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# Supporting Student Mobility with EMREX — a field trial on exchanging student achievement records



Uddannelses- og  
Forskningsministeriet



Swedish Council for  
Higher Education



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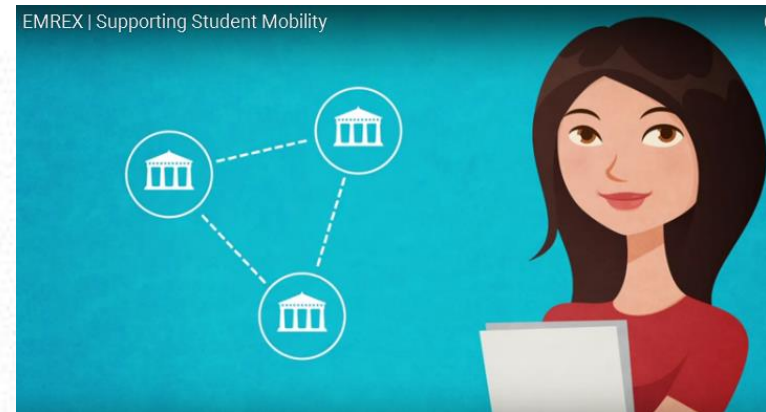
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## EMREX animation video

- Purpose is to briefly explain to students (and administrators) what EMREX is all about
- EMREX video -> [www.emrex.eu](http://www.emrex.eu)

# Agenda

- What is EMREX?
- Demo
- Field trial
- Evaluation
- What happens next?



**“Field trial on the impact of enabling easy mobility on recognition of external studies”**

# Facts about the project



- EU Erasmus+ project (2015-2017)
- Ministry level initiative
- Increase student mobility (20%)
- Recognition of previous studies
- Electronic and secure transfer of student data between HEIs
- Field trial and evaluation of impact
- Denmark, Finland, Italy, Norway, Poland, Sweden





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# Participants in EMREX

- Steering group with Ministry representatives from four countries
- CSC-IT Center for Science (Finland)
- Ladok Consortium, Umeå University and Swedish Council for Higher Education (Sweden)
- FSAT, University of Oslo (Norway)
- IT department of the Ministry of Higher Education and Science (Denmark)
- University of Warsaw (Poland)
- KION (Italy)

