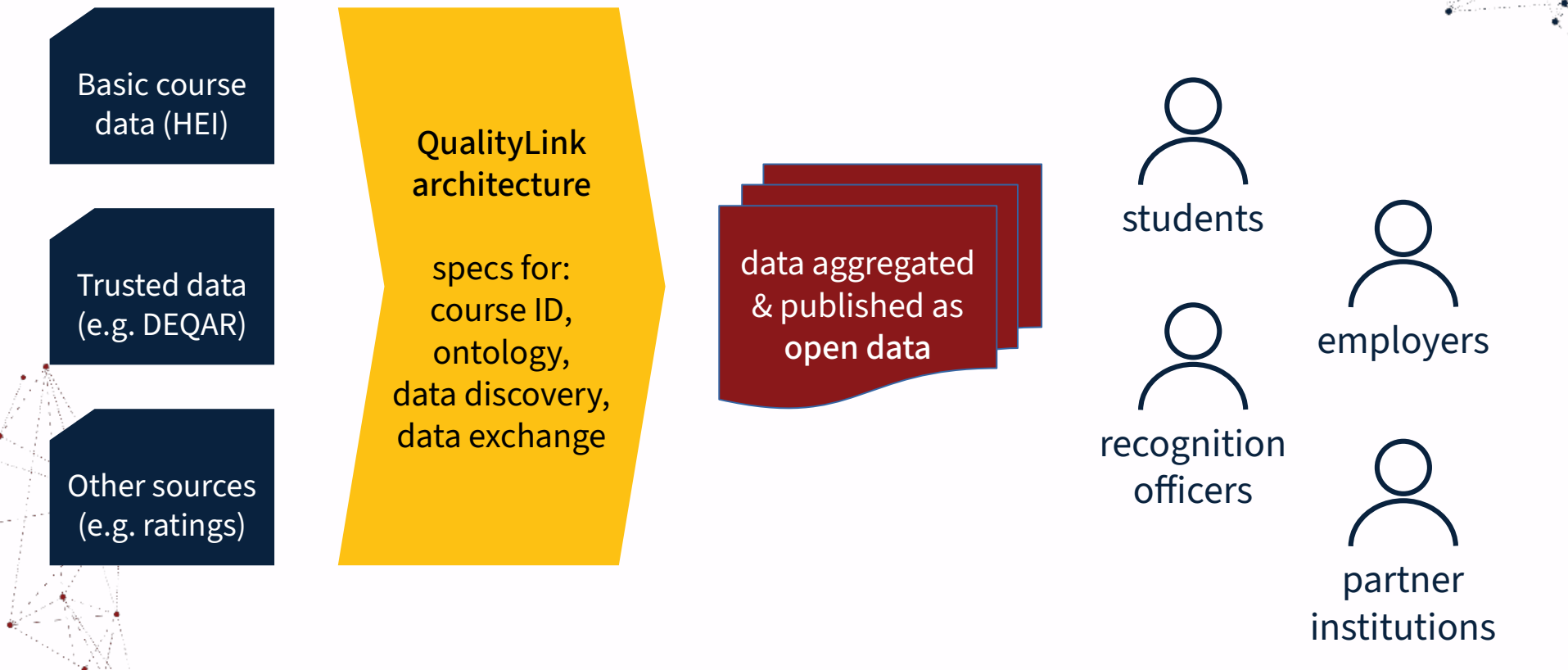
Basic course data often not published in open & structured form

Erasmus+ project running Dec 2023 – May 2026 | Partners:



Vision for an open quality data exchange architecture

(in particular, but not only for micro-credentials)



