Mobility scenarios supported by the Erasmus Without Paper Network

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Agenda

- Erasmus Without Paper Project 2.0.
- State of development of the EWP Network.
- Examples of mobility scenarios supported by the EWP Network
  - Starting mobility with a new partner.
  - Interinstitutional Agreement.
  - Nominations.
  - Transcripts of Records.
- How to join the EWP community.
- Summary.

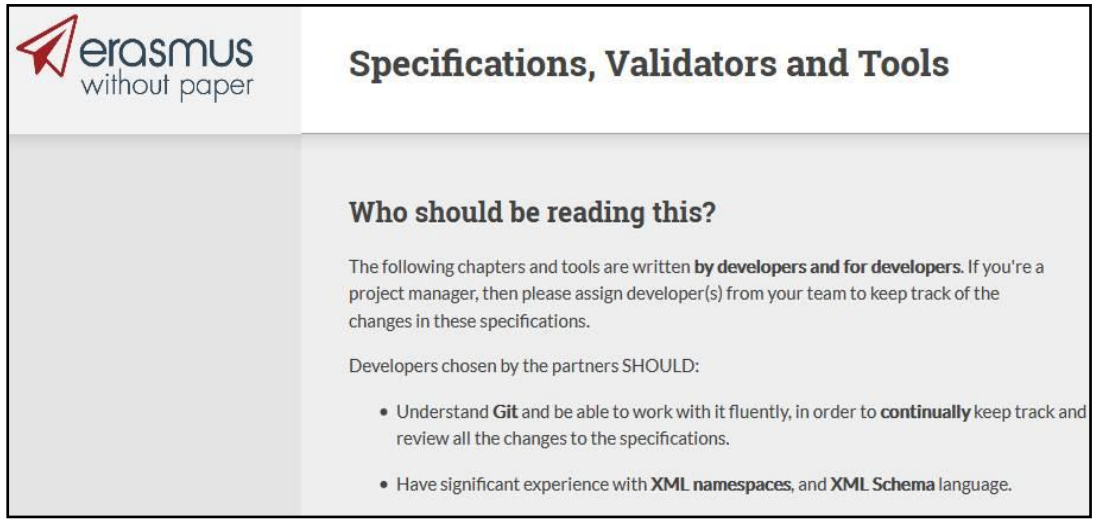
Erasmus Without Paper Project 2.0

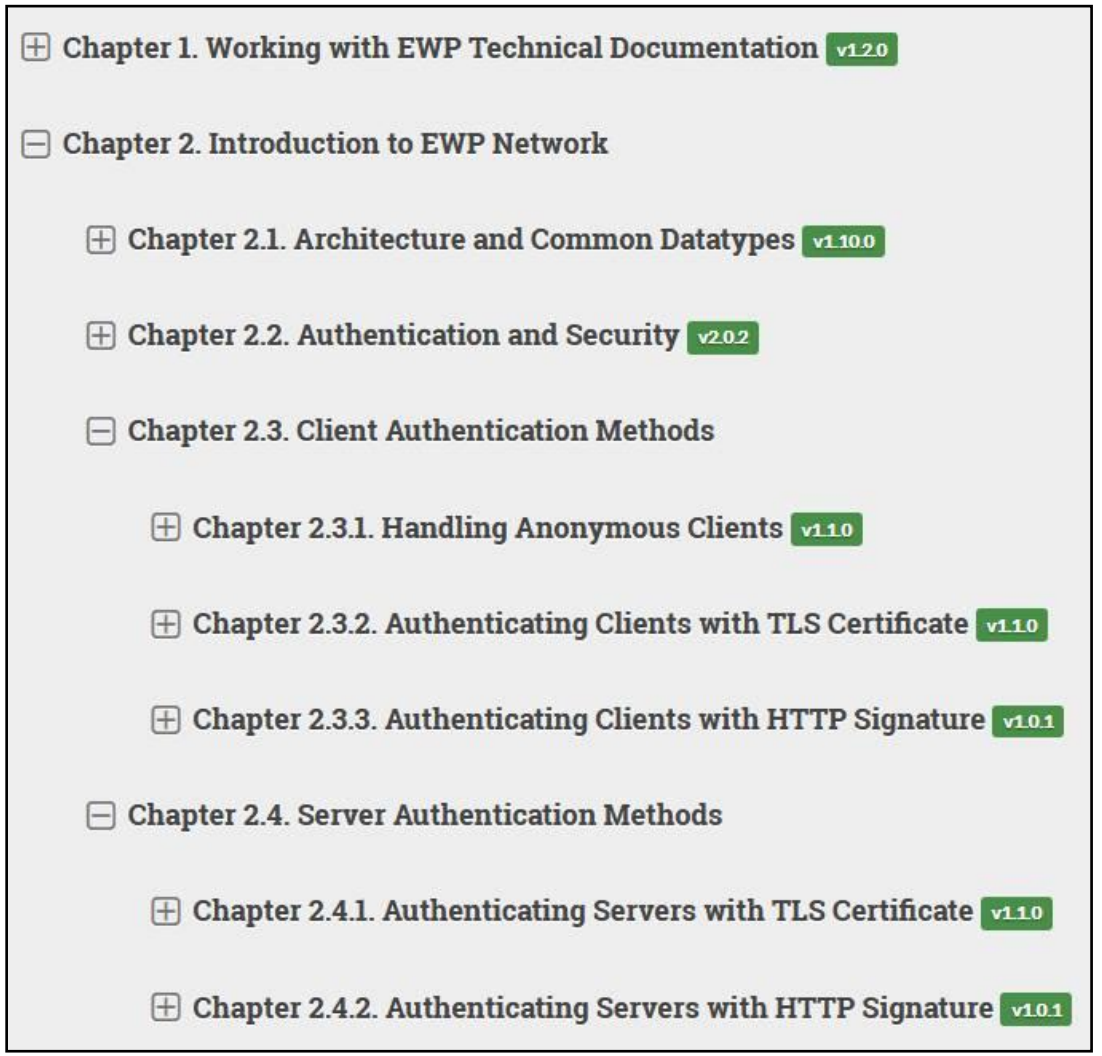
- Funded by the Erasmus+ Programme, Key Action 3, years 2018-2019.
- Basing on the results of EWP 1.0, aims at building the sustainable infrastructure for digitized exchange of mobility data.
- Various pieces of the puzzle:
  - The EWP Network.
  - Connectors for SISs developed at home, by national consortia, by commercial providers.
  - The HUB (Dashboard) for the others.
  - Competence Center to help with dissemination and development.
  - Open source University Alliance to share code.

EWP Network

- Fully designed and specified.
- Specification publicly available in Github.
- Developers Guide.
- Supporting tools for developers.
- Reference connector.
- Two stable DEMO environments for independent testing.
- DEV Registry and PROD Registry.
- EWP Network up and running in development environment.
- Launch in production environment planned for December 2018.

Developers Guide
http://developers.erasmuswithoutpaper.eu





Security
ECHO API Validator
(performs thousands of tests)

Validation result: NOTICE

Basic information

- URL of the Echo API being tested: `https://ewp.demo.usos.edu.pl/ewp/echo`
- Datetime validation started: `2018-06-03T11:56:57.751Z`
- Datetime client keys regenerated: `2018-05-09T06:30:52.232Z` (2179565 seconds before validation)

Tests performed

1.	Check if our client credentials have been served long enough.	SUCCESS
2.	Verifying the format of the URL. Expecting a valid HTTPS-scheme URL	
3.	Verifying if the URL is properly registered.	
4.	Querying for supported security methods. Validating http-security inte	

111.	Trying Combination[PHHTT] POST request with a list of echo values [a, b, a], plus an additional GET echo=c&echo=c parameters. Expecting the GET parameters to be ignored. (It's a POST request, so all parameters are passed via POST body.)	SUCCESS
	Details (click me)	
112.	Trying Combination[PHHTT] with additional "gzip" added in Accept-Encoding. Expecting the same response, but preferably gzipped.	NOTICE
	The client explicitly accepted gzip, but the server didn't compress its response. That's not an error, but it might be useful to support gzip encoding to save bandwidth.	
	Details (click me)	

Try again

Schema Validator

</> XML Schema Validator

This tool will help you with writing EWP XML documents. For example, you can paste the contents of your Manifest file here before you upload it onto your production site. You should be able to validate any XML document described in all RELEASED, DEPRECATED and OBSOLETE specifications above (plus, perhaps, some of the DRAFT ones).

Note, that this tool will validate **against the schema only**! Even if such validation succeeds, your file **may still be invalid** (if, for example, you didn't adhere to the guidelines described in `<xs:documentation>` elements included in the XSD files).