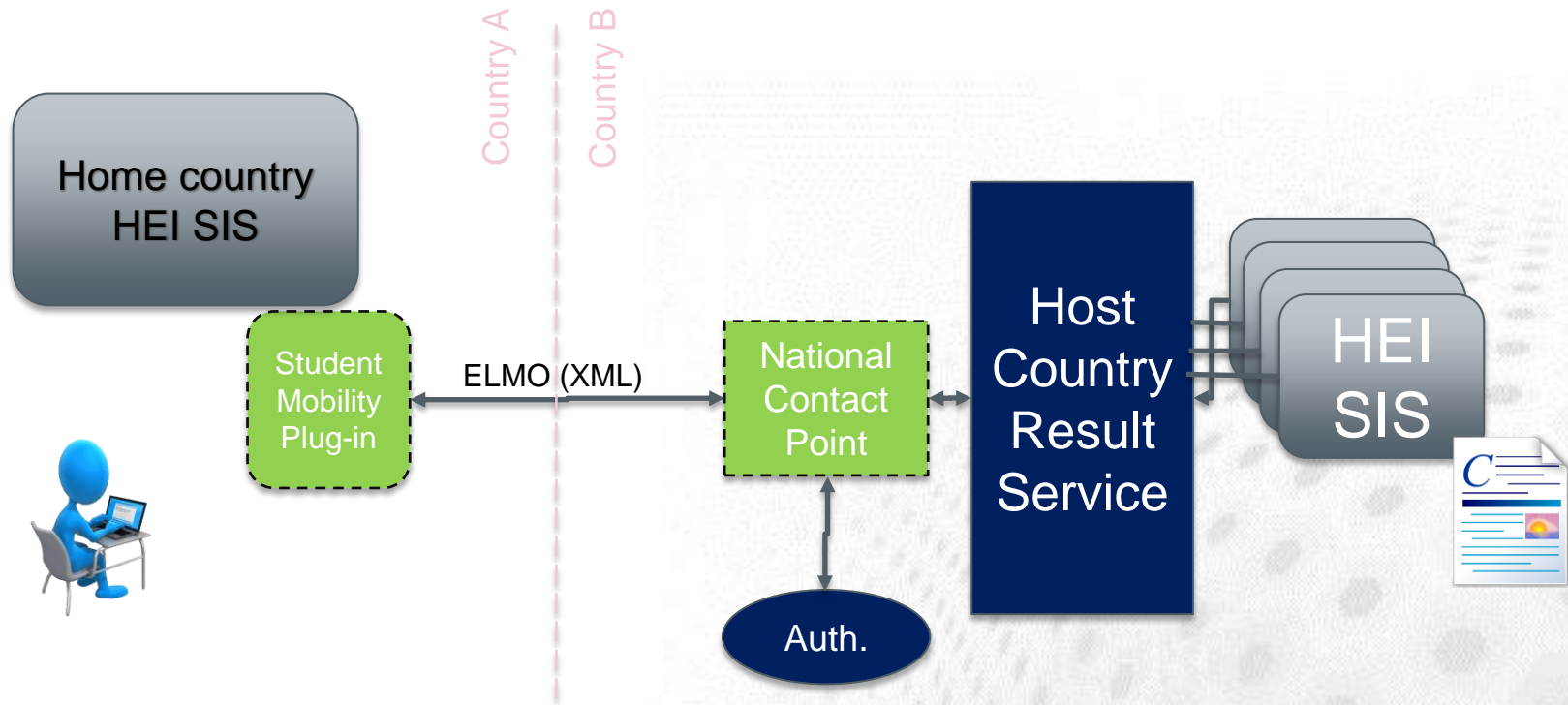


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## Timeline



# Supporting student mobility



Student returning home can retrieve his achievement data electronically



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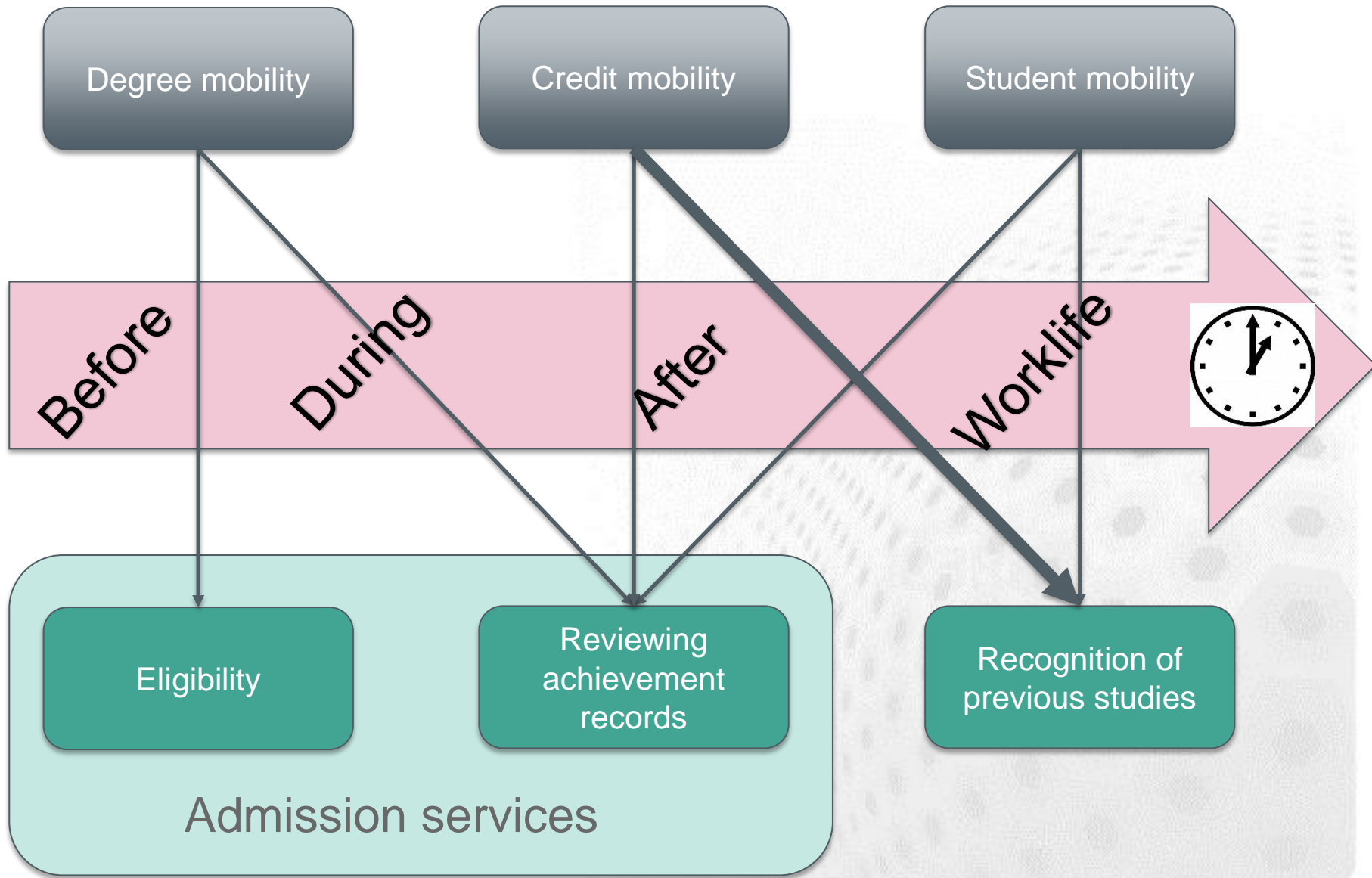
## Benefits for higher education