Use cases



Potential learners,
guidance



Recognition and
labour market



Alliances' joint
catalogues



Mapping and
benchmarking

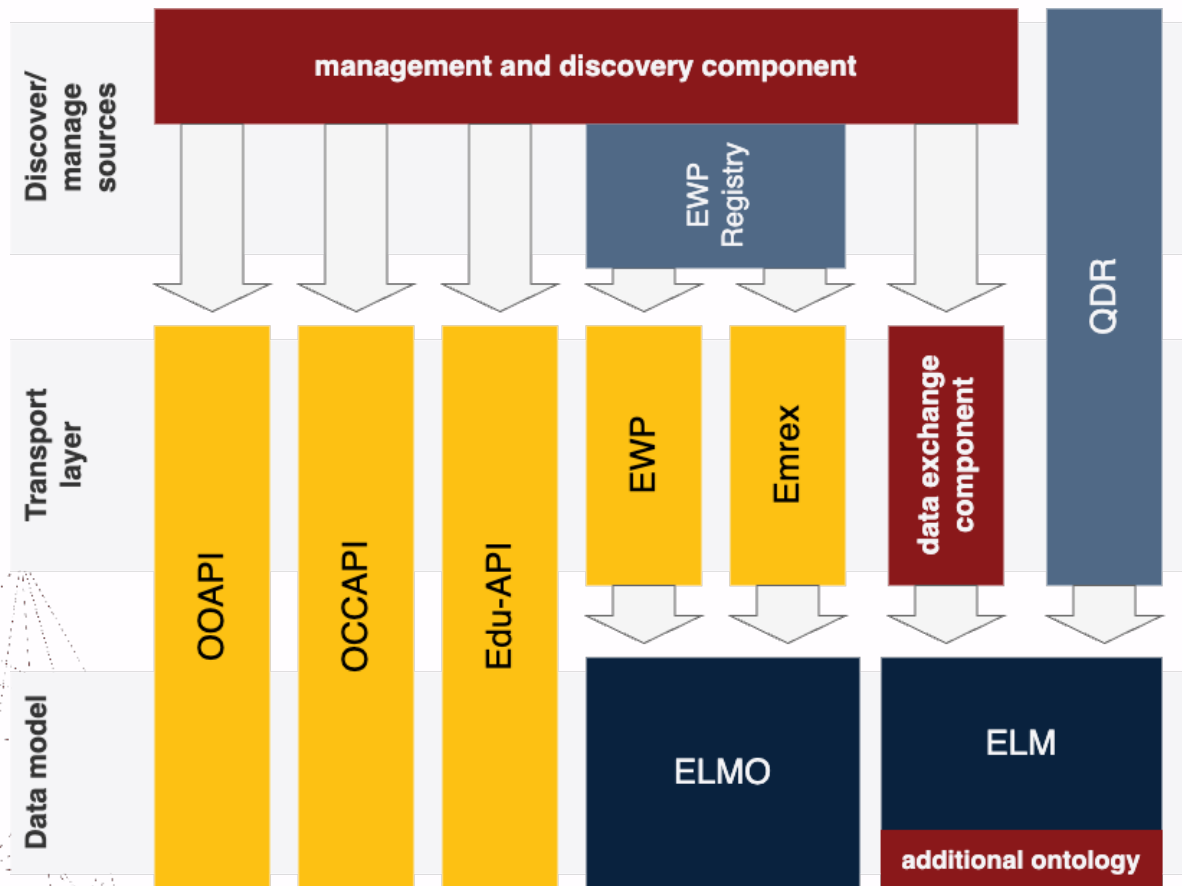


Interoperability for
other apps



Europe-wide
visibility

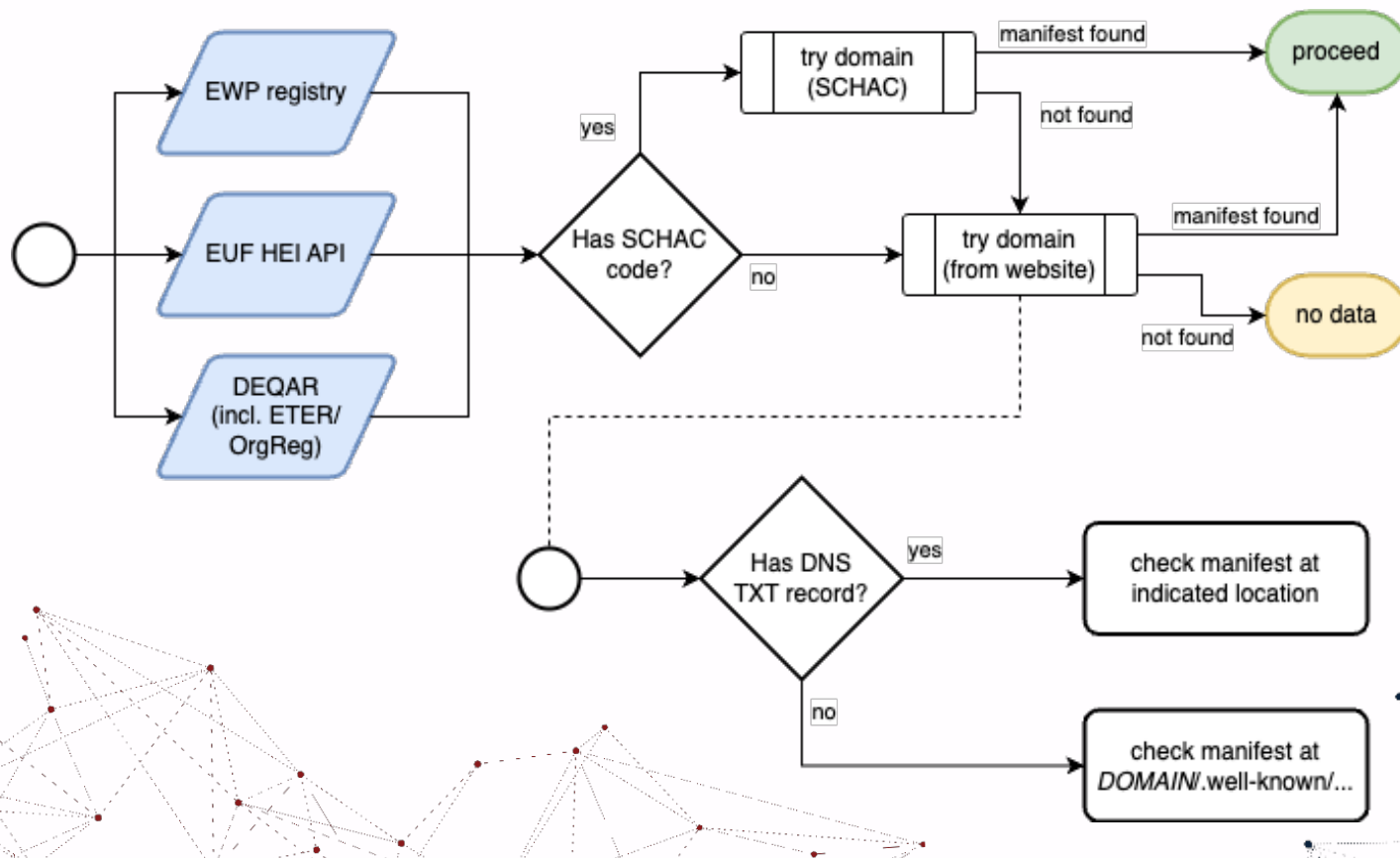
Architecture – overview



Principles:

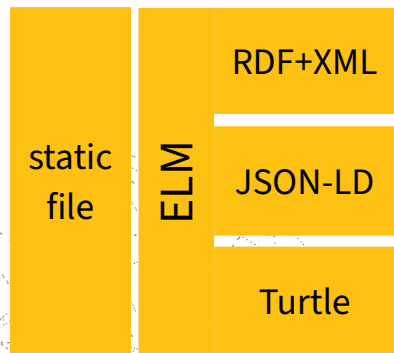
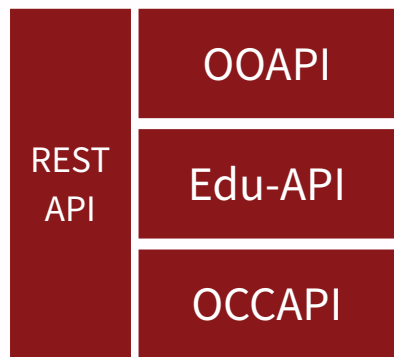
- Build on existing standards
- Low bar to adoption
- Flexibility where helpful
- Open to extensions
- New components open source

