

EDUBADGES

in Dutch education

Ready, Set, GO!

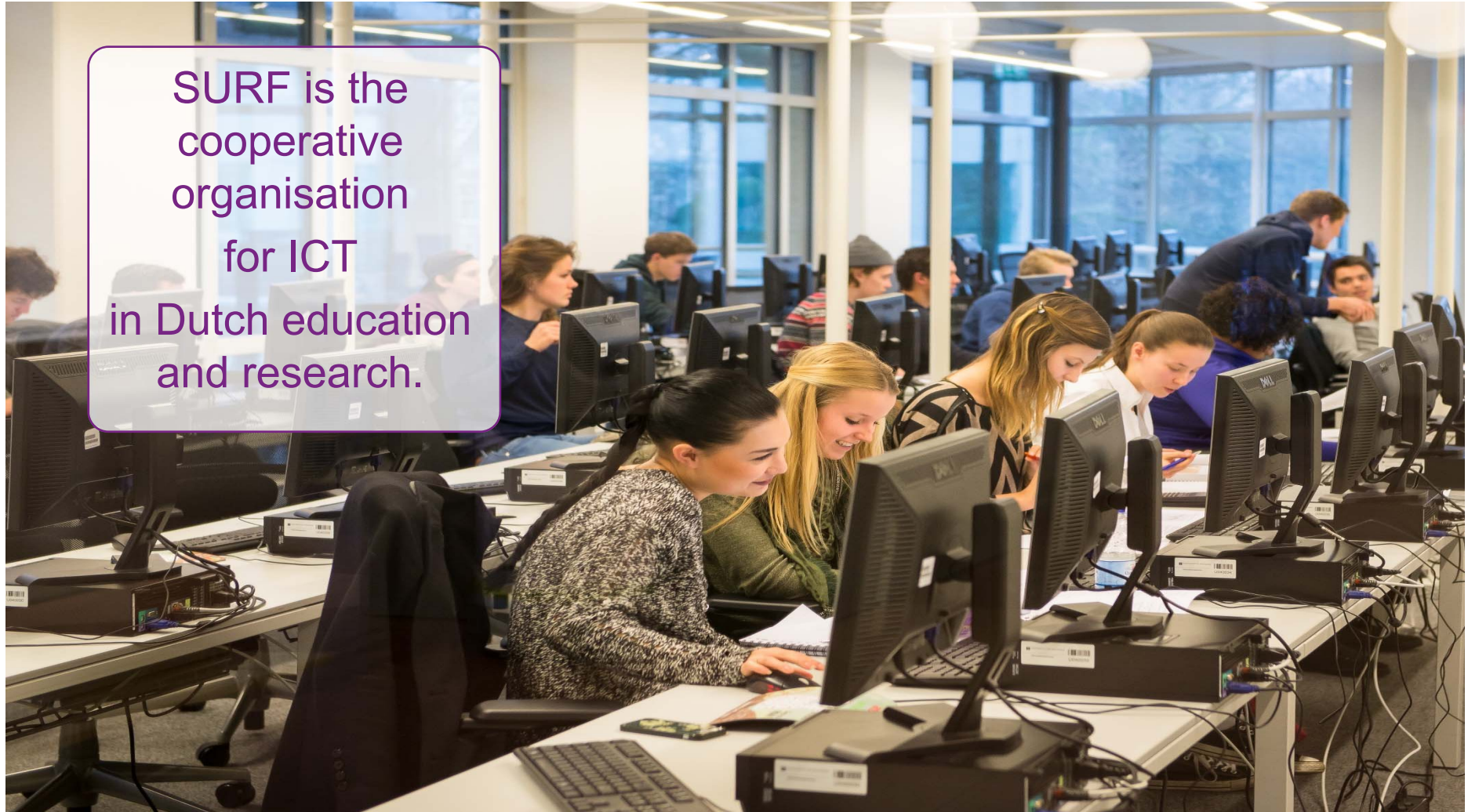
edubadges

Oct 20th, 2020
Janina van Hees &
Frans Ward

SURF, the collaborative ICT
organisation for Dutch
education and research

SURF

SURF is the
cooperative
organisation
for ICT
in Dutch education
and research.

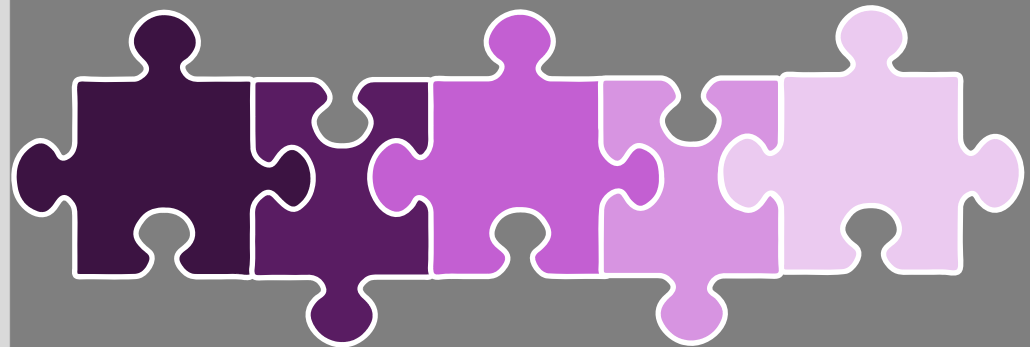


Mission:
improving the
quality of Dutch
education and
research through
ICT innovation.



