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QualityLink

Interoperable course catalogues - bridging data models and standards

QualityLink Webinar
29 April 2026

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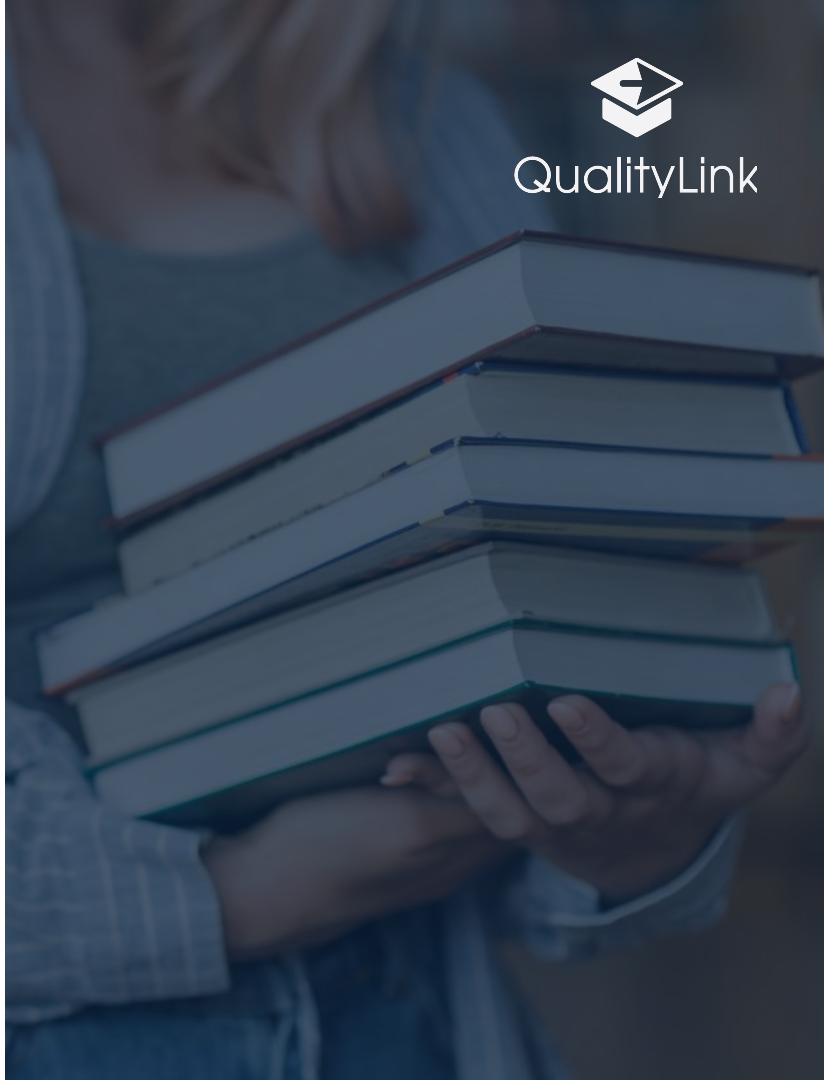

Project Goals & Vision

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Building an Interoperable Ecosystem for Micro-Credentials

- Comprehensive data on learning opportunities: a fundament for interoperable credentials
- Focus on micro-credentials and improving their transparency, trust, and recognition

Development of:

- Technical standards for data exchange
- A prototype data aggregator & course catalogue
- Ontology mapping and quality data architecture

Supports key stakeholders:

- 🎓 Learners
- 🏫 Institutions
- 💼 Employers

- Pilot platform demonstrates how quality data can be shared and reused across systems

Importance of Open Data & Micro-Credentials

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What is qualitative data of micro-credentials?
- Information on course quality, learning outcomes, accreditation, and assessment
- Contextual data beyond simple certification

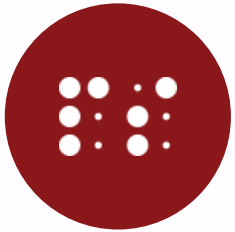
Key Challenges:
- How to share courses using existing systems
- How to represent data for different stakeholders
- How to ensure discoverability and recognition

Use Cases:
- Institutions share courses leading to micro-credentials
- Learners can find, compare, and apply
- Employers and institutions can verify and recognise credentials

