

OPEN EDUCATION API

The open standard for sharing educational data

IMS Europe Conference,
9 November 2018
Frans Ward
SURF

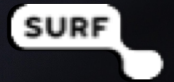
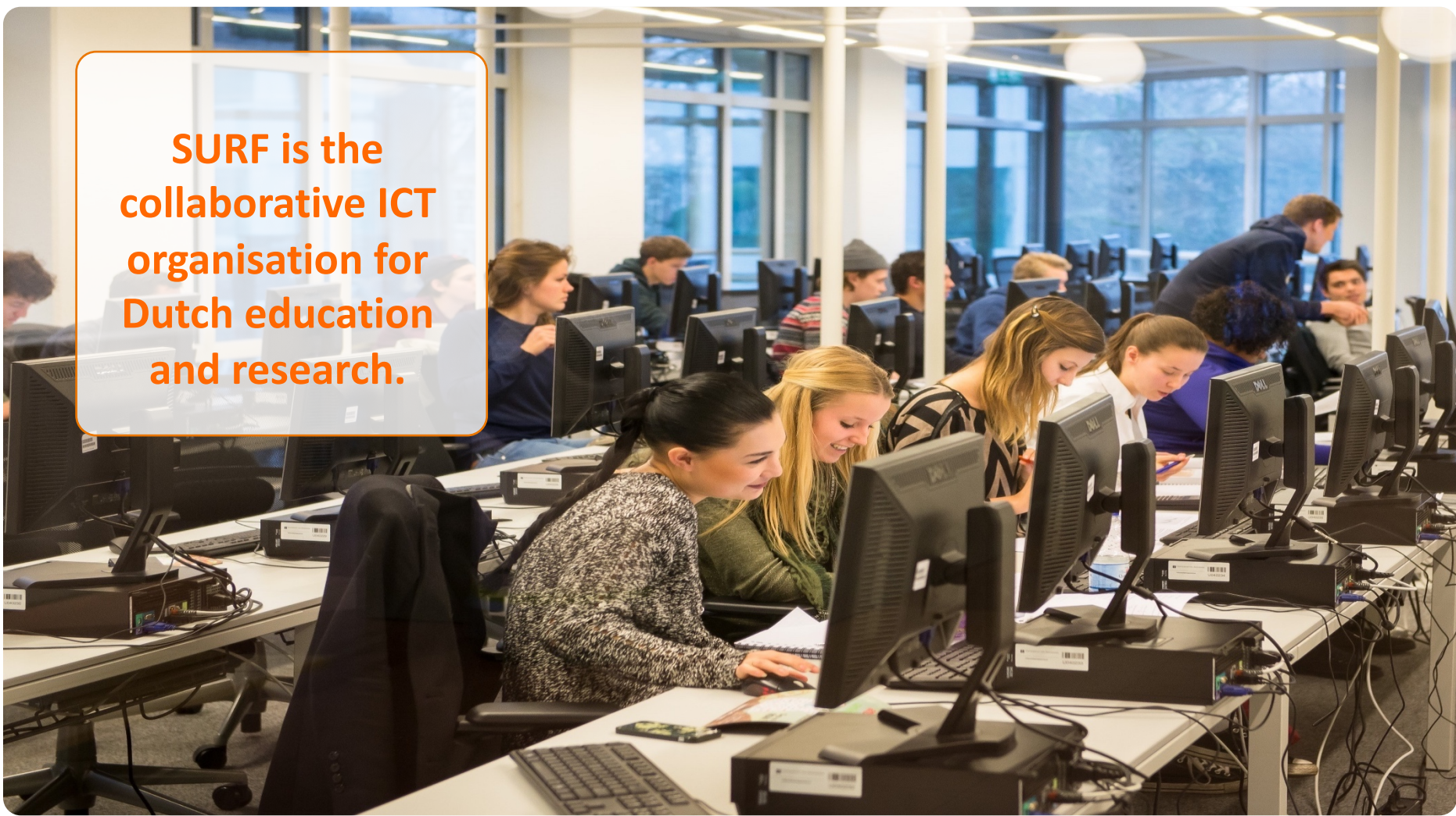


Photo by [Alejandro Escamilla](#) on [Unsplash](#)