Edubadges was developed **with** and **for** Dutch (higher) education.

We are working together in order to issue **digital certificates** in a **standardized way** (in small or large units), so that these become **comparable, interchangeable** and **stackable**.



edubadges

SURF

SURF edubadges project



2016

- Can we develop an infrastructure for Dutch educational institutions to award digital credentials to their students in the form of open badges?
- Can this become a sustainable service with significant added value to the education system as a whole?

Proof of concept



Our aim: to prove that open badges can be used in practice in Dutch higher education

- Set up the work proces, show how it would work and what's needed to make it work
- Let institutions get an idea of what badges could mean in their educational context



THE HAGUE



Utrecht University



RSM



Edubadges Proof of Concept

2017 - 2018

- Open Badge Infrastructure based on Open Source Badgr
- Collaboration with Concentric Sky on joint development
- Development on Badgr on Github (<https://github.com/edubadges>)
 - SSO SURFconext – openID Connect
 - LTI integration component
 - Roles and permissions model
 - Frontend Theming options
- Experiment researching blockchain technology for endorsements
- Code audit

This organization Search Pull requests Issues Apps Explore

edu **BADGES** SURF edubadges
Edubadges is a SURF project
Netherlands https://edubadges.nl info@edubadges.nl

Repositories 3 People 4 Teams 0 Projects 0 Settings

Search repositories... Type: All Language: All

badgr-lti
JavaScript Updated 16 days ago

badgr-server
Forked from concentricsky/badgr-server
Open Badge issuing and management with Django
Python 45 forks AGPL-3.0 Updated 16 days ago

badgr-ui
Forked from concentric:
TypeScript 1 fork 16 days ago

badgr SURF

Learned lessons Edubadges Proof of Concept



BADGE ISSUER (EDUCATIONAL INSTITUTION)

Lessons learned

- Badge strategy; determine the status that the badge has within the education system and how it relates to other badges.
- Badge governance; who may issue badges, when may they be issued, and to whom?
- Badges for micro-credentials require a vision on flexible education.



BADGE CONSUMER (EMPLOYER OR OTHER EDUCATIONAL INSTITUTION)

Lessons learned

- No experience acquired through the PoC (to be discussed in the future).



BADGE EARNER (STUDENT)

Lessons learned

- Possibilities offered by badges not yet known.
- Uploading badges to social media takes time and effort, and they are not displayed prominently.
- Managing badges is still an issue to be resolved.



INFRASTRUCTURE

Lessons learned

- Important focus is storage of edubadges.
- Standardisation: alignment required on subject-specific metadata and value system.
- Integration of the edubadge features in the digital learning environment and student information systems (SIS) is imperative.
- Important focus is on guaranteeing the authenticity of the badge's content, the awarding party and the badge earner.
- A persistent ID to manage the badges is a prerequisite (e-mail address is not sufficient).

Edubadges pilot

2018-2020

- Fresh install Edubadges infrastructure
- GDPR compliant setup
- More participating institutions
- Increasing effort on policy support for enabling microcredentialing within Dutch HE
- Alignment with European exchange and description frameworks
- Preparing business model for service delivery by SURF to Dutch HE
- Investigating interest and possibilities for a pan European badge infrastructure

Add Badge Class

BASIC INFORMATION

IMAGE (generate random)

Upload Image

SHORT DESCRIPTION





A short summary of this achievement.

Badge Basics

Badge images can be either PNGs or SVGs. All fields are required.