Paste your XML document below and press Validate

```
<courses-response
    xmlns="https://github.com/erasmus-without-paper/ewp-specs-api-courses/tree/stable-v1"
    xmlns:trm="https://github.com/erasmus-without-paper/ewp-specs-types-academic-term/tree/stable-v1"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="
        https://github.com/erasmus-without-paper/ewp-specs-api-courses
        https://raw.githubusercontent.com/erasmus-without-paper/ewp-sp
    "
>
    <!--
    IMPORTANT: Please see the response.xsd file for detailed requireme
    descriptions of all the elements. You MUST NOT base your implement
    solely on the example file.
```

Validation result: PASSED

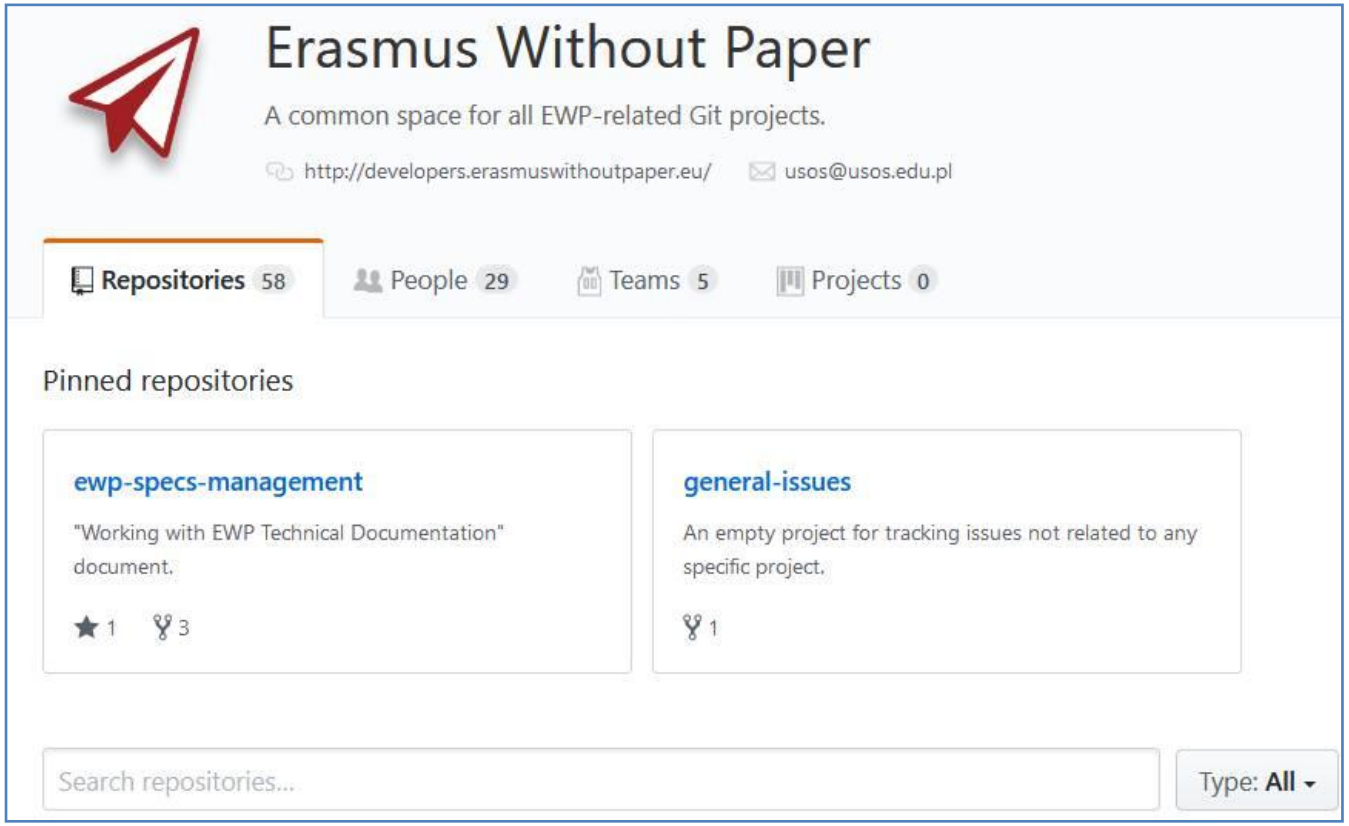
Recognized element

This seems to be a valid `courses-response` element (from `https://github.com/erasmus-without-paper/ewp-specs-api-courses/tree/stable-v1` namespace).

Try again

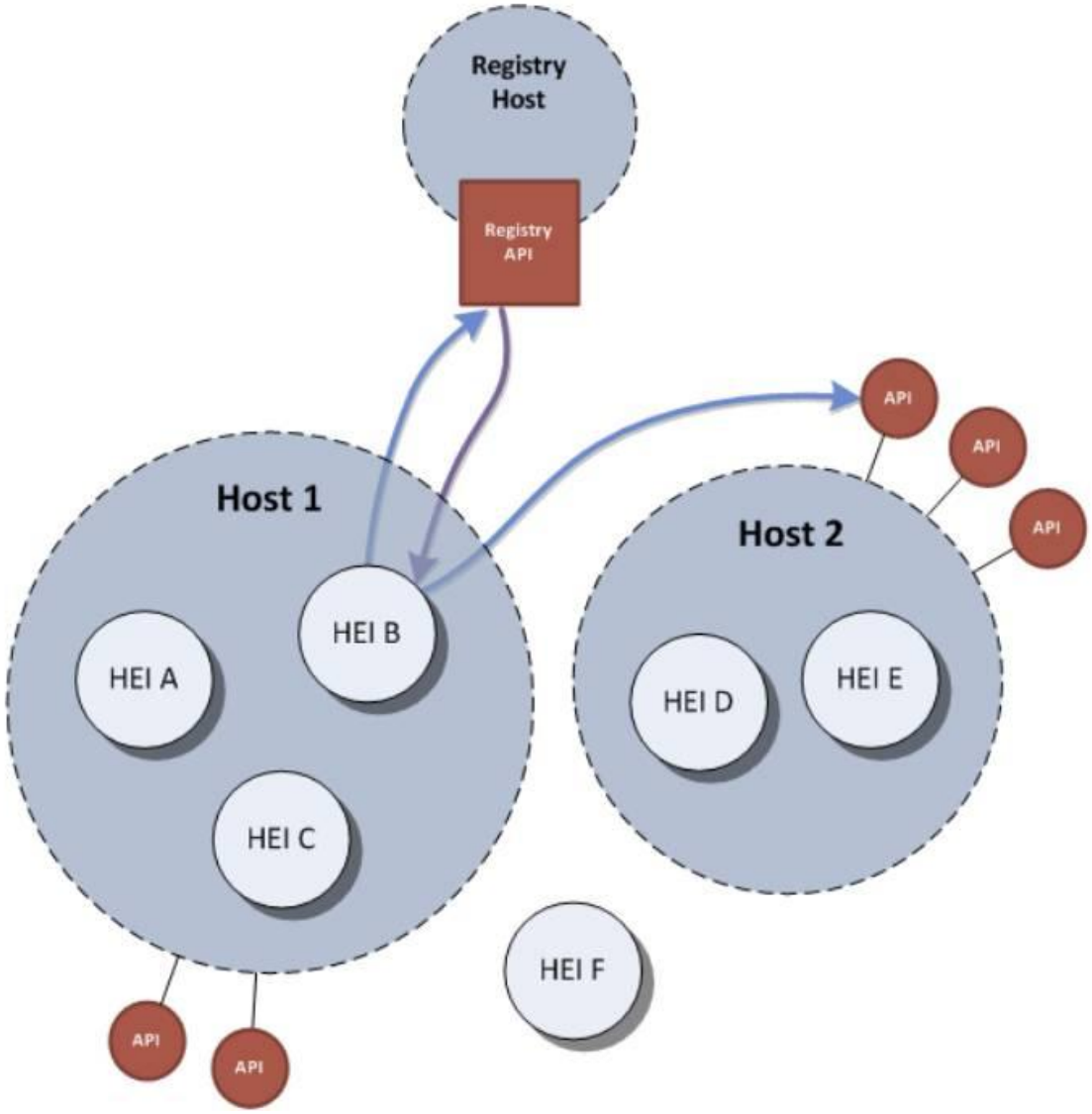
GitHub
https://github.com/erasmus-without-paper

- Specifications
- Common data types
- Communication protocols
- XSD schemas
- Examples of requests and responses in XML
- Libraries of code

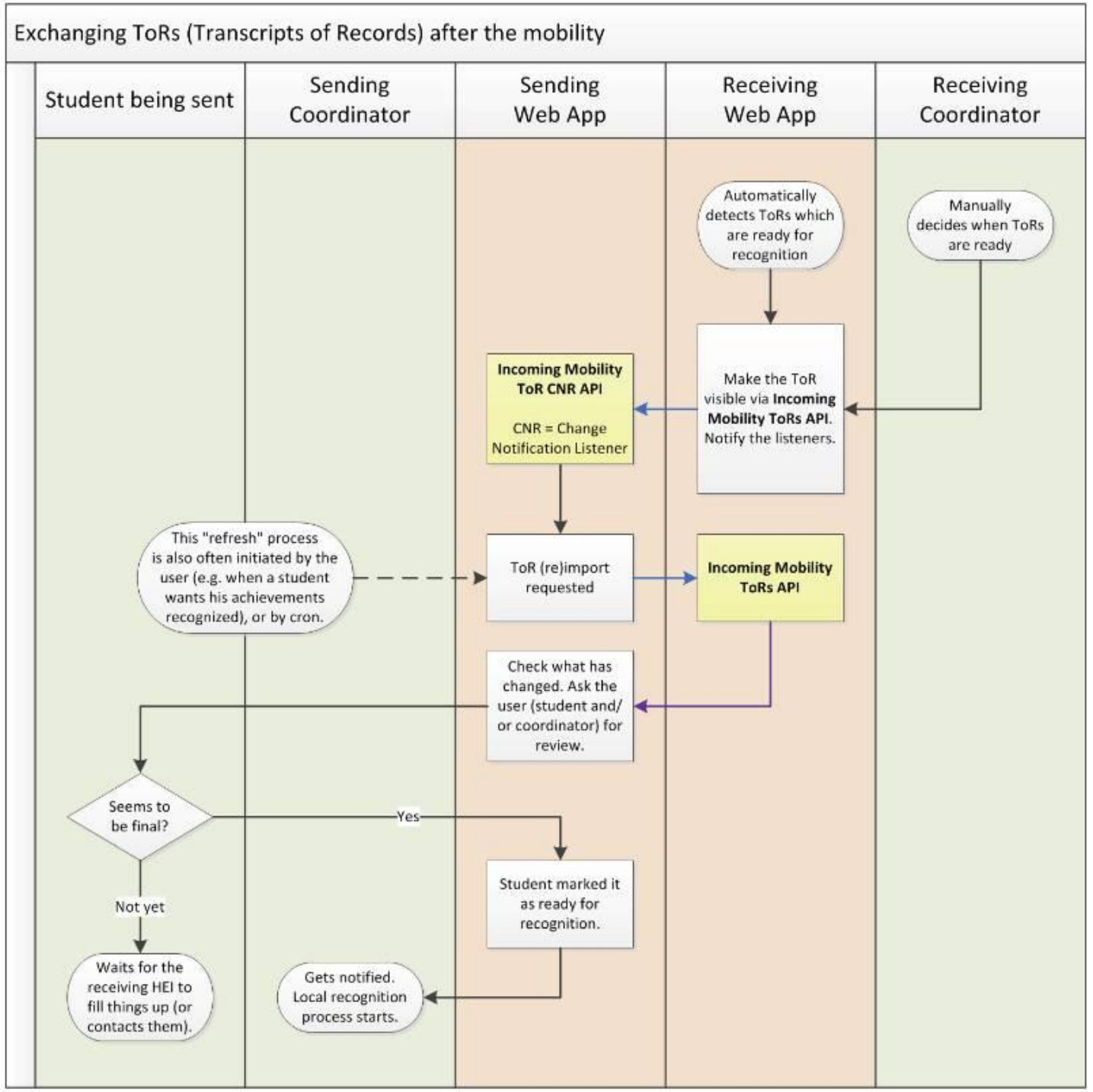


GitHub EWP Network Architecture

- APIs with various endpoints
  - Get
  - Index
  - Update
- CNR APIs
- Data masters