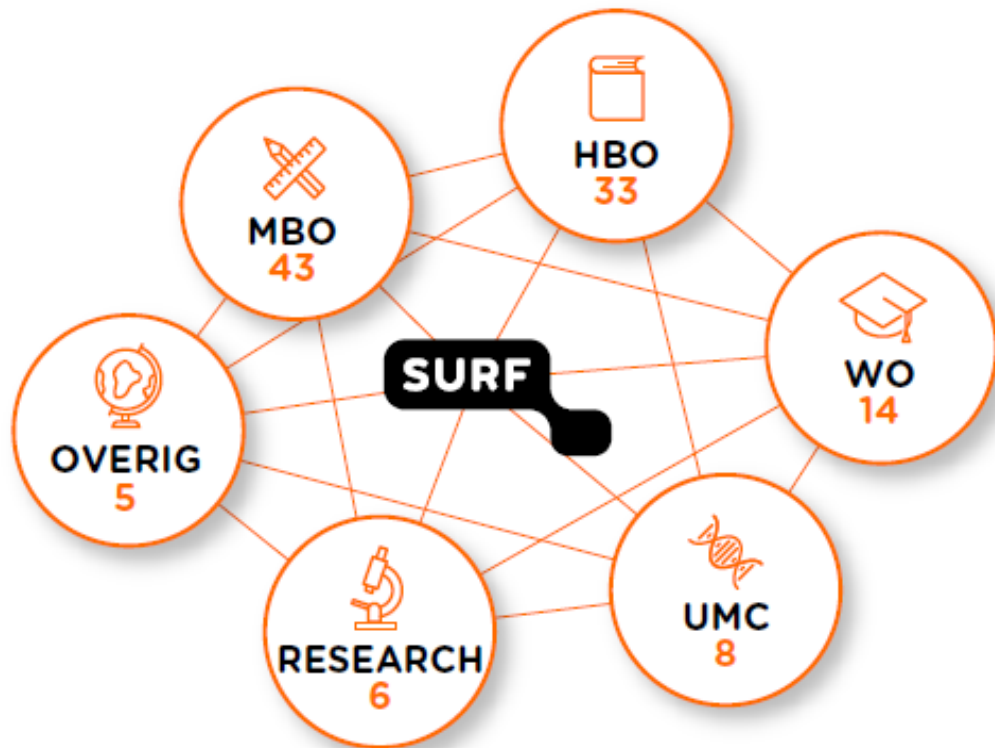
ABOUT ME

**SURF is the
collaborative ICT
organisation for
Dutch education
and research.**





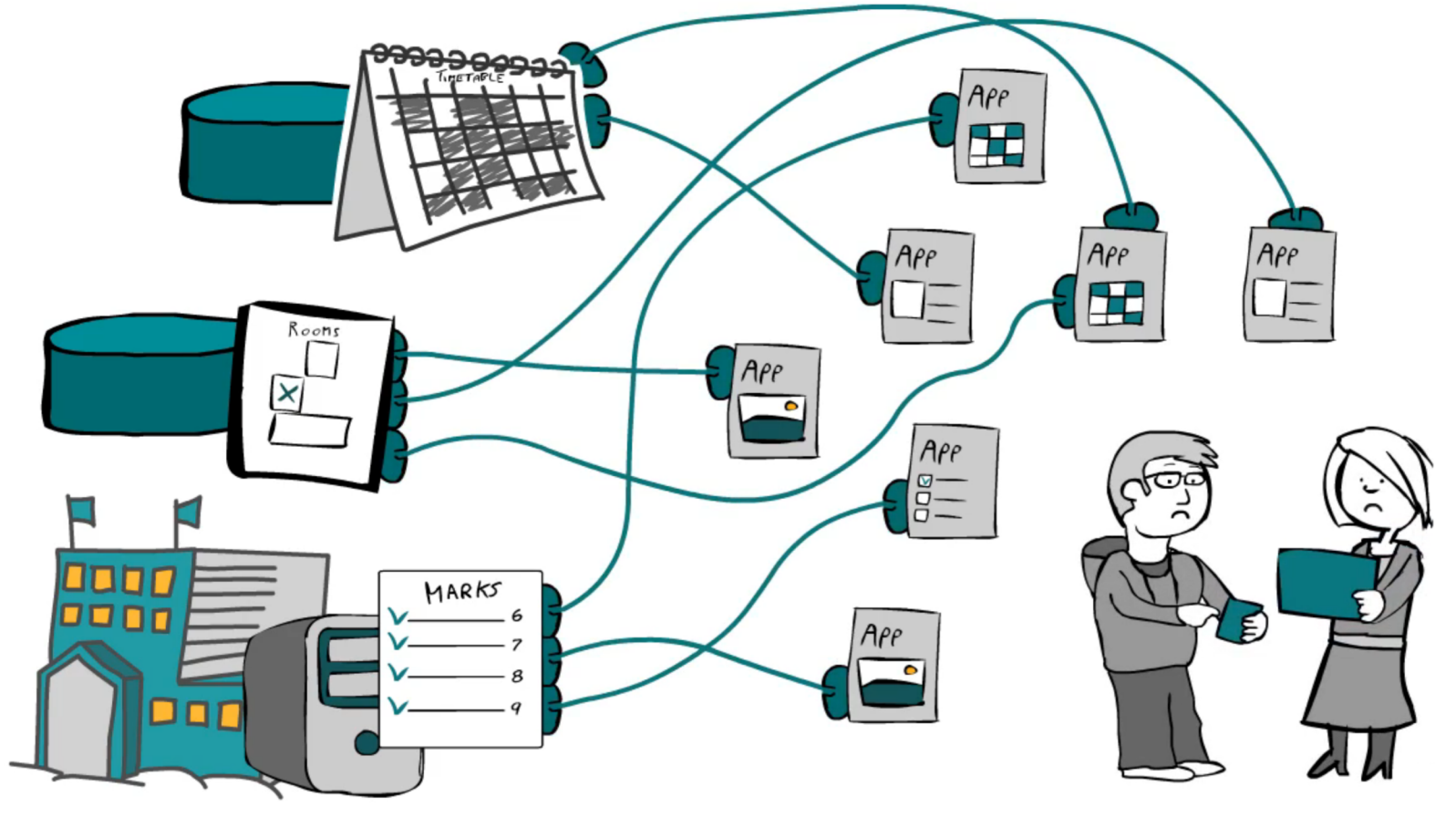
Serving over 1 million users





SURF, COULD YOU HELP US?

The problem....





