



Ministerie van Onderwijs, Cultuur en
Wetenschap



Studentmobiliteit met EMREX

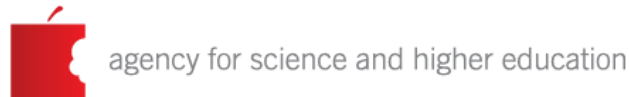
Dienst Uitvoering Onderwijs (DUO)

Jan Joost Norder
Gerald Groot Roessink
Pieter Zeeuw

25 januari 2022



"Enabling digitalization of any process in need of assessment data - before, during and after studies"

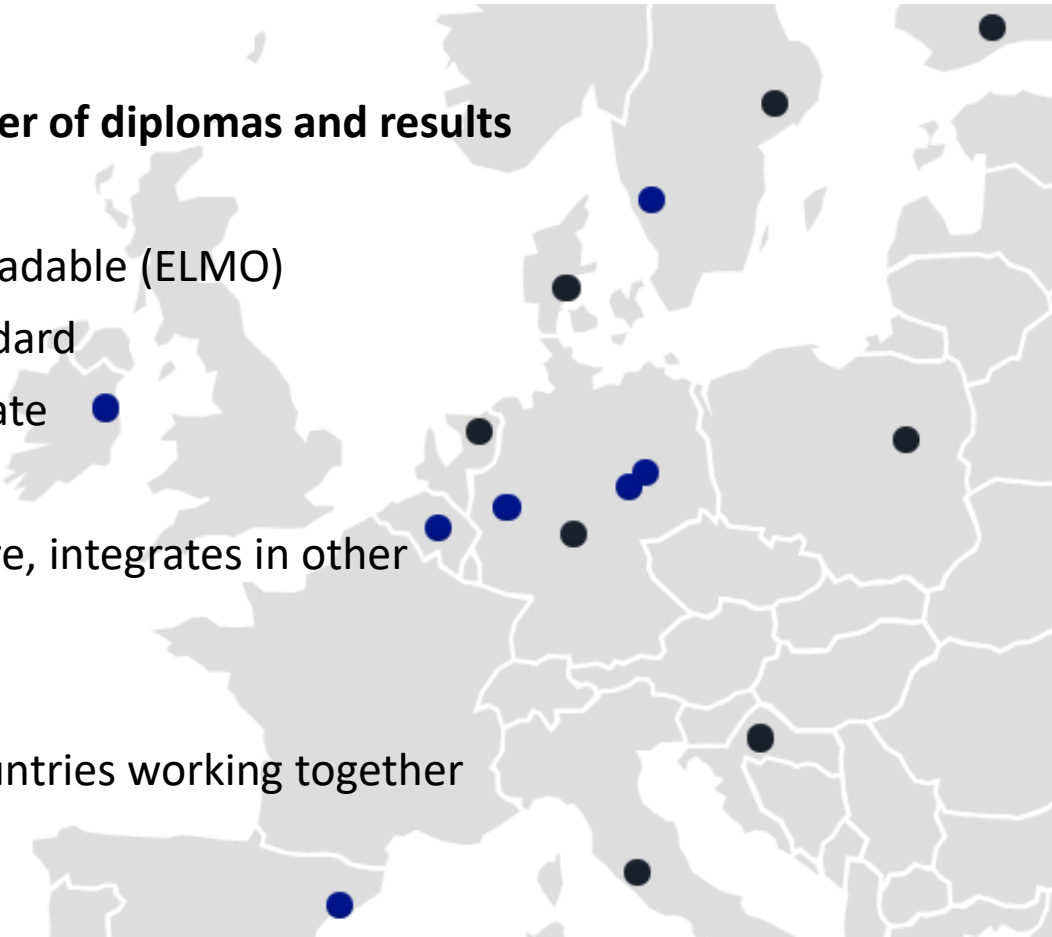


- Goes beyond Erasmus+ mobility
- student mobility programs
 - cooperative arrangements e.g. joint degrees, double degrees
 - admission services
 - recruitment solutions
 - credential evaluation
 - authorization