- **Fast and easy-to-use tool for fetching achievement records**
- Significantly increases the availability, quality and recognition of degrees and credits
- Reduces the risk of overlapping studies
- Diminishes the risk of forged transcripts and/or certificates
- Reduces the administrative workload, saving time and money
- Promotes student mobility

Students used to google – demand fast and online services



# Different types of mobility

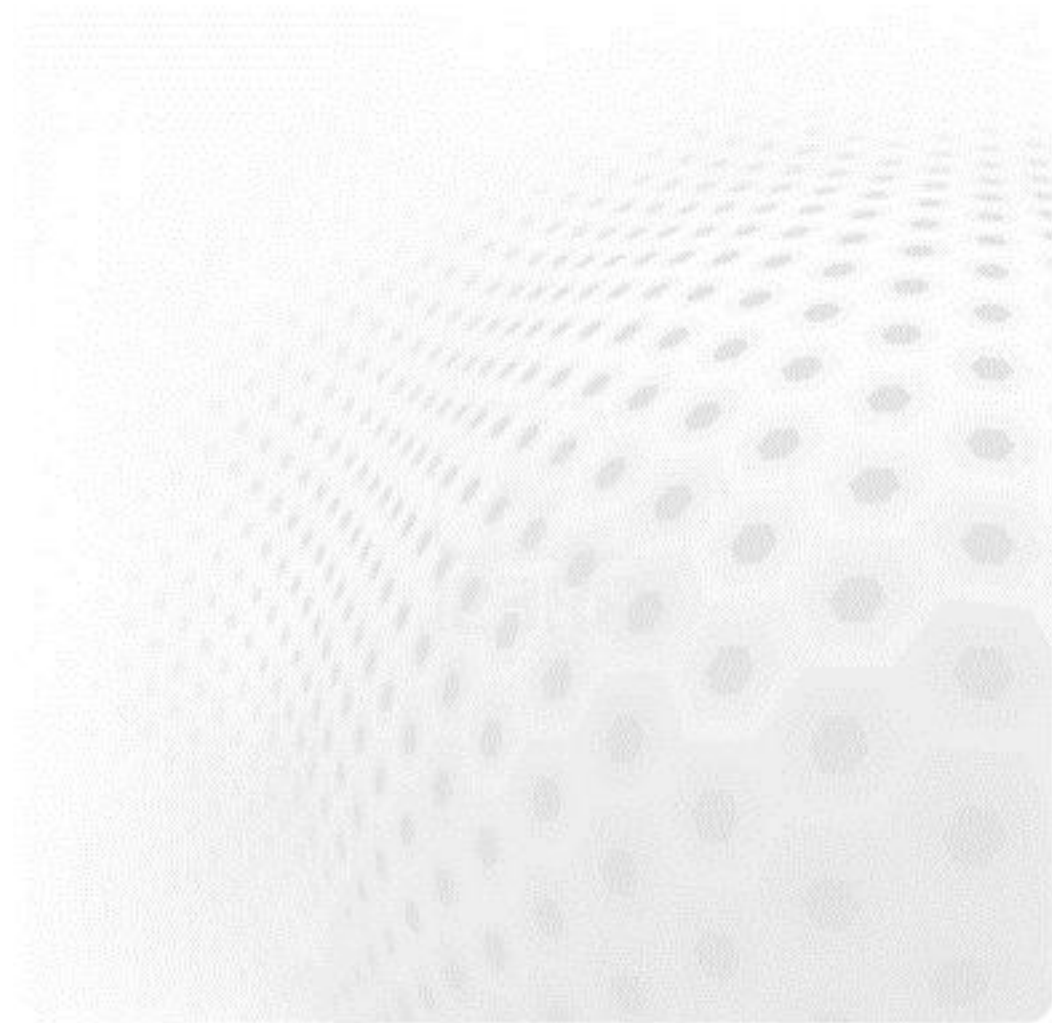




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# Demo

➡ ....if it works....





