



What is Erasmus Without Paper and why it matters?

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Student mobility SIG workshop, 2019



Co-funded by the
Erasmus+ Programme
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erasmuswithoutpaper.eu



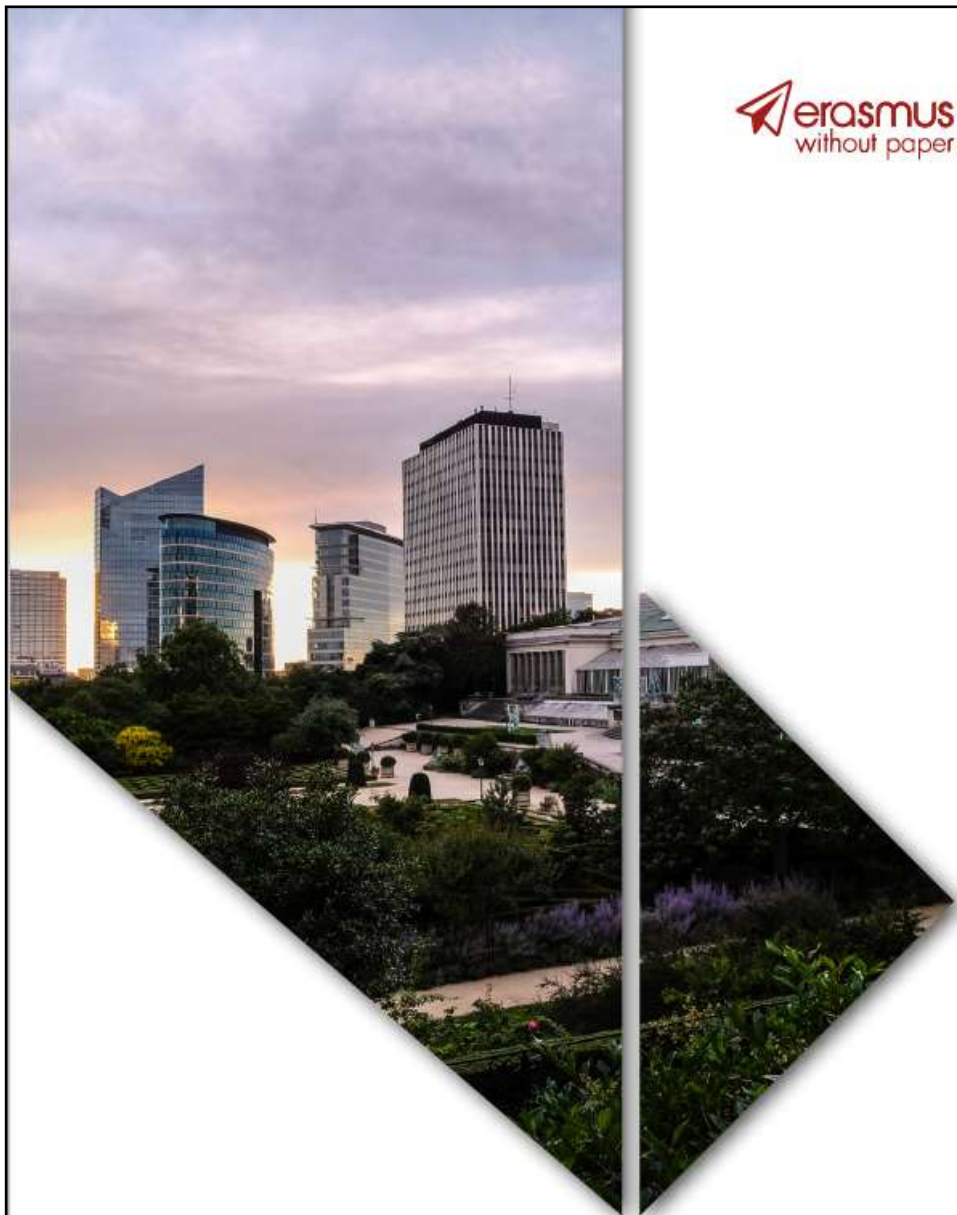
Agenda

- Challenges of the Erasmus+ Programme.
- What is EWP.
- What services does EWP offer.
- Current state of EWP.
- EWP in the next programme.
- How to go digital.
- EWP connections and dependencies.
- Future of EWP. Upcoming developments.



Erasmus+ Programme

- More than 4 million beneficiaries.
- Half of which in higher education.
- €14.7 billion from 2014 to 2020.
- Includes student, staff mobility and youth mobility, volunteering and support for projects.

