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QualityLink

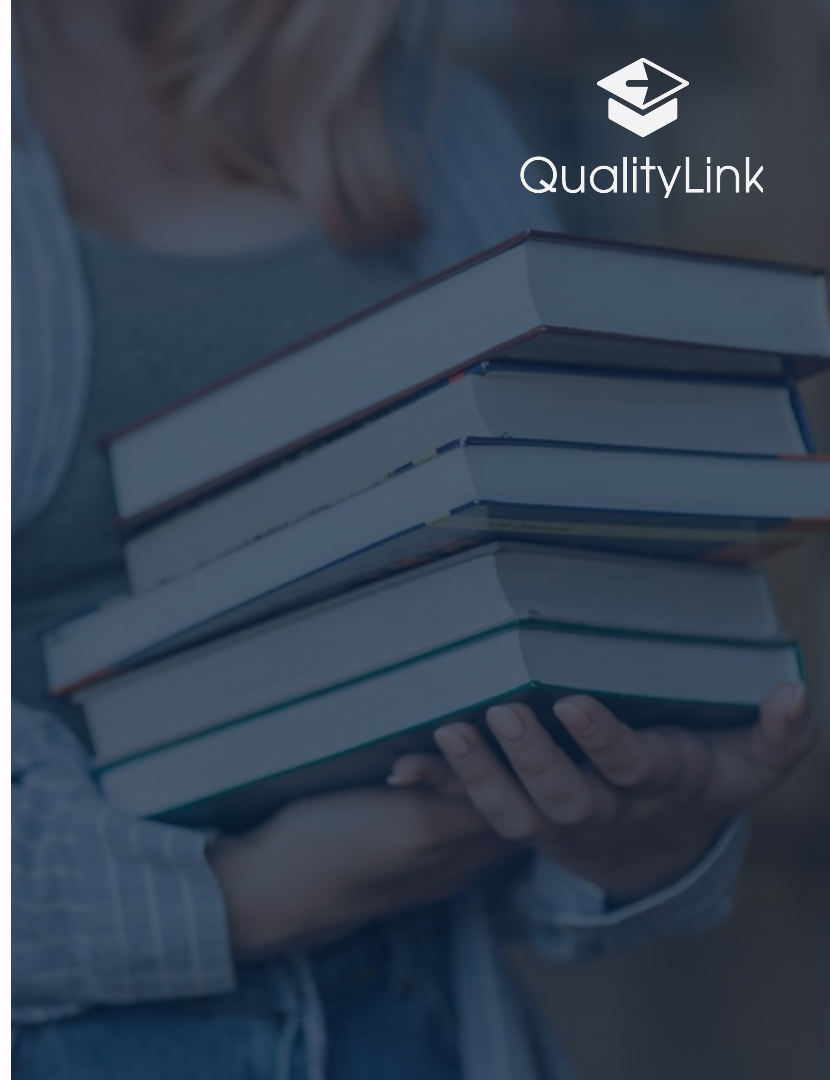
Interoperable course catalogues - bridging data models and standards

UOC/1EdTech/Dxtera workshop
5 May 2026

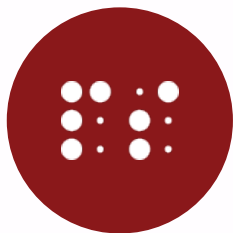
Colin Tück



Knowledge
INNOVATION
Centre



Current challenges



Reliable data is essential for flexible learning pathways and for recognition of micro-credentials