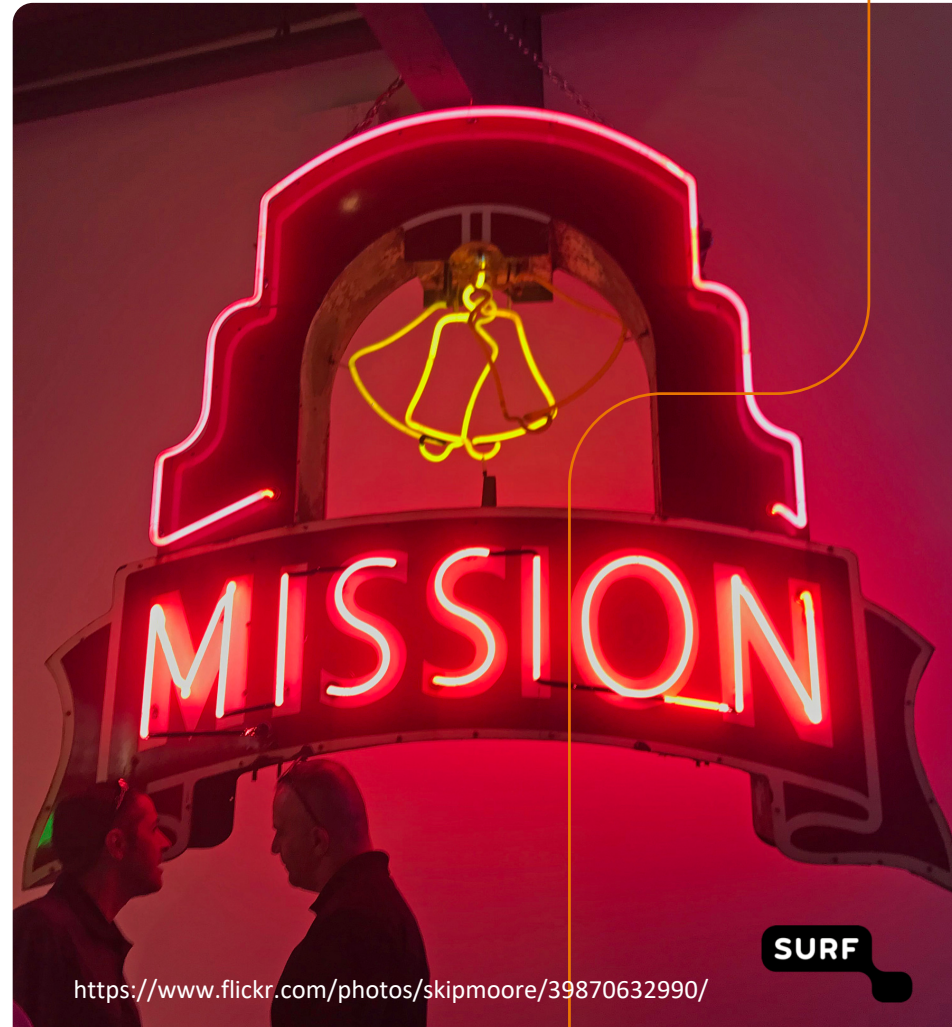
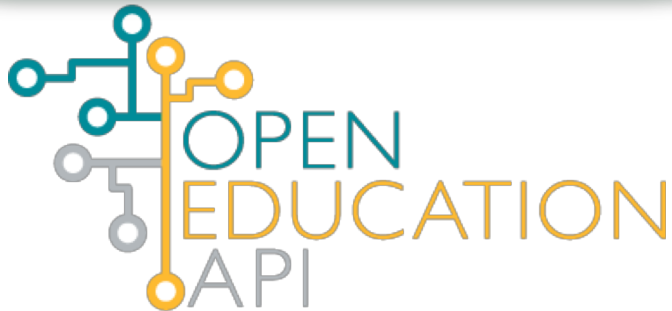
We still have data silos

- Educational data is still mostly stuck in silos.
- Hard to move data in and out of systems.
- Lots of extra clerical work that educators and administrators have to do.