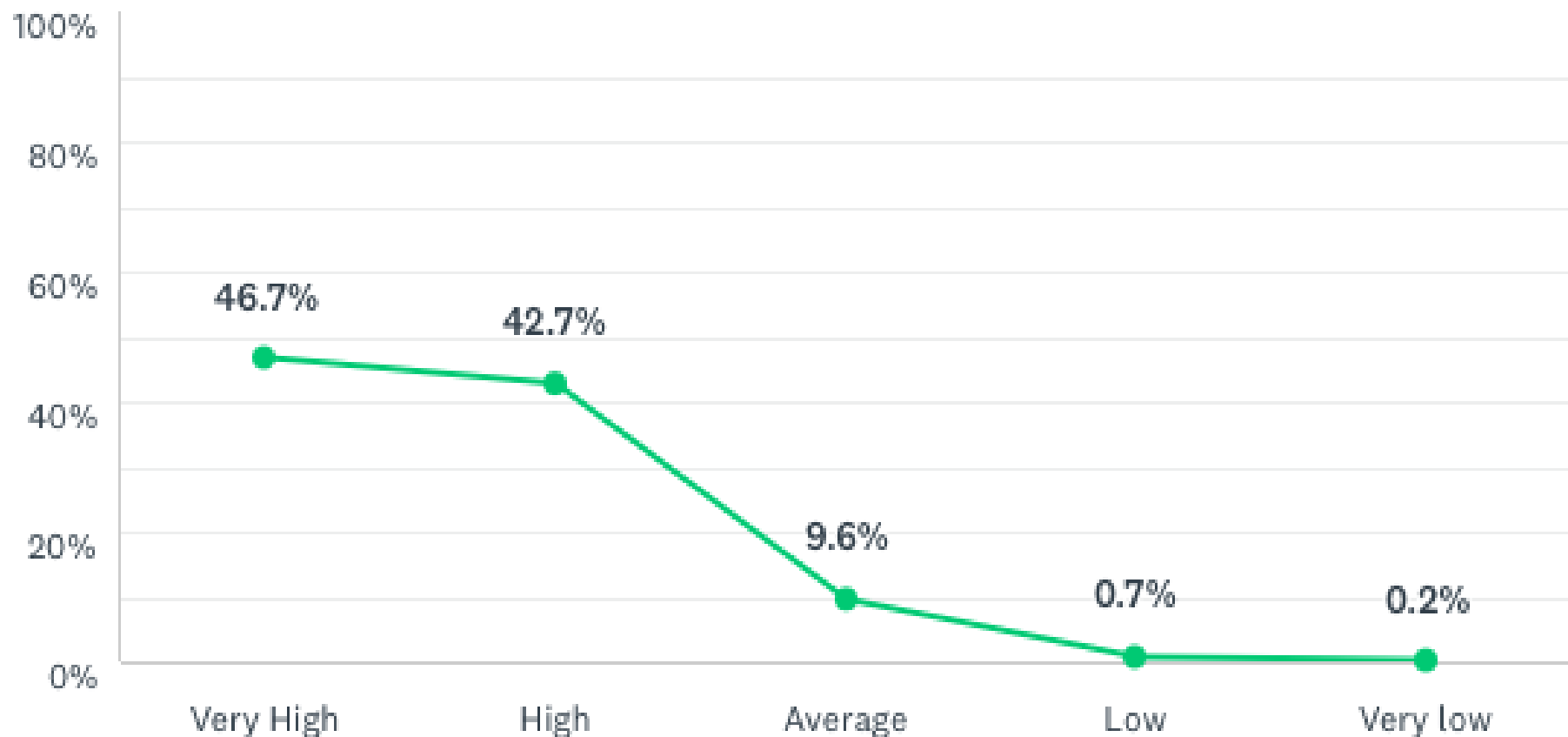


DESK RESEARCH
Erasmus Without Paper

<https://www.erasmuswithoutpaper.eu/sites/default/files/pages/EWP%20desk%20research%20final%20version.pdf>

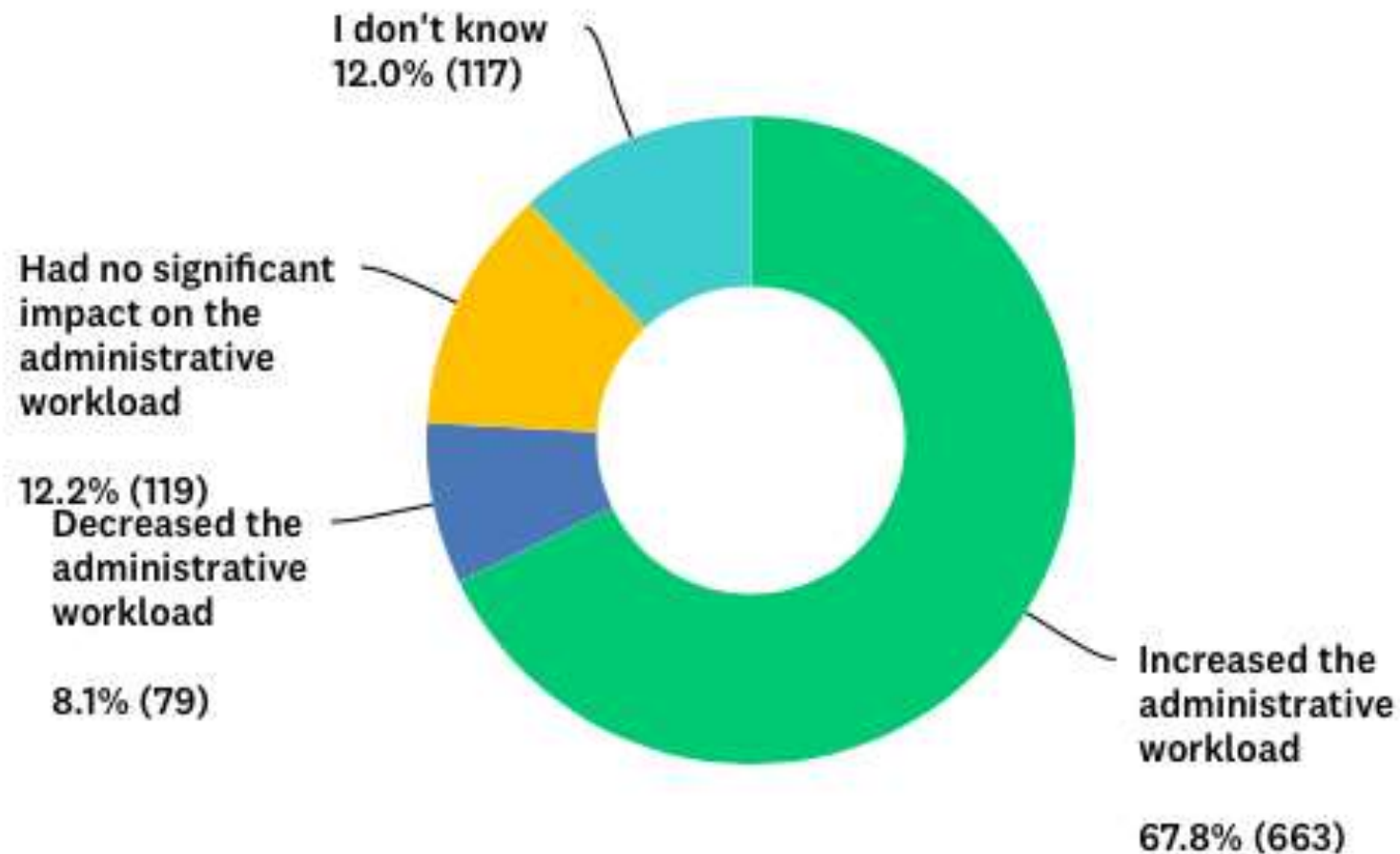
In your opinion, the workload surrounding the management of Erasmus+ exchanges is