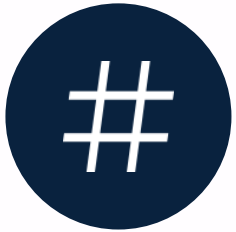
What is needed?
- Open, standardised, interoperable data formats
- A platform enabling data sharing and aggregation
- Tools supporting recognition decisions

Project Outputs:
- Indicators and analysis of existing datasets
- Technical architecture & specifications
- Data aggregator & course catalogue
  (= pilot implementation of the developed specifications)

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

Discover & Quality Indicators

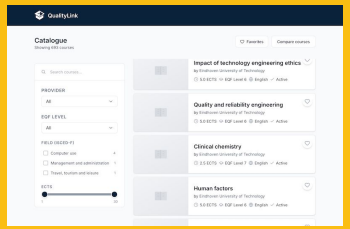
Quality Information about Learning Opportunities from different sources

- Content Relevance & Labour Market Demand
- Teaching Methodology
- Accessibility
- Learner-Centred Approach

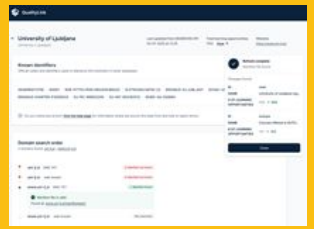
Policies & Standards

- Unique Course Identifier
- Policy: data sources and access
- RDF ontology and application profile
- Data source discovery
- Data exchange, using established standards: ELM, OOAPI, Edu-API, OCCAPI

Pilot Aggregator and Catalogue



frontend for learners



dashboard for education providers

Community Co-Creation

QualityLink Standards Consultation Board

European University Alliances

EU4Dual
CHARM-EU
EuroTeQ
UNITA!
ECIU
ENHANCE

European Digital Education Hub

Interoperability Workgroup

EdTech

1EdTech

Policy

SURF
EHESO
EQAR
NAWA
EWP/Emrex

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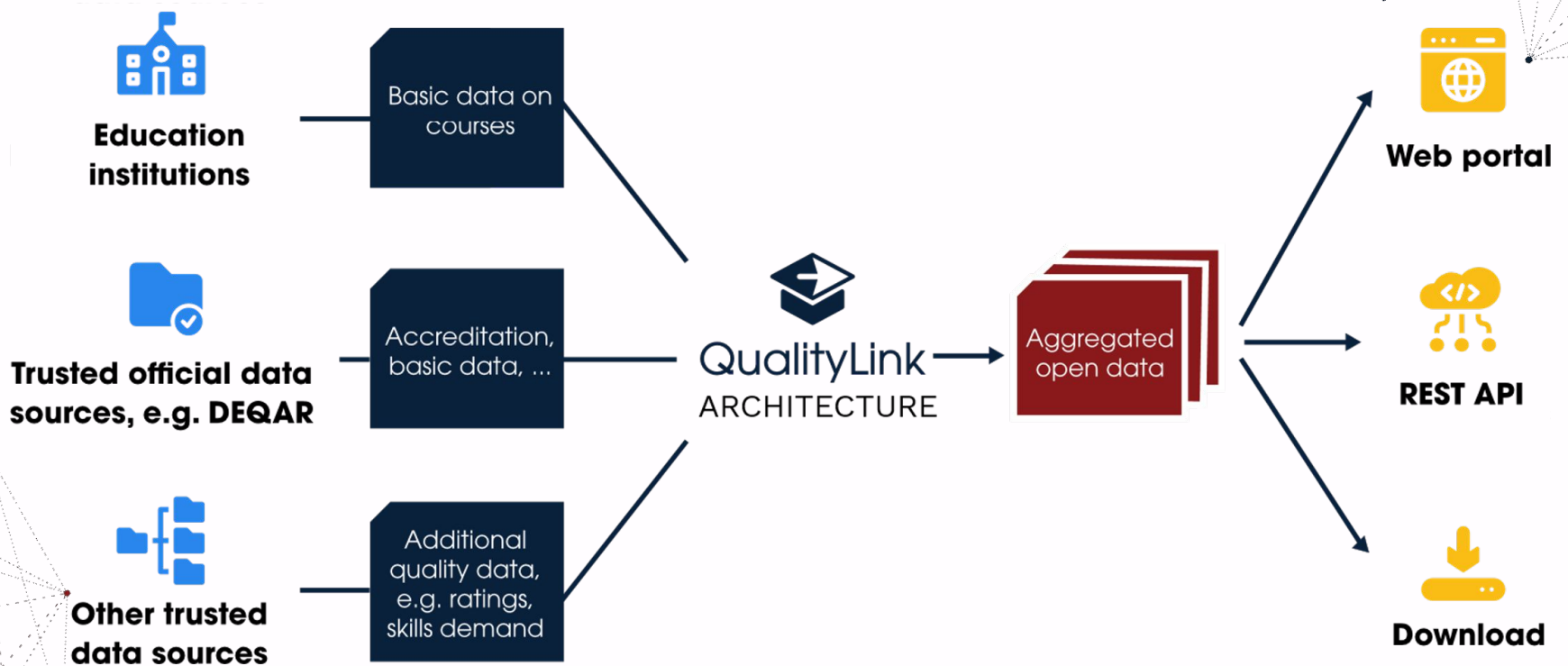
The aim: an open quality data exchange architecture