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## Live Field trial 2016-2017

- ➊ Has started, 50+ unique users have used EMREX
- ➋ Norway, Sweden, Finland, Denmark (incoming) and Italy (Verona and Siena) participating
- ➌ Giving support to students across borders a challenge! A “one way in” for questions thru [emrex.eu](mailto:emrex.eu) with support email.
- ➍ Personal contact with co-ordinators and students through IRO is recommended.
- ➎ Feedback from students, administrators and coordinators key to development of the EMREX solution!





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# First feedback from student testing

- “Very easy to use!”
- “I had a hard time finding my institution at the receiving institution.” (about Swedish NCP)
- “Wow, can I find results from all European countries?”



# Evaluation methodology and results

- Opinion of DG EAC (webinar on 2016-06-02)
  - ... researchers' role in the project is to give **reliable, sound evidence** for public authorities and practitioners ...
- **Research based on the data from administrative registers**
  - measure the impact of EMREX on recognition rate – number of grades (ECTS credits) recognized and its potential change over time
  - data prepared by the universities for the Mobility Tool could not be reused
  - data in registries are often not complete and not reliable
  - statistics on the number of outgoing and incoming students for each HEI in partner countries were collected and are the most trusted data
  - methodology can be reused on other (better) data sources
  - recommendations prepared for the partners



# Evaluation methodology and results

## ➊ Qualitative research

- Before and after introduction of EMREX.
- Based on interviews with administrative staff (IRO, ERASMUS coordinators).
- Positive response to digital system for academic records' transfer.
- Could significantly speed up the recognition process.
- Students' involvement will not be a problem.
- Scepticism on short-term impact on students mobility.

# Evaluation methodology and results

## 🔴 Surveys

- EMREX evaluation, survey as part of the system
  - 🔵 EMREX users are asked to rate their experience
  - 🔵 “Very quick and straightforward to use”
  - 🔵 „The courses etcetera are all in Swedish”
  - 🔵 “I would like to see some extra information on courses”
- Survey regarding the recognition process
  - 🔵 Over 750 completed questionnaires so far
  - 🔵 Only 47% students got their transcripts before leaving for home
  - 🔵 Responsibility for transcript delivery – student in 46% cases
  - 🔵 11% transcripts have not been delivered at all
  - 🔵 Average # of earned credits 31,51; recognised credits 29,21%
  - 🔵 Fast and reliable service most important

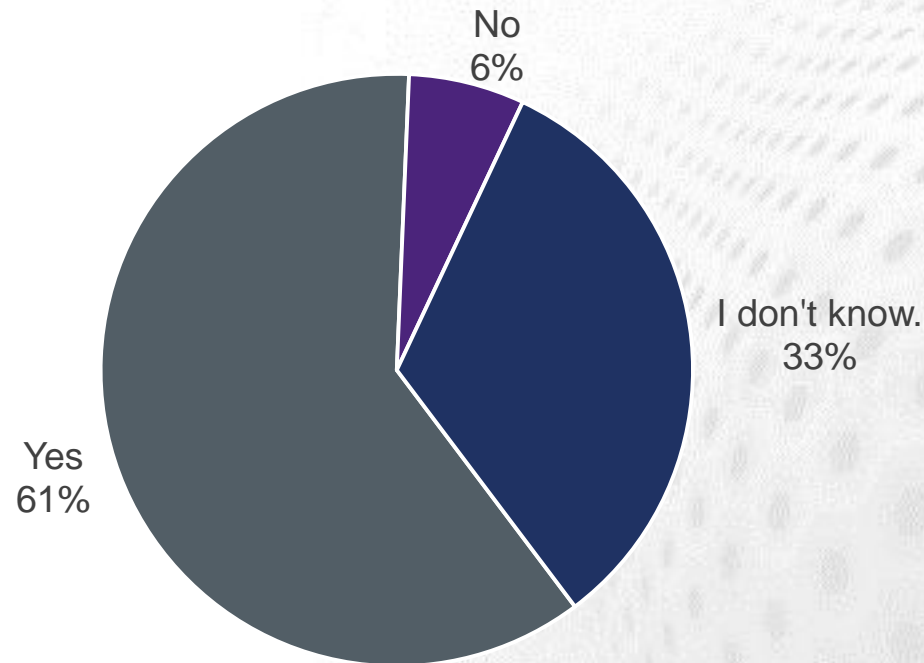




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# Willingness to use EMREX

*EMREX is the solution for electronic transfer of student records between higher education institutions in Europe. Students can use online tool to transfer their records from their host institution to their home institution. If EMREX was available for you, would you be willing to use it?*