Emrex - Algemeen

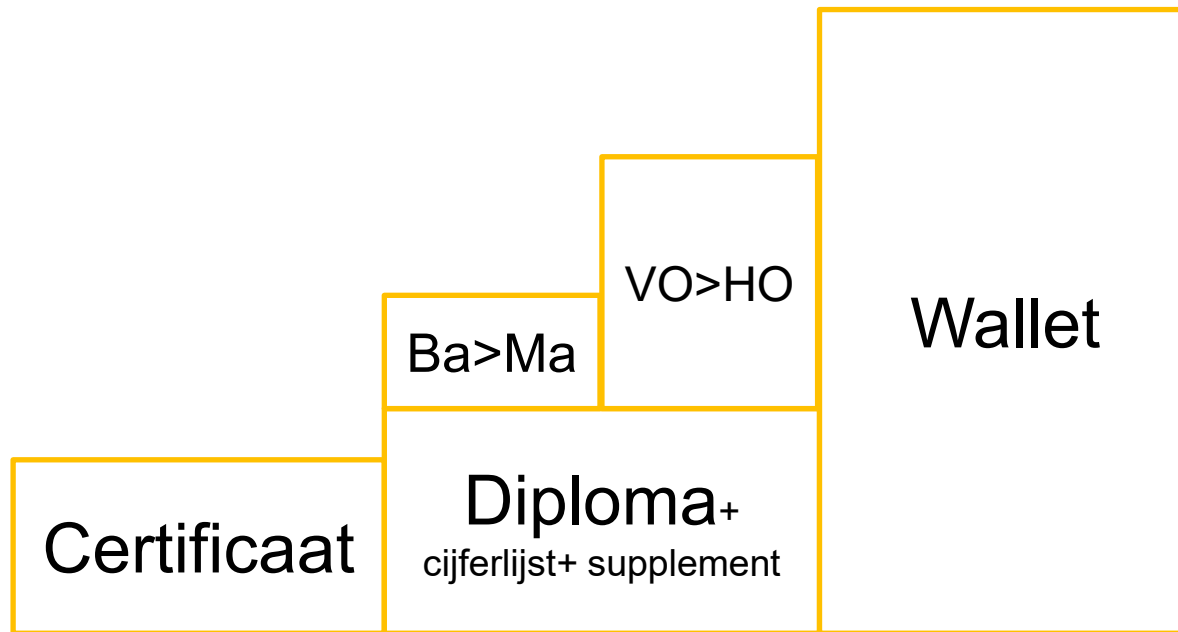


- **EU Erasmus project: 2015-2017**
- **Safe, secure and fast electronic transfer of diplomas and results**
- **User-driven approach (GDPR)**
- **Standard data format** and machine readable (ELMO)
- **ELMO** derived from ISO and CEN-standard
- **Open network:** everyone can participate
- **Open Source code** (github)
- **Building block:** uses local infrastructure, integrates in other services and processes
- Makes digitalization possible (xml)
- EMREX User Group: consortium of countries working together