Answered: 978 Skipped: 72



In your opinion, the changes introduced by Erasmus+ in 2014 have

Answered: 978 Skipped: 72



What is the solution?

- **Electronic communication** leads to faster results and in real-time.
- Develop tools to support **digitized processes** and get rid of paper.
- Digitized processes need **standards**.
- Support **interoperability** of systems developed by various providers.
- Ensure **security** in inter-system communication.
- No one left behind – optimize **resources** and **efforts** so that everybody can join.
- Ultimately: *rethink the whole process*.



Erasmus Without Paper project

(2015-2017 and 2018-2019)

- Supported by the European Commission (Erasmus+ Programme, Key Action 3).
- Developing **standards** that enable machine-to-machine communication.
- Building the sustainable **infrastructure** for digitized exchange of mobility data.
- Various pieces of the puzzle:
 - The EWP **Network**.
 - **Connectors** for Student Information Systems or stand-alone Mobility modules.
 - **Competence Center** to help with dissemination and development.
 - **Dashboard** (IIA manager, OLA and more) for the others.
 - **Open Source University Alliance** to share code.
- The EWP Network **in production** since December 2018.

What is the EWP Network?

- An **electronic network** that allows real time communication of student data among HEIs. Network architecture, protocols, services etc. are described in **GitHub**, which is publicly available repository of source code.
- **Registry** (DEV, PROD) which gathers in one place information on who is connected, where to find him and what services are offered.
- **Connector** – piece of software which is SIS's agent in the network.
- **API** (service) – method of communication between various software components used to build applications.
- **Client** – EWP functionalities spread over the user interface of the mobility module used by IRO.

Data standards

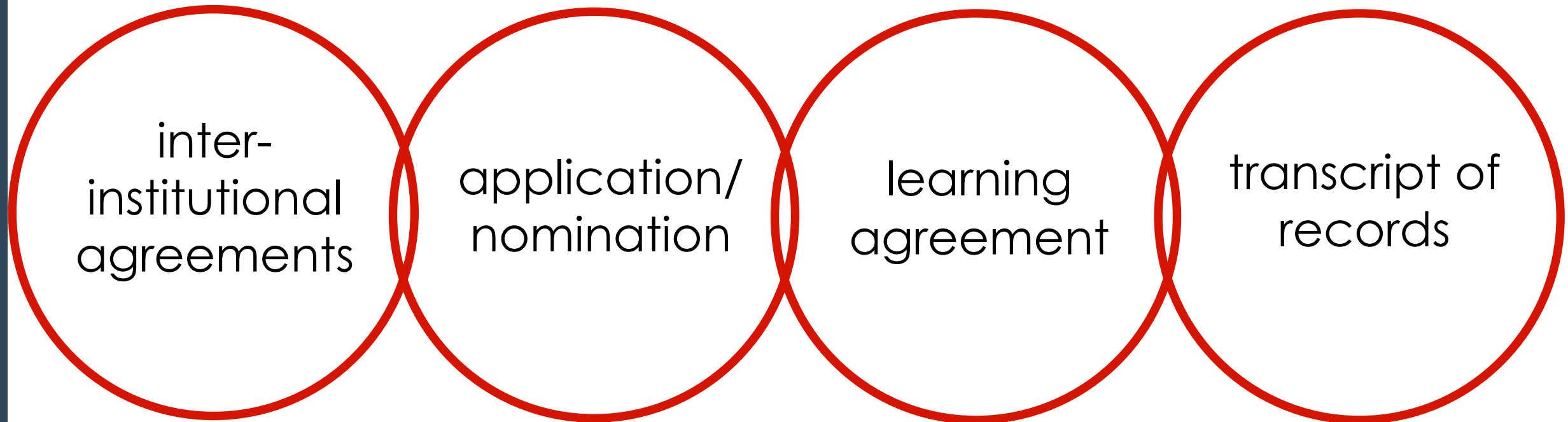
- In the EWP network, systems exchange **structured data**, not documents, over the **secure platform**, not by emails.
- Structured data can be downloaded to the local database – no need to enter data twice.
- **ELMO** format is used to describe content of transcript of records.
- Other commonly accepted standards are used (ISO for countries, languages, SCHAC for identifiers etc.)
- Data formats are specified formally by **XSD schemas** and data records can be validated with **XML validator**.
- EWP team cooperates with other projects on data standards.