Data Source Discovery



Data Exchange Architecture

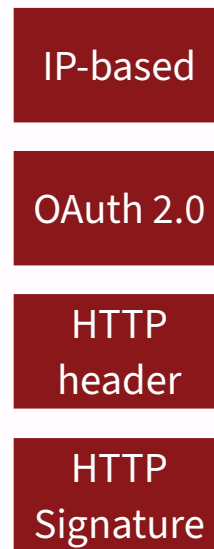
Data exposed by HEIs



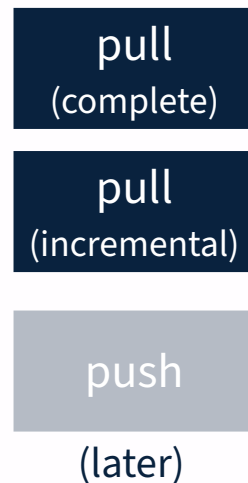
Aggregator



Access control



Strategies



Landscape of data standards used in Europe

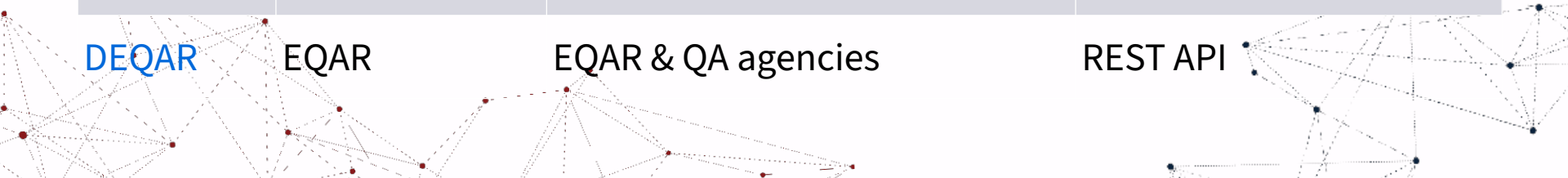
Standard	Maintained by	Used by	Tech
ELM	EU	EDC, QDR	RDF ontology & profiles
ELMO	EMREX	EWP, EMREX	XML schema
OOAPI	SURF	Dutch HEIs, European alliances	REST API
OCCAPI	EUF	Some HEIs	REST API
Edu-API	1EdTech	Various	REST API