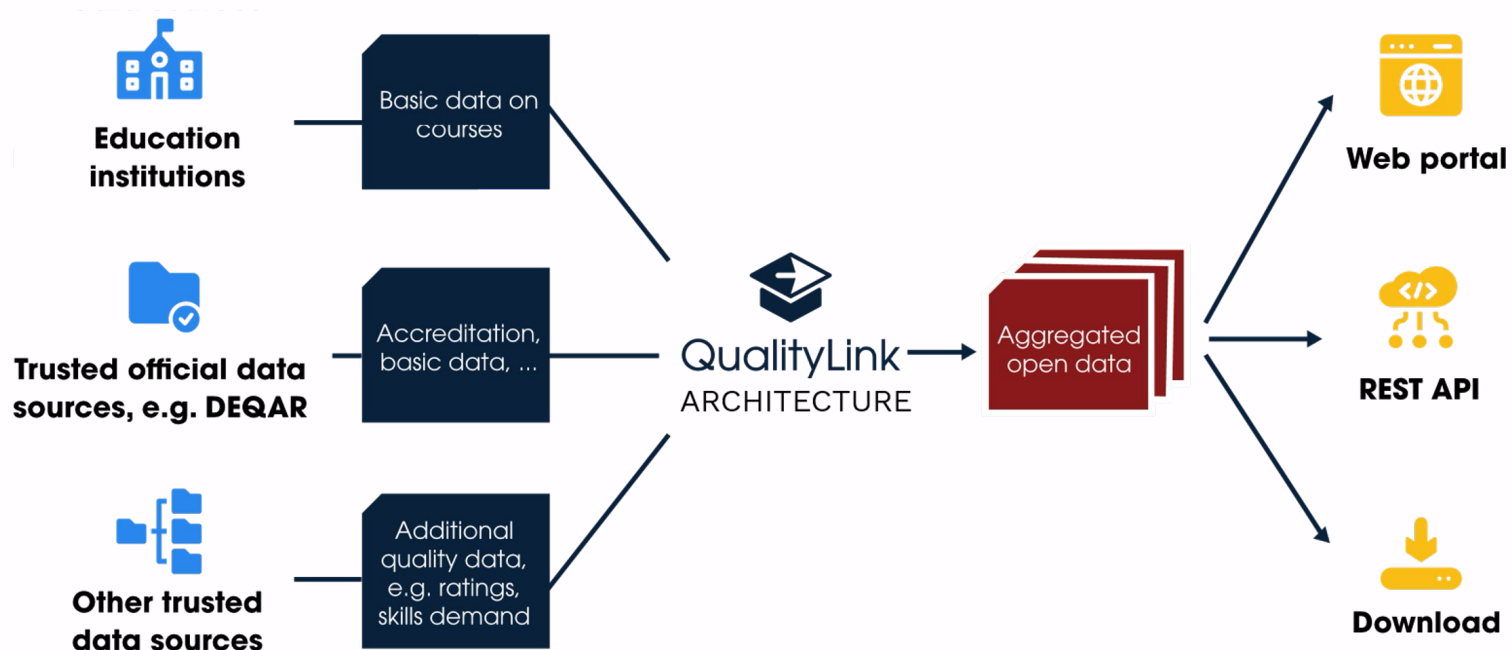
Basic course data often not published in open & structured form



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

Objective

Create a Europe-wide open data exchange architecture for course catalogue data, with data coming directly from the source (HEIs)





Web portal

- Publicly accessible
- Basic search, filtering, ...
- Preset views for alliances, etc.



REST API

- Integration into other applications
- Custom course catalogue frontend
- Free, but with rate limits



Download

- Research or analysis
- Freely accessible without restriction

Dataset available under
Creative Commons
Attribution-NonCommercial:

- requires that users give credit
- allows to distribute, remix, adapt – but for noncommercial purposes only



Information needed on micro-credentials

1. Basic elements

Required

- Title of the micro-credential
- Country(ies)/Region(s) of the issuer;
- Awarding body(ies)
- Learning outcomes
- Notional workload/ECTS
- Level (EQF, QF-EHEA)
- Type of assessment
- Form of participation
- Type of quality assurance

Optional

- Prerequisites
- Supervision and identity verification
- Integration/stackability options

(Council Recommendation on a European Approach to MCs, 2022 - non-individual elements only)

2. Quality indicators

1. Content Relevance, Labour Market Demand and Accuracy	1.1 Accurate and up-to-date
	1.2 Demand for skills
	1.3 Stackability
2. Teaching Methods and Pedagogy	2.1 Quality Assurance
	2.2 Tutoring
	2.3 Virtual learning env.
3. Accessibility and Inclusivity	3.1 Recognition of prior learning
4. Learner-Centred Approach Satisfaction and Success	4.1 Student ratings
5. Institutional Reputation	5.1 Expertise of Lecturers
	5.2 Networks
	5.3 Recognition history of the micro-credential