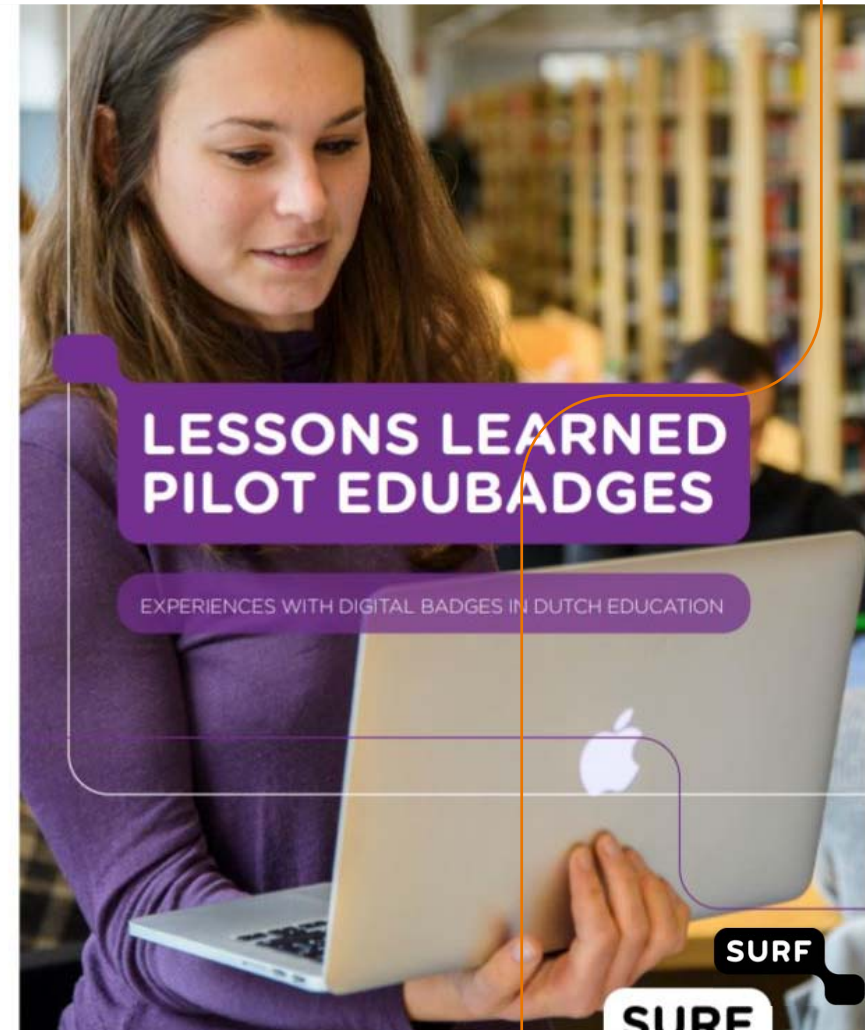
+ ADD OPTIONAL DETAILS

+ ADD EXTENSIONS



Decision to go ahead!

- HEI decide jointly that edubadges should be made available on a structural basis.





edubadges: issuing digital certificates to students

edubadges is the digital certificates platform for the Dutch education community. edubadges enable you to award students or workers with evidence of knowledge and skills they have acquired. An edubadge is issued electronically within a secure and trusted SURF platform.



edubadges

[About](#) [Get affiliated](#) [Ongoing development](#) [In practice](#) [FAQ](#)

Launch
October 1st 2020



A single platform for digital certificates

Issue edubadges digitally from within a safe and trusted platform. Find out what edubadges can do for you as an institution and for your students.

[About edubadges](#)

Why edubadges?

Recognition for achieving learning outcomes

Reward your students with an edubadge for knowledge and skills they have acquired.

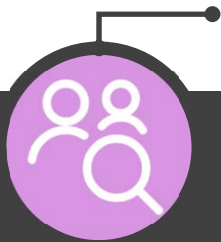
Lifelong learning

By issuing digital certificates, you help make a Dutch education more flexible and students and workers more mobile.



What are edubadges?

Exploring, together with educational institutions, which techniques and standards are necessary in order to issue edubadges to students and provide these for the long term.