DEQAR

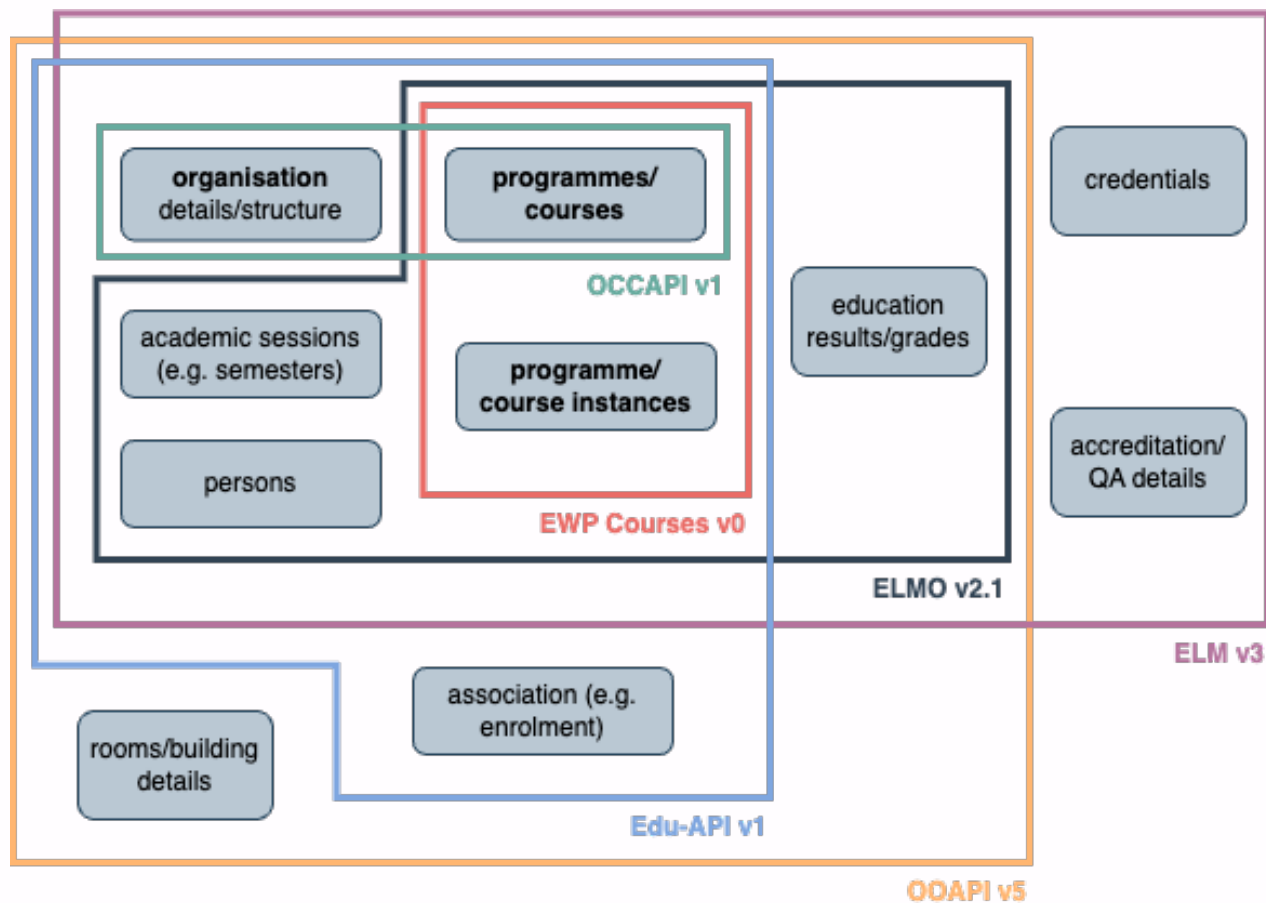
EQAR

EQAR & QA agencies

REST API



Coverage of information domains



Terminology used

	Qualification/achievement <i>A defined level of achievement of learning outcomes & credits, <u>provider-independent</u></i>	Learning opportunity (abstract) <i>A course or programme offered <u>by a specific provider</u>, leading to qualific./achievement</i>	Learning opportunity (instance) <i>Offering in <u>a specific year or semester</u>, or <u>at specific location</u></i>
E.g.:	Bachelor in Chemistry	Chemistry Bachelor programme offered by University of Ljubljana	Chemistry Ba prog. at Uni Lj. starting in winter semester 2025/26

ELM Learning Achievement Specification Awarding Opportunity or specialisation Learning Opportunity

ELMO	(out of scope)	Learning Opportunity Specification	Learning Opportunity Instance
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OOAPI Education Specification Program / Course / Component P/C/C Offering

OCCAPI	(out of scope)	Programme / Course	(out of scope)
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Edu-API (out of scope) Collection / Course / Component Template C/C/C Offering

DEQAR	(out of scope)	Programme	(out of scope)
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Using DESM for mapping

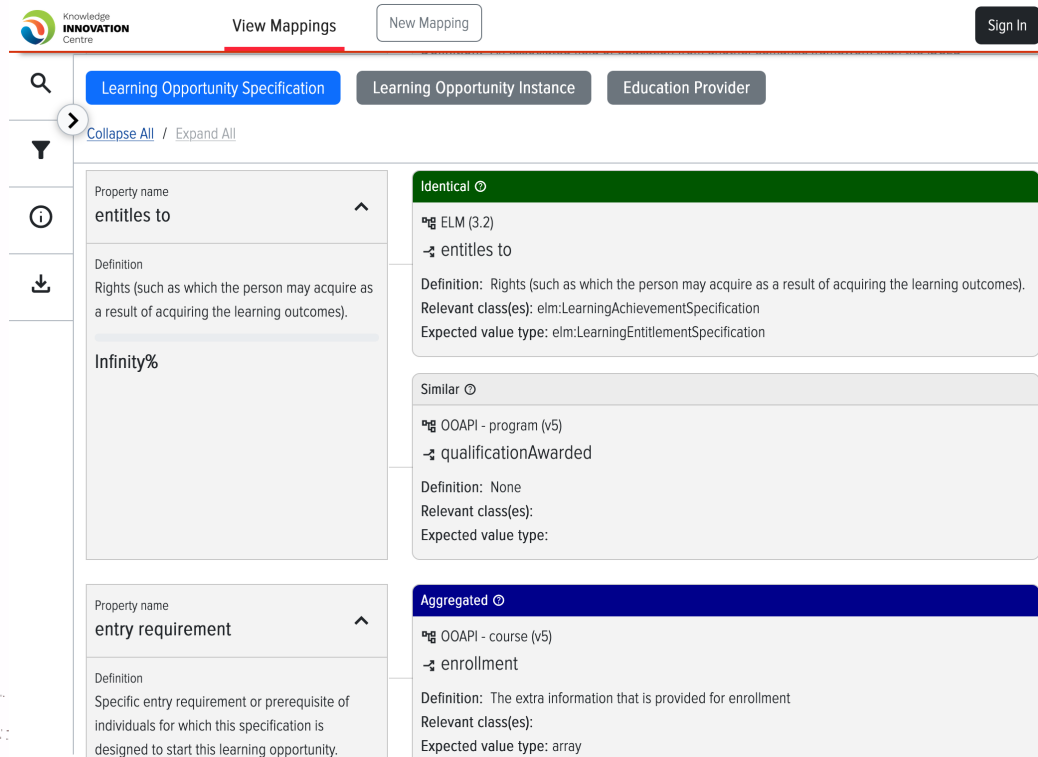
<https://mappings.skilldata.info/mappings-list?cp=4>