GitHub Mobility process explained on flowcharts



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DEV Registry Service

An alternative instance of the EWP Registry Service intended to be used for development
See „Development environment" chapter in the Architecture document

At the following URL you will find the XML catalogue which describes all the institutions and APIs exposed by them:

```
https://dev-registry.erasmuswithoutpaper.eu/catalogue-v1.xml
```

This catalogue is continously refreshed. Read the Architecture document for more information. Also check out the Developers Hub for useful tools and documents.

Manifest Importer Status | HEI/API Coverage Matrix | EWP Developers Hub

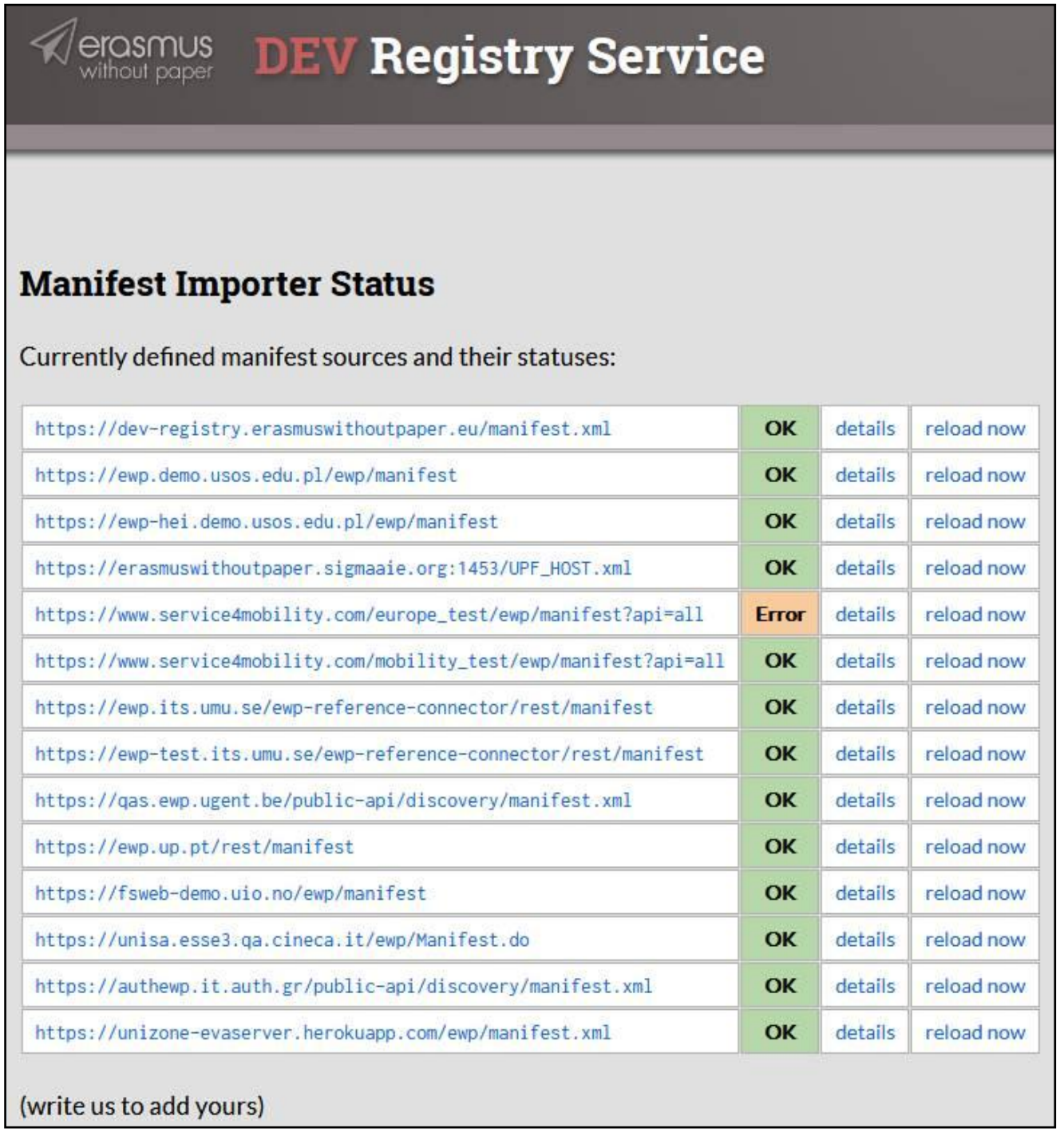
Uptime ratios

100.00% - 24 hours
100.00% - 7 days
100.00% - 30 days
99.99% - 365 days

v1.6.0-RELEASE

DEV Registry Manifest files

```
- <ns9:imobility-tor-cnr version="0.1.0">
  - <ns9:http-security>
    - <ns2:client-auth-methods>
        <ns17:tlscert allows-self-signed="true"/>
        <ns18:httpsig/>
      </ns2:client-auth-methods>
    - <ns2:server-auth-methods>
        <ns36:tlscert/>
        <ns37:httpsig/>
      </ns2:server-auth-methods>
    </ns9:http-security>
    <ns9:url>https://ewp.demo.usos.edu.pl/ewp/tors/cnr</ns9:url>
    <ns9:max-omobility-ids>10</ns9:max-omobility-ids>
  </ns9:imobility-tor-cnr>
</ns39:apis-implemented>
- <ns38:institutions-covered>
  - <ns39:hei id="demo.usos.edu.pl">
      <ns39:other-id type="erasmus">PL WARSZAW01</ns39:other-id>
      <ns39:other-id type="pic">999572294</ns39:other-id>
      <ns39:name xml:lang="pl">Uniwersytet Warszawski</ns39:name>
      <ns39:name xml:lang="en">University of Warsaw</ns39:name>
    </ns39:hei>
</ns38:institutions-covered>
- <ns38:client-credentials-in-use>
  - <ns38:certificate>
      MIIDcTCCAlmgAwIBAgIEKYg+WjANBgkqhkiG9w0BAQsFADBpM
      VQQKEwdVbmtub3duMRAwDgYDVQQLEwdVbmtub3duMQ0wCw
      DTE3MDMzMDA5MTI1OVoXDTE5MTIyNTA5MTI1OVowaTEQMA
```