3. Alliance use cases

Enrolment

- Capacity
- Application period
- Enrolment process

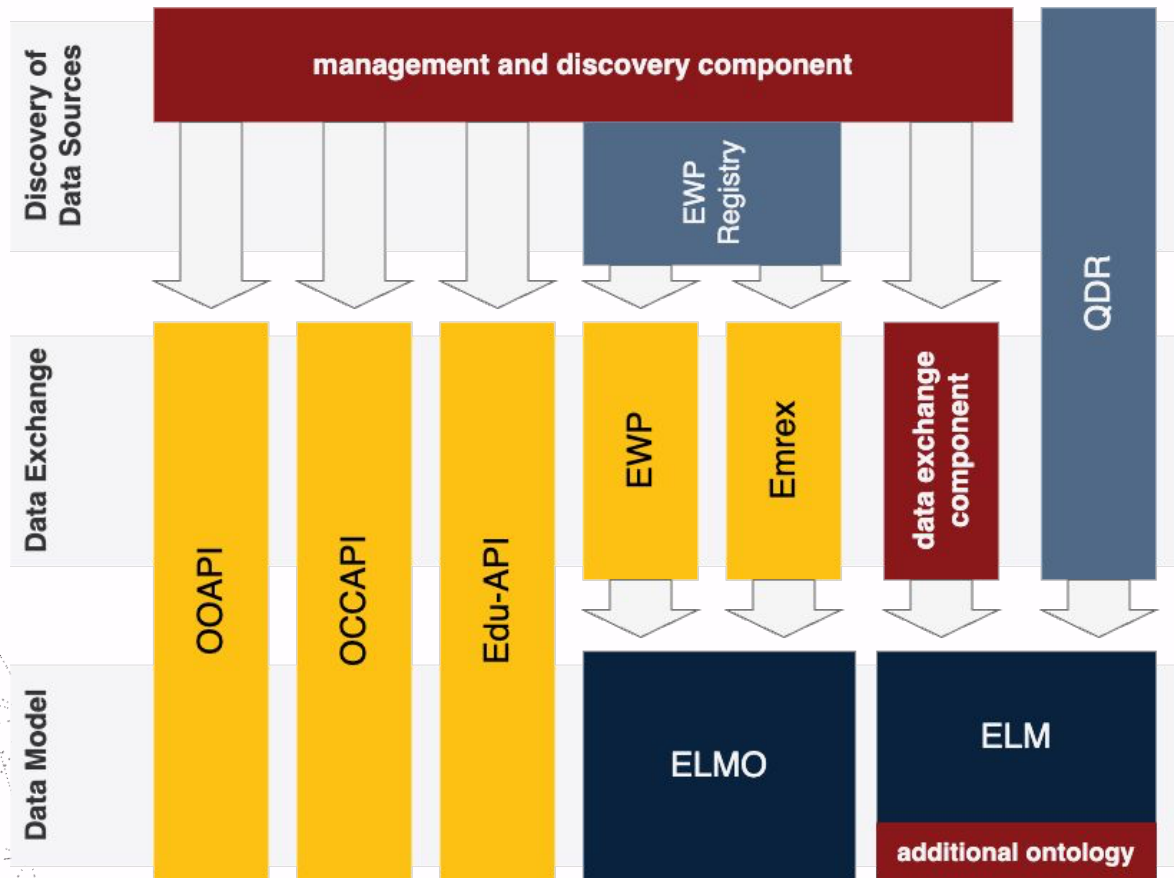
Pathways

- Requirements and prerequisites
- Conditions for specific learner groups

Recognition

- Grade distribution details

Existing landscape

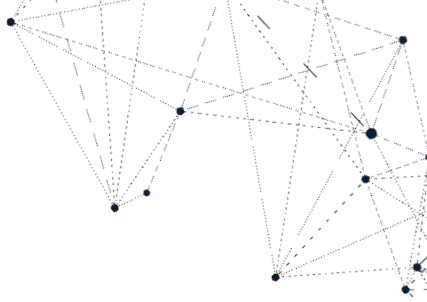


Principles:

- Build on what's there
- Keep bar to adoption low
- Be flexible
- Open to extensions
- Open source

How standards cover the basic elements

Element	ELM	OOAPI	Edu-API	OCCAPI
Title	yes	yes	yes	yes
Awarding body	yes	yes	yes	yes
Learning outcomes	text + ESCO	text	no	text
Workload/ECTS	yes	yes	yes	yes
Level	EQF	EQF	yes	EQF
Type of assessment	yes	yes	no	yes
Form of participation	yes	yes	yes	indirect
Type of QA	yes	no	no	no
Prerequisites	yes	indirect	no	yes
Supervision and verification	yes	no	no	no
Integration/stackability	indirect	no	no	no



Future OOAPI
& Edu-API
extensions
could cover
additional
elements

Three main elements that we found were needed:



