

HOW INSTITUTIONS CAN USE THE OEB-API

As of 18 December 2025

Via the OEB API (Application Programming Interface), organisations can access data and functions of the Open Educational Badges platform **directly from their own systems**. The API is designed for integration, automation, and data exchange. Data visualisation takes place within the institution's own system, not through the API itself. However, **selected functions can also be embedded and displayed within the institution's system via iFrames**, using OEB's native visualisations. See section 3 for details.

1. Security and authentication

The OEB API uses secure **OAuth2 authentication** (with client ID and client secret, which can be generated directly within the OEB account). This enables platforms to communicate with OEB in a controlled and data-protection-compliant manner. Access to badge-, issuance-, and profile-data is clearly defined and technically secured.

2. General functionalities (data-based, without UI visualisation)

Create, edit, and delete badges

Institutions can create, edit, and delete badges directly from their own systems.

This applies to all badge types:

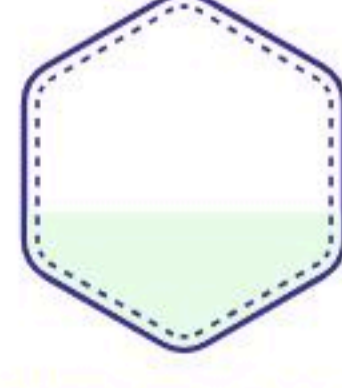
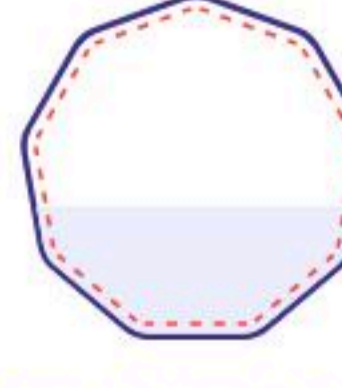

- participation badges
- competency badges
- micro-degrees (learning pathways)

The API provides structured data models and endpoints.

Badge erstellen

Wir helfen dir, in wenigen Schritten deinen Badge zu erstellen.
Los geht's!

1. Badge-Kategorie wählen

 <p>Teilnahme-Badge dient als Bestätigung der Teilnahme an einer Veranstaltung – er enthält <u>keine</u> Kompetenzen.</p>	 <p>Kompetenz-Badge kann (mithilfe unseres KI-Assistenten) mit den Kompetenzen gefüllt werden, die deine Lernenden erwerben.</p>	 <p>Micro Degree verbindet mehrere Badges zu einer größeren Lerneinheit. Wenn Lernende alle Badges dieses Lernpfads erworben haben, erhalten sie automatisch den Abschluss Micro Degree.</p>
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The badge creation view on OEB.

Trigger and manage badge issuing process

The API enables institutions to issue and manage badges directly from their own systems:

- manually issuing badges to specific email addresses
- automatically issuing badges to learners when predefined conditions in the institution's system are met (for example, passing an exam)

Learners receive the badge via email, including a PDF certificate.

Use case: After completing a learning unit in the institution's digital learning platform, the badge is automatically sent to the learner.



The first screenshot shows an email notification: "Herzlichen Glückwunsch Annika Sommer, du hast einen BADGE erhalten!". It features a 3D printer icon and lists competencies: 3D-Modellierung (1:00 h), 3D-Druckvorgang (1:00 h), CAD-Software nutzen (1:00 h), kreativ denken (1:00 h), mit Kollegen und Kolleginnen zusammenarbeiten (1:00 h), and Modelle erstellen (20:00 h).

The second screenshot is a PDF certificate for Annika Sommer, dated 18.12.2025, for the "3D Druckworkshop". It includes a QR code and a description of the workshop. At the bottom, it says "ERSTELLT ÜBER OPENBADGES.EDUCATION".

The third screenshot shows the "KOMPETENZEN" section for the badge "3D Druckworkshop". It lists the same competencies as the email. Below, under "VERGABE-KRITERIEN", it states "75% bestanden".

Badge email.

PDF certificate for the badge, pages 1 and 2.

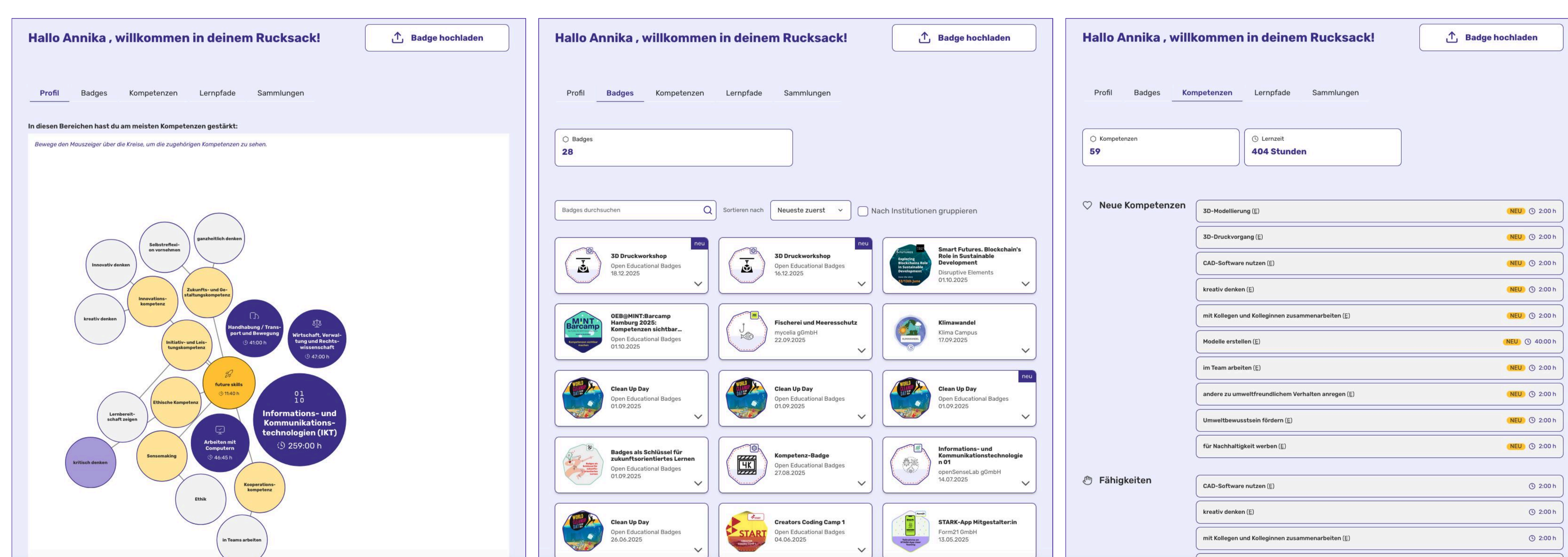
Wallet and competency profile for learners