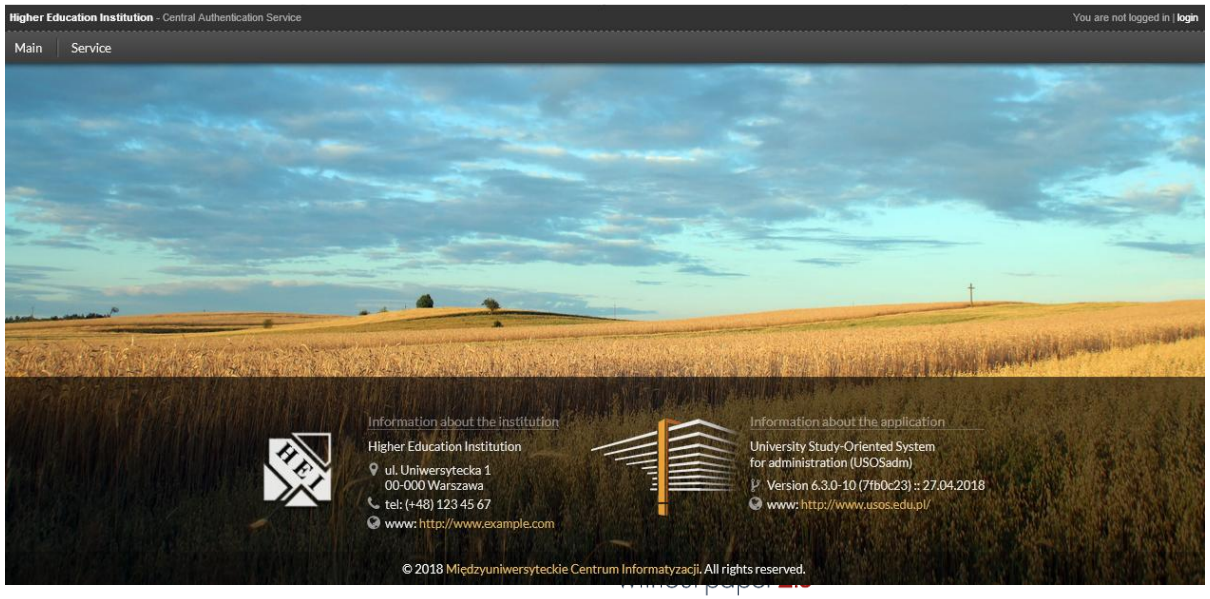
DEV Registry – HEI/API Coverage Matrix

HEI/API Coverage Matrix

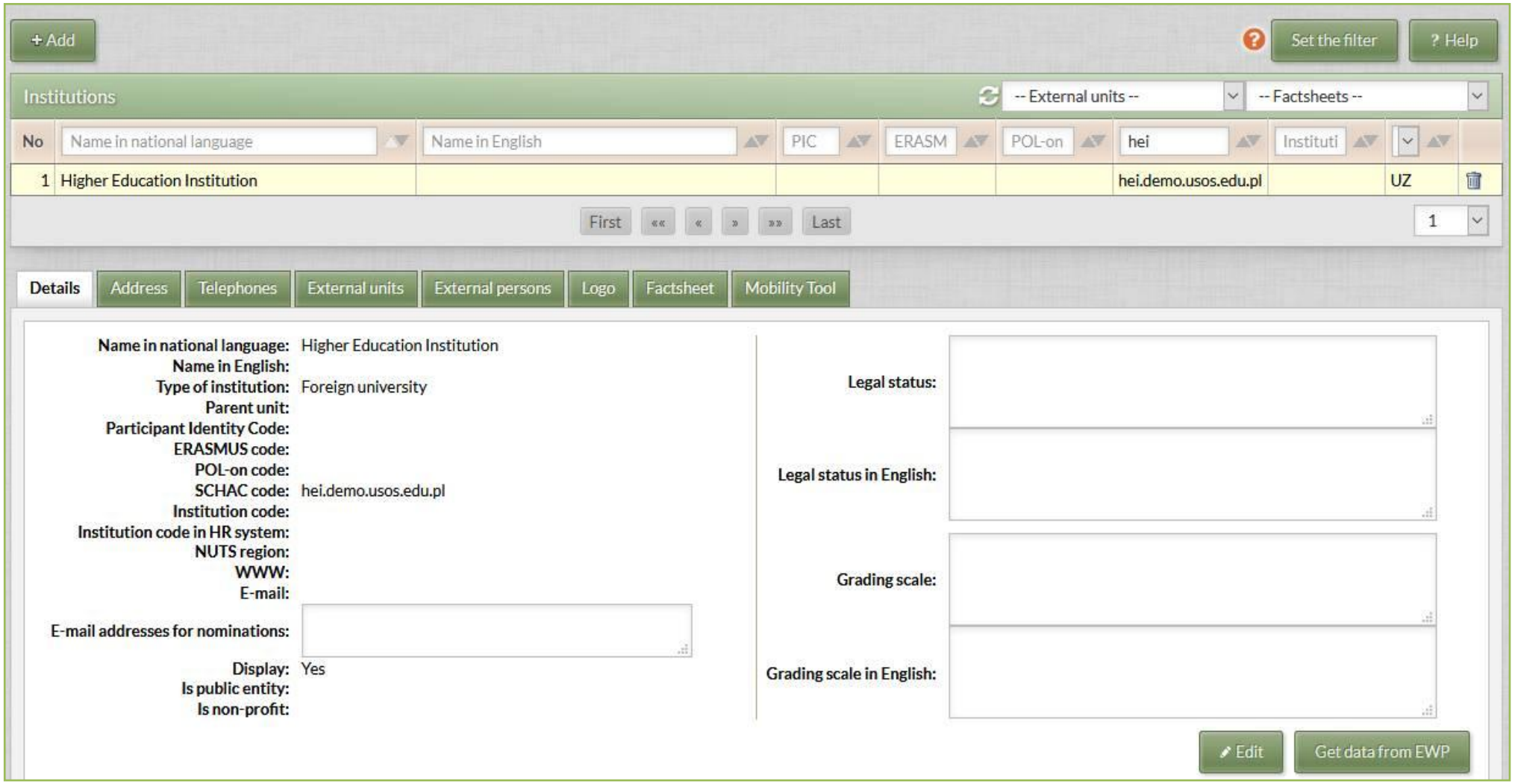
Institution	General Purpose APIs				IIAs			OMobilities				IMobilities			IMobility ToRs		
	inst.	ounits	courses	course replic.	ver.	CNR		ver.	update types	CNR		ver.	CNR		ver.	CNR	
						sends	recv.			sends	recv.		sends	recv.		sends	recv.
sop-at.at	2.0.0	2.0.0															
vorlage.sop-at.at	2.0.0	2.0.0															
ugent.be	2.0.0	2.0.0						0.12.1	NNN	yes	0.4.0						
upf.edu	2.0.0	2.0.0	0.7.0		2.0.0	no		0.12.1	NNN	no					0.7.0	no	
uni.gl																	
auth.gr																	
unisa.it	2.0.0	2.0.0	0.7.0														
pomodoro.university.it	2.0.0	2.0.0	0.7.0	1.0.0	2.0.1	yes	2.0.1	0.12.1	YYN	yes	0.4.0	0.1.0	yes	0.1.0	0.7.0	yes	0.1.0
ntnu.no	2.0.0	2.0.0	0.7.0	1.0.0	2.0.0	no											
uio.no	2.0.0	2.0.0	0.7.0	1.0.0	2.0.0	no											
demo.usos.edu.pl	2.0.0	2.0.0	0.7.0		2.0.0	yes	2.0.1	0.13.0	NNY	yes	0.4.0	0.1.1	yes	0.1.0	0.7.0	yes	0.1.0
hei.demo.usos.edu.pl	2.0.0	2.0.0	0.7.0		2.0.0	yes	2.0.1	0.13.0	NNY	yes	0.4.0	0.1.1	yes	0.1.0	0.7.0	yes	0.1.0
up.pt	2.1.0	2.1.0			2.1.0	no		0.14.0	NNN	no		0.1.1	no		0.7.0	no	
ikea.university.se	2.0.0	2.0.0	0.7.0	1.0.0	2.0.1	yes	2.0.1	0.12.1	YYN	yes	0.4.0	0.1.0	yes	0.1.0	0.7.0	yes	0.1.0

Mobility scenarios

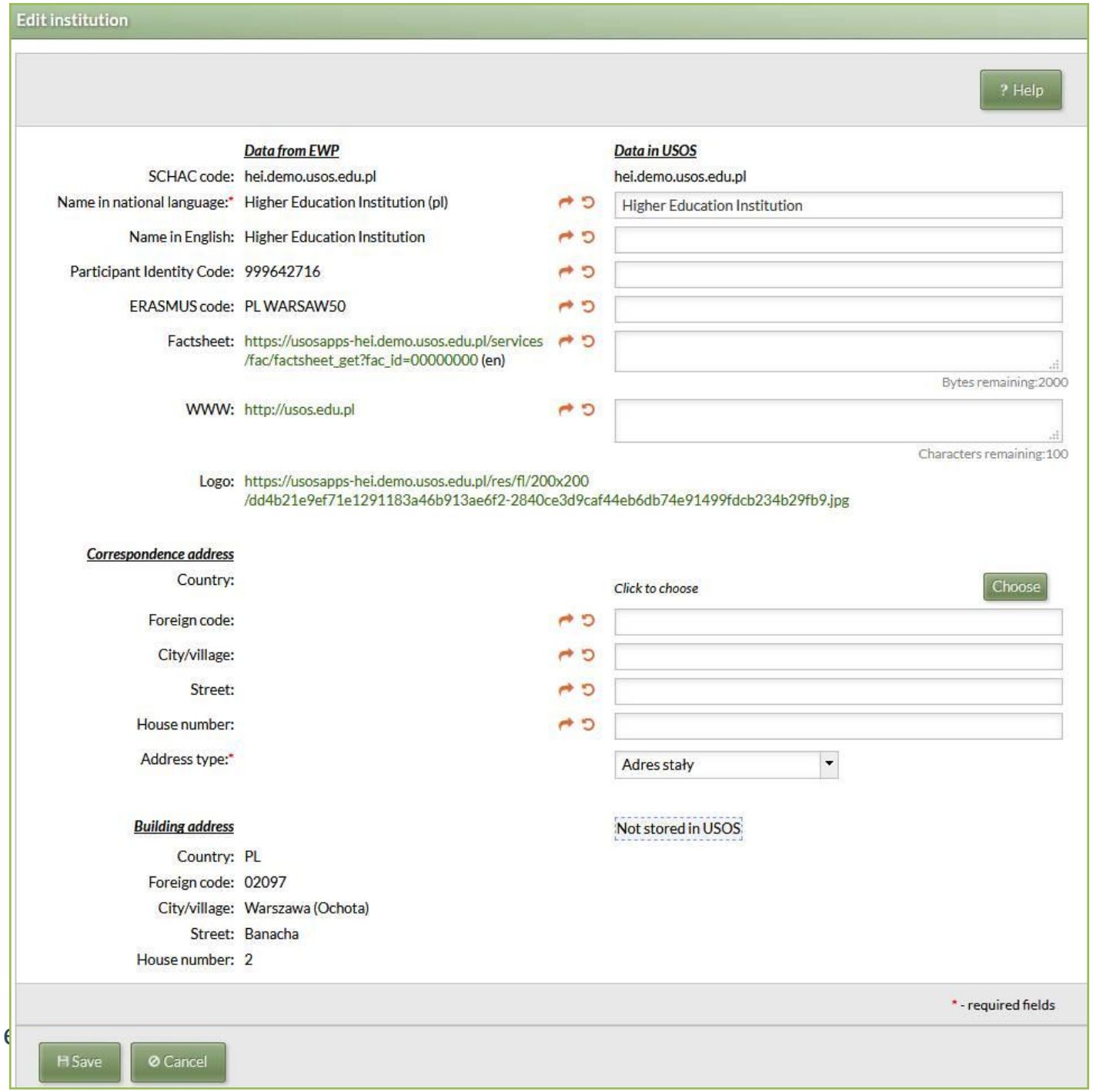
- Two installations:
  - University of Warsaw at https://usosadm.demo.usos.edu.pl/usosadm/
  - HEI – new mobility partner of UW at https://usosadm-hei.demo.usos.edu.pl/usosadm/