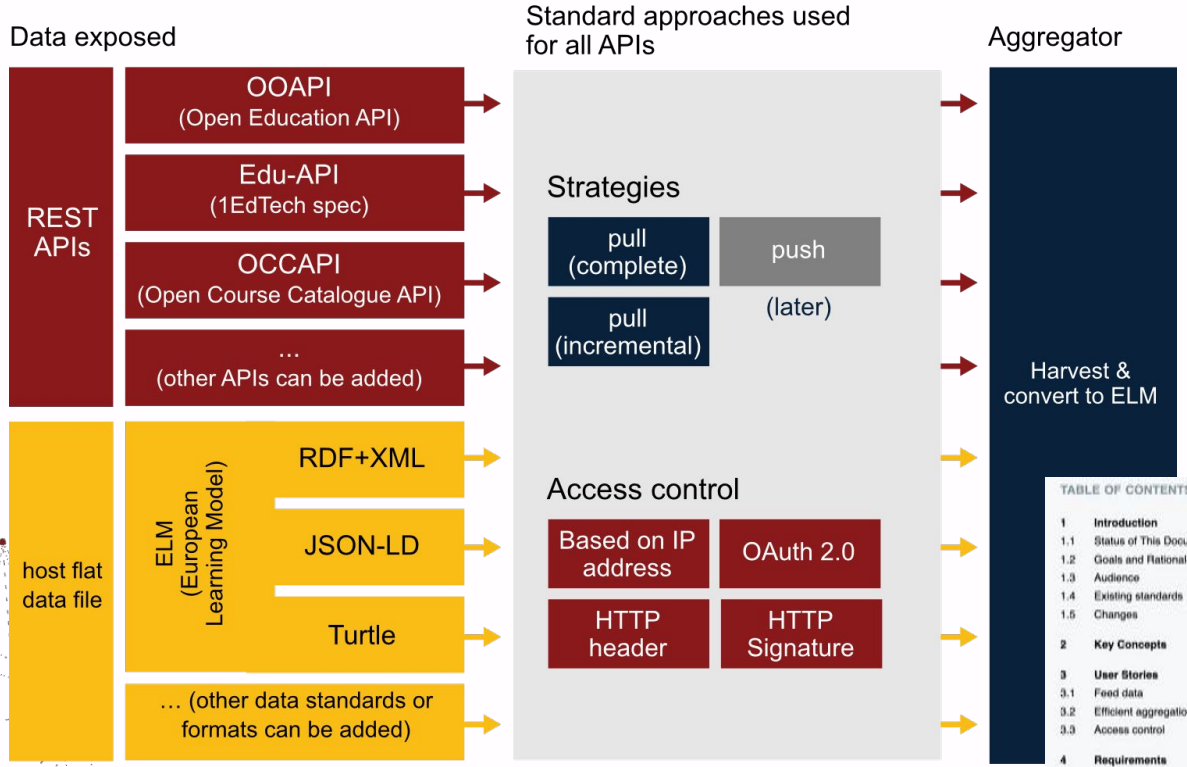


For micro-credentials - but not only!