OEB provides structured data for the following elements:

- a wallet for collecting earned badges
- a consolidated view of the competencies strengthened through these badges
- visualisation of the individual competency profile

This data can be retrieved via the API and processed within the institution's own interface.

Use case: An app can display a person's competency profile derived from collected badges as part of their individual learning progress.



The first screenshot shows a competency profile for Annika Sommer. It features a circular diagram with various competency icons and their durations, such as "Informations- und Kommunikationstechnologien (IKT)" for 259:00 h.

The second screenshot shows a "wallet" of collected badges. It lists various badges like "3D Druckworkshop", "Smart Futures, Blockchain's Role in Sustainable Development", "Klimawandel", "Clean Up Day", "Kompetenz-Badge", and "STARK-App Mitgestalterin".

The third screenshot shows aggregated competencies. It lists "Neue Kompetenzen" and "Fähigkeiten" with their respective durations, such as "3D-Modellierung" for 1:00 h and "CAD-Software nutzen" for 1:00 h.

Competency profile on OEB.

Collected badges.

Aggregated competencies.

3. iFrames (embedding as OEB views)

In addition to pure API usage, OEB offers the option to **embed selected functions as ready-made visualisations**. The following functions can be integrated into an institution's own platform via iFrames:

- creating and editing badges (excluding badge deletion)
- displaying the learner view (collected badges, competency view, profile visualisation)

4. LTI capability (Learning Tools Interoperability)

The features described in section 3 are LTI-enabled and can therefore be **provided securely as seamlessly integrated views directly within existing learning platforms**, without users having to leave the platform or log in again.

Establishing the LTI connection requires coordination with the operators of the OEB platform for the exchange of LTI configuration data.

BENEFITS OF USING THE API

Seamless system integration

Badges are created, issued, and displayed directly within the systems that staff and learners already use, without media breaks or additional logins.

Automation instead of manual processes

Badge issuance and profile updates can run fully automated in the background as soon as predefined trigger conditions are met.

Scalability

The API integration is particularly suitable for organisations that:

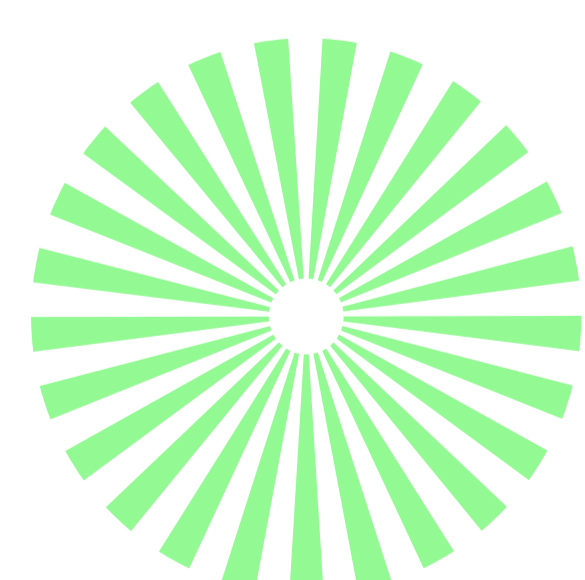
- issue large volumes of badges
- want to display learners' competency profiles within their own systems
- aim to integrate badges into their digital workflows

Alignment with standards

OEB badges are based on:

- the technical Open Badges Standard 3.0
- the content standard of the ESCO* framework for saving competencies

This makes them interoperable, understandable across Europe, and usable in the long term.



TECHNICAL DOCUMENTATION

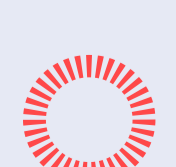
- Introduction: <https://docs.openbadges.education>
- Detailed endpoint documentation: <https://api.openbadges.education/docs/v2/>

* ESCO is the EU's competency taxonomy and includes around 14,000 skills in 28 languages (https://esco.ec.europa.eu/de/classification/skill_main). When creating badges, (educational) institutions can use our AI assistant to select the appropriate competencies for their learning units from this set of 14,000 skills. As a result, all badges use a shared competency language, are comparable, and remain interoperable regardless of where they were earned.



Interested?
Here's the link to the
OEB Platform

www.openbadges.education



CONTACT

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