# Technical evaluation

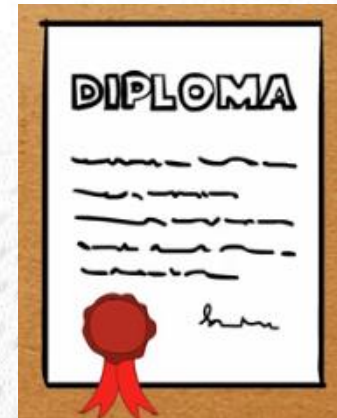
- Common data format and solution
  - EMREX-ELMO ver. 1.1 posted on GitHub
  - Example NCP/SMP on GitHub
- Some technical aspects of the project (data format, data compliance with XSD, system architecture) are evaluated as the system is developed
- General software components will be evaluated at the final stage of the project
- Possible issues
  - Software reuse (open source)
  - Scalability (registry – one central component)
  - Reusing the same format in other European projects)

Popular repositories	
 <a href="#">elmo-schemas</a>	ELMO Schemas
 <a href="#">emrex-client</a>	An example of an EMREX Client
 <a href="#">ncp-mockup</a>	A mockup of an NCP
 <a href="#">SMP</a>	Student mobility plugin

# Future – other scenarios

## ● Other use scenarios – EMREX a building block

- Internal national mobility
- Admission to educational institutions
- Recruitment for jobs
- Validation of degrees and diplomas
- Informal learning



## ● Further steps

- Expand to other countries
- More automatization of recognition, admission, recruitment, certification etc.

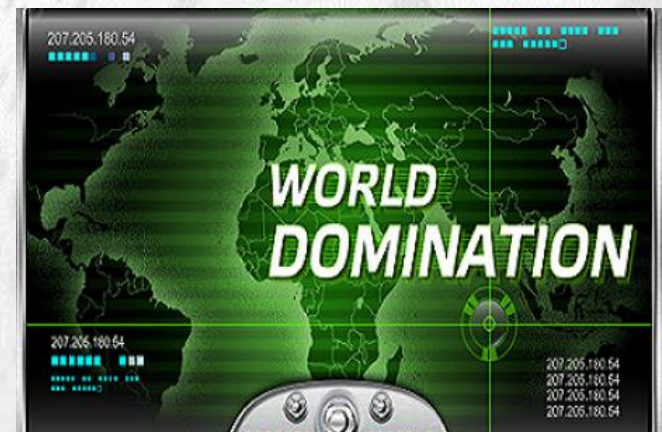
## ● Issues to be worked out in a broader perspective

- Long-lived authentication services for students leaving academia
- Common eID for EU