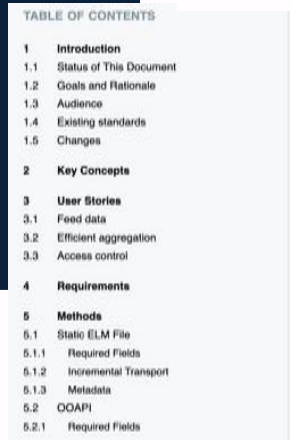
Data source discovery

Trusted providers	Internet domain	Announce source
DEQAR used as reference list of recognised higher education providers Same principle possible for other providers - if trusted list available	Every provider has an internet domain - in DEQAR as website as well as SCHAC code	Institutions place a “manifest file” (a table of contents basically) under their domain - indicates where data can be found in which format

Data exchange architecture



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



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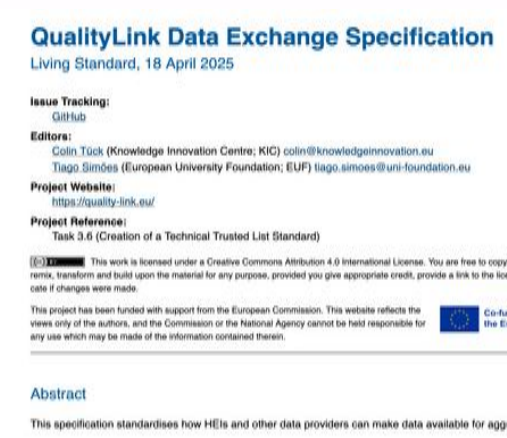

QualityLink Data Exchange Specification

Living Standard, 18 April 2025

Issue Tracking:
GitHub

Editors:
Colin Tück (Knowledge Innovation Centre; KIC) colin@knowledgeinnovation.eu
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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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This project has been funded with support from the European Commission. This website reflects the views only of the authors, and the Commission or the National Agency cannot be held responsible for any use which may be made of the information contained therein.

Abstract

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

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

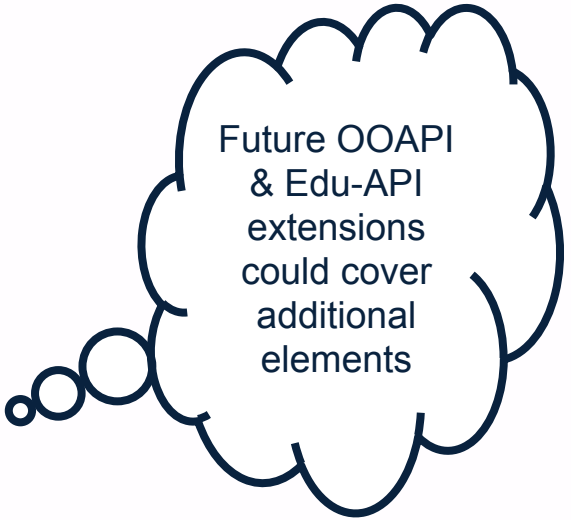
- Requirements and prerequisites
- Conditions for specific learner groups