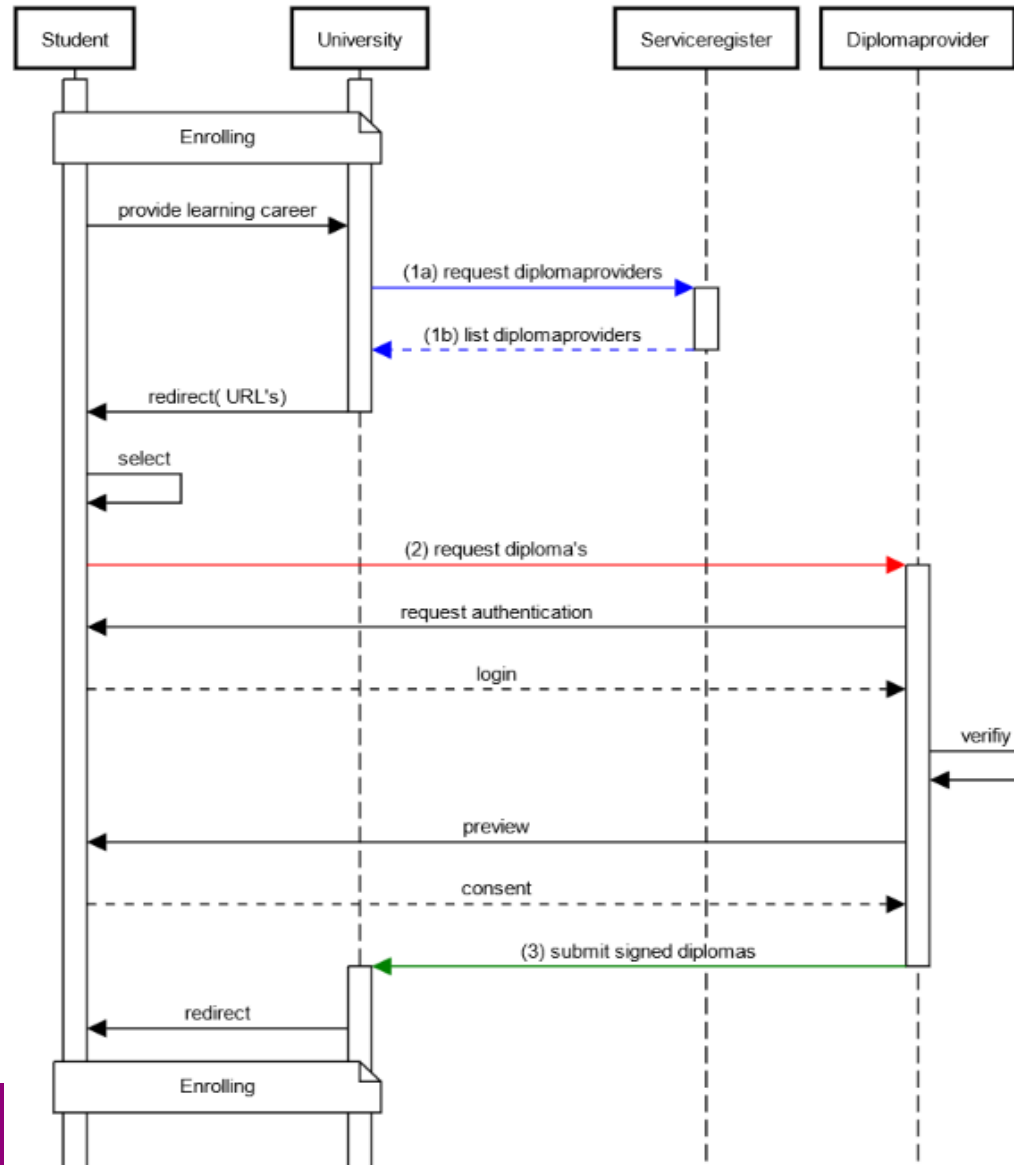


Toepassingsmogelijkheden Emrex



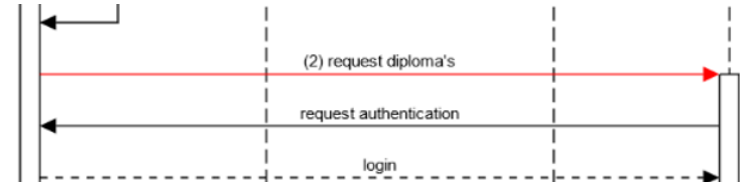


Sequence diagram Emrex





EMP



- POST request

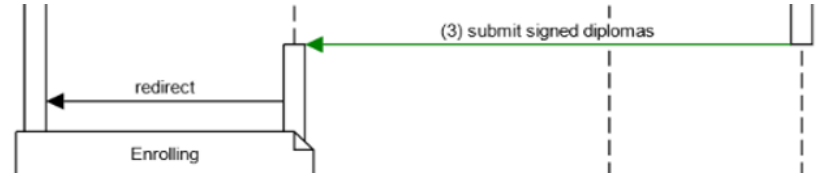
```
<form action="https://app.vitnemalsportalen.no/vp/init" method="POST">  
  <input type="hidden" name="sessionId" value="mysessionid12345">  
  <input type="hidden" name="returnUrl" value="https://postback.url">  
</form>
```