The network in practice



Erasmus+

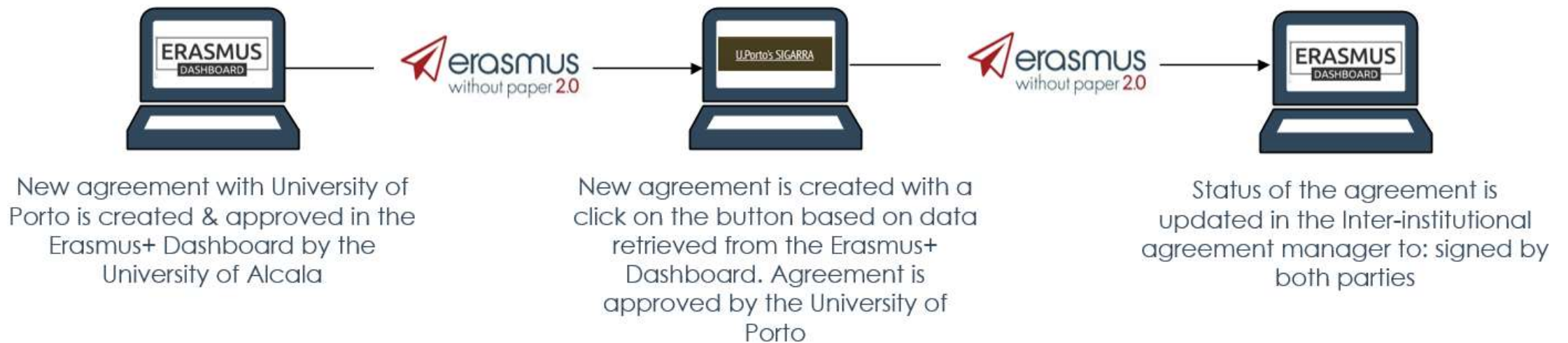
key process overview



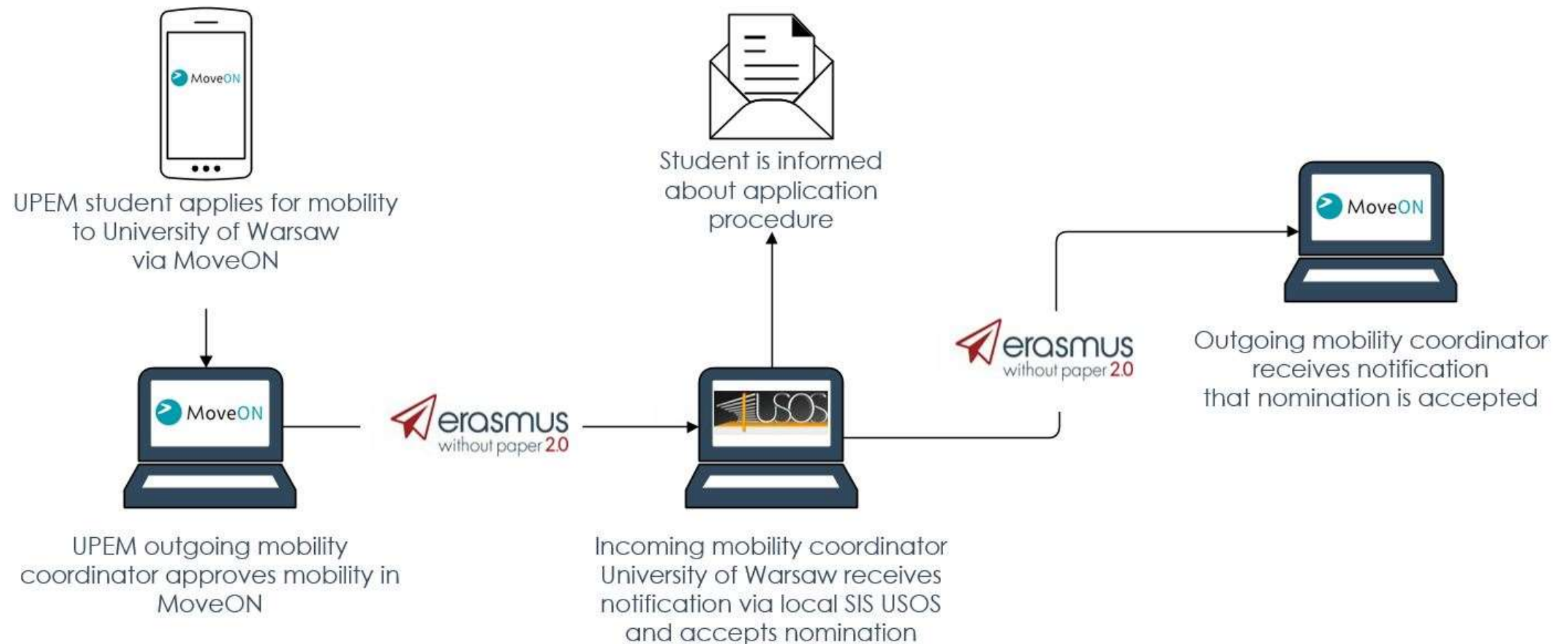
EWP network in practice

- EWP offers many APIs (services):
 - Institutions (address, contact persons, factsheet).
 - Organisational units (faculties, departments, divisions).
 - Courses (exported from course catalogue).
 - Inter-institutional agreements.
 - Outgoing and incoming mobilities.
 - Learning agreements.
 - Transcripts of records.
- Access to **Mobility Tool+** managed by the *Directorate-General Education and Culture Unit (DG EAC)* of the European Commission.
- Modular approach allows future extensions.