+ =

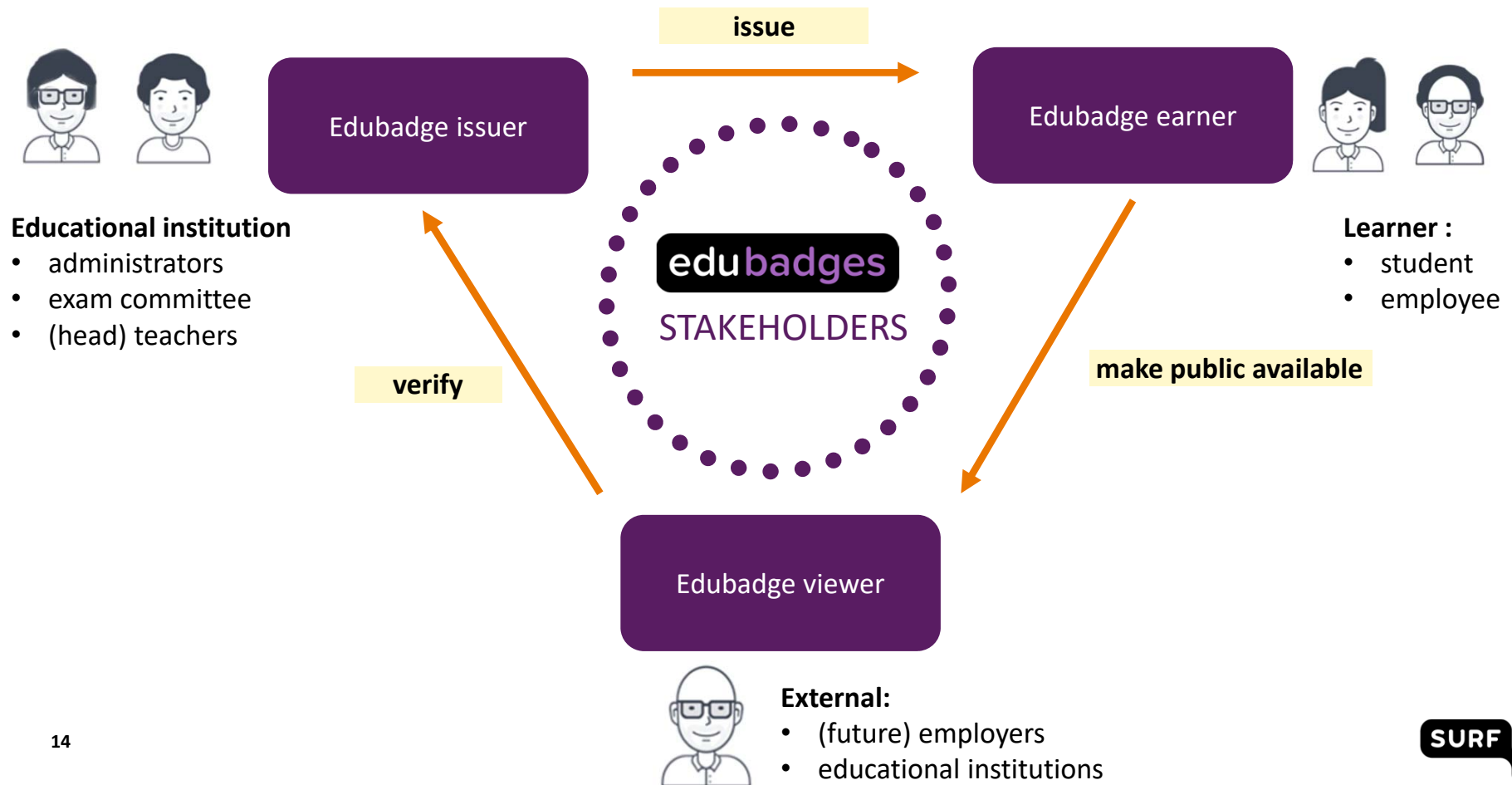


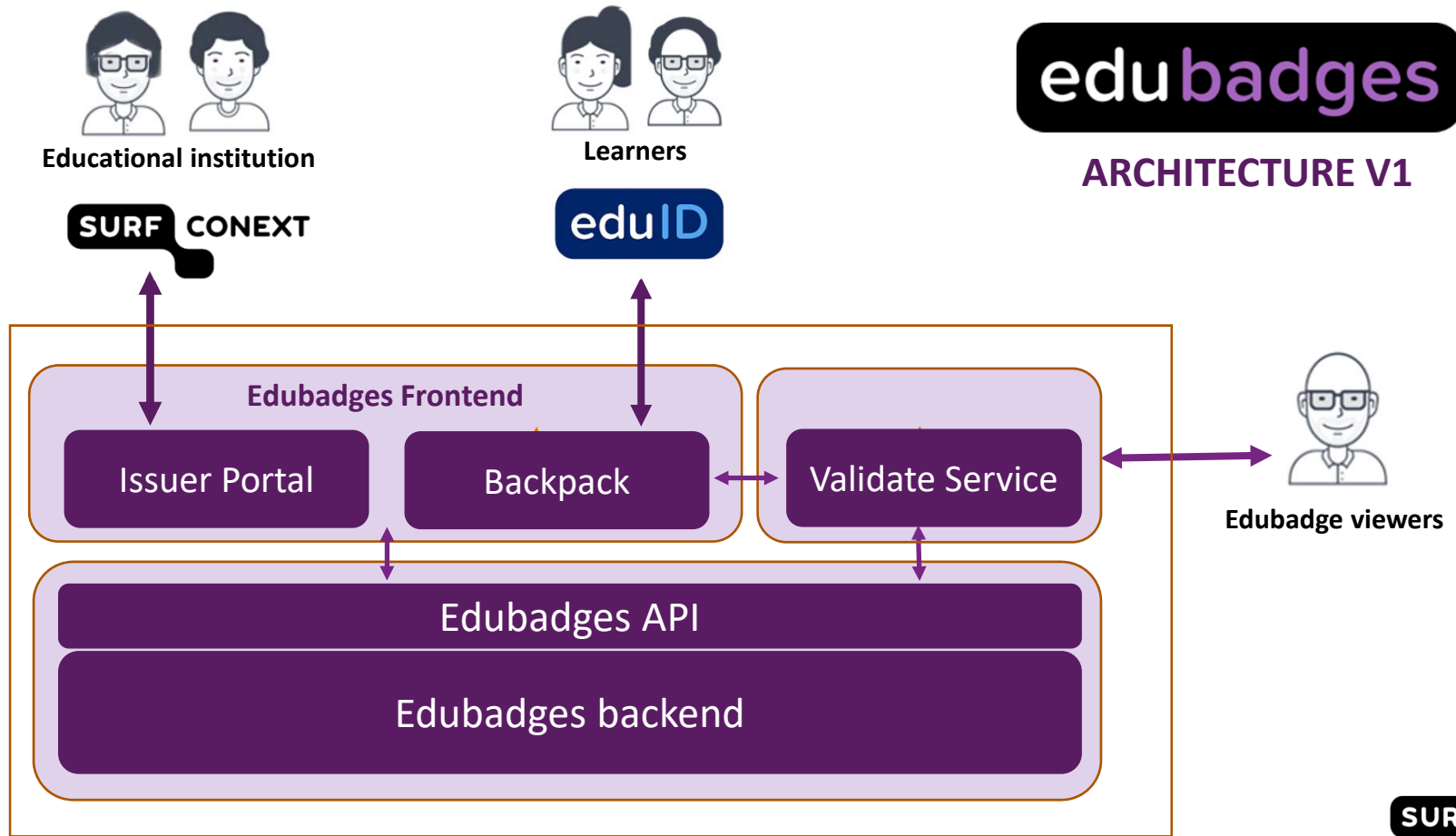
The digital certificates, in the form of **badges**, are safely stored at SURF.

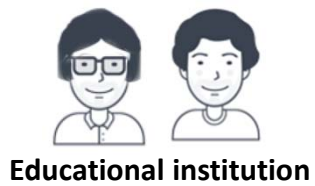
A joint **infrastructure** for issuing digital certificates in education (VET and higher education).