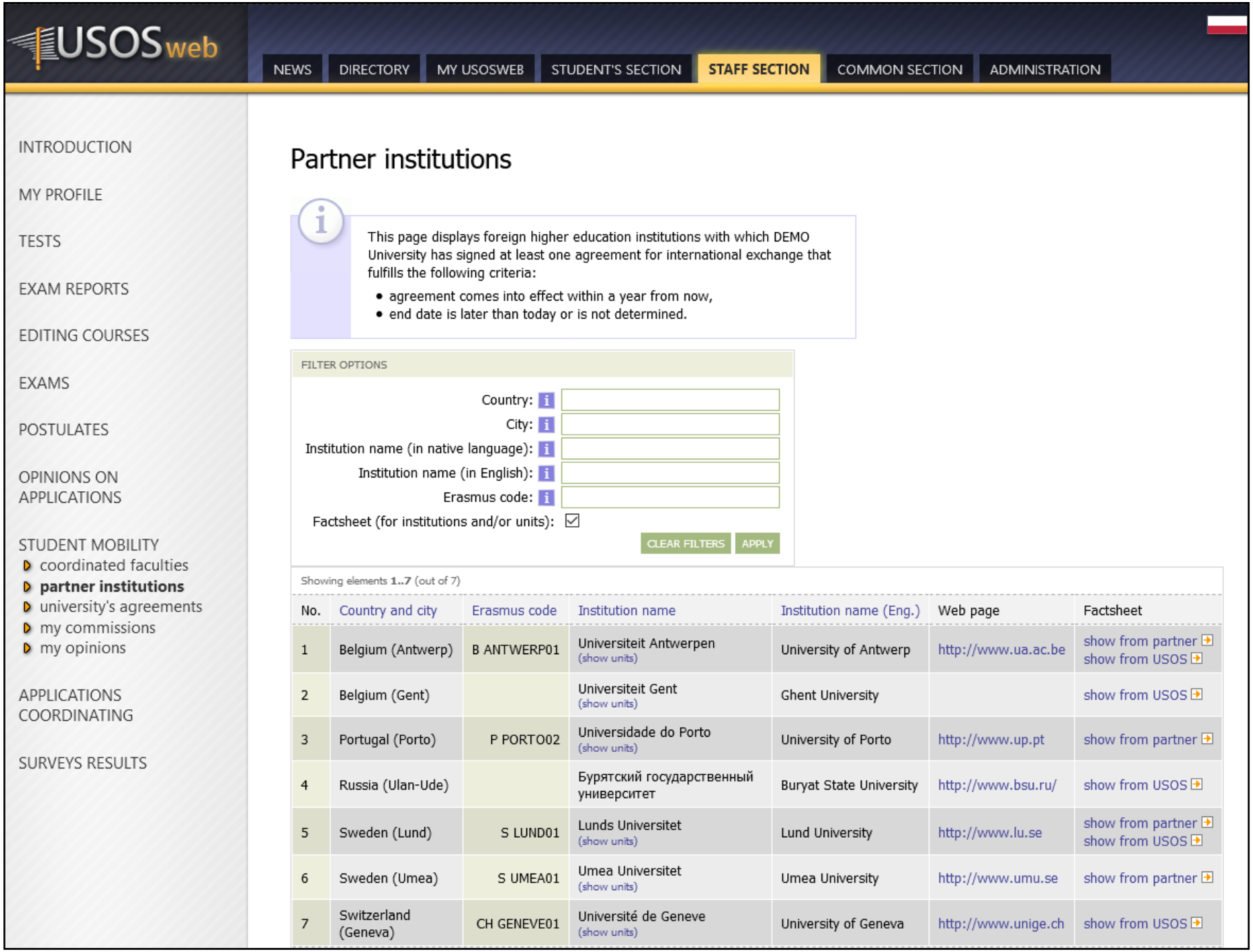
University of Warsaw
Enters name and SCHAC code of the new mobility partner



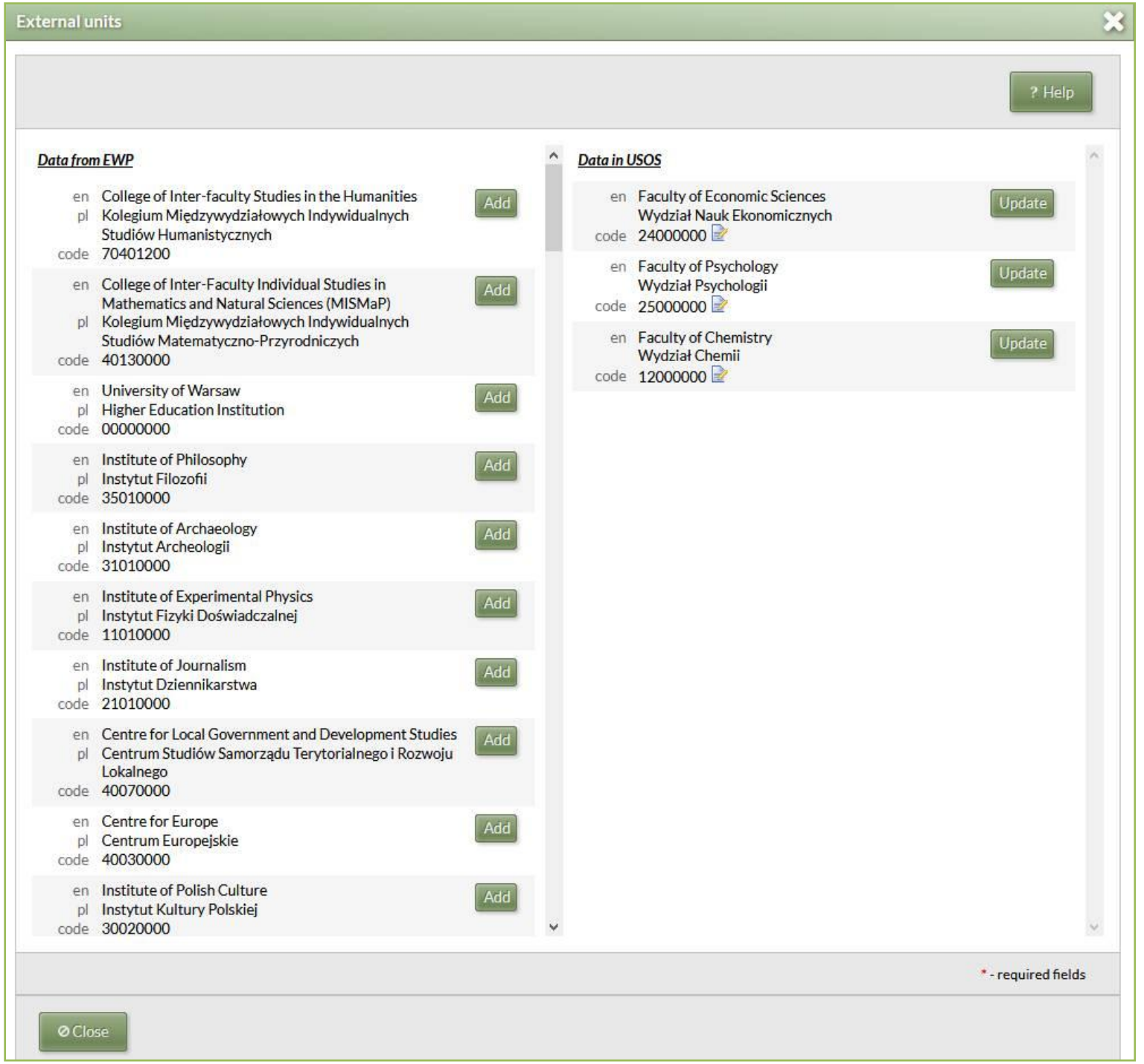
University of Warsaw gets the rest of the institution data from the partner by calling **Institutions API** (data are copied to the appropriate fields)



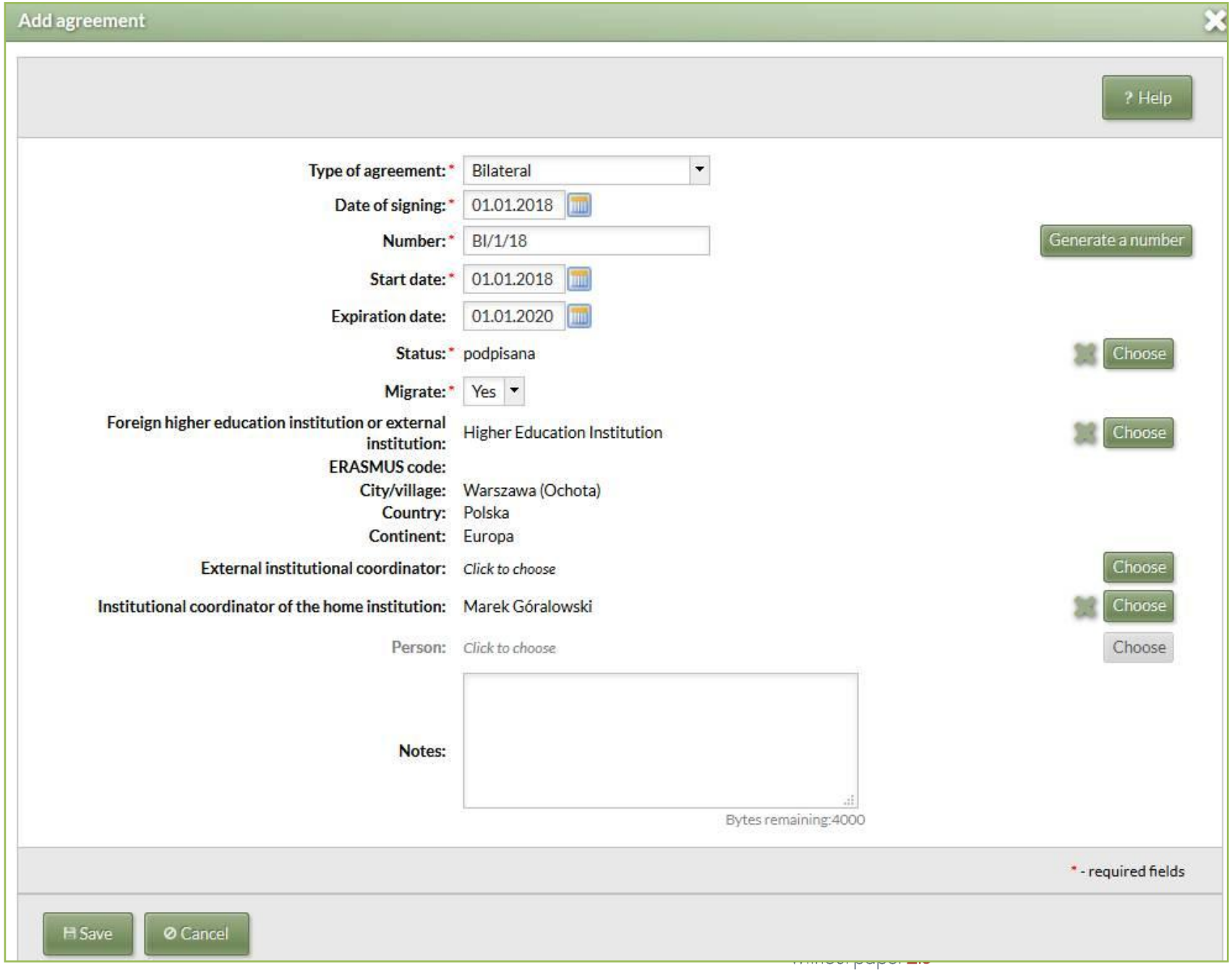
University of Warsaw displays all obtained factsheets in the web portal for students and staff