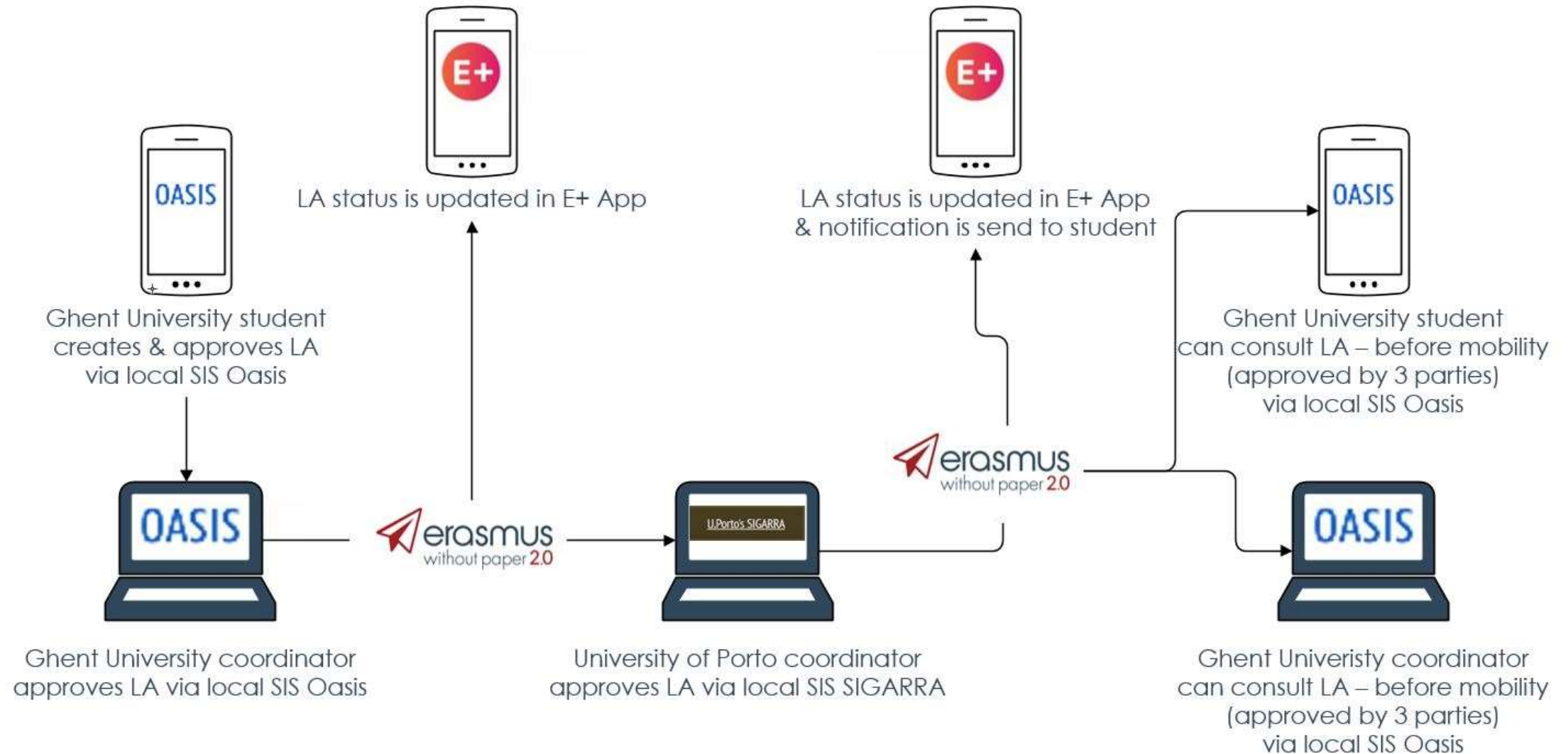
Inter-institutional agreements



Nominations



Learning Agreement



Confirmation of stay



Student arrives at the University of Warsaw and contacts student advisor who enters actual date of arrival in USOS system



Outgoing student advisor from the University of Bremen retrieves arrival date from USOS system



Student departs at the University of Warsaw and contacts student advisor who enters actual date of departure in USOS system



Outgoing student advisor from the University of Bremen retrieves departure date from USOS system

Transcript of records



University of Oslo generates
TOR in FS



Universidad Carlos III de Madrid
can collect the grades and grade
distribution information in SIGMA

Anticipate future needs

- New services can be added at any time and not all have to be implemented.
- EWP does not operate in a vacuum: OLA, EGRACONS, EMREX, ESC, Erasmus+ App, ESMO, eQUATIC, ...
- eIDAS and GDPR needs to be taken into account.
- Roll-out, documentation and training from 2019.
- Global developments to be considered.
- Enhances impact/sustainability.

Current state of EWP

- Network has been officially launched in December 2018.
- DEV and PROD registries are up and running.
- Adherence to the designed security protocol can be checked with automatic tests.
- More and more developers join the DEV network and start testing.
- More and more institutions and APIs are available in the PROD network.



The screenshot shows the EWP Registry Service website. At the top left is the 'erasmus without paper' logo. To its right is the title 'EWP Registry Service' in a large, bold font. Below the title is a subtitle: 'Automated discovery service of APIs related to Higher Education in Europe. Provided and supported by Erasmus Without Paper project.' The main content area has a heading 'At the following URL you will find the XML catalogue which describes all the institutions and APIs exposed by them:' followed by a highlighted box containing the URL 'https://registry.erasmuswithoutpaper.eu/catalogue-v1.xml'. Below this, it says 'This catalogue is continuously refreshed. Read the Architecture document for more information. Also check out the Developers Hub for useful tools and documents.' At the bottom of the main area are three links: 'Manifest Importer Status', 'HEI/API Coverage Matrix', and 'XML Schema Validator', followed by 'EWP Developers Hub'. On the right side, there is a box titled 'Uptime ratios' containing a table of uptime statistics.

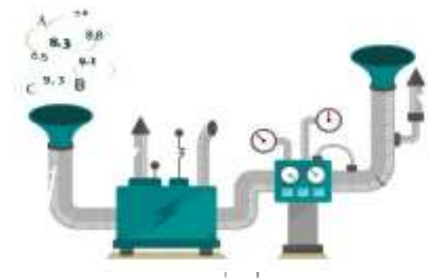
Uptime ratios	
100.00%	24 hours
100.00%	7 days
100.00%	30 days
100.00%	365 days

At the bottom right, there is a 'Contact' link with the email 'info@ewp.edu.pl'.