Ontology extension
and profile

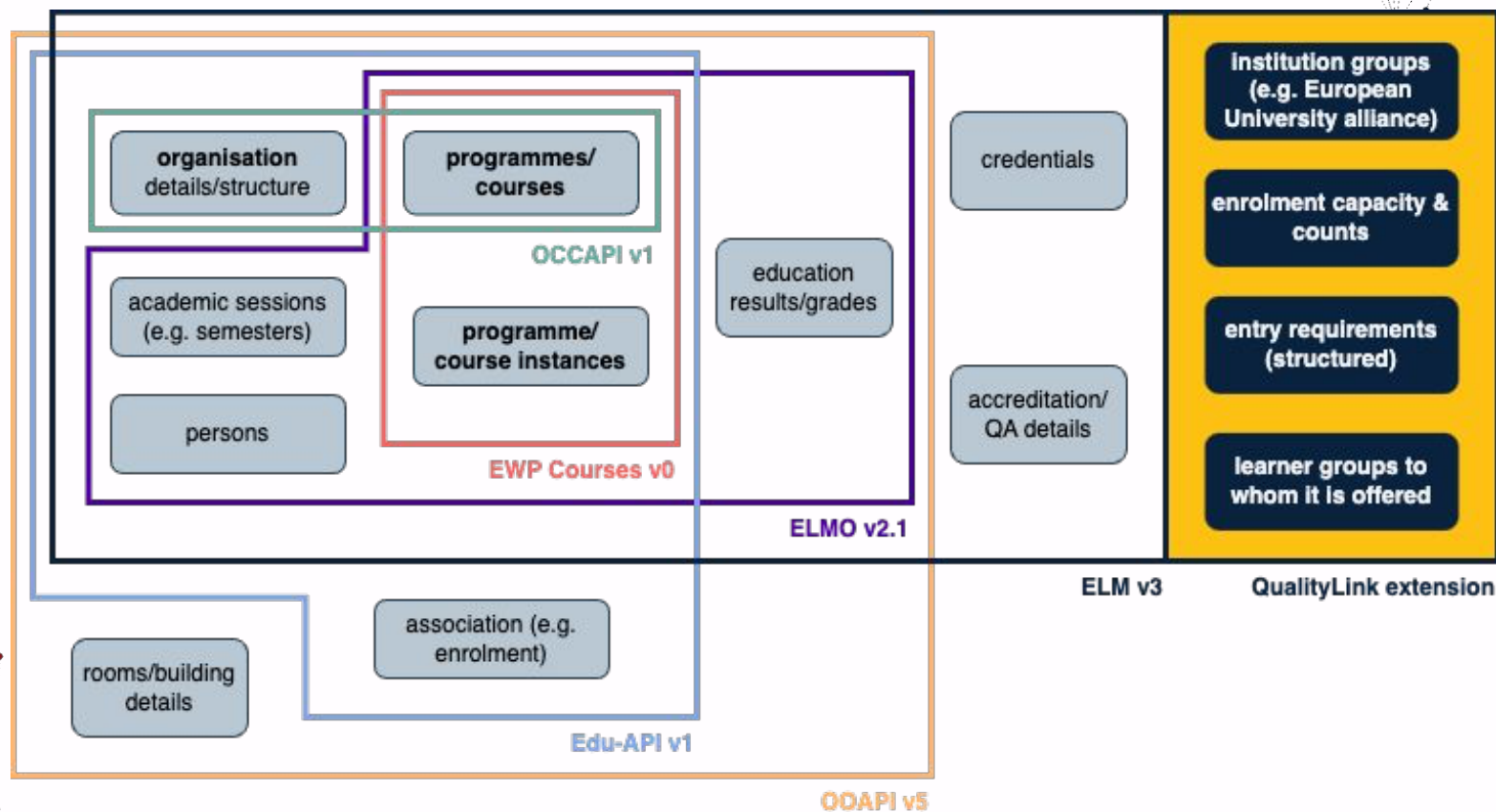


Data source
discovery



Data exchange
specification

Ontology extension and profile

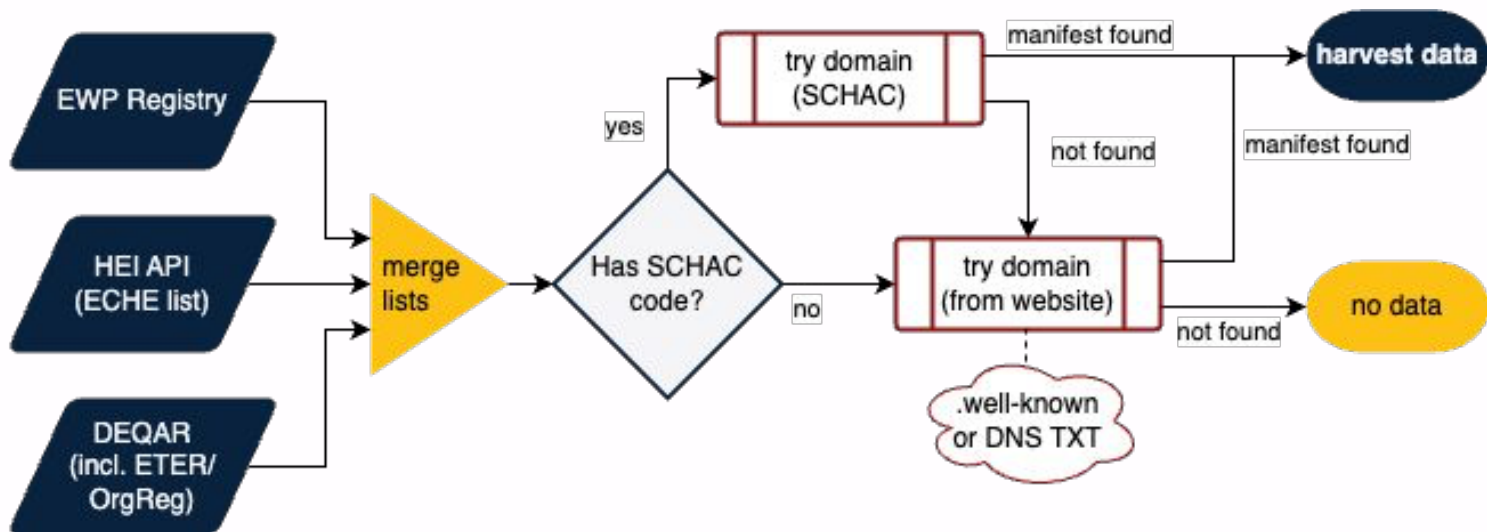


Data source discovery

Trusted providers
(from DEQAR)