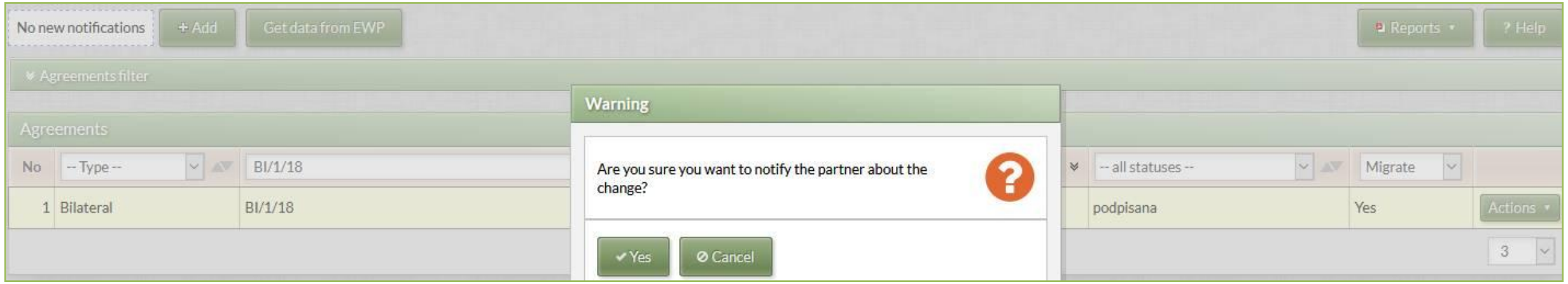
University of Warsaw gets units of the partner HEI by **Organizational Units API**.
Only units which participate in the mobility are copied.



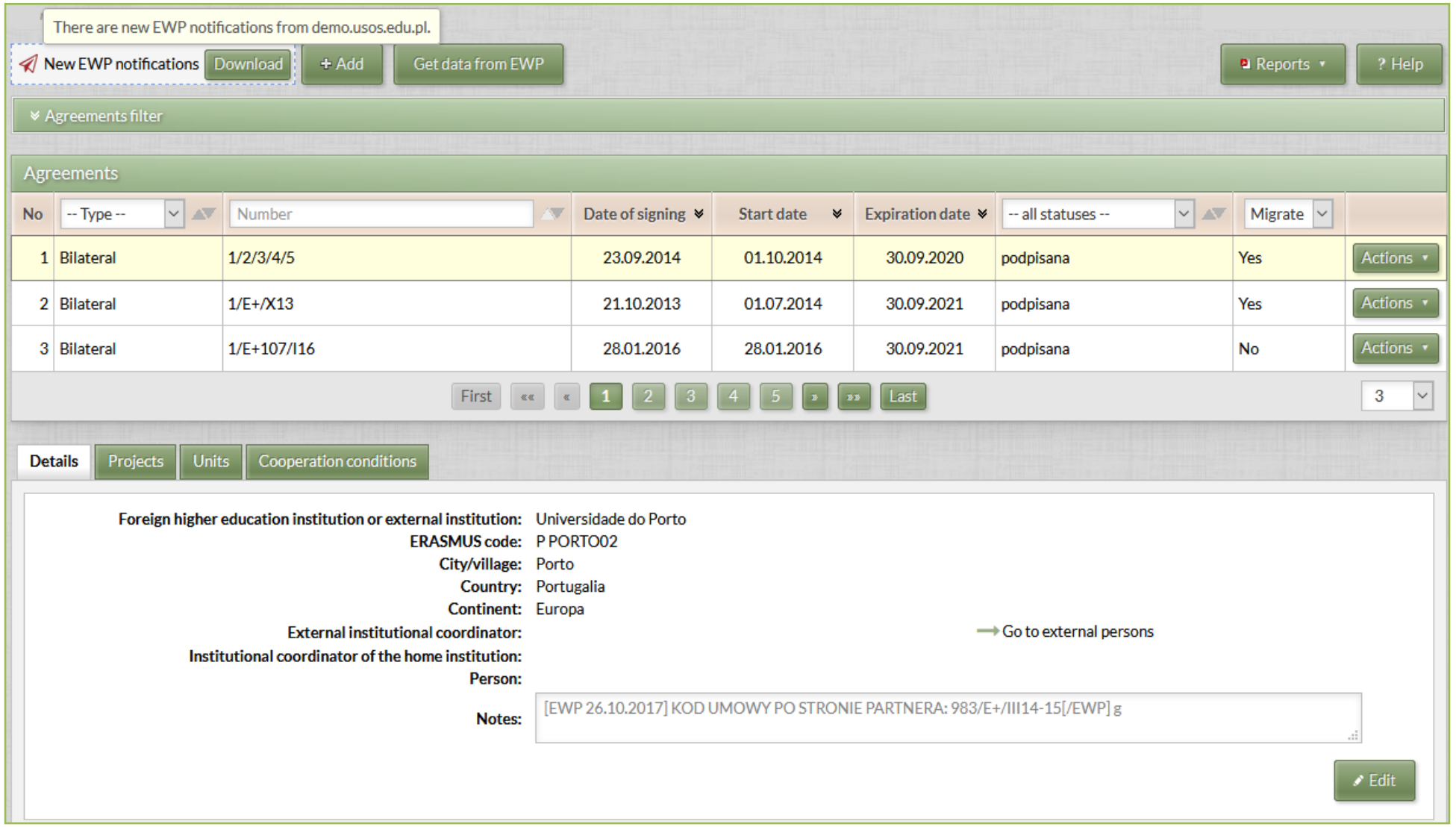
University of Warsaw enters details of the bilateral agreement



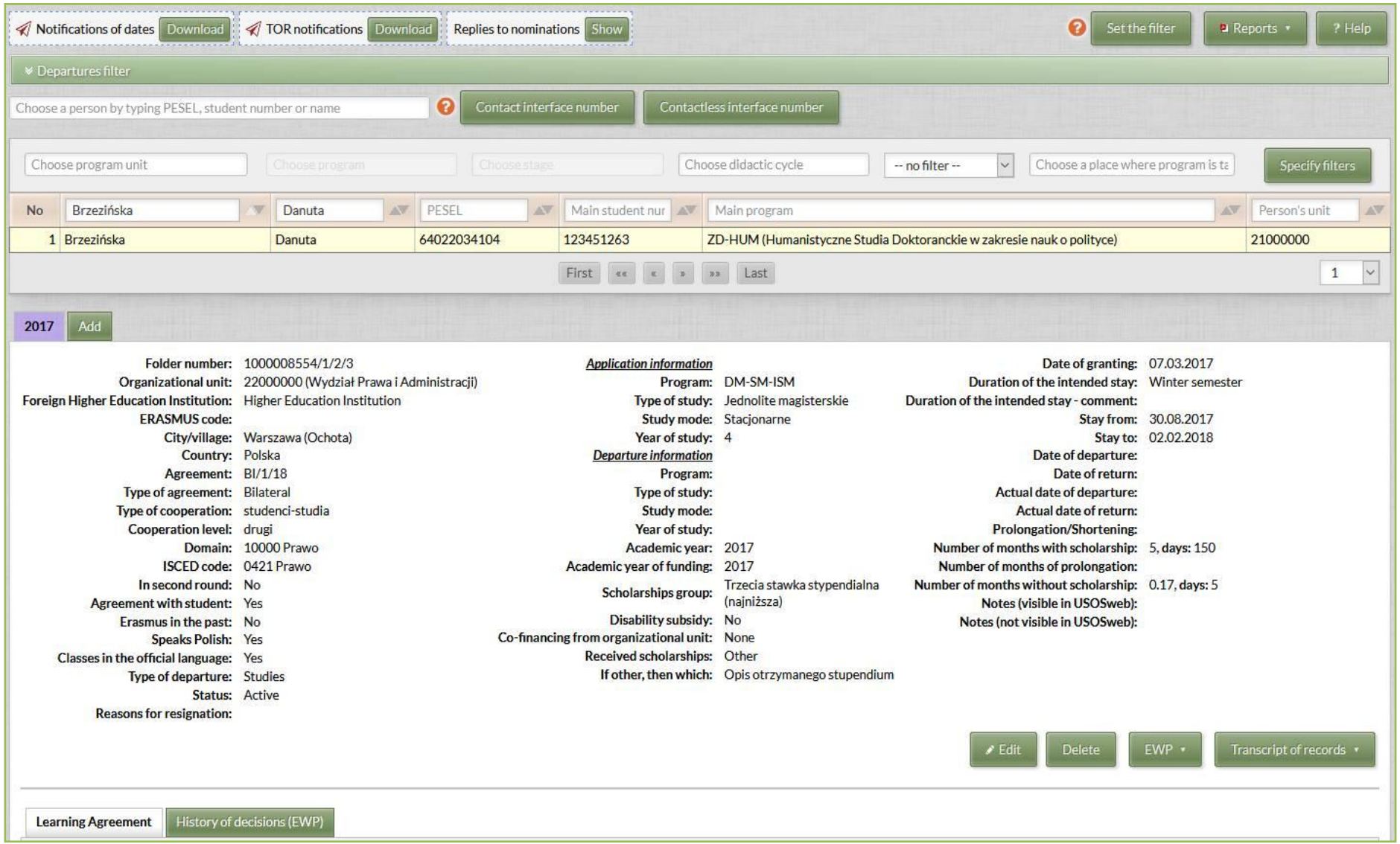
University of Warsaw notifies the partner that the draft agreement is ready by calling **IIA CNR API** (Interinstitutional Agreement Change Notification Request)



