EMREX Newsletter, January 2023

Germany joining the EMREX network!

Michael Lierath and Arn Wassmann, HIS

German HEIs are able to join the EMREX network! The student information system HISinOne enables the transfer of incoming and outgoing result records via EMREX. Students who earned credits at another university can easily import the results to HISinOne through the use of EMREX. To accomplish this, the student just has to sign in into both systems and initiate the data transfer. Once the data has been imported, the imported results may be reviewed by the student and a staff member will be able to verify and acknowledge the results. The transfer could also be done in a national setting using the same protocol, exchanging result data between German HEIs. If any additional recognition processes are required, PIM (platform for international student mobility) may be used to implement these.

In 2022, penetration tests were conducted on the EMREX implementation of HISinOne for both EMP and EMC. The tests were passed with good results, proving the strong and robust base provided by the protocol specification of EMREX.

The University of Freiburg is currently piloting the use of EMREX. The University of Education Ludwigsburg has also registered a test system. Another two test systems are run by HIS eG. All other HIS universities are also invited to join the EMREX network and utilize the result transfer through EMREX.

University of Talca, Chile – First productive implementation of EMREX in Latin America!
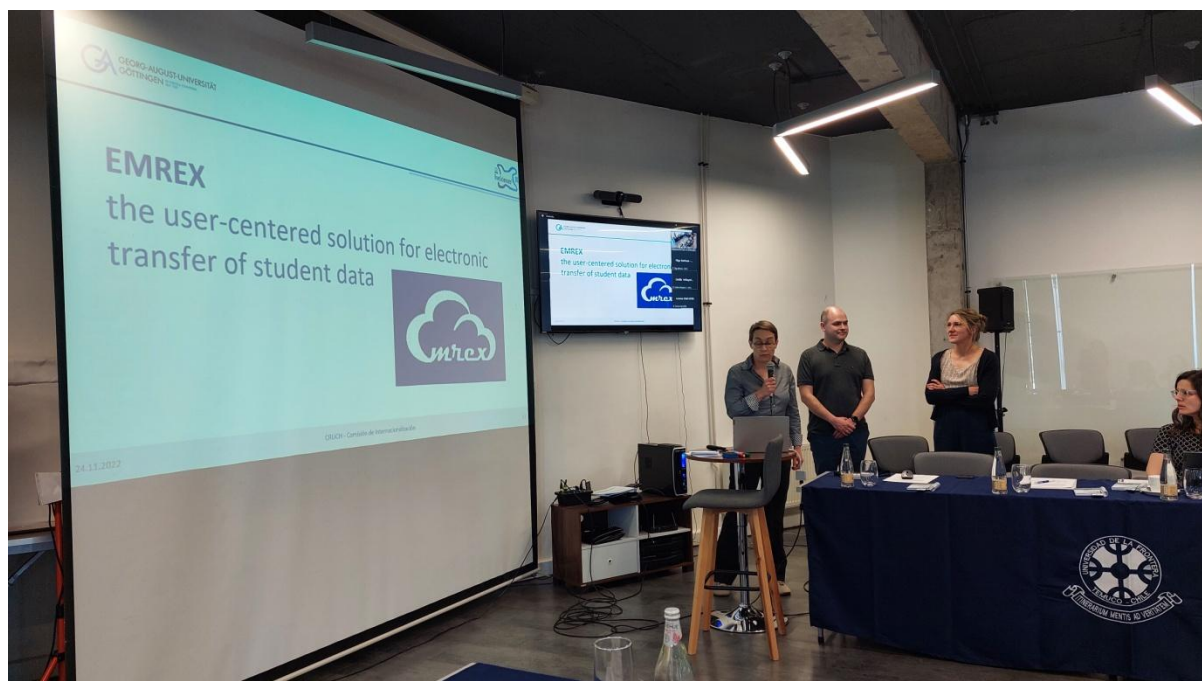
Bettina Bube

The University of Göttingen, Germany (already an EMREX member since 2019) and the University of Talca, Chile share a long history of close collaboration in study & teaching, including a double degree programme and a lively student exchange. Being able to share educational data and thereby reduce significant barriers for international student mobility is of great value for the students, teachers and administration. As part of close collaboration and shared ambition the University of Göttingen and the University of Talca implemented the digital student data transfer between both institutions using ELMO/ EMREX. Thus, the University of Talca has applied for full membership at EMREX network and will be the first full member in Latin America.