## And after the project?

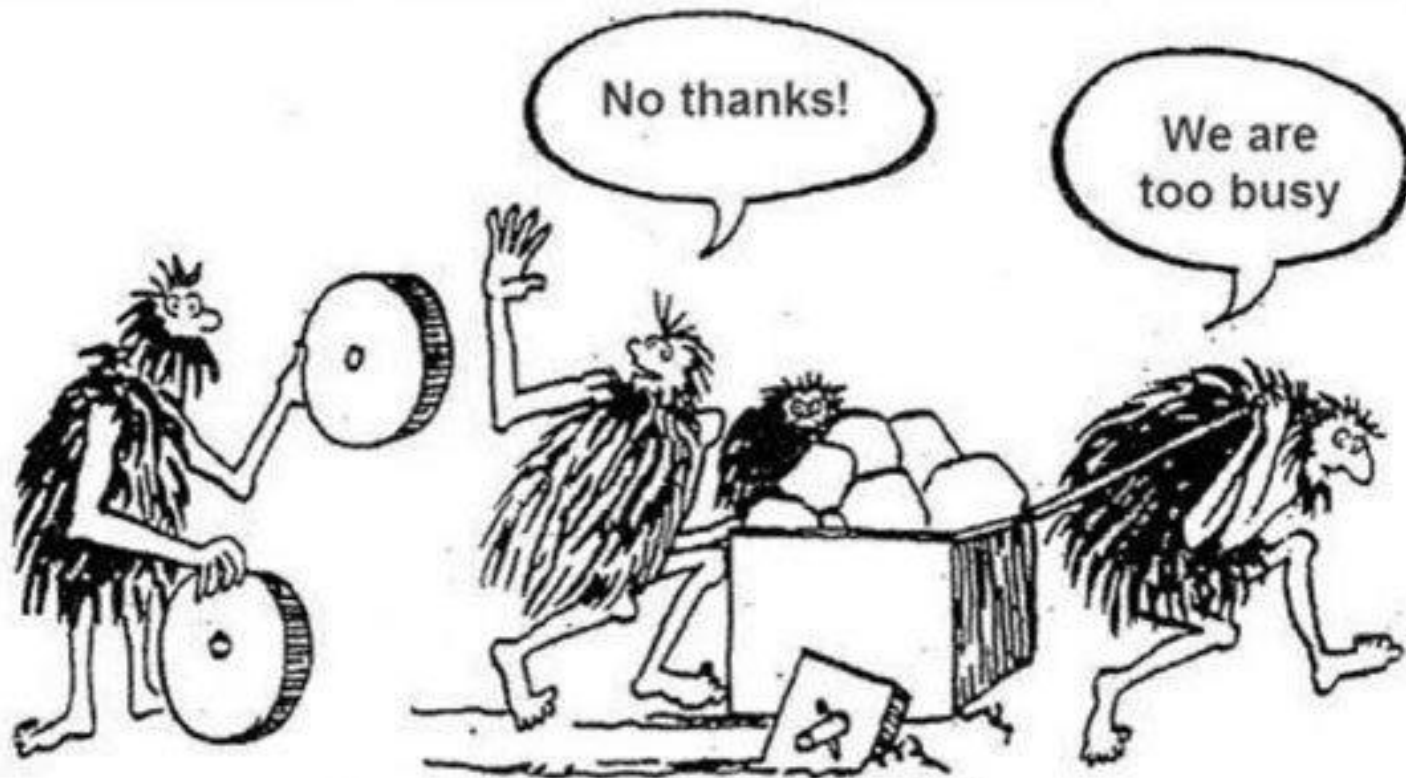
- EMREX components available already today
  - Open source, no licencing costs, in GitHub
- Needed: European organization responsible for automatization of administration processes behind mobility
- Co-operation with other projects (e.g. ERASMUS Without Paper, On-line Learning Agreement)
- Building block for new services (automatic recognition, admission, recruitment, etc)
- Scaling up to the whole of EU and beyond !!



# Additional information

- EMREX website: [www.emrex.eu](http://www.emrex.eu)
- EMREX-info mailing list, e.g. monthly reports
- GitHub: <https://github.com/emrex-eu/>
- Survey for mobile students on recognition  
<https://ankieter.mimuw.edu.pl/en/surveys/81/>
- EUNIS pre-conference workshop „*Informal evangelist meeting on paperless student mobility*”  
<https://www.auth.gr/en/node/20219>