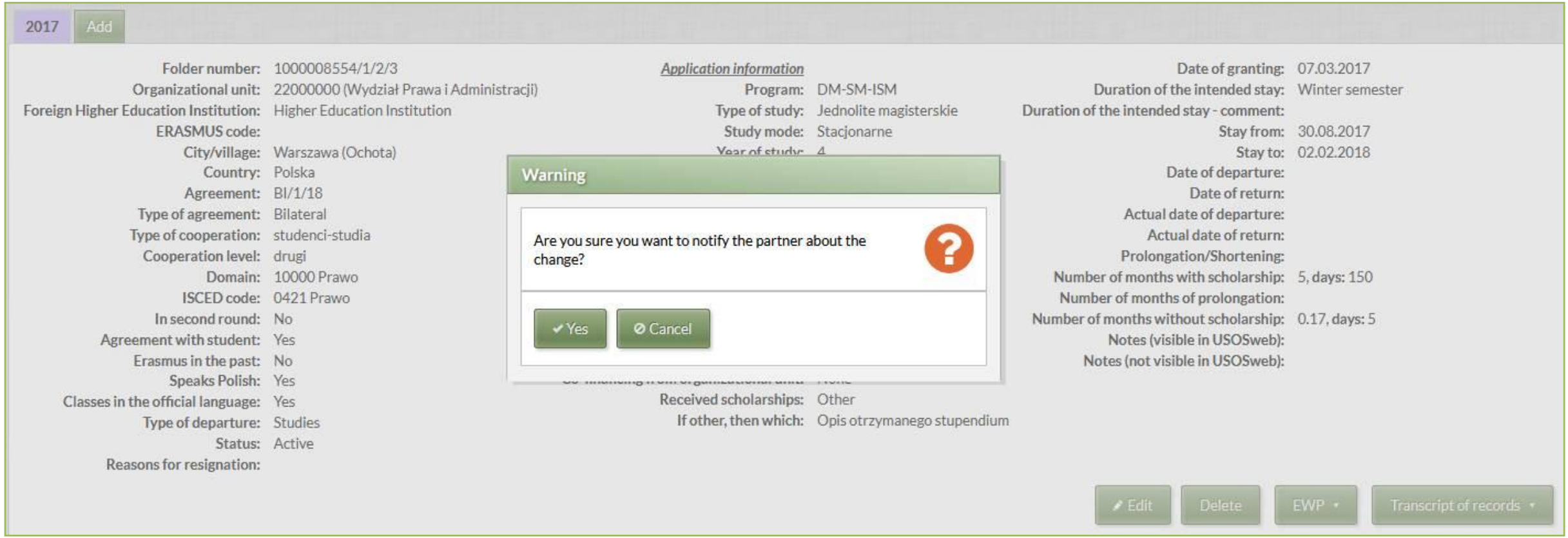
HEI receives notification, gets agreement data from UW by calling **IIA API** (no need to enter this data by hand)



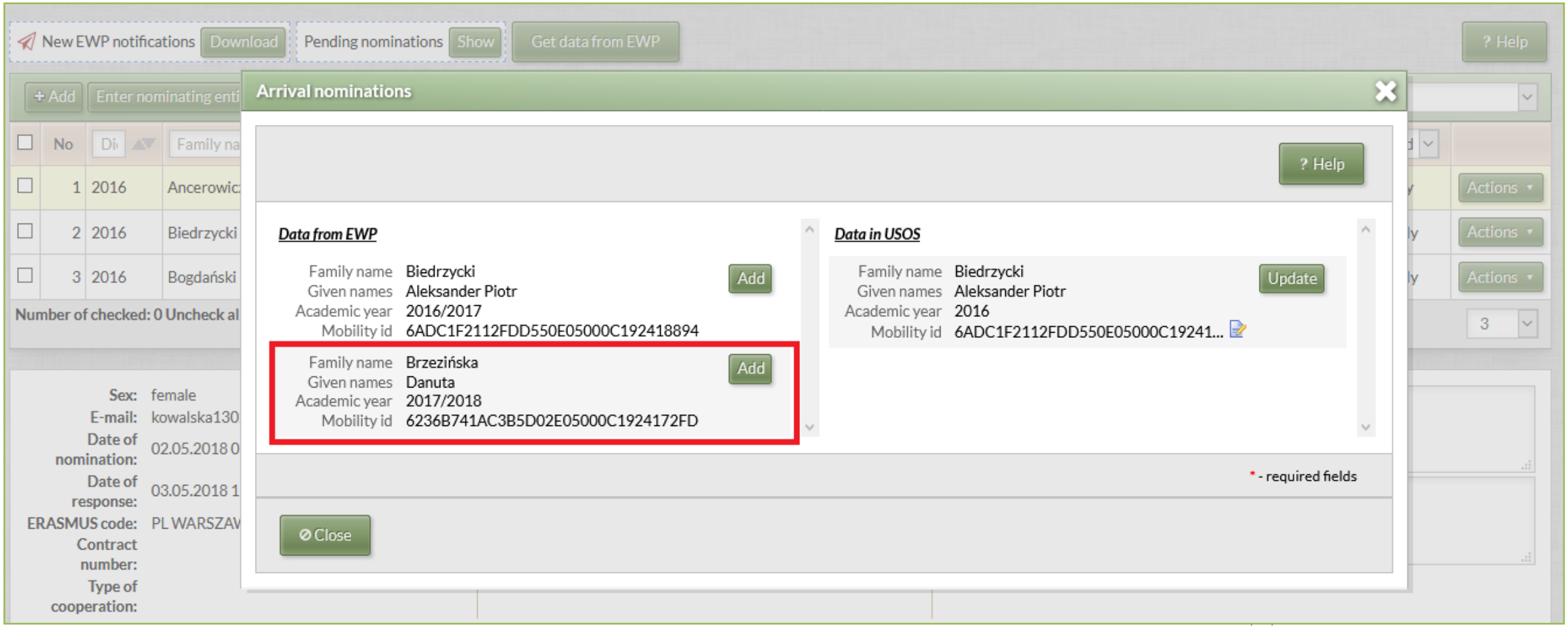
University of Warsaw nominates a student for outgoing mobility at HEI under the newly signed agreement



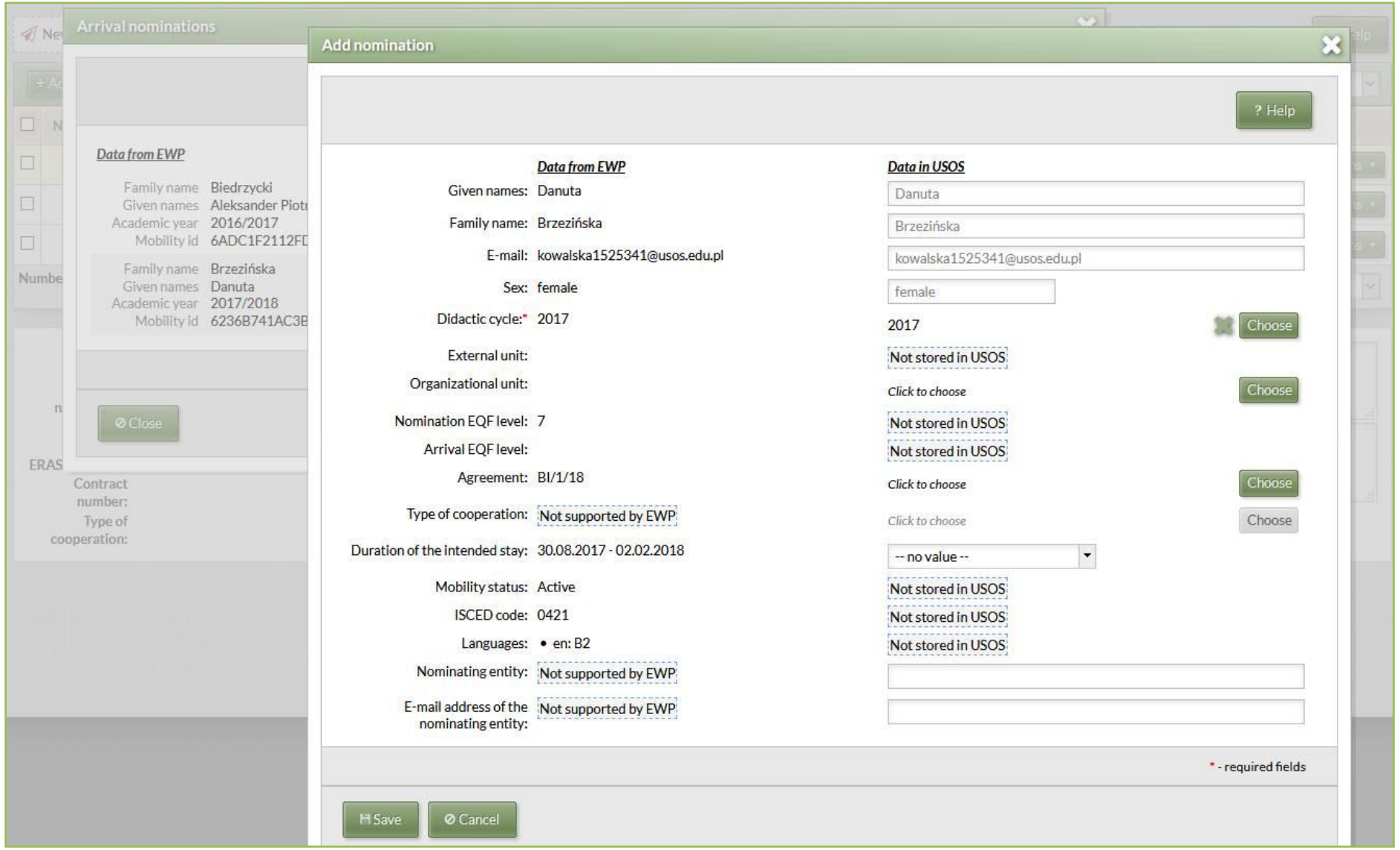
University of Warsaw informs the partner about new nominations or changes in nominations by calling **Outgoing Mobility CNR API**