Facilitating international student mobility with digital services with focus on EMREX as the user centered solution for electronic transfer of student achievement data was further presented by a team of the University of Göttingen together with counterparts from University of Talca at the assembly of 30 Chilean universities on the 24th of November 2022 in Chile. The presentation was part of the agenda of the internationalization committee of the Chilean university's rectors conference (Consejo de Rectores de Universidades Chilenas, Comisión de Internacionalización). As follow up to this presentation several higher education institutions (HEI) in Chile showed interest in

implementing international exchange of student data applying international standards. A technical workshop for IT units of the interested HEIs in Chile will be offered by the UGOE & UTalca in April 2023.

Looking forward to continuing collaboration with HEI in Chile & Latin America!

Bettina Bube, Anne Sennhenn and Nils Gehrke from the University of Göttingen presenting EMREX in Chile

The Digital Credentials for Europe project (DC4EU)

A few of the EMREX members are involved in the project DC4EU which is funded under the call DIGITAL-2022-DEPLOY-02.

The objective of the project is to create a European digital identity wallet as described in the Amendment of the regulation 910/2014 called **Procedure 2021/0136/COD (eIDAS 2.0).** The wallet will be able to hold different types of information but our scope is of course to handle educational data.

The project consists of 82 organizations from 23 countries and the budget for the project is almost 20 million euros. Web page is available at https://dc4eu.eu.

Groningen Declaration Network

The Groningen Declaration Network (GDN) had its annual conference in Groningen in October 2022. It was 3 eventful days in the city where the organization started. After many years of service, the Executive Director Herman de Leeuw handed over the administration to the new Director Joanne Duklas.

The latest newsletter with more information can be found here: https://www.groningendeclaration.org/2023/01/26/newsletter-january-2023/.

Chief Technical Officer (CTO) for EMREX

In order to keep up with the growing international demands in the field of information and security technology, the EMREX Executive Committee has decided to appoint a CTO for EMREX (including the ELMO Data Standard). This CTO position has been filled by **Mirko Stanic**. Mirko has already rendered invaluable services to EMREX/ELMO in the renewal and reorganisation of the EMREX/ELMO Github, as well as in the creation of the ELM-ELMO conversion table (in collaboration with DG EMPL of the European Commission).

Welcome on board, Mirko!

ELMO/ELM alignment – and what is the current status
Guido Bacharach

As already reported in the September EMREX Newsletter, the group developing the new European data format standard European Learning Model (ELM – formerly *Europass Learning Model*) on behalf of DG EMPL of the European Commission, together with the EMREX Executive Committee and its new CTO Mirko Stanic, was able to establish interoperability between the data standards ELMO 1.7 (currently in release) and ELM 3.0 (expected to be released during the first half of 2023).

A mapping table between both systems has been created, refined in the meantime and is in final quality control. After successful acceptance, this mapping table will then be the basis for ELMO-ELM converters, which e.g. the European project DC4EU plans to create.

With such a converter, it would then be possible to create a so-called "coupling concept", as the figure below shows. With such a realised concept, an interoperable ecosystem could be created in which ELMO as well as ELM data, converted accordingly, could be used by all currently important transport systems (EWP, Europass, EMREX, EBSI, ...).
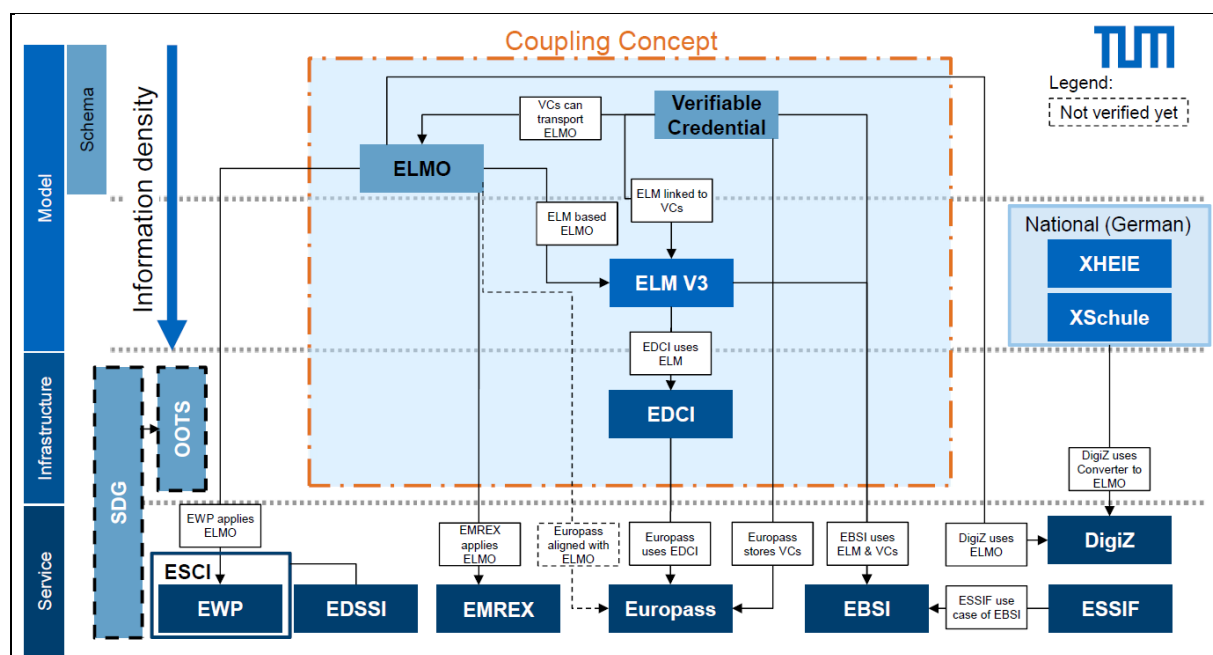
Interoperable ecosystem with coupling concept