PRESENTER SWITCH









Educational institution



Learners

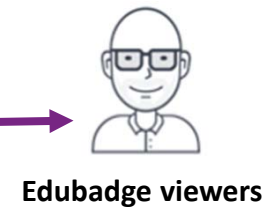
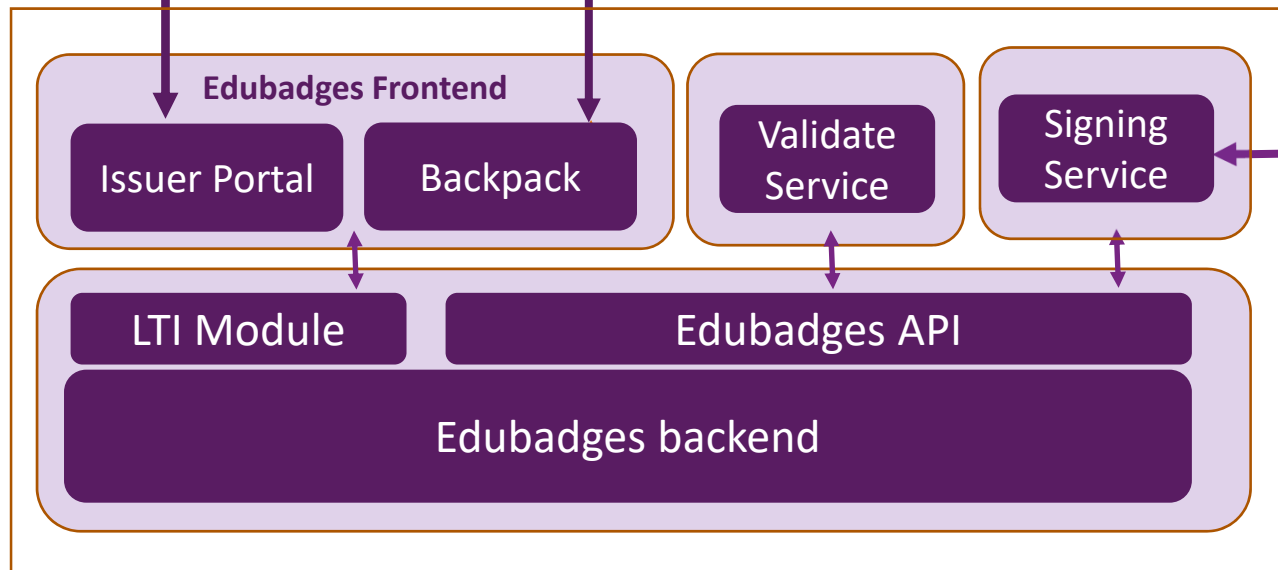
edubadges

ARCHITECTURE V2

SURF CONEXT

eduID

LMS



Edubadge viewers

SURF

SURF edubadges

Edubadges is a SURF project. Edubadges are open badges: digital certificates that show that the owner has certain skills or knowledge.

Netherlands <https://edubadges.nl> info@edubadges.nl

Repositories 16 Packages People 8 Teams 1 Projects Settings

Find a repository... Type: All Language: All Customize pins **New**

edubadges-validator
Edubadges validator service (aka badgecheck)
Python Apache-2.0 0 stars 0 issues 0 forks Updated now

edubadges-server
Edubadges: A SURF project for Open Badge issuing and management with Django.
Python AGPL-3.0 1 fork 4 stars 0 issues 0 forks Updated 3 days ago

edubadges-ui
New edubadges frontend code repository
Svelte AGPL-3.0 1 fork 1 star 0 issues 0 forks Updated 3 days ago

privacy
Privacy stuff for the Edubadges project
AGPL-3.0 0 forks 0 stars 0 issues 0 forks Updated 12 days ago

Top languages
Python TypeScript JavaScript HTML Svelte

Most used topics Manage
edubadges open-badges openbadges surf surfnet

People 8 >
[Profile pictures of contributors]

Invite someone

Edubadges software development

- Open source
AGPL-3.0 / Apache-2.0
- Available on github
- Frontend UI:
Javascript/Svelte
- Backend server:
Python/Django
Based on Badgr code
- Validator server:
Python



SOME TECHNICAL CHALLENGES



Photo by Chinh Le Duc on Unsplash

**European
Metadata
Extension**

Need a
persistent
identity!

Only
Signed
Badges?