- sessionId: max 32 karakters
- returnUrl: URL waar diplomadata naar toe moet



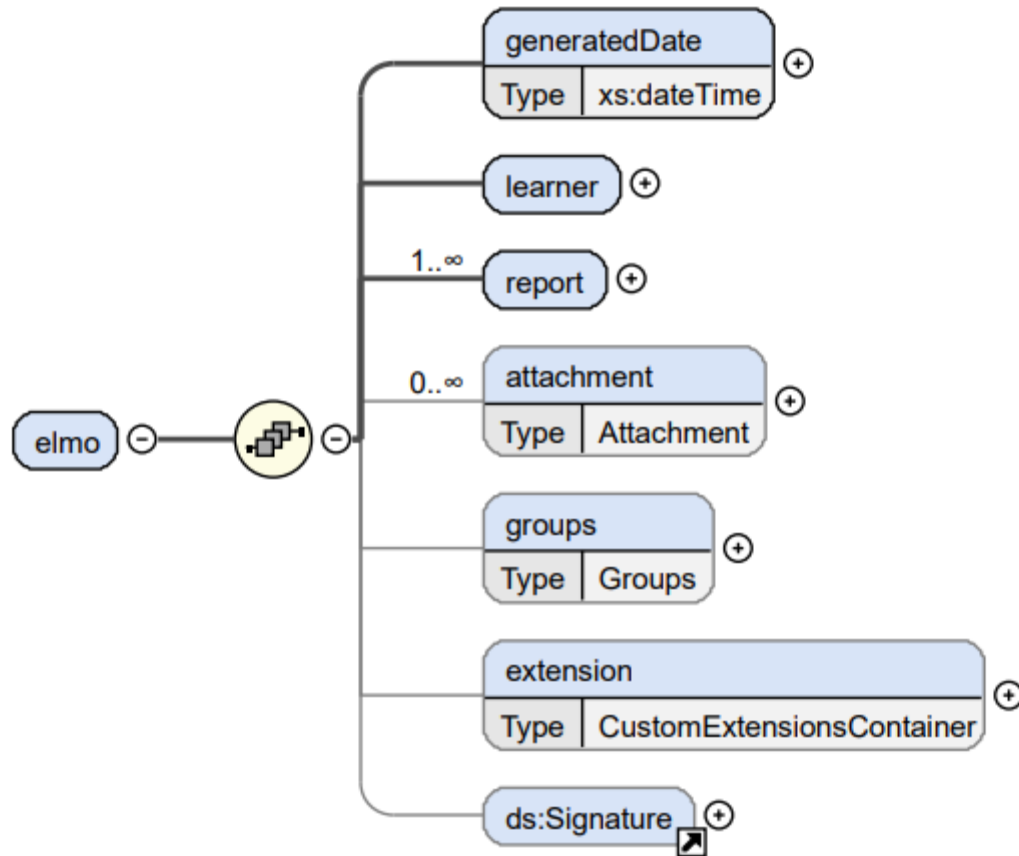
EMC

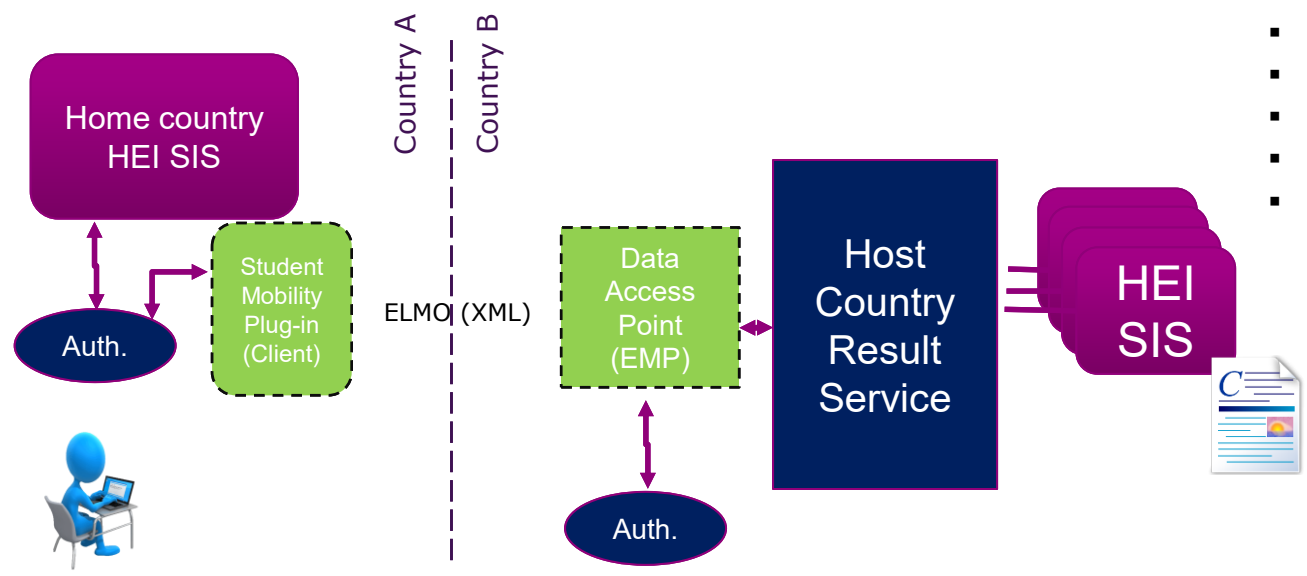
- POST request



```
<form action="https://fsweb.no/studentweb" method="POST">  
  <input type="hidden" name="sessionId" value="mysessionid12345">  
  <input type="hidden" name="returnCode" value="NCP_OK">  
  <input type="hidden" name="returnMessage" value="">  
  <input type="hidden" name="elmo" value="H4sIAJSMFl...AAAA==">  
</form>
```

- sessionId: Zelfde als werd aangeleverd
- returnCode: NCP_OK, NCP_ERROR, NCP_NO_RESULTS, NCP_CANCEL
- returnMessage: In geval van NCP_ERROR
- elmo: Encoded/gzipped xml bericht





ELMO versions

- V1.0: prd. version
- V1.1: small bugs
- V1.2: add qual. level (EQF)
- V1.3: minor improvements
- V1.4: add Diploma supplement
- V1.5: additional field on learner
- V1.6: under development

Anyone can build a Client

(National) suppliers can build EMP



Tor Fridell 1961-06-16

Welcome to EMREX!

This service will enable you to import your awarded credits from other higher education institutions abroad connected to EMREX. Importing your records is a quick and easy process.

1. Select the country from which you want to retrieve your credits from.
2. Use the credentials from the host university where you studied to log into the system where your credits are stored.
3. Select the credits you want to import.