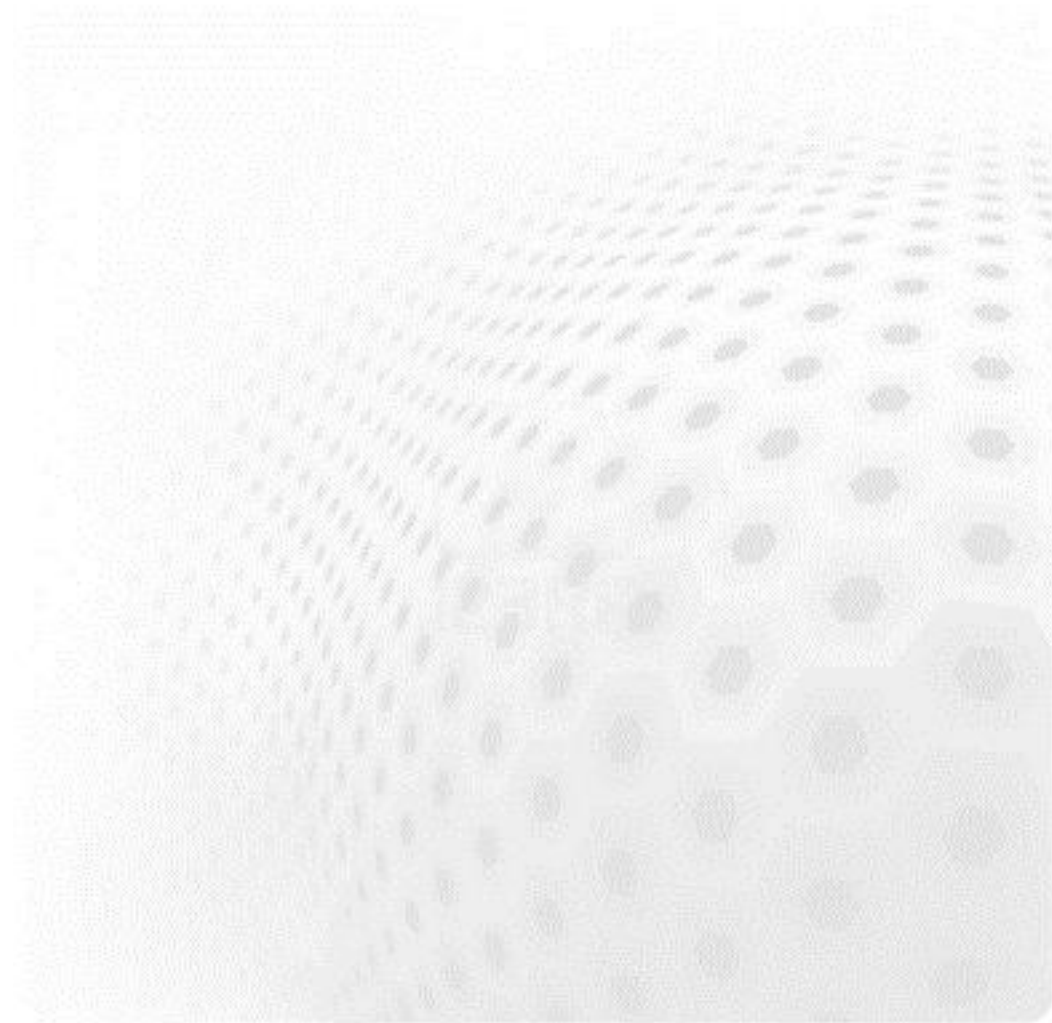
# Questions?





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# Backup





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# Logging in to home SMP



## Haka Test-Idp login page

**Username**

**Password**

☐ Clear prior granting of permission  
for release of your information to this  
service.

Login

**Login to EMREXtest SMP**

Service: **EMREXtest SMP**

Description: **EMREX testserver SMP**

Privacy Policy: **Privacy Policy Service**





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# Home SMP – select country



## Supporting Student Mobility (EMREX)







### Hi and welcome to Emrex!

Welcome! With this service you can retrieve your achievement records from studies at another university or college. Importing your records is a quick and easy process.

1. Select the country from which you want to retrieve your achievement records
2. Use the credentials from the host university where you studied to log into the system where your results are stored.  
-- You will be able to import results from all the universities you studied at in that country (if part of EMREX)
3. Select the achievement records you want to import
4. Review and confirm the selection. The records will be sent to your home university and you will be sent a copy if you'd like.
5. Afterwards you will be asked to answer a few questions about the tool to help us develop it further.

### Choose Your Exchange Country:

Select	[Test] Finland	
Select	[Test] Italy	
Select	[Test] Norway	
Select	[Test] Poland	
Select	[Test] Sweden	

So let's get started by selecting a country!





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## Host NCP – host login

# EMREX test-IdP

Login to the NCP using the buttons below.

User name

Password

Login

Kaisa K



# Host NCP – select results



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Emrex - Swedish National Contact Point

På Svenska:

## Kaisa Keränen 1966-07-18

1. Select courses 2. Confirm selection 3. Back to home university

## Select courses to import

☒ Bachelor's Programme in Real Estate and Finance - 180 credits | TFOFK | Ict services, Umeå