Interna-
tional
alignment

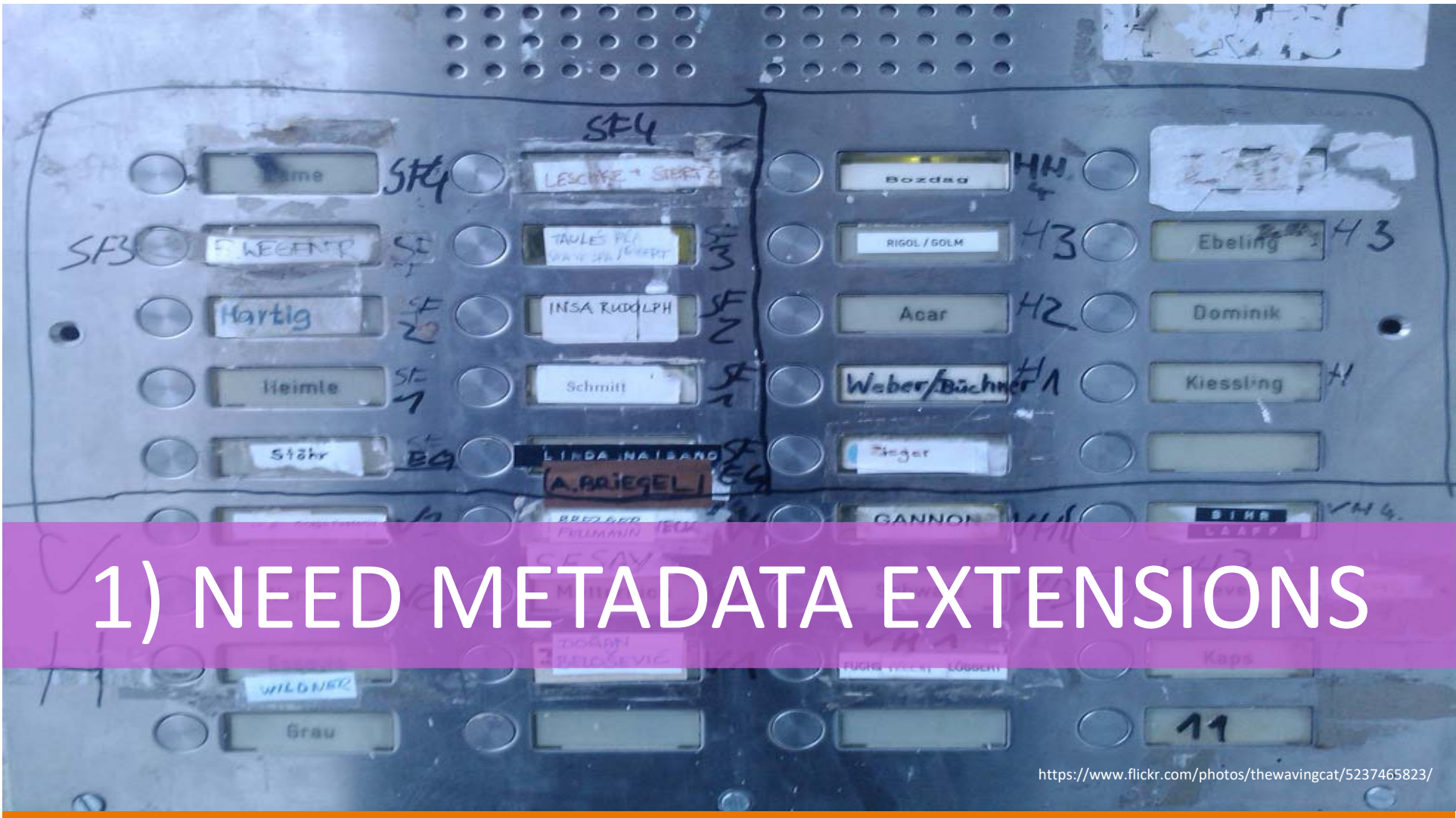
Pathways
in badge-
metadata?

Endorse-
ments! On
Blockchain?

Accredited
vs non-
accredited

Federated
Badge
search

....and
much
more!



1) NEED METADATA EXTENSIONS

Metadata Extensions

Adding European centric metadata extensions and aligning with Bologna tools like the Diploma Supplement

ISSUER

- InstitutionNameExtension
- InstitutionIdentifierExtension
- GradingTableExtension

BADGECLASS

- LanguageExtension (Language of instruction)
- ECTSExtension (Number of European Credit Transfer Points)
- StudyLoadExtension (Study load in hours)
- EQFExtension (European Qualifications Framework)
- LearningOutcomeExtension
- EducationProgramIdentifierExtension

YES! I'm number one!

Should we explain him our country's grading system ?!

Not yet...



Photos by Ben White on Unsplash

https://wiki.surfnet.nl/display/Edubadges/Metadata+extensions



edubadges



Pages

Blog

SPACE SHORTCUTS

Here you can add shortcut links to the most important content for your team or project. Configure sidebar.

CHILD PAGES

Edubadges Metadata

Metadata extensions

+ Create child page

Dashboard / edubadges / Edubadges Metadata

Edit Save for later

Metadata extensions

Created by Frans Ward, last modified on Fri 04 Sep 2020

Proposal to extend the Open Badge specification with the following metadata extensions. To be send to IMS Global.

In the meantime we have changed all references to openbadgespec.org to w3id.org/openbadges

ToDo: add the extensions below to the repo: <https://github.com/edubadges/w3id.org>