Internet domain
(website & SCHAC)

Announce source(s)
through manifest file



Data source discovery

```

{
  "meta": {
    "schac": "tuwien.ac.at",
    "eterid": "AT0005",
    "deqarid": "DEQARINST0005"
  },
  "sources": {
    "0": {
      "name": "main source",
      "type": "elm",
      "path": "https://at0005-ql-dev.test.36ada.eu/courses.ttl",
      "version": "3.2",
      "auth": {
        "type": "httpheader",
        "field": "x-qualitylink-test",
        "value": "HVX51N0tsnuIiCuXIKvDvXGICsvicli/LYLq1bE/LEY1Bb0eejzJoIBjPEbZo1yFbzn0AuceYLPkQcbKwYbEe5hgsH4+9r8LYguf6TDKZyp0C  
RXrh+e8lVaIKB lm+cyJQaHmCAJH+p8CDs4tixvHy3dQsT9BgAeJgt9u5nJg5zEBF8+cs  
DjXXhP8KpuMazT5FumPZV0e+e3zutgRHMBQIJl2mkv5d1jVTVEBgksgcnMTB6vsBMOVvbIg  
VrxseeFTgg89FTUfJIuW1aEQHoWtwaA52q50aMymXEmA3ceaQVAMLC6/2qpjc7TNrxewEA"
      }
    },
    "1": {
      "name": "additional courses",
      "type": "elm",
      "path": "https://at0005-ql-dev.test.36ada.eu/more-courses.ttl",
      "version": "3.2",
      "headers": {
        "x-eccentric-header": "random value"
      }
    },
    "2": {
      "type": "edu-api",
      "path": "https://build.1edtech.org/eduapi/ims/eduapi/base/vlp0/",
      "id": "1edtech",
      "name": "1EdTech testing endpoint",
      "auth": {
        "type": "httpheader",
        "field": "Authorization",
        "value": "d+XI9buSoxKqxFDveh0lwvy8jtd140Qd0Q6pDfXitD7U11VBbxdDGc8FN3dU8T9b0KubhC  
oe2Kb1l0mxHMSUzNp1PhnAN09kHnY3Utr/rJB/SJ6ySLa6yM4ZwTkF17cyaXhBuf99QE0Y  
VN56C8zXS0R1UxcchugrZT7mkvrbkMFhYdvGbm9AYxo2R0TKAb7NnmMwxjft7ThgFv0gV  
Zb9lI9K4Jkoo0K+fi97a0DQzbDxhCnxIRNDGcHuukj4RAHb0D5sld061GSKLb3nSEx940A  
fGALh4/uDQa6623ECvrvo6HYI09ZdBaLAAdZtXnwtGI06Ns1zBfxJmK08xZge1sH4+SLQm+"
      }
    }
  }
}
```



Domain search order

4 domains found

- **tuwien.ac.at** DNS TXT ⊗ Manifest not found
- **tuwien.ac.at** .well-known ⊗ Manifest not found
- **at0005-ql-dev.test.36ada.eu** DNS TXT ⊗ Manifest not found
- **at0005-ql-dev.test.36ada.eu** .well-known ✔ Manifest found

✔ Manifest file is valid
Found at: <https://at0005-ql-dev.test.36ada.eu/.well-known/quality-link-manifest.json>