Benefits:

- Good user interface
- Browse and filter properties
- Scales well to many standards

Limitations:

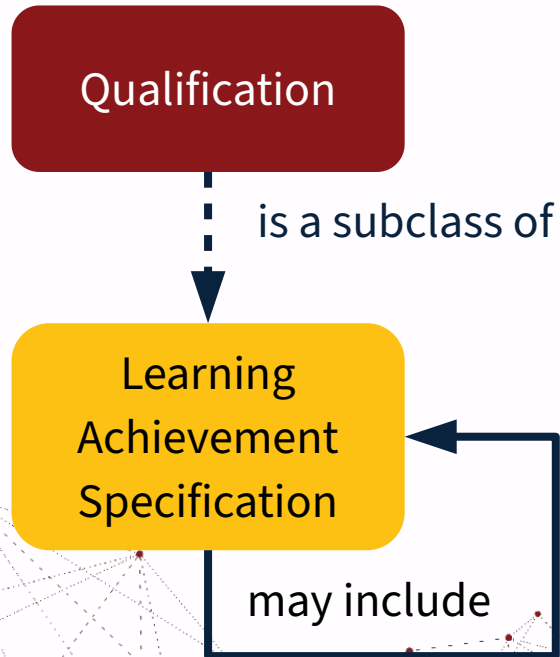
- Difference in abstract classes, i.e. concepts not matching 1:1
- Class inheritance not straight-forward
- Does not build your converter



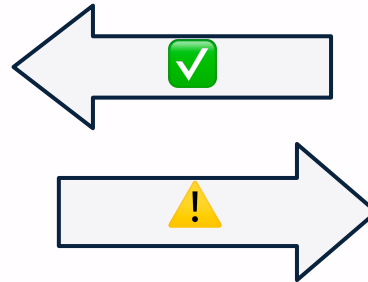
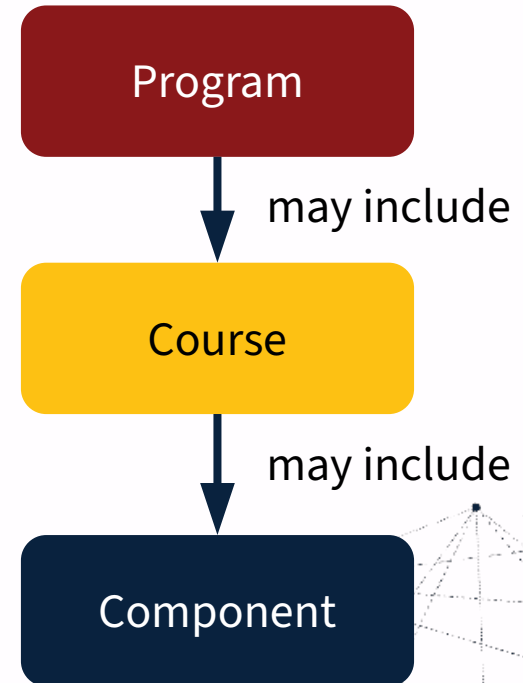
The screenshot shows the SkillData Mappings web application. At the top, there's a navigation bar with the Knowledge INNOVATION Centre logo, a 'View Mappings' tab, a 'New Mapping' button, and a 'Sign In' button. Below the navigation bar, there's a search bar and a filter bar. The filter bar has three buttons: 'Learning Opportunity Specification' (selected), 'Learning Opportunity Instance', and 'Education Provider'. Below the filter bar, there's a 'Collapse All / Expand All' link. The main content area is divided into two columns. The left column shows a list of mappings with icons for search, filter, and download. The right column shows the details of the selected mapping, 'Learning Opportunity Specification'. The details are organized into sections: 'Identical' (green header) and 'Similar' (grey header). The 'Identical' section shows a mapping from 'ELM (3.2)' to 'entitles to'. The 'Similar' section shows a mapping from 'OOAPI - program (v5)' to 'qualificationAwarded'. Below these, there's an 'Aggregated' section (blue header) showing a mapping from 'OOAPI - course (v5)' to 'enrollment'. The details for each mapping include the property name, definition, relevant class(es), and expected value type.