Vitnemålsportalen

Geir Vangen, Sikt

The Norwegian Diploma Registry, or Vitnemålsportalen as it is known in Norwegian, is the Norwegian node of EMREX made and maintained by Sikt.
Vitnemålsportalen was built in parallel to the EMREX project and put into production in January 2017.

Vitnemålsportalen includes not only diplomas for qualifications, but all results from Norwegian higher education. The service was built to give citizens access to their results from higher education to share with employers and other third parties. There was a focus on countering diploma forgery, simplifying the process of sharing result data and enabling third parties to digitise and automate their processes.

Sikt has cooperated with the business community and a number of organizations have made integrations to Vitnemålsportalen using the EMREX protocol. Most recruitment systems used in Norway have been integrated into Vitnemålsportalen, this enables job applicants to share their results in an effective and trustworthy way.

Today Vitnemålsportalen is used in recruitment systems, education admission systems, licenses and authorizations applications and more. The amount of users sharing their data through Vitnemålsportalen has grown from 33,500 shares in its first year in production to just under 258,000 shares in 2021. Of the about 258,000 shares in 2021, just about 60,500 of them were through EMREX. Production of paper Transcript of Records has been reduced to a minimum, and now the paper version of diplomas from higher education institutions are being phased out.
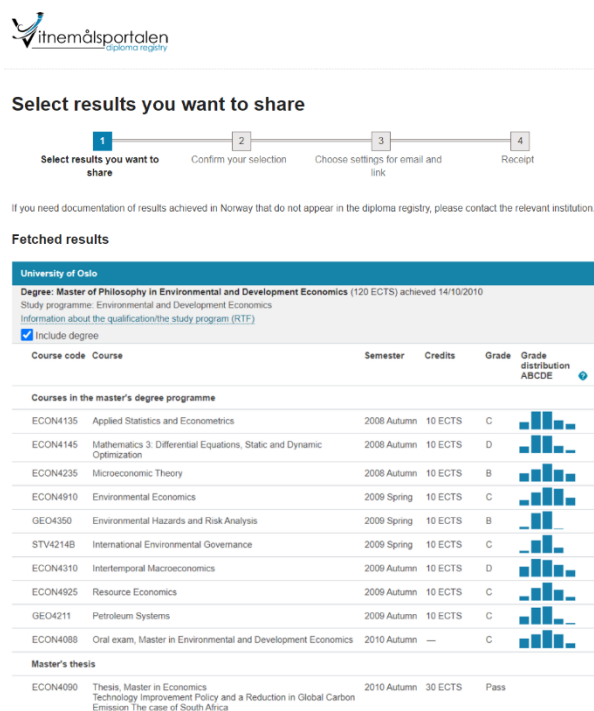
Vitnemålsportalen covers 100% of higher education, including complete sets of data back to the 90s for most institutions and even back to the 60s for some universities. From 2023 there are plans to include results from upper secondary school, almost complete data sets from 1999.

More information about Vitnemålsportalen can be found at
https://www.vitnemalsportalen.no/english/.