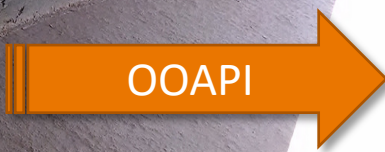
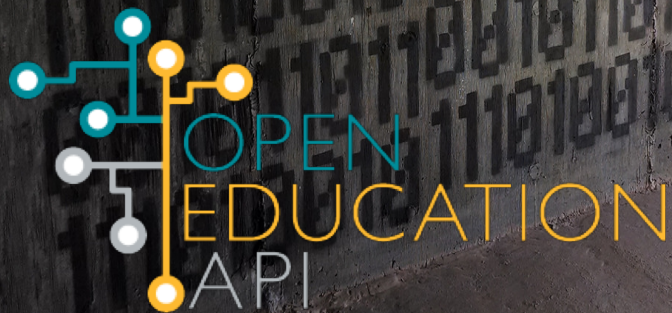
This is mostly because educational apps and software do not, as a rule, talk to one another.

The Open Education API project

“To make **educational data** available in a **standardized, safe and user friendly way**”



What is (open) Educational Data?



Metadata about educational institute

or

Open Educational Resources (OER)

or

Administrative data that is released
by educational systems



Open Onderwijs API

The open standard for sharing education data

POWERED BY **SURF** NET



THE STANDARD

WHAT IS STANDARDIZED?

What is standardized?

Syntax

The description of the API REST endpoints.

The aim of this is that educational institutions that provide educational data through an API will do this according to the Open Education API.

Dataformat

The output of the API, the JSON code.

The objective of this is that applications know which output can come, so that eg a mobile app works with the OoAPI of all institutions that apply and offer it.

Semantics

Analysis of the concepts and modeling of the databases that are on the nomination to be unlocked.

Check whether they fit in with the formal standardized concepts and OBK modeling.

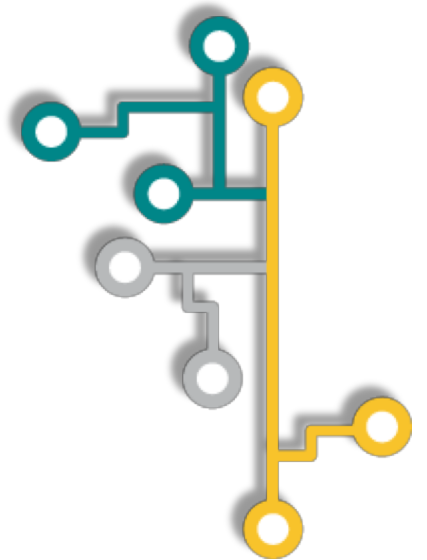
Also check whether they appear or should occur in the HORA data dictionary.

<https://github.com/open-education-api/specification>

The OOAPI 2.1 specification

The Open Education API currently supports the following data types:

- ✓ Course information: [/courses](#)
- ✓ News: [/newsfeeds](#) and [/newsitems](#)
- ✓ Users: [/persons](#)
- ✓ Educational: [/faculties](#),
[/educational-departments](#),
[/educational-plans](#), [/course-groups](#)
- ✓ Timetables: [/schedules](#)
- ✓ Study progress: [/courseresults](#)
- ✓ Exam results: [/testresults](#)
- ✓ Buildings: [/buildings](#)
- ✓ Available workstations: [/rooms](#)



Specification: <https://github.com/open-education-api/specification>

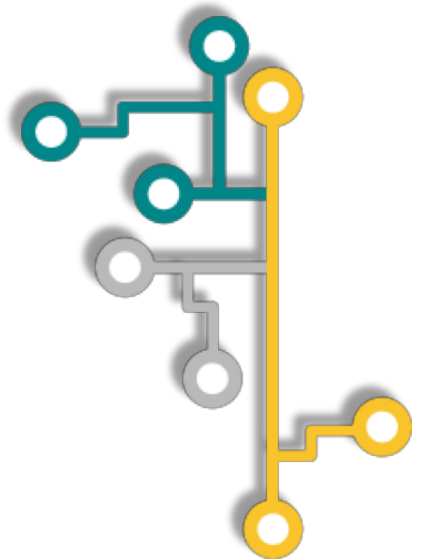
Documentation: <https://rawgit.com/open-education-api/specification/v2/docs.html>

The upcoming OOAPI 3.0 specification

The Open Education API currently supports the following data types:

- ✓ Course information: [/courses](#)
- ✓ News: [/newsfeeds](#) and [/newsitems](#)
- ✓ Users: [/persons](#)
- ✓ Educational: [/faculties](#),
[/educational-departments](#),
[/educational-plans](#), [/course-groups](#)
- ✓ Timetables: [/schedules](#)
- ✓ Study progress: [/courseresults](#)
- ✓ Exam results: [/testresults](#)
- ✓ Buildings: [/buildings](#)
- ✓ Available workstations: [/rooms](#)

Align with OpenAPI 3.0
Add notification endpoints
Add groups and group roles definitions
Add identifiers for levels and room types
Bring back certain POSTS calls
Support multilingual responses





GOVERNANCE

Community



<https://github.com/open-education-api/specification/blob/v2/Governance.md>

Working Group



Project Lead



Advisory





<https://openonderwijsapi.nl/en/>

the standard for education data

Using your phone to find the nearest unoccupied computer? Or enroll in a few clicks? Or quickly check your timetable or your marks? The Open Education API will help you do this.