Issuer extensions

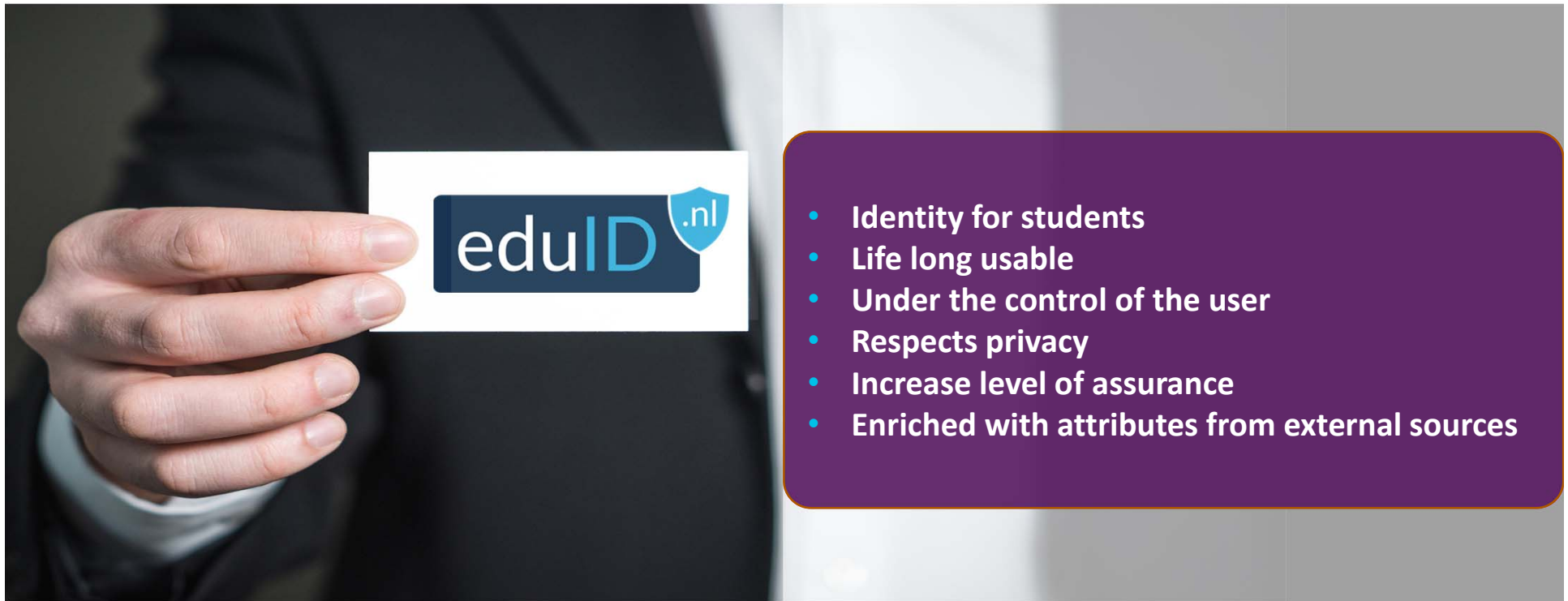
extensions:InstitutionNameExtension	context.json	schema.json
<pre>1 { 2 "extensions:InstitutionNameExtension": { 3 "@context": "https://w3id.org/openbadges/extensions/Instituti 4 "type": ["Extension", "extensions:InstitutionNameExtension"], 5 "InstitutionName": "Delft University of Technology" 6 } 7 }</pre> <p>Name of institution Example: Delft University of Technology</p>	<pre>1 { 2 "@context": { 3 "obi": "https://w3id.org/openbadges#", 4 "extensions": "https://w3id.org/openbadges/extensions#", 5 "InstitutionName": "extensions:InstitutionNameExtension" 6 }, 7 "obi:validation": { 8 { 9 "obi:validatesType": "extensions:InstitutionNameExtensi 10 "obi:validationSchema": "https://w3id.org/openbadges/ex 11 } 12 } 13 }</pre>	<pre>1 { 2 "\$schema": "http://json-schema.org/draft-04/sc 3 "title": "Institution Name Extension", 4 "description": "An extension that allows you t 5 "type": "object", 6 "properties": { 7 "InstitutionName": { 8 "type": "string" 9 } 10 }, 11 "required": ["InstitutionName"] 12 }</pre>
extensions:GradingTableExtension	context.json	schema.json
<pre>1 { 2 "extensions:GradingTableExtension": { 3 "@context": "https://w3id.org/openbadges/extensions/GradingTak 4 "type": ["Extension", "extensions:GradingTableExtension"], 5 "GradingTableURL": "https://www.eur.nl/onderwijs/praktische-z 6 } 7 }</pre> <p>Reference (URL) to the institution's grading table. Example: https://www.eur.nl/onderwijs/praktische-zaken/afstuderen/ects-grading-table</p>	<pre>1 { 2 "@context": { 3 "obi": "https://w3id.org/openbadges#", 4 "extensions": "https://w3id.org/openbadges/extensions#", 5 "GradingTableURL": "extensions:GradingTableExtension" 6 }, 7 "obi:validation": { 8 { 9 "obi:validatesType": "extensions:GradingTableExtension" 10 "obi:validationSchema": "https://w3id.org/openbadges/ex 11 } 12 } 13 }</pre>	<pre>1 { 2 "\$schema": "http://json-schema.org/draft-04/sc 3 "title": "Grading Table Extension", 4 "description": "An extension that allows you t 5 "type": "object", 6 "properties": { 7 "GradingTableURL": { 8 "type": "string" 9 "format": "uri" 10 } 11 }, 12 "required": ["GradingTableURL"] 13 }</pre>



2) NEED PERSISTENT IDENTITY

Photo by Alex Iby on Unsplash

Characteristics of the eduID



- Identity for students
- Life long usable
- Under the control of the user
- Respects privacy
- Increase level of assurance
- Enriched with attributes from external sources

eduID

Use your eduID to continue to **My eduID**

Your email address

|e.g. user@gmail.com

No password needed. We'll send a magic link to your email address to sign in instantly.

Stay logged in

Send magic link

[Type a password anyway](#) if you have set one.

Don't have an eduID yet?

[Request an eduID](#)

[What is eduID?](#)

Privacy policy
Terms of Use
EN | NL
Powered by SURF

eduID
Logout

- 👤 Personal info
- 🔒 Security
- 🔗 **Connections**
- 📁 Services
- 👤 Account

Connected institutions

By connecting your educational institution to your eduID, you will be able to prove through eduID that you study or work at one of these institutions.