Property name	Definition	Relevant class(es)	Expected value type
entitles to	Rights (such as which the person may acquire as a result of acquiring the learning outcomes).	elm:LearningAchievementSpecification	elm:LearningEntitlementSpecification
entitlements	Infinity%		
entry requirement	Specific entry requirement or prerequisite of individuals for which this specification is designed to start this learning opportunity.		

ELM



OOAPI



Learning outcomes

- **ELM**: summary, ESCO and other frameworks/classification
- **OOAPI, OCCAPI**: array of textual descriptions
- **DEQAR**: summary & ESCO
- **Edu-API**: intended learning outcomes not included in standard spec

Qualifications frameworks (QF) and level

- **ELM**: native use of European Qualifications Framework (EQF)
- **OOAPI**: refers to Dutch national QF and EQF together
- **Edu-API**: “graduate”, “undergraduate”, “doctoral” – plus “ext:...”
- **DEQAR**: native use of Bologna/EHEA QF (“short cycle”, “first cycle”, “second cycle”, “third cycle”)

Controlled vocabularies

ELM	OOAPI
learning schedule	modeOfStudy

Part time light

full-time

Part time intensive

part-time

Full time

dual training

self-paced

ELM	OOAPI
mode	modeOfDelivery

Workbased

distance-learning

Project based

on campus

Presential

online

Online

hybrid

Hybrid

situated

Blended

Research-Lab based

Instance	⚠	Specification
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Specification	✓	Specification
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What's next

- **Consultation:** review our **draft specifications** and share your feedback

<https://quality-link.eu/technical-specs/>

- **And:** tell us which **quality indicators** are the most relevant to you

- **Next:** working on data **converters and aggregators**

- **Later** this year: expose your own course catalogue in the **pilot platform**



<https://quality-link.eu/>

Questions/topics for further discussion

- Are our **different terminologies** clear enough and do we know how to “translate”?
- Can we represent different **programme/curricula structures** well in all standards?
- In which areas would it be most urgent to align **controlled vocabularies**?
- Do any other **conceptual differences** than inhibit conversion or translation of data?



Short description of QualityLink

QualityLink aims to address all stakeholders' needs by furnishing them with all relevant information about courses and micro-credentials from a diversity of sources to improve recognition decisions and allow learners to follow flexible learning pathways. To make sure that the standards are of high quality and have ownership in the community, the consortium will create a Standards Consultation Board – a group of higher education interoperability experts from across different countries. Through creating open standards and collaboration, the project aims to establish the infrastructure for aggregating quality information from a wide range of sources.

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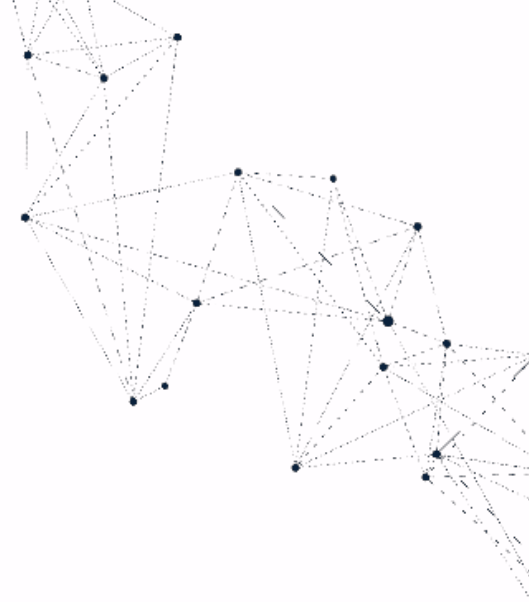
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