Open Onderwijs API
The open standard for sharing education data



OPEN EDUCATION API

SURFnet is working with some higher education institutions to define a standard API: the Open Education API. An API is a set of definitions which help software programs communicate with each other. It can be used

Search...

[</DEMO>](#)

News

[English translation of the website available now](#)

Due to overwhelming demand, and to be prepared for TNC2016 we have translated th...

[Welcome to the Open Education API website](#)

There is an increasing interest in the Open Education API. On October 1, 2015 we...

[Best practice UvA: the Mijn-UvA app utilizes data from different sources using the Open Education API](#)

The 'MijnUvA'-app (MyUvA App) combines data from the electronic learning environ...

[Mark de Jong shares experiences with the Open Education API](#)



GitHub navigation bar: Search or jump to... Pull requests Issues Marketplace Explore

Open Education API / Open Onderwijs API

Code repository for the open specification 'Open Education API' (Open Onderwijs API - OOAPI)

Utrecht, Netherlands | https://openonderwijsa... | info@openonderwijsapi.nl

Repositories 11 | People 18 | Teams 4 | Projects 1 | Settings

Find a repository... Type: All Language: All

specification

OpenAPI (fka Swagger) specification for the Open Education API.

HTML ★ 11 🍴 9 Updated on Sep 10

sdk-ios

iOS SDK for the Open Education API.

Objective-C Updated on Nov 11, 2016

sdk-java

Java SDK for the Open Education API.

Persons

The persons API provides information about persons related to an educational institute.

GET /persons

Get an ordered list of all persons.

PARAMETERS

Query Parameters

- order: string, Default: "surname_asc", Valid values: "surname_asc", "surname_desc", "givenName_desc". The field to sort on.
- pageSize: integer <int32>, Default: 10, Valid values: 10 20 50 100 250. The number of items per page.

PERSONS

- GET /persons
- GET /persons/{personId}
- FACULTIES
- EDUCATIONAL DEPARTMENTS
- EDUCATIONAL PLANS
- COURSE GROUPS
- COURSES
- COURSE RESULTS
- ROOMS
- SCHEDULES

affiliation: string, Valid values: "student" "employee" "staff" "member" "affiliate"

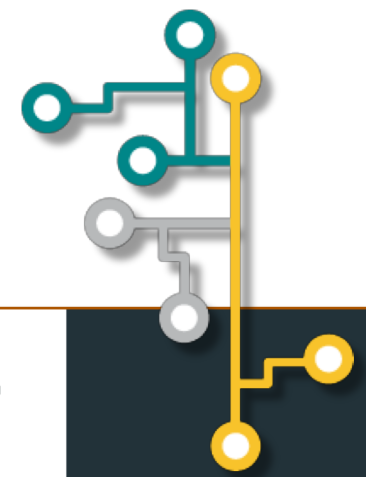
GET /persons

RESPONSE SAMPLES

200 OK

```
{
  "pageSize": 0,
  - "_embedded": {
    - "items": [
      - {
        "personId": "string",
        "givenName": "string",
        "surnamePrefix": "string",
        "surname": "string",
        "displayName": "string",
        "dateOfBirth": "2018-1-1",
        - "affiliations": [
          "student"
        ],
        "mail": "user@example.",
        "telephoneNumber": "str",
        "mobileNumber": "string",
        "photoSocial": "http://",
        "photoOfficial": "http://",
        "gender": "M",
        "title": "string",
        "office": "string",
      }
    ]
  }
}
```