Short name	surfnet.nl	>
------------	------------	---

Connect new institution

Privacy policy | Terms of Use
Help

eduID
Logout

< Service

You first logged in to this service on Friday, October 16, 2020 at 13:40

Name	Edubadges [Backpack] SURF
EduID	78e7757d-6294-404f-aa66-88eca490a9bc

Cancel

Delete

Privacy policy | Terms of Use
Help
EN | NL
Powered by SURF



3) NEED BETTER STRUCTURE & ROLES / PERMISSION MODEL

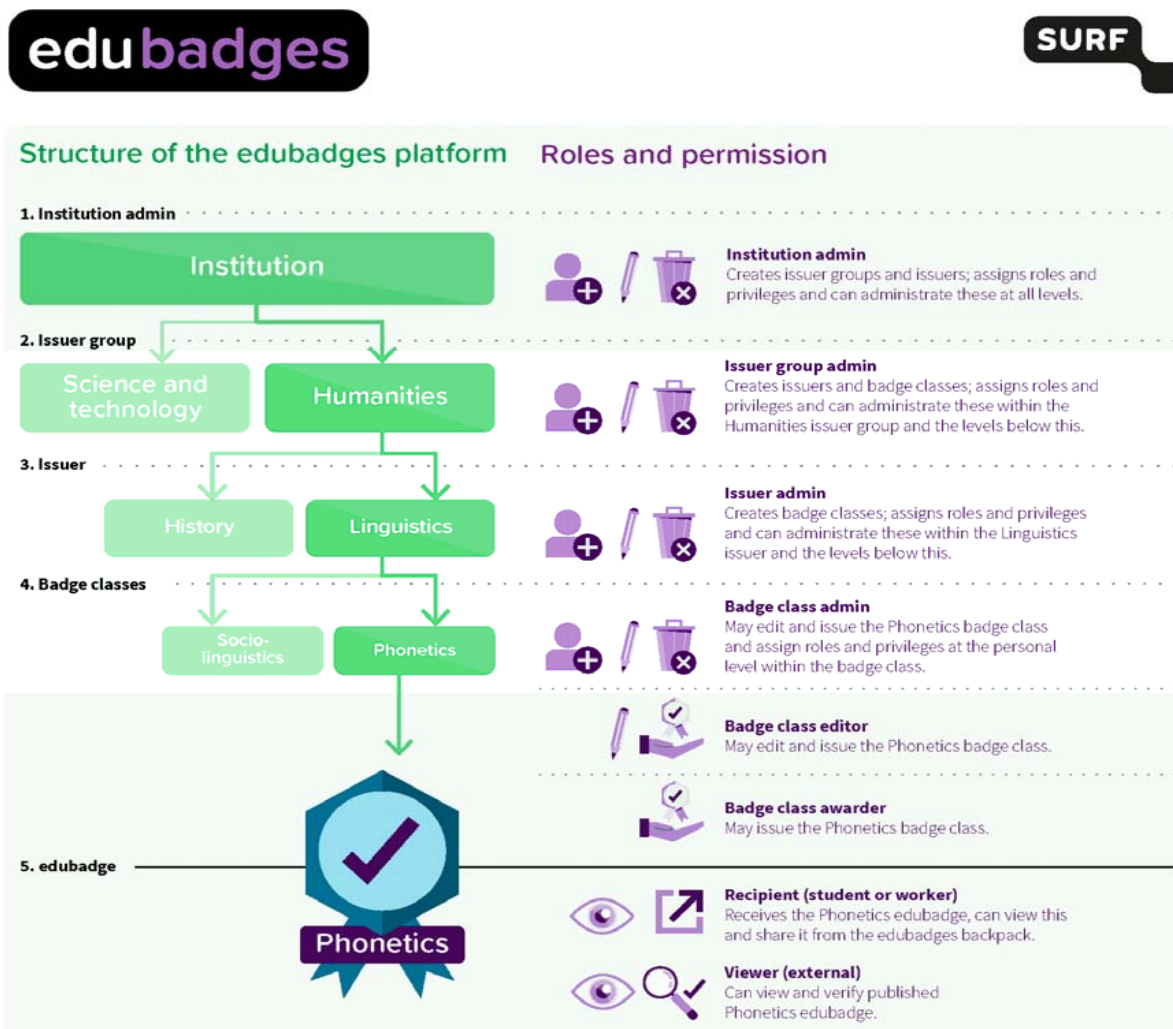
Photo by rawpixel on Unsplash

EXTENDED STRUCTURE

- More levels
- Option to define groups

FINE GRANULAR ROLES AND PERMISSION MODEL

- Institution admin can administer all users within institution
- By invite only



Further development of edubadges

V1 Edubadges – Oktober 2020

Depending on the findings of the edubadges service delivery, SURF will start determining the further development of functionalities.

Current items on the roadmap:

- ❖ Guest use: students without an institutional account
- ❖ Direct awarding functionality
- ❖ Integration with Learning Management Systems, based on LTI
- ❖ Integration with Student Information Systems
- ❖ Bulk upload tools
- ❖ Pathways

Never stop learning

Edubadges are digital certificates which show that the owner has acquired certain skills or knowledge. Edubadges can be issued for both accredited education and extracurricular activities.

Where do you want to go?

Backpack

Receive and collect edubadges



Enter with eduID

If you don't have an eduID yet, we'll help you get one. This takes less than 30 seconds

By invite only

Issuer portal

Award edubadges



Enter with SURFconext

Don't have access?
Contact your institution admin

DEMO TIME





Project team Open Badges

info@edubadges.nl



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