Current state of EWP

Work in progress:

- Designing MT+ API for reporting mobilities.
 - Authorisation of end users.
 - Draft mobilities, final mobilities.
- Connecting Dashboard (with OLA and IIA manager) to the EWP Network.
- Fine tuning and extending existing APIs (e.g. automatic Egracons grade conversion).
- Automatic tests for all APIs.



EWP in the next programme

The EWP standards will become gradually mandatory from 2021

- ✓ 2021: Inter-institutional agreements and Online learning agreements
- ✓ 2022: Nominations
- ✓ 2023: Transcripts of records
 - ✓ *Roadmap to be maintained provided testing confirms they are fit for purpose!*



How?



Step 1: Digitise all the Erasmus+ procedures

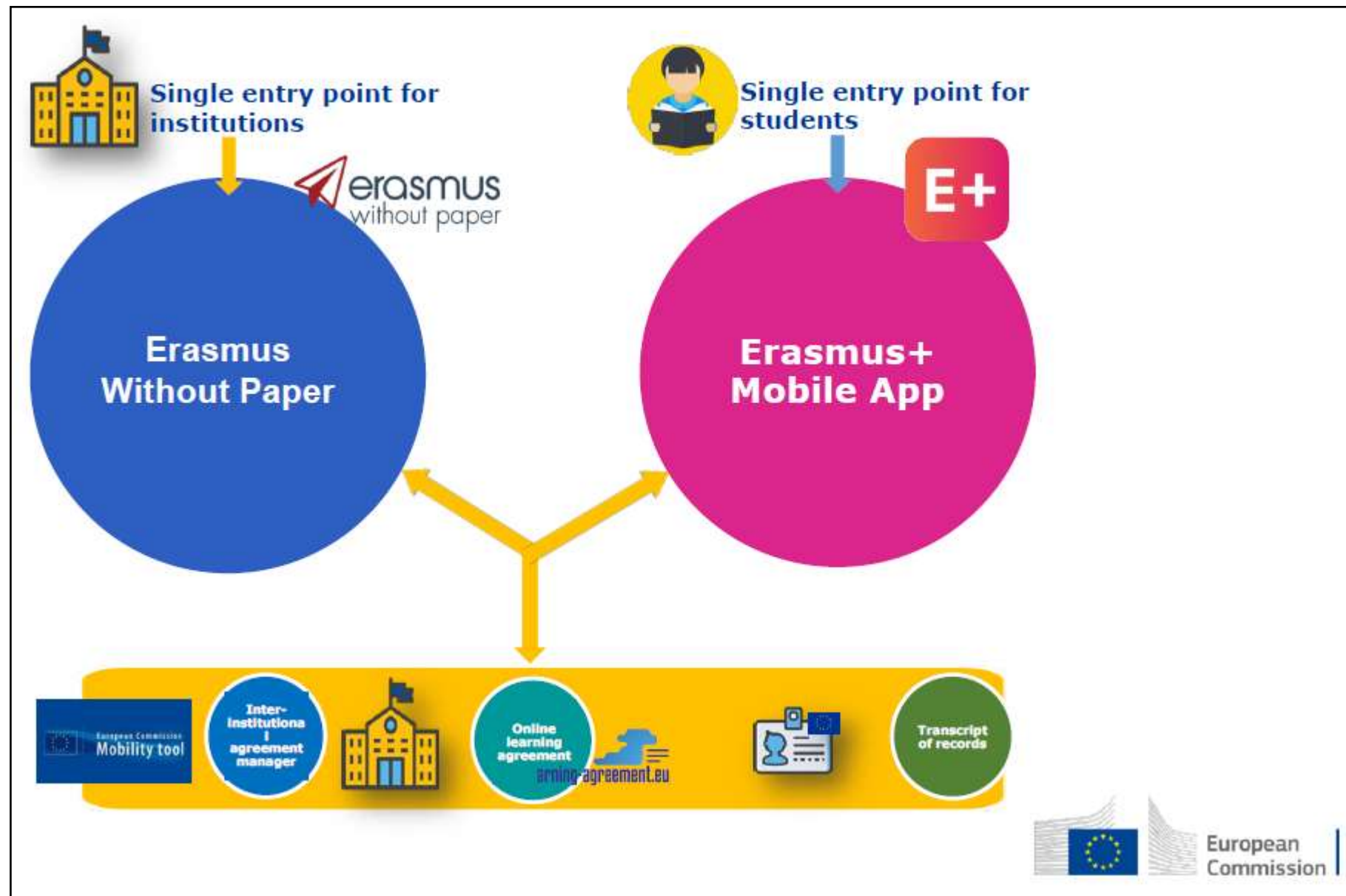
- ✓ *Erasmus Without Paper, Online Learning Agreement, Erasmus+ Mobile App, Inter-institutional Agreement Manager*

Step 2: Integrate a student e-identifier

- ✓ *MyAcademicID (incorporating eIDAS, ESC and EduGain)*

Step 3: Connect all the services into a single online entry point for staff and students

DG EAC webinar „Digitalisation in the future Erasmus+”, 7 March 2019



DG EAC webinar „Digitalisation in the future Erasmus+”, 7 March 2019



Development roadmap

Ready now:

- ✓ ESC tools for card management
- ✓ EWP Network and Dashboard
- ✓ Erasmus+ Mobile App
- ✓ OLA for studies

Ready in 2019:

- ✓ OLA for traineeships
- ✓ Inter-Institutional Agreement Manager
- ✓ Connection between EWP Network and Dashboard
- ✓ Automatic reporting into Mobility Tool+

Ready in 2020-2021:

- ✓ MyAcademicID online student authentication
- ✓ Erasmus+ Mobile App with all functionalities for before, during and after mobility

DG EAC webinar „Digitalisation in the future Erasmus+”, 7 March 2019



It addresses the diversity of needs of every institution

- ✓ If you use an **in-house developed tool** you can connect it to the EWP network
- ✓ If you use a tool **developed by a commercial provider** they can connect to the network
- ✓ If you are currently **not using any tool** to exchange student data you can use the EWP dashboard

DG EAC webinar „Digitalisation in the future Erasmus+”, 7 March 2019

When?