<https://github.com/open-education-api/specification>





FUTURE PLANS

SURF Education Innovationproject 2015-2018

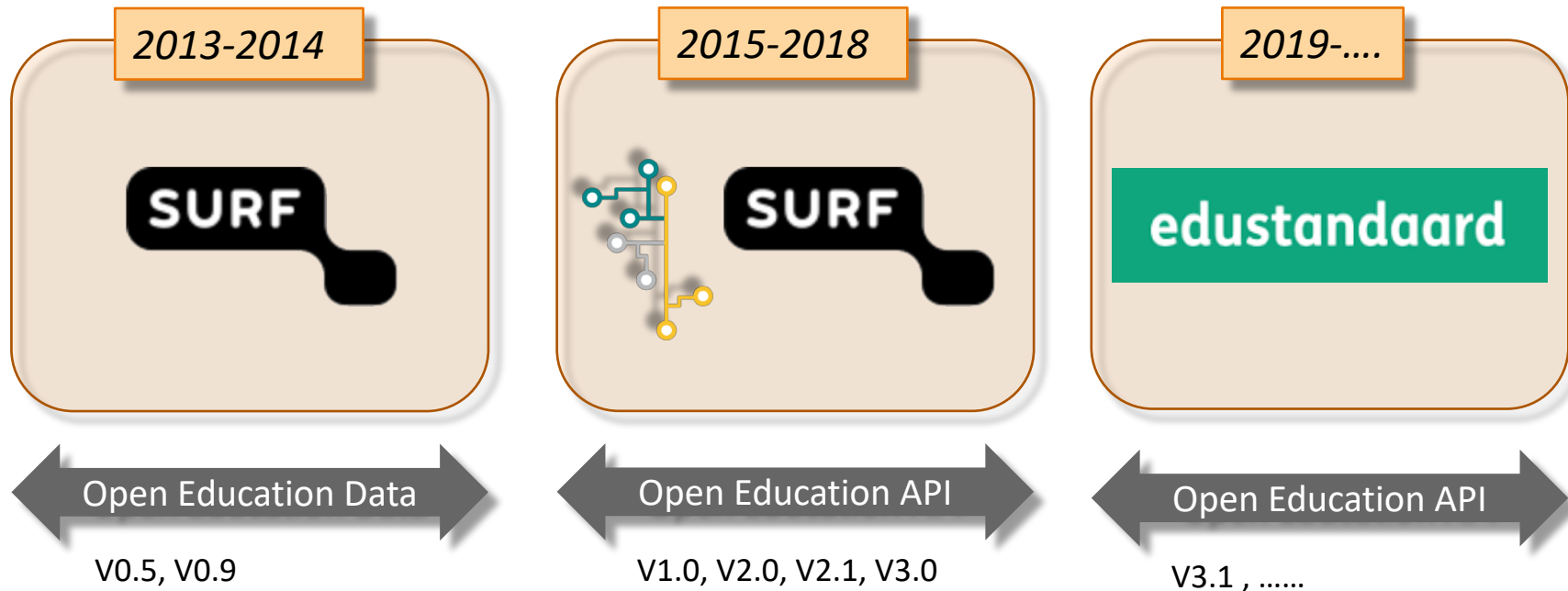




Photo by [Daniel Gonzalez](#) on [Unsplash](#)

OOAPI Roadmap

- Finalize the OOAPI V3.0 specification
- Prepare Governance for transition to Edustandaard
- Align OOAPI with IMS EDU-API
- Collect issues for future releases
- Describe the data items of the OOAPI specification
- Design a better mechanism for updating the overview of institution OOAPI endpoints
- Define guidelines for authentication and authorisation for the implementation of the OOAPI



ORGANISING FLEXIBILITY

Photo by [Indian Yogi \(Yogi Madhav\)](#) on [Unsplash](#)

Organising flexibility

The student population is becoming increasingly diverse, and every student has their own preferences and wishes. Consequently, student-oriented education requires flexibility. SURF is developing tools for student mobility and educational logistics that institutions can use to make their education more flexible and offer students more choices.

Offering students choices

SURF wants to help institutions to organise their education in a more flexible way. Our starting point is the idea that institutions can offer students more freedom of choice. This requires flexibility in many respects: in creating the curriculum, in facilitating student mobility within and between the institutions, and in the way education is organised.