EMREX test users

Mathias Hjertholm, Sikt

The test users for the diploma registry are updated in the EMREX demo *Using the Norwegian EMP to test your EMC*.

ELMO workshop on recognition

Geir Vangen, Sikt

Sikt – *Norwegian Agency for Shared Services in Education and Research* – arranged a two day ELMO workshop to discuss adding results of recognition to the ELMO format. The background for this is that the Norwegian diploma portal plans to present results to applicants for recognition at HkDir (earlier NOKUT), the Norwegian Enic-Naric organisation. There is a general interest in the Enic-Naric community to standardize the outcome of the recognition processes. In addition to results of recognition, this goal also to some extent aims to include entitlements such as professional entitlements like the right to practice as a nurse. NOKUT, who in addition to general recognition, also issues licenses for teachers based on foreign teacher training will require entitlements be able to deliver all recognitions in ELMO format.
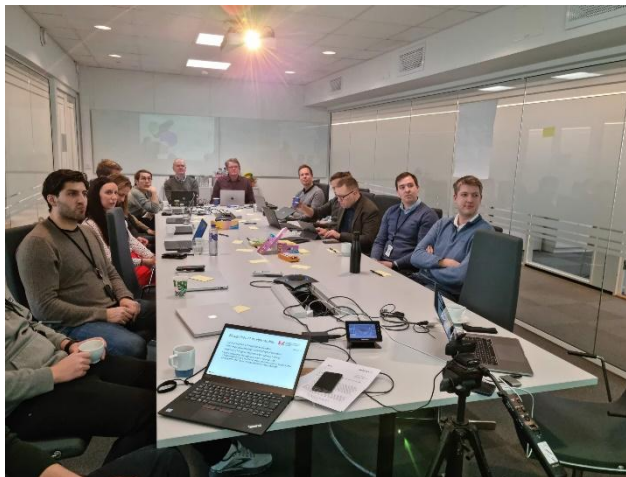
The workshop also discussed more specific recognition done at the universities, exempting subjects based on education from other universities.

The result of the workshop includes a list of the data elements that need to be covered by ELMO, and some ideas for the structure of these data. The follow-up work will be to suggest solutions on
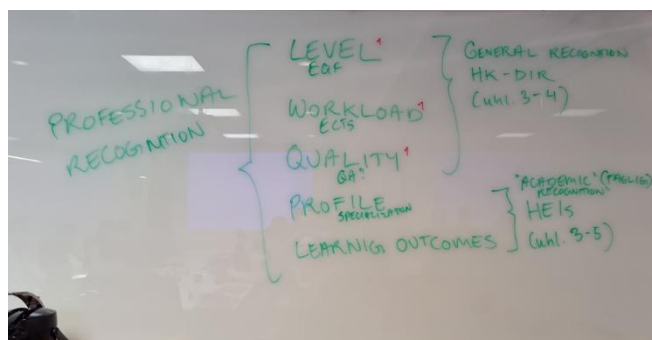
how this can be done in ELMO. The solution should cover both general recognition done by Enic-Naric organizations, issuance of licences for work, and more specific recognition done at the HEIs. In this context, we also look to ELM 3.0 to ensure that the formats do not deviate too much from each other to ensure compliance between the formats.

We would like to thank participants from Norway, Sweden, Finland and Germany for the fruitful discussions during this workshop.

ELMO 1.7 released

Version 1.7 of the ELMO-format has now been released in Github. It contains smaller changes, new license and editorial changes due to name changes of NCP to EMP. It will not break backwards compatibility. It is available at https://github.com/emrex-eu/elmo-schemas.

EMREX and ELMO Strategic Goals

On 13 September 2022, the EMREX Executive Committee (EMREX EC) met in the northern German city of Hanover to discuss the strategic future of EMREX and ELMO. The reason for this discussion was to pause in the current successful but also challenging development of EMREX and ELMO and to

ask ourselves in which direction EMREX and ELMO should move in the future in order to be able to use the scarce resources around EMREX and ELMO effectively and efficiently.

Initially, it was assumed that the strategic development of EMREX and ELMO should be linked or basically considered independently of each other, since EMREX may also transport other data structures than ELMO and ELMO can also be used and is used by other transport systems, such as EWP.

The instruments of classical strategy development were used. The mission of EMREX and ELMO was once again clarified and put into written words. In addition, the stakeholders as well as the competitors and possibly opponents of EMREX and ELMO in the current situation were identified.