- **2019-2020**
Development and testing phase
- **By 2021**
All functionalities ready for the future Erasmus+ programme
- **By 2025**
Possible roll-out for all mobile students

How to go digital?

What tool is your university using to manage Erasmus+ mobilities?

No Tool



Erasmus Dashboard

3rd party
mobility
software
provider



A number of providers
are implementing EWP
for you

In-house
built
mobility
software



Connect to the EWP
Network

Commercial SIS



No specific IT-tools



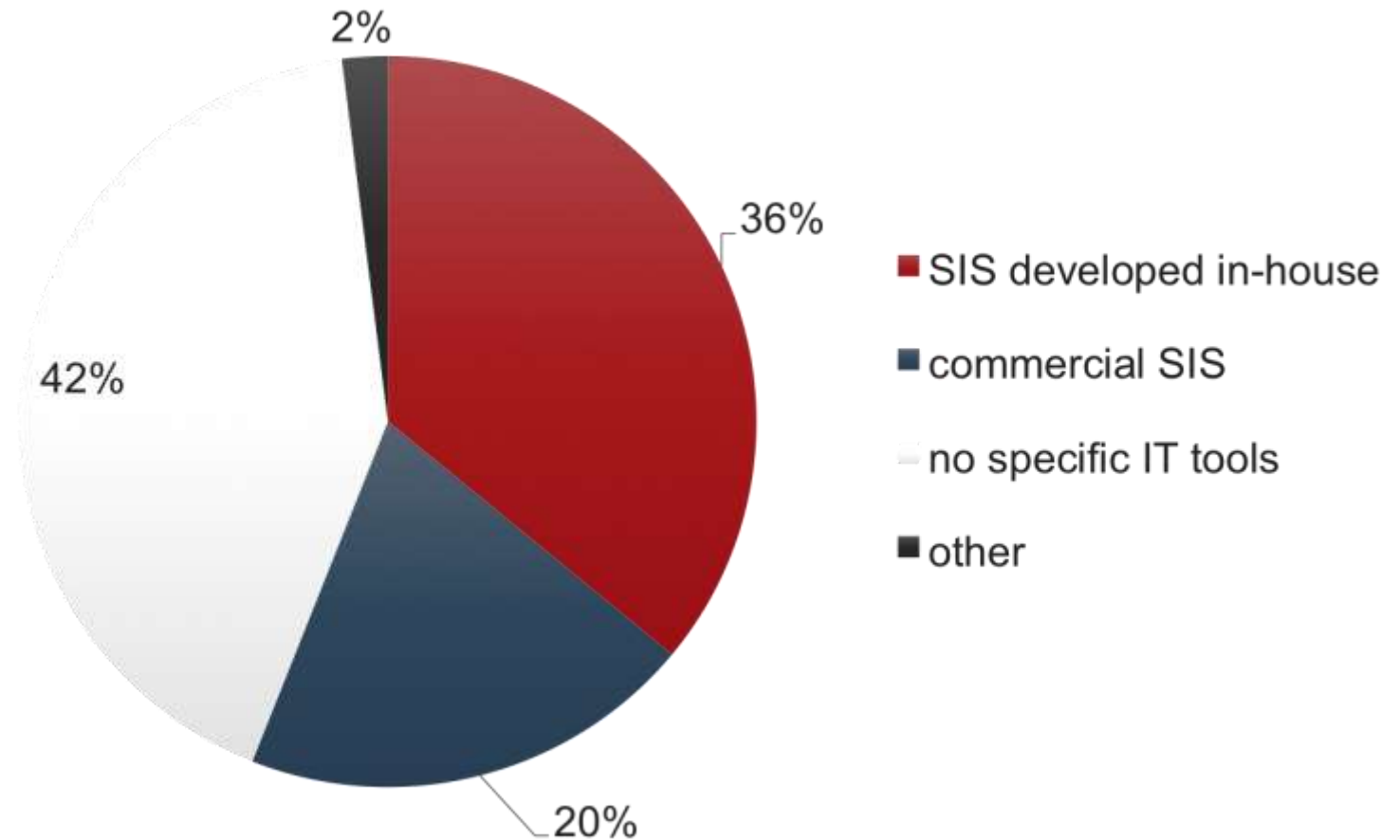
SIS developed for consortium



SIS developed in-house

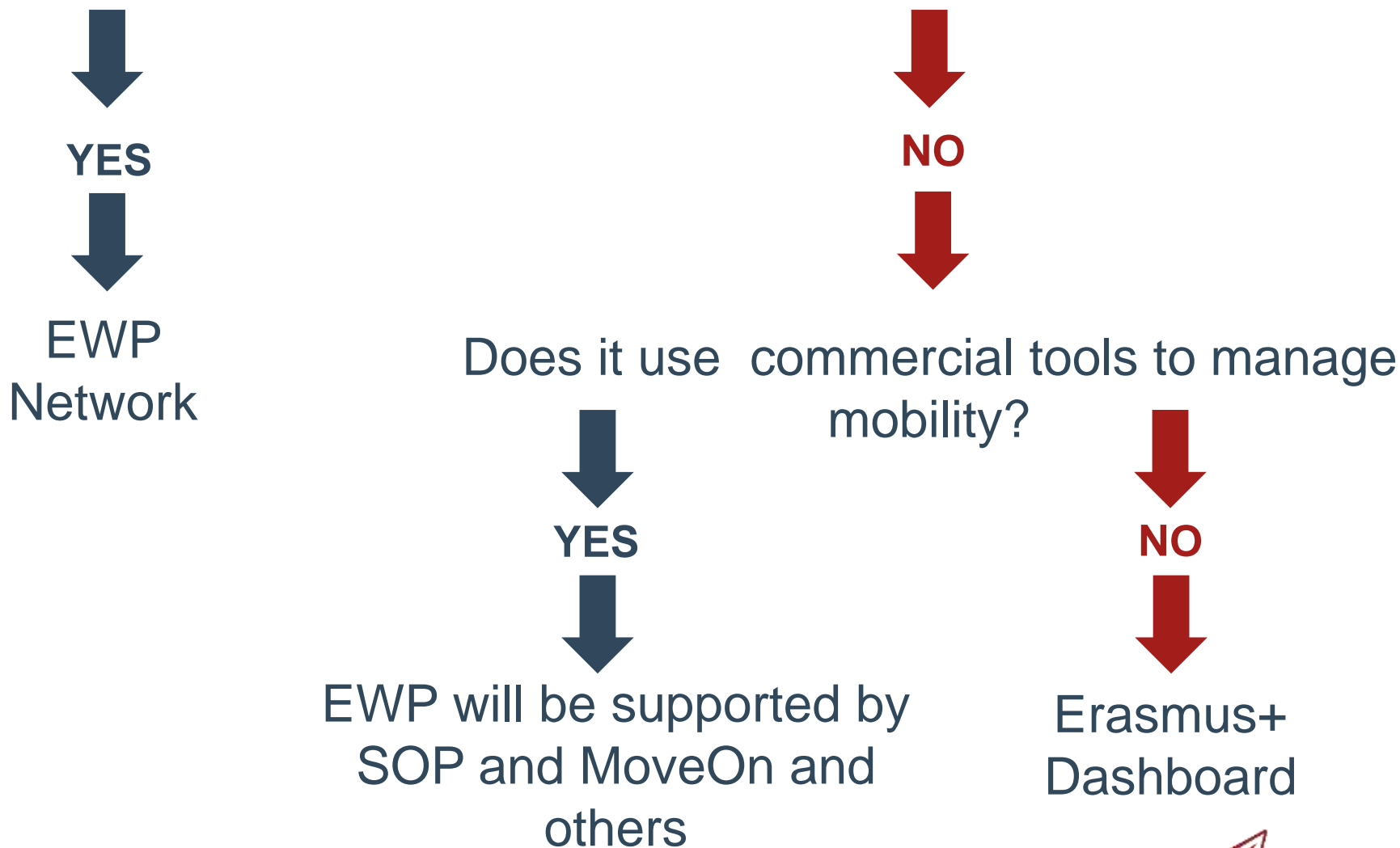


Types of software in use



Mapping of IT infrastructure among ECHE holders

Does your institution have in-house developed IT tools for managing Erasmus mobilities?



Erasmus+ Dashboard

- The Erasmus+ Dashboard is a tool designed to support HEIs with the administration of mobility. It allows to manage incoming and outgoing students, sign and review their Online Learning Agreements as well as communicate with students and partner institutions. HEIs with no specific tool can use this to exchange data with their partner institutions.
- Inter-institutional Agreement Manager.
- Online Learning Agreement.

<https://www.erasmus-dashboard.eu/intro>

Open Source University Alliance (OSUA)

Will be presented later ...

EWP Competence Centre

- Delivers useful resources, tutorial videos, presentations and other tools and material to support developers with the transition from a paper based work flow to manage Erasmus mobilities to a completely digital workflow.
- Technical documentation.
- Training toolkit.
- Practical examples.

<https://cc.erasmuswithoutpaper.eu/>

Some basic steps if you want to connect your SIS to EWP

- Get ready to connect, involve your IT team and the leadership of the institution.
- Read developers webpage (<http://developers.erasmuswithoutpaper.eu>).
- Implement one or more APIs (Echo and Discovery API).
- Go to GitHub and ask questions.