Next

Title	Credits	Code	Grade	Date
<input checked="" type="checkbox"/> ▶ Introduction to Real Estate and Finance	1.5	AI1124	P	2009-08-17
<input checked="" type="checkbox"/> ▶ Introduction to the Planning and Building Process in Real Estate and Finance	7.5	AI1122	C	2009-12-17
<input checked="" type="checkbox"/> ▶ Introduction to Swedish Law, Basic Course	7.5	AI1510	E	2010-03-09
<input checked="" type="checkbox"/> ▶ Introduction to Swedish Law, Continuation Course	7.5	AI1511	E	2010-03-17
<input checked="" type="checkbox"/> ▶ Economics	7.5	AI1107	D	2010-05-26
<input checked="" type="checkbox"/> ▶ Organization and Management	7.5	AI1123	C	2010-05-31
<input checked="" type="checkbox"/> ▶ Database Technology and Information systems	7.5	DD1370	E	2010-05-31
<input checked="" type="checkbox"/> ▶ Basic Statistics and Probability Theory for Economists	6.0	SF1902	E	2010-06-09
<input checked="" type="checkbox"/> ▶ Investment Analysis	7.5	AI1108	E	2010-10-18
<input checked="" type="checkbox"/> ▶ Fundamentals of Residential Real Estate Finance	7.5	AI1144	D	2010-10-20
<input checked="" type="checkbox"/> ▶ Planning, Building and Environmental Law for Real Estate and Finance	7.5	AI1513	E	2010-12-15
<input checked="" type="checkbox"/> ▶ Real Estate Management I	7.5	AI1143	D	2011-01-24



# Host NCP – confirm



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Emrex - Swedish National Contact Point

På Svenska:

## Kaisa Keränen 1966-07-18

1. Select courses 2. Confirm selection 3. Back to home university

## Review and approve your selected courses

Review your selected courses below. If something is incorrect, you can go back to previous steps and change it.

**Bachelor's Programme in Real Estate and Finance - 180 credits | TFOFK | Ict services, Umeå**

Title	Credits	Code	Grade	Date
▶ Introduction to Real Estate and Finance	1.5	AI1124	P	2009-08-17
▶ Introduction to the Planning and Building Process in Real Estate and Finance	7.5	AI1122	C	2009-12-17
▶ Economics	7.5	AI1107	D	2010-05-26

Back

[Cancel without import](#)

Approve and import





# Home SMP – review import



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Supporting Student Mobility (EMREX)



## Review and approve import

You have selected to import 11 courses.

Due to mismatch between your birthday information from Haka and in course report your identity is not verified.

You will still be able to import your results but not use them until they have been reviewed.

Please review your selection below and approve it to import the courses to your home university results.

[Import courses](#)

[Cancel](#)

If you'd like a copy of the imported results, [please open and save the PDF](#) to your own device.

### ICT Services, Umeå ()

ID	Code	Title	Part of	Level	Type	Credits	Results	Date
TFOFK	TFOFK	Bachelor's Programme in Real Estate and Finance	-		Module			
AI1124	AI1124	Introduction to Real Estate and Finance	TFOFK	Bachelor	Course	1.5 ects	P	2009-08-17
NÄR1	NÄR1	Presence	AI1124		Class		P	2009-08-17
AI1122	AI1122	Introduction to the Planning and Building Process in Real Estate and Finance	TFOFK	Bachelor	Course	7.5 ects	C	2009-12-17
TEN1	TEN1	Moment	AI1122		Class		P	2009-09-23
TEN2	TEN2	Moment	AI1122		Class		P	2009-10-22
TEN3	TEN3	Moment	AI1122		Class		P	2009-12-15
TEN4	TEN4	Final Examination	AI1122		Class		C	2009-12-17
ÖVN1	ÖVN1	Exercises	AI1122		Class		P	2009-12-15
AI1107	AI1107	Economics	TFOFK	Bachelor	Course	7.5 ects	D	2010-05-26
PROA	PROA	Project	AI1107		Class		P	2010-03-15
TENA	TENA	Examination	AI1107		Class		D	2010-05-26





# Questionnaire



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## EMREX - user experience evaluation

[English] [Norsk] [Svenska] [Suomi] [Dansk] [Polski]

✓ Now we would like to ask your opinion about EMREX. Please fill in the questionnaire below. This should take no more than 3 minutes of your time. Your responses are very important and will help us improve our software. Your answers will be completely anonymous.

✓ Please rate how much you agree or disagree with the following statements:

	1 - Strongly disagree	2 - Disagree	3 - Neutral	4 - Agree	5 - Strongly agree	No opinion
EMREX is easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The instructions are clear and understandable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EMREX works fast.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was able to import all relevant data (courses, grades) using EMREX.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The EMREX interface is visually appealing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with how EMREX works.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend EMREX to other mobile students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

✓ Do you have any other comments about EMREX?



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## EMREX prehistory

- Collaboration between the Nordic countries (Finland, Sweden, Norway and Denmark) began more than 10 years ago.
- A couple of earlier attempts at creating a solution for electronic transfer
- (EMREX) Prestudy done by Nordforum and afterwards decision to start a common project
- Preproposal submitted to EACEA in May 2014
- Project started 1.1.2015