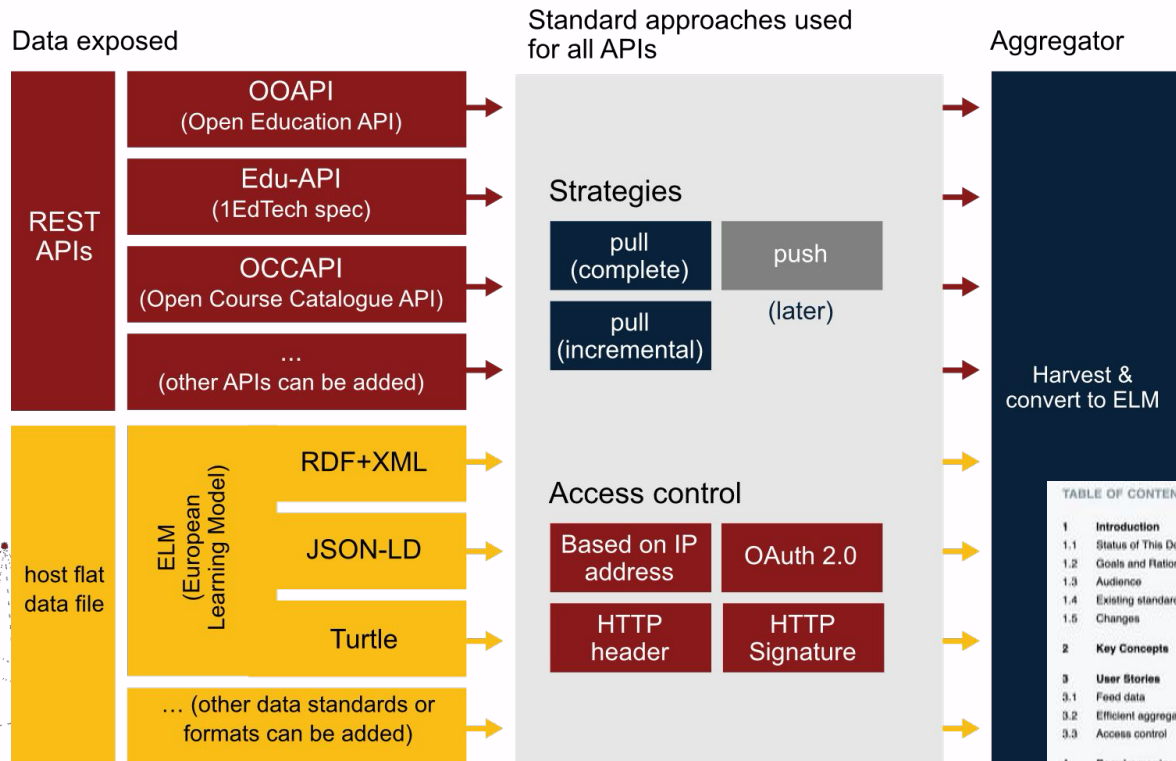
🔄 Refresh ? Was your manifest file not found? [Visit the help page](#)

Data sources

The following data sources were found in the manifest file

ID	NAME	TYPE	PUSHED
bf68fbc1...	additional courses	ELM	—
1edtech	1EdTech testing endpoint	EDU-API	29 Apr 2026
e93e48fb...	main source	ELM	4 May 2026

Data exchange architecture



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

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QualityLink Data Exchange Specification

Living Standard, 18 April 2025

Issue Tracking:

GitHub

Editors:

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Project Website:

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

Project Reference:

Task 3.6 (Creation of a Technical Trusted List Standard)

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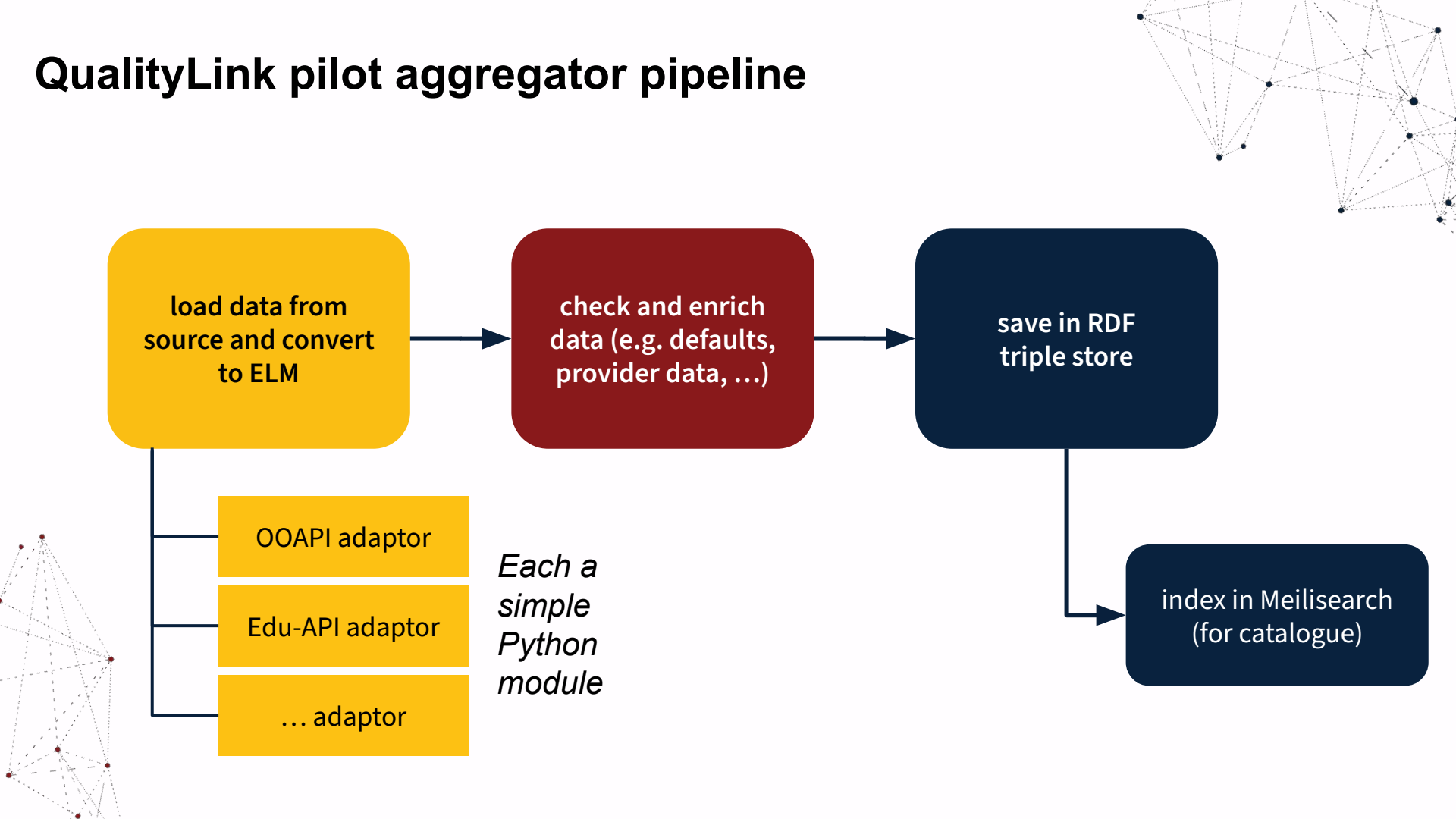
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Abstract