Recognition

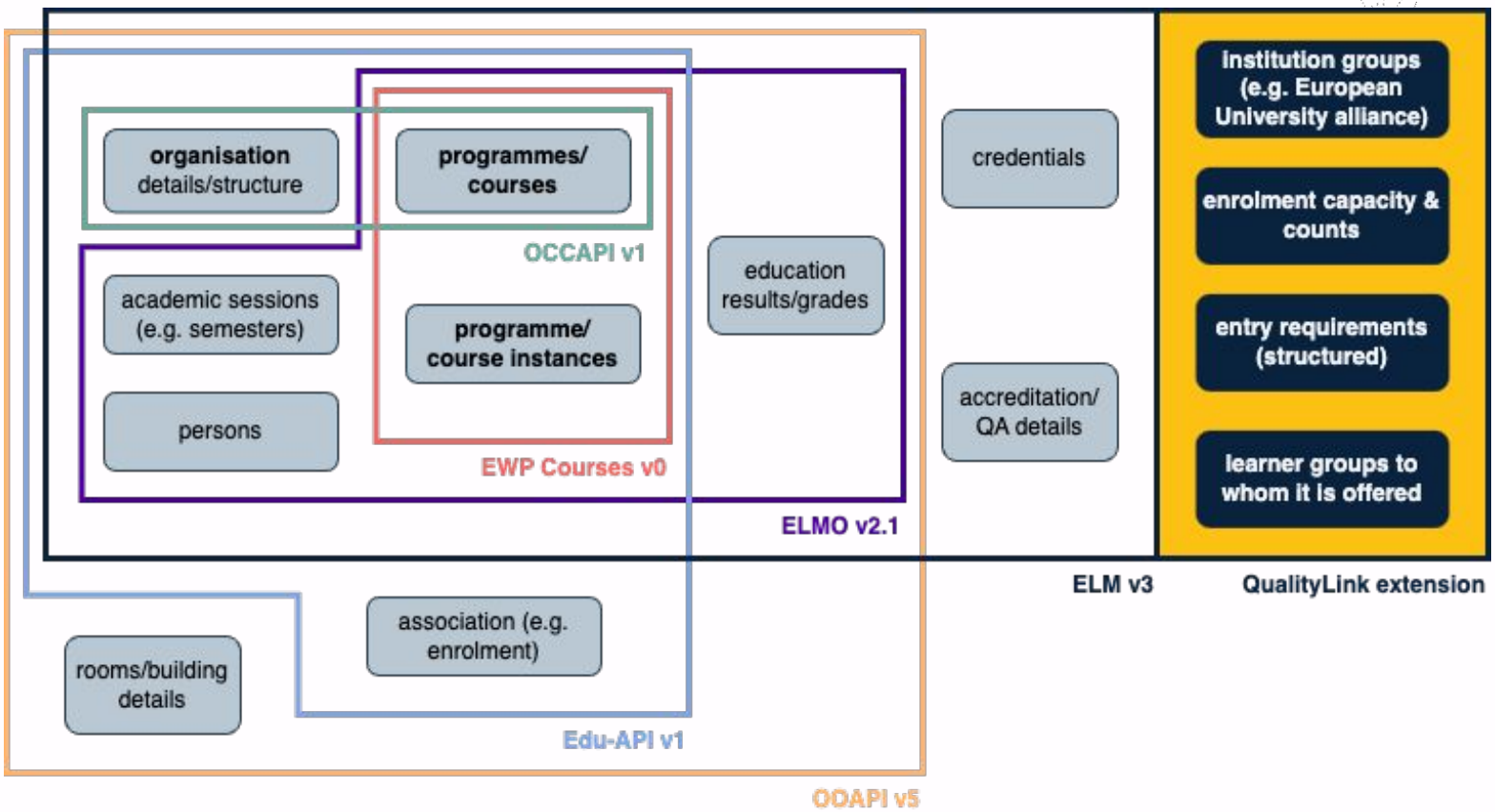
- Grade distribution details

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



Landscape of data standards



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/

Status of implementation

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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/

Data Usage

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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

Future perspectives

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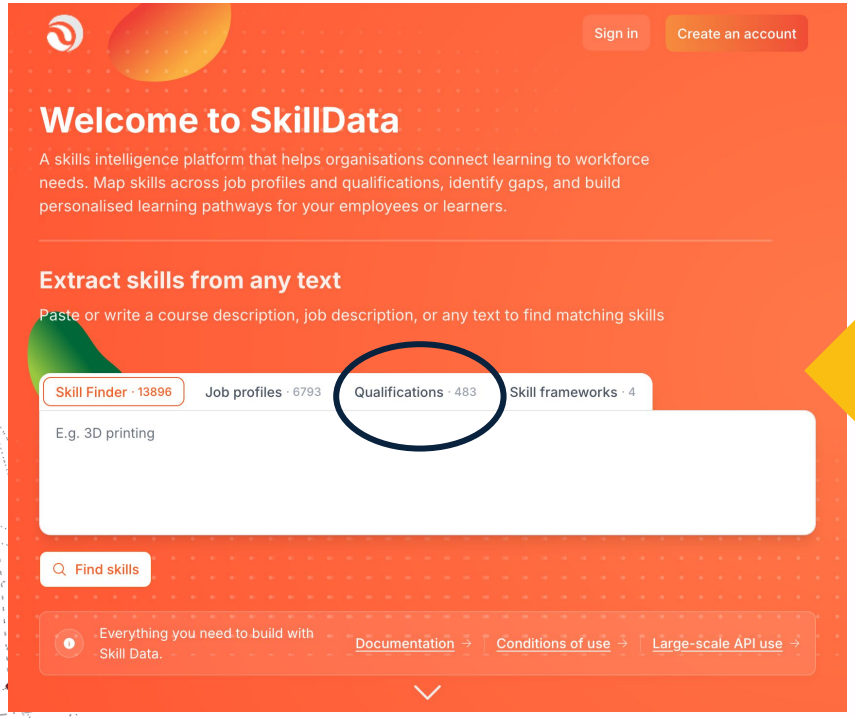