The EMREX EC agreed on these strategic foundations as well as a basic vision for EMREX and ELMO. The mission and vision on which the further development of the strategy was based can be found here:

1.   Mission and benefits of EMREX (Mission – why we exist, what we do, where...)

EMREX is an international (European) data protocol that can be implemented with simple means to exchange education data (with focus on educational data from Higher Educational Institutions (HEI)), between two digital systems in a digitally machine-processable and GDPR-compliant way. The benefit of EMREX, with its electronic data exchange solution, is to empower individuals to control their own student data and exchange throughout lifespan, across borders for various purposes in a GDPR-compliant way.

2.   Vision for EMREX (Vision = idealistic emotional future)

The benefit of EMREX, with its electronic data exchange solution, is to empower individuals to control their own student data and exchange throughout lifespan, across borders for various purposes in a GDPR-compliant way.

EMREX is used for various purposes, not limited to educational information, in many countries. Regarding student data the goal is that all partners in the Erasmus network use it but also major partner countries in the world, like the US, China, Japan, etc. Regarding other purposes EMREX is used by different actors that contribute to digitalization, for the benefit of the data owner. It is constructed to empower individuals to control their own student data and exchange throughout lifespan, across borders for various purposes in a GDPR-compliant way.

3.   Mission and benefits of ELMO

ELMO is a digital data structure based on the XML standards ELM-AI (EN 15981) and MLO (EN 15982), with which education data (with a focus on tertiary education) can be prepared in a structured and machine-processable manner. ELMO is currently used by many European countries with the digital systems EMREX and EWP and thus forms a de facto standard. The data model describes primarily diplomas, diploma supplements, assessments, and transcript of records.

4.   Vision for ELMO

It is the EMREX EC's vision that ELMO converges with other data standards to cover all of EMREX's current use cases as well as future use-cases; such as Primary, secondary and tertiary vocational education as well as certificates, Recognition of results from a Recognition Authority, and Vocational Entitlements in addition to the use cases of EWP systems and other European Schemes like Europass and SDG.

Based on this understanding of the mission and vision of EMREX and ELMO, the EMREX EC agreed on the following strategic goals of EMREX and ELMO for the next 3-5 years:

5. Strategic Goals for the next 3-5 years

5.1. Strategic Goals for EMREX

- *EMREX will become a leading international transport system for any education data (not only tertiary education) of any data structure (not only ELMO).*
- *EMREX will focus on business or use cases that guarantee a large regional spread on the one hand and a high degree of utilization on the other (e.g. enrolment/admission to universities in Germany, recognition of educational achievements by ENIC/NARIC organizations, data exchange between the Baltic and Scandinavian states).*
- *EMREX will be recognized in the European Commission as a leading transport system for educational data through participation in EU projects.*
- *EMREX is accepted and lived/implemented by the SDG as the sectoral solution for the education space.*
- *EMREX will support one or more wallet solutions.*
- *EMREX Governance Strategy:*
  - *EMREX will have a professional governance with sufficient resources to ensure efficient development and operation of EMREX.*
  - *The currently used governance model "Self-appointed council or board" (see https://www.redhat.com/en/blog/understanding-open-source-governance-models) will be maintained for the time being.*
  - *The EMREX Executive Board is to be seen as the product owner of the EMREX product.*
- *Long-term strategy for the EMREX Community:*
  - *The EMREX Community becomes a think-tank on lifelong education.*

5.2. Strategic Goals for ELMO

- *ELMO will be used as a standard for educational data (especially for transcript-of-records.*
- *ELMO will be kept ELM and, as far as possible, SDG compatible.*
- *ELMO will be given a professional governance with sufficient resources to guarantee an efficient further development of ELMO (especially in the effective handling of issues).*

From the perspective of the EMREX EC, these strategic goals should set the direction for the further development of EMREX and ELMO in the next 3-5 years. Based on these goals, the EMREX EC, but also the rest of the EMREX/ELMO community, is called upon to define and launch activities and projects to support the goals.

These strategic goals are of course first and foremost a proposal from the EMREX EC to the EMREX/ELMO community for discussion. Do you recognize yourself and your own goals that you pursue with EMREX and ELMO in these goals? Are you missing any important strategic goals, or do you disagree with some of the goals?

We look forward to your feedback at info@emrex.eu.

Get in touch

EMREX portal is available at emrex.eu. To contact us write to info@emrex.eu. To get support write to support@emrex.eu.