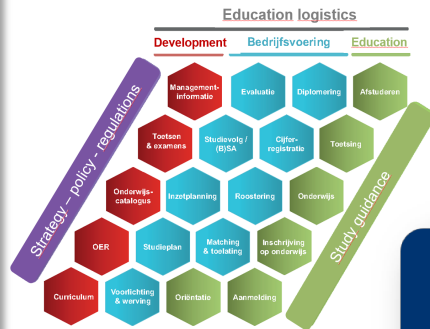
Student mobility

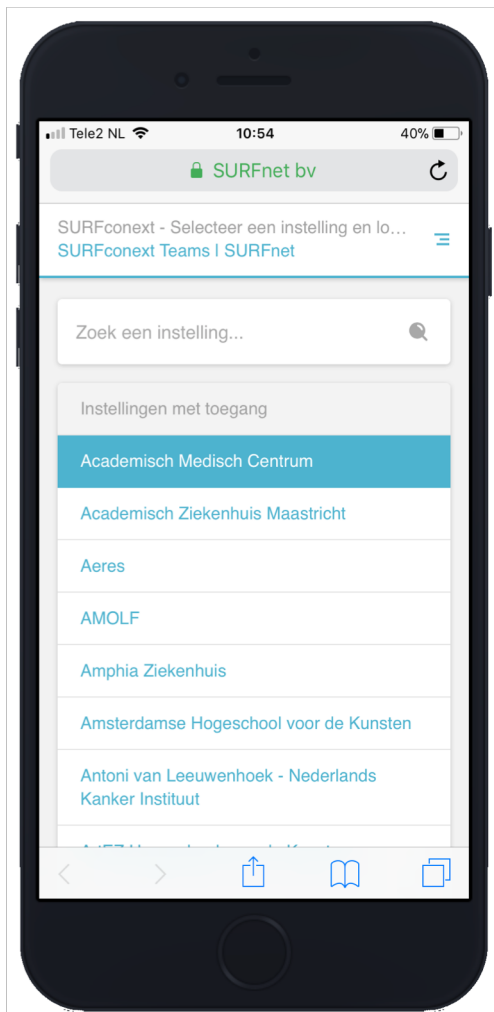
Students have the most freedom of choice when they can create their curriculum by following courses at different educational institutions. This is not easy to achieve due to obstacles in educational logistics, legislation, privacy issues and the complexity of investigating what the exact bottlenecks are and whether we can offer general solutions. We will be tested with a number of institutions.

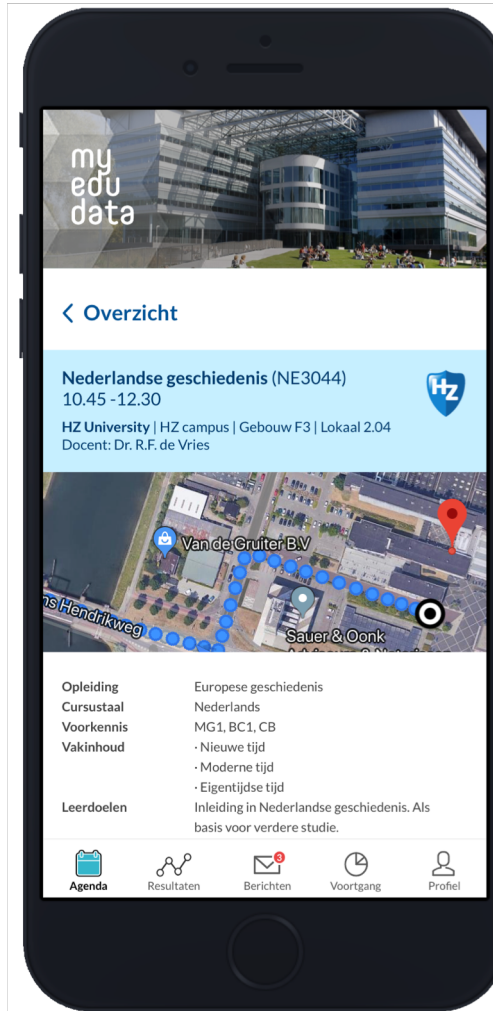
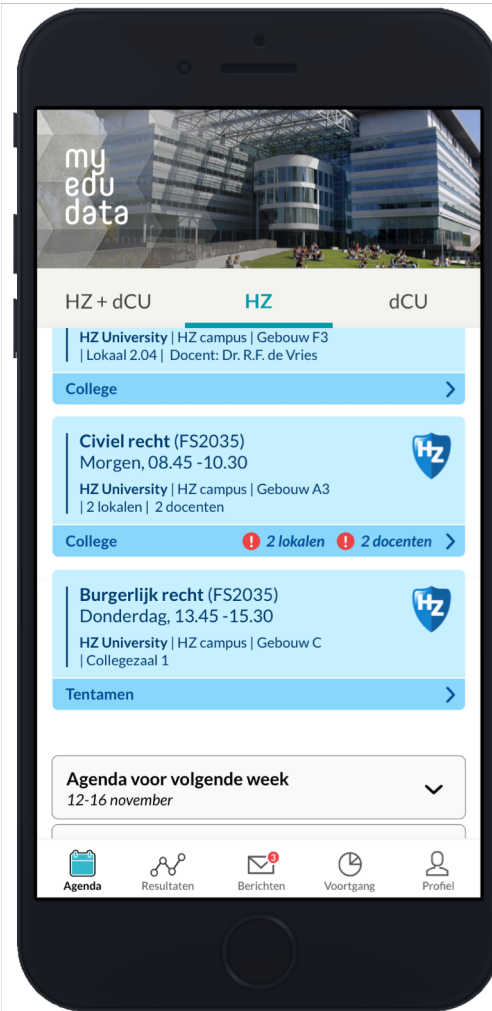
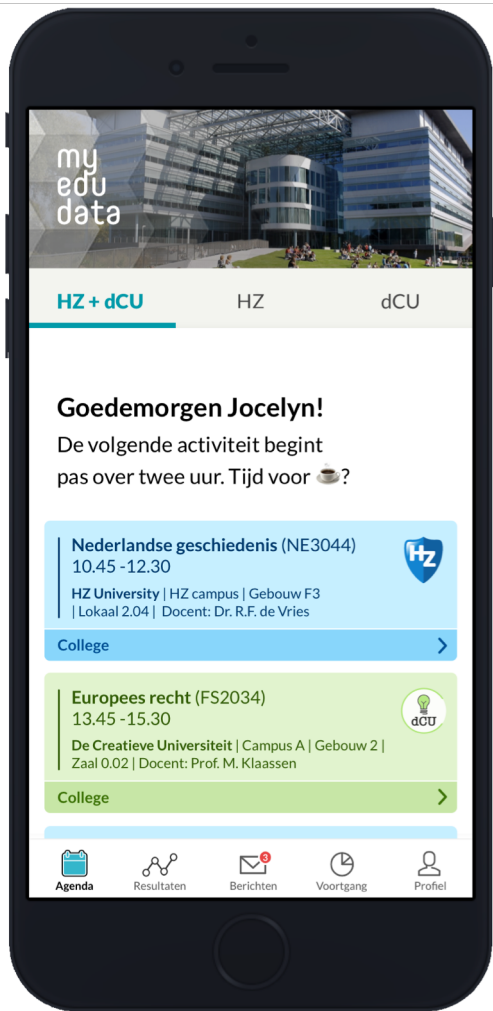