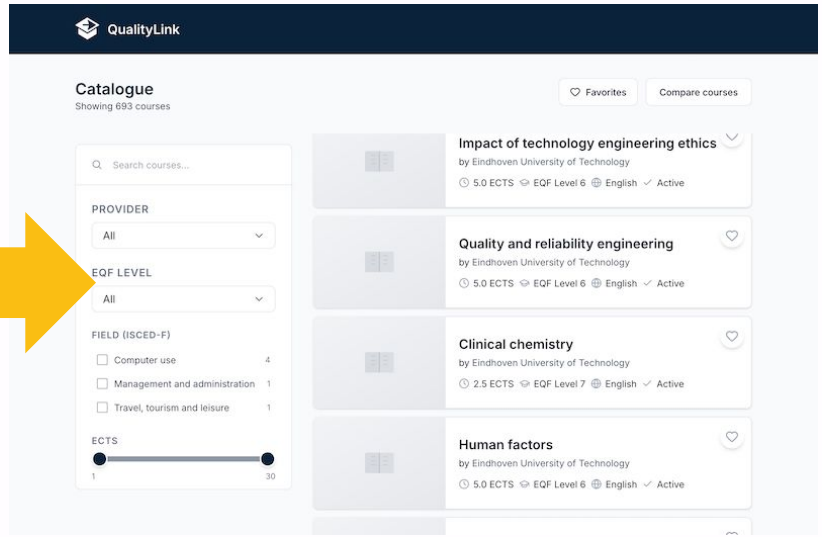

Use cases

Potential learners, guidance

Recognition and labour market

Alliances' joint catalogues

Mapping and benchmarking

Interoperability for other apps

Europe-wide visibility

Implementation options for institutions and alliances

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Expose information	Aggregate data	Public catalogue
Export ELM data	**QualityLink aggregator** (hosted by project)	**QualityLink platform** (hosted, filtered view)
Implement OOAPI	QualityLink aggregator (own instance)	QualityLink platform (own instance)
Implement Edu-API	Custom aggregator	Own **custom front-end**
Implement OCCAPI		

Combinations are possible

Pilot aggregator & catalogue: draft specs implemented

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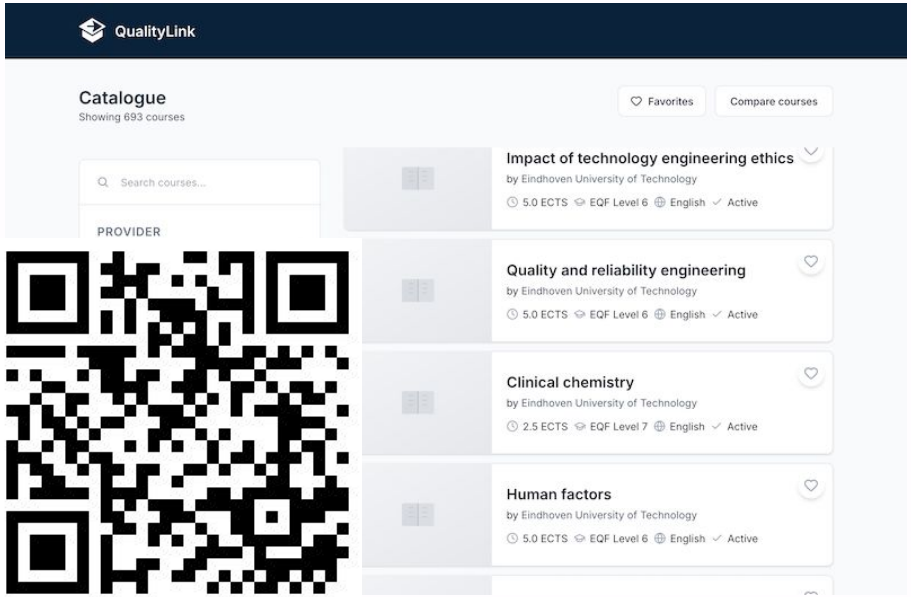

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FINAL EVENT

Innovating Academic Catalogues in Higher Education: From Information to Transformation

Pre-event webinar: June 11 (10:30-12:00 CEST)
Conference in Brussels: June 17

Register today

Digitasing Academic Catalogues for Enhanced

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Innovating Academic Catalogues in Higher Education: DACEM final event

https://ec.europa.eu/eusurvey/runner/dacem-final-event

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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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