This specification standardises how HEIs and other data providers can make data available for aggregation.

QualityLink pilot aggregator pipeline



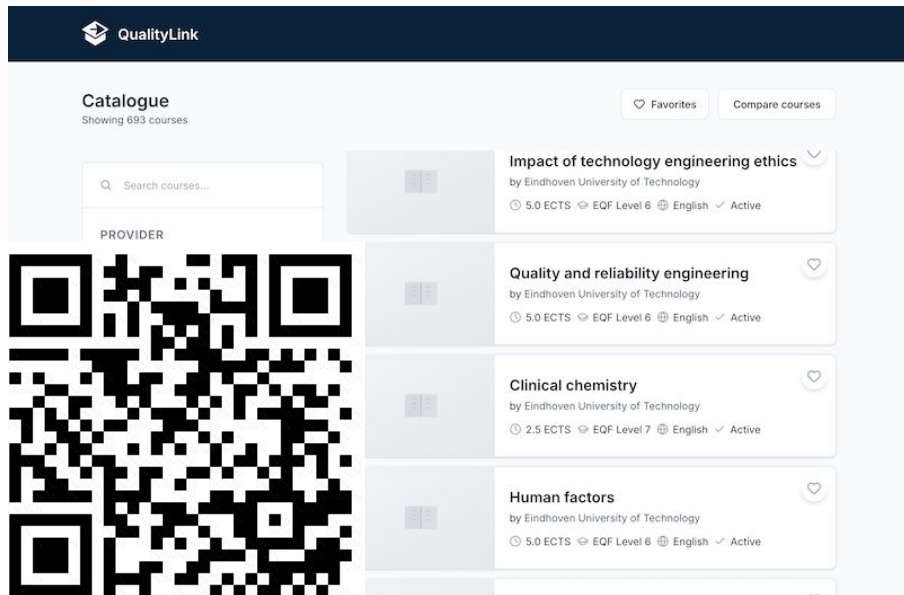
Overview: specifications developed

- **Data Sources and Access Policy** – terms and conditions for data use
- **Ontology** – extends the **European Learning Model (ELM)**
- **QualityLink Application Profile** – extends the ELM profile for Learning Opportunities and Qualifications (LOQ)
- **Course Identifier Specification** – common format for unique course identifiers
- **Data Source Discovery Specification** – mechanism to discover data sources exposed by institutions
- **Data Exchange Specification** – describes use of supported formats (**ELM**, **OOAPI**, **Edu-API** and **OCCAPI**)



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

Pilot aggregator & catalogue: draft specs implemented



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



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

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 has created 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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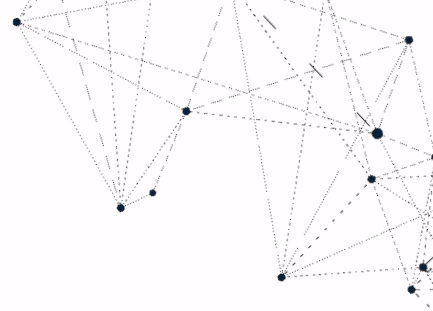
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Use cases