4. Review and confirm the selection. The records will be sent to your home university and you may save a copy in PDF format.
5. When the import is finished, please answer a few questions about the service to help us develop EMREX further.

So let's get started by selecting a country!

Choose Your Exchange Country:

	Croatia	Select
	Denmark	Select
	Finland	Select
	▶ Italy	
	Netherlands	Select
	Norway	Select
	▶ Poland	
	Sweden	Select





DEMO



Dank voor de aandacht!



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Contact information:

<http://www.emrex.eu>





- **The EMREX Project:** <https://emrex.eu/>
- **EMREX implementation details:**
<https://confluence.csc.fi/display/EMREX/Implementation+of+EMREX>
- **EMREX GitHub:** <https://github.com/emrex-eu>
- **XML Signature Syntax and Processing:**
<https://www.w3.org/TR/xmlsig-core/>
- **European Committee for Standardization:** <https://www.cen.eu/>
- **Diploma Supplement:**
https://ec.europa.eu/education/resources/diploma-supplement_en
- **SCHema for Academia:** <https://wiki.refeds.org/display/STAN/SCHAC>
- **European Credit Transfer and Accumulation System (ECTS):**
https://ec.europa.eu/education/resources-and-tools/european-credit-transfer-andaccumulation-system-ects_en
- **International Standard Classification of Education:**
https://en.wikipedia.org/wiki/International_Standard_Classification_of_Education