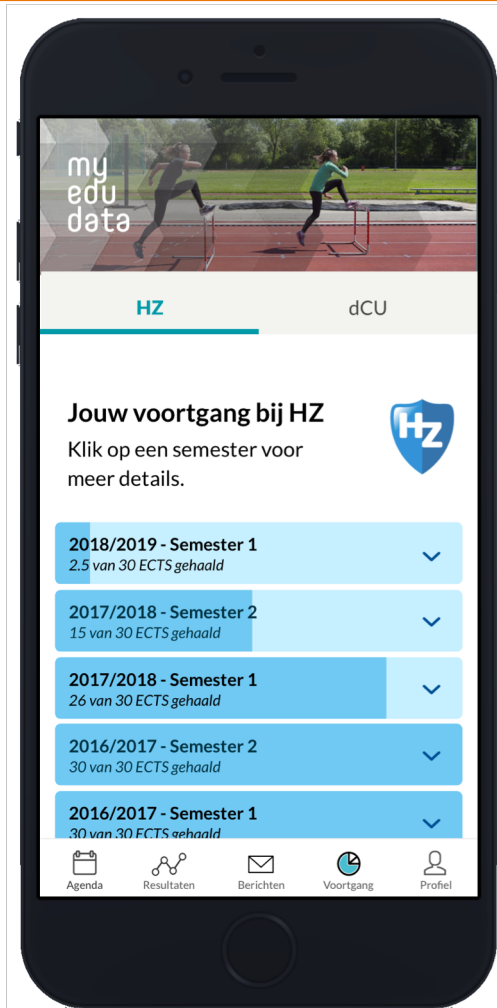
Open badges and micro-credentialing

Micro-credentialing means breaking down the certification of education courses a student follows into units







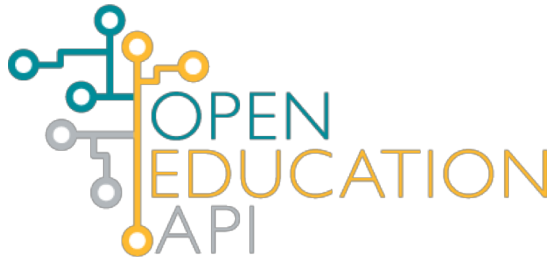


A high-angle, perspective shot of a vast stadium filled with rows of bright green plastic seats. The seats are arranged in a grid pattern, receding into the distance. In the middle-right section, one seat is a distinct yellow color, standing out from the rest. The lighting is bright, casting soft shadows between the rows of seats.

SPOT THE DIFFERENCE

OOAPI vs EDU-API

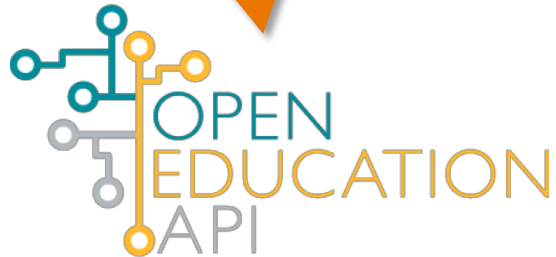
- Student centric
- Tends towards OneRoster
- Focus on courses and schedules
- Machine to machine
- Tends towards LIS
- First focus on Persons and Demographics



OOAPI vs EDU-API

- Str
-

Thanks, but
are we at
least on the
same path?



- Mac
-

“You guys are
miles ahead”





Photo on Flickr by IMF Staff Photograph/Stephen Jaffe



OPEN EDUCATION API: AN OPEN STANDARD FOR MAKING EDUCATIONAL DATA AVAILABLE

 Frans Ward

 E-mail: frans.ward@surfnet.nl

 <https://openonderwijsapi.nl/en/>

 <https://github.com/open-education-api/specification>

Driving innovation together

SURF