Potential learners,
guidance



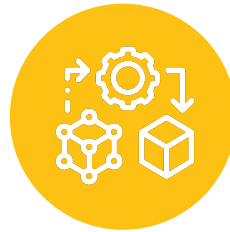
Recognition and
labour market



Alliances' joint
catalogues



Mapping and
benchmarking



Interoperability for
other apps



Europe-wide
visibility

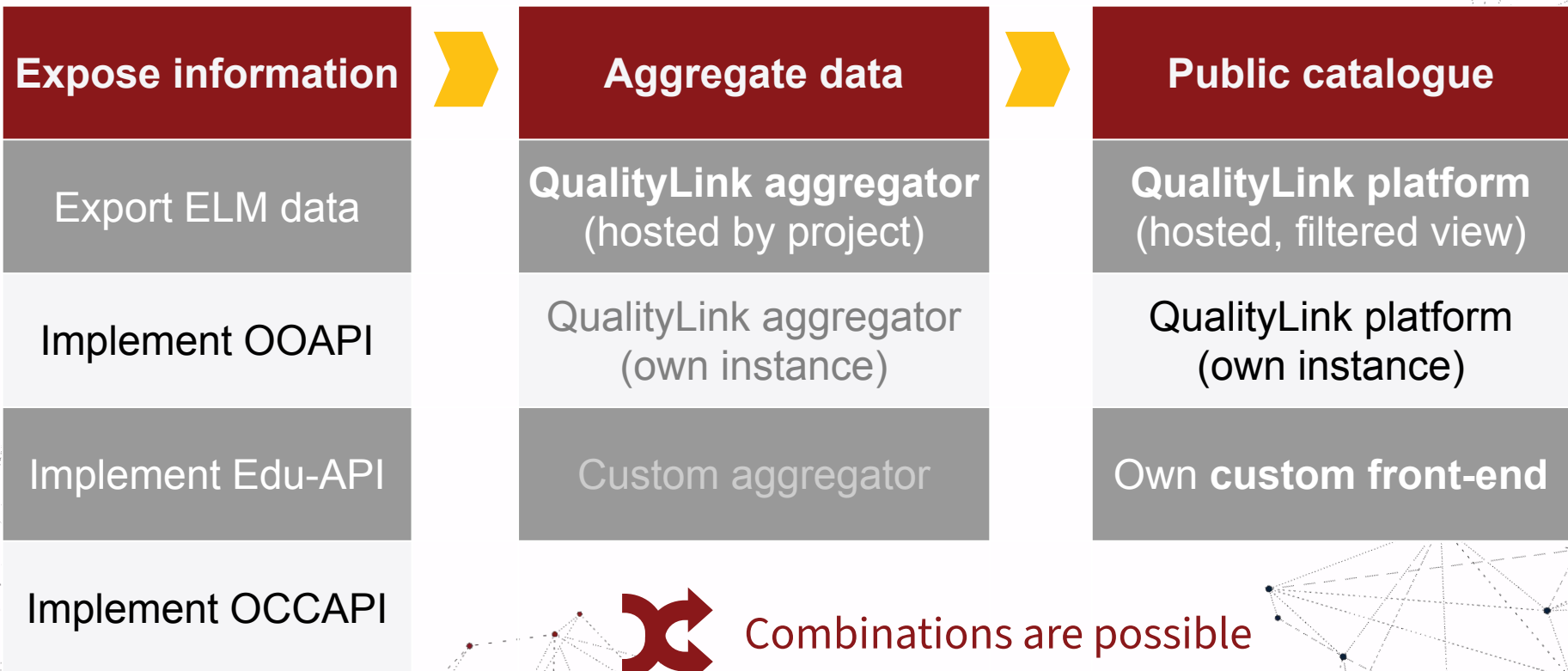
Status of implementation

ELM (static file) sources	supported (v3)
ELM – incremental updates	work in progress
OOAPI sources	supported (v5)
Edu-API sources	supported (v1)
OCCAPI sources	work in progress
Access control: based on IP address	supported
Access control: HTTP Request Header	supported
Access control: OAuth 2.0	on hold
Access control: HTTP Signature	on hold



[https://quality-link.eu/
step-by-step/](https://quality-link.eu/step-by-step/)

Implementation options for institutions and alliances





Sign In Create an account

Welcome to SkillData

A skills intelligence platform that helps organisations connect learning to workforce needs. Map skills across job profiles and qualifications, identify gaps, and build personalised learning pathways for your employees or learners.

Extract skills from any text

Paste or write a course description, job description, or any text to find matching skills

Skill Finder · 13896 Job profiles · 6793 **Qualifications · 483** Skill frameworks · 4

E.g. 3D printing

Find skills

Everything you need to build with Skill Data. Documentation → Conditions of use → Large-scale API use →



Catalogue
Showing 693 courses

Search courses...

PROVIDER
All

EQF LEVEL
All

FIELD (ISCED-F)
☐ Computer use 4
☐ Management and administration 1
☐ Travel, tourism and leisure 1

ECTS
1 30

Impact of technology engineering ethics
by Eindhoven University of Technology
5.0 ECTS EQF Level 6 English Active

Quality and reliability engineering
by Eindhoven University of Technology
5.0 ECTS EQF Level 6 English Active

Clinical chemistry
by Eindhoven University of Technology
2.5 ECTS EQF Level 7 English Active

Human factors
by Eindhoven University of Technology
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