- Contact technical team and expose your manifest file.
- Test the connection with other nodes.
- Join discussions about streamlining Erasmus+.

Summary – EWP characteristics

- **Ambition:** enable interoperability between +2000 in-house systems to exchange data (instead of documents) electronically and securely.
- **Impact:** digitize all key steps of the management of Erasmus+ exchanges (and other programmes).
- **Scale:** interconnect all ECHE holders.
- **Final goal:** grow into a common platform for all internationalization processes.
- **Timing:** key infrastructure needs to be ready before the next Erasmus programme (early 2021).

Conclusions

- EWP is just the beginning of something far bigger.
- EU encourages cooperation of digitization projects for higher education (EWP, ESC, ESMO, EMREX, MyAcademicId etc.).
- Projects need to cooperate and adhere to common standards.
- Student data portability and digitization will not stop in Europe, but needs to be worked out on a global scale .

If you want to learn more ...

Parallel session 06:

OpenX & Interoperability

Wednesday 10:45 – 11:45

Erasmus Without Paper Network — from development to production

Janina Mincer-Daszkiewicz

Paper #: 15 [View extended abstract](#)

Subtrack: Standards & European Interoperability

Type: Technological



helping universities succeed



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UNIVERSIDAD DE MÁLAGA



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- EWP project is co-funded by the Erasmus+ Programme of the European Union.
- In Poland it is also co-financed by the Polish Ministry of Science and Higher Education from the funds allocated in the years 2018-2019 for science,

<http://erasmuswithoutpaper.eu>

<http://developers.erasmuswithoutpaper.eu>

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

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

<https://twitter.com/hashtag/ErasmusWithoutPaper>

<https://www.erasmuswithoutpaper.eu/launch-conference>