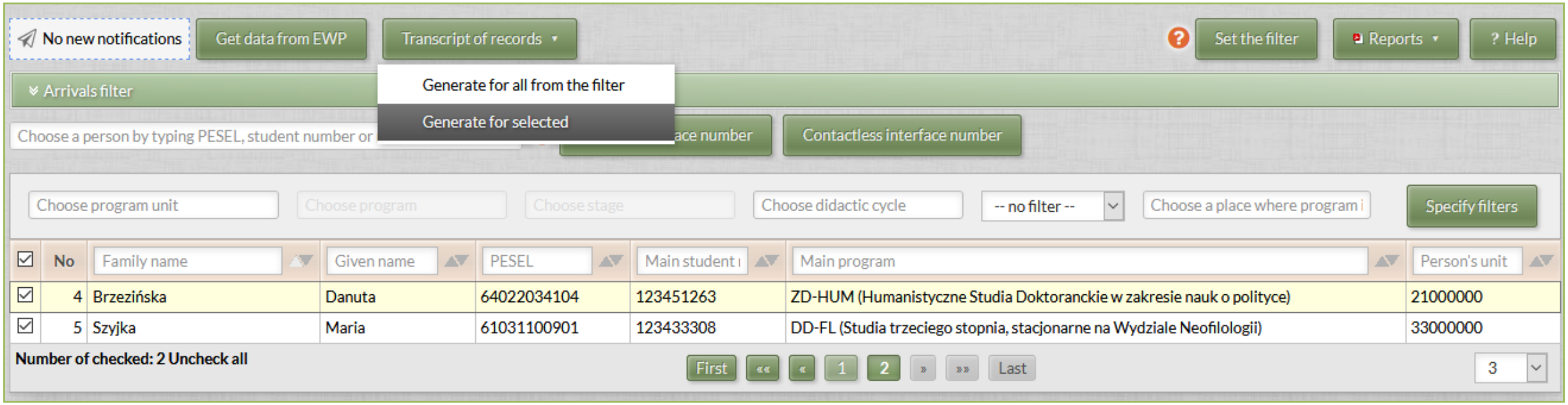
HEI receives notification, gets student data from UW by calling **Outgoing Mobility API**

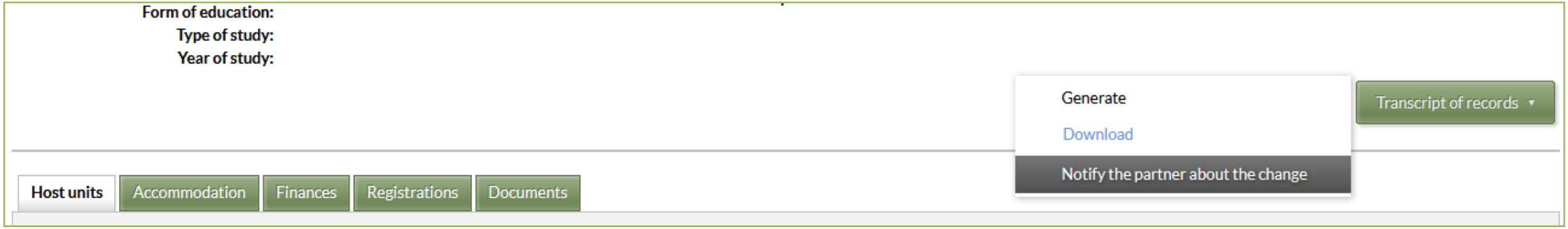


HEI can copy data which should be stored in the local system (no need to enter data by hand)

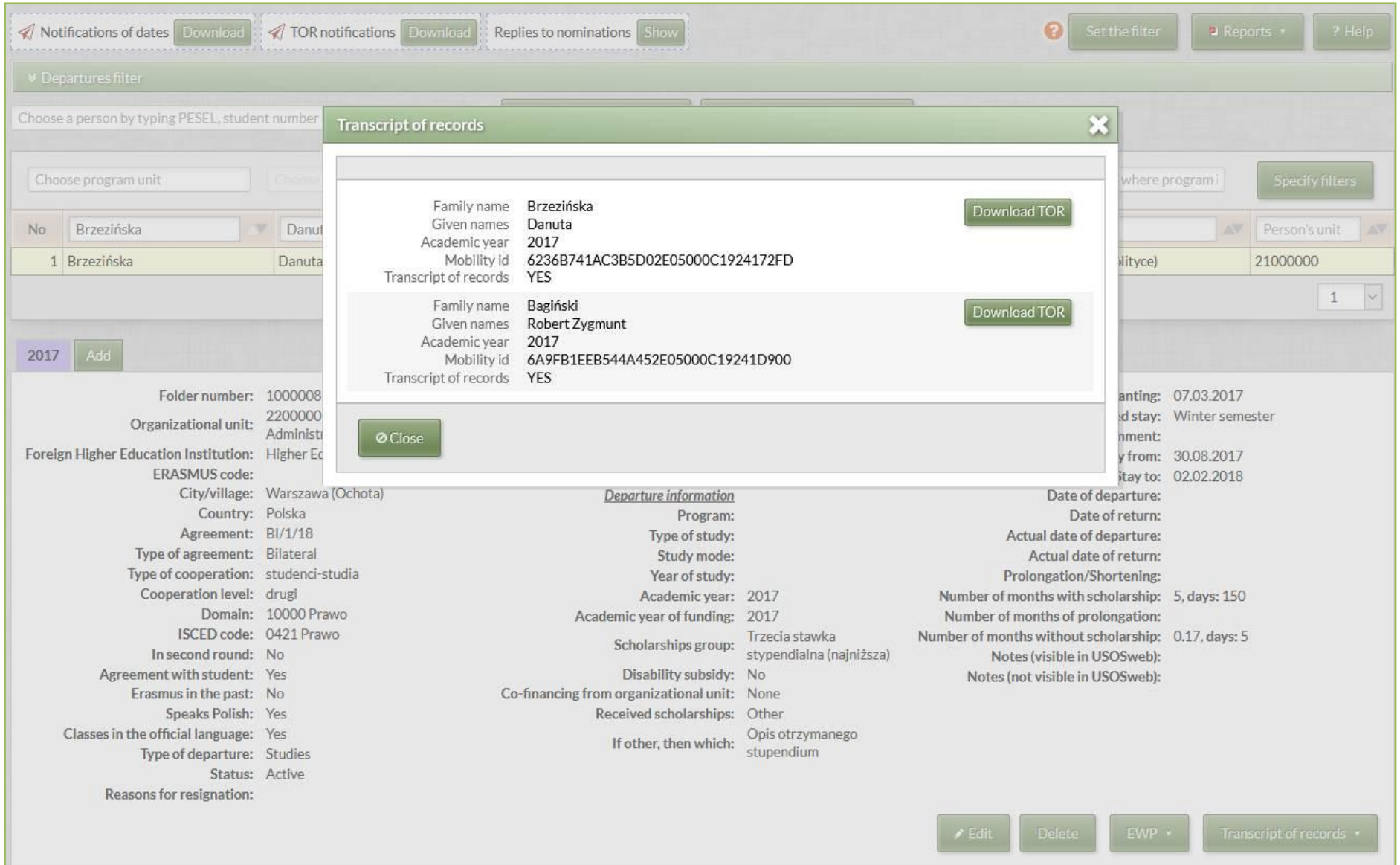


HEI at the end of the mobility generates ToRs for incoming students and notifies the partner (**ToR CNR API**)





University of Warsaw receives notification and then downloads ToR to the local system (Incoming Mobility ToR API)



Other scenarios and APIs

- Sharing new versions of factsheets
- Approval/rejection of nominations
- Changes in nominations
- Learning agreements – all parts
- Confirmation of the arrival and departure dates → grants
- Digitally signed Transcript of Records (XML and PDF)
- Mail notifications as a supplement to Change Notification Requests
- Greater process automation
- Use GitHub to tell us about your favorite scenarios – are any APIs or parameters missing?

Steps to join the EWP community

- Get in touch with the EWP **Competence Centre.**
- Depending on the situation:
  - Develop your own connector,
  - Use connector developed by a national consortium (if you are a member),
  - Use connector developed by a commercial provider,
  - Use the **HUB** (**Dashboard**).
- Contact EWP technical team to be entered to the **DEV Registry.**
- Test, test, test.
- Contact EWP technical team to be entered to the **PROD Registry.**
- Enjoy easy data exchange at you institution.
- Encourage your partners in mobility to join.

Summary

- EWP proves that it is possible to exchange data between partners in mobility in a digital way.
- Network, tools, specifications, code, competences are publicly available.
- We are getting ready for the official launch of the EWP Network in December – join the EWP conference in Ghent.
- Work will continue in 2019
  - Pending invitation for new partners.
  - New APIs with extended functionalities (MT+, grade conversion).
  - Joining forces with other European digitization projects.
- Goal: interconnect all ECHE holders.
- Get ready for new Erasmus+ in 2021-2027.

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http://erasmuswithoutpaper.eu

http://developers.erasmuswithoutpaper.eu

http://github.com/erasmus-without-paper

https://www.linkedin.com/groups/13590744

https://twitter.com/hashtag/ErasmusWithoutPaper