

D7.1

STRUCTURAL COLLABORATION WITH OTHER ALLIANCES ON DIGITALISATION AND IT-STRATEGY OF HE IN EUROPE

**CHARM-EIGHT ∞ (CHARM-EU EXPANSION, INTER-INSTITUTIONAL CAMPUS,
GOVERNANCE, HIGHER EDUCATION, TRANSFORMATION)**

DELIVERABLE 7.1– CHARM-EU: Structural collaboration with other alliances on digitalisation and IT-strategy of HE in Europe

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EXECUTIVE SUMMARY: STRUCTURAL COLLABORATION WITH OTHER ALLIANCES ON DIGITALISATION AND IT-STRATEGY OF HE IN EUROPE

The goal of this deliverable was to organize **meetings/events with other alliances** for sharing **good practices** in relation to **digitalization**, with the goal of increasing interoperability and aligning our approach. CHARM has devoted a large amount of time and energy to this goal, with more than **2 activities on average per month**. The WP-leadership conducted many of these activities, but involving the responsible task teams wherever possible and sharing the results.

This work has been done on four different levels.

On the **European level**, CHARM has contributed intensively to initiatives such as the FOREU subgroup on IT, the European Digital Education Hub and specifically its project to develop an Interoperability Framework. We also contributed to related activities and networks such as Erasmus Without Paper and the annual conference of the European Association of International Education (EAIE). In terms of impact, this included a lot of knowledge exchange, but also concrete joint development work, especially on the framework for interoperability.

On an **inter-alliance level**, we have exchanged knowledge bilaterally with a number of specific alliances to whom we have close contacts. Specifically, the contribution of the Interoperability study commissioned by the German *Hochschulforum Digitalisierung* deserves mentioning. This has provided important groundwork for what later became the project for the interoperability framework.

On a **national level**, we most notably contributed to the discourse in the **Netherlands**, through a variety of events, seminars, workshops and publications to which we contributed. Our contribution was of significant help to make visible the needs of the European University Alliances and put these on the agenda of SURF, the national-level organisation that supports Higher Education Institutions with their IT. Also in **Hungary** and in **Germany**, we have contributed to the national-level knowledge exchange.

On a **local level**, the initiative of our colleagues at Johannes-Maximilians-Universität Würzburg deserves specific attention. They have organized a series of internal events to support the knowledge exchange.

Considering the **lessons learned** from all these activities, we would like to mention three:

1. The challenges of the European University Alliances with regard to digitalisation are all similar – so the solutions could be, too!
2. Interoperability of our systems is the key for a successful and efficient IT-setup.
3. Main IT-priorities are identity management, joint course catalogues and digital credentials.

Looking at the picture in its entirety and the **impact** of our work, we can conclude that the collaboration across alliances and across national borders is crucial for the success not only of our own alliance, but just as well for the success of the European University initiative as a whole.

1. INTRODUCTION

The goal of this deliverable was defined as follows:

“Meetings/seminars/workshops/events organized with other alliances for sharing good practices of European University Alliances related to the Digital Action Plan and to ignite the cooperation of alliances for the benefit of all alliances and the transformation of HE in Europe with the focus on Digital Action Plan. Main goal: find solutions that increase the independence of the Higher Education sector of Big Tech commercial business.”

CHANGE REQUEST

In June 2024, we made a change request to the European Commission to alter the last sentence to:

“Main goal: Increase interoperability between institutions and align the approach between different EUAs.”

This change request was granted.

This change reflects **the current priority on interoperability issues in the European Digital Education Hub**, supported by the European Commission. CHARM contributes intensively to the Interoperability Framework that is currently being set up. The European Digital Education Hub was newly established 2 years ago and is therefore not mentioned in the original text but is currently an important player in this field. Independence from big tech (= the original wording) is not the priority here, though it remains something that CHARM will strive for.

WORK ON FOUR LEVELS

During the two years of this project phase, we have been working with other institutions and especially other European University Alliances on the topic of digitalization rather intensively.

We can identify the following levels on which we have worked:

- **European Level:** A strong example of European level collaboration is CHARM’s contribution to the European Digital Education Hub’s expert group for forming an Interoperability Framework.
- **Inter-alliance level:** In bilateral contacts with a number of alliances, we have compared our approaches to specific topics and exchanged knowledge about good practices.
- **National level:** We have participated in several national-level events, such as the SURF Education Days, where we have presented work that CHARM is doing on the subject of digitalization.
- **Local level:** A good example of how knowledge exchange with others can be beneficial on a local level, is the initiative of JMU to organize an event series in Würzburg, dedicated to different IT-topics.

In the next section of this document, we will zoom in to the different clusters of activities and explain their goals, the approach taken and the impact that we have reached. A chronological overview of all the activities undertaken can be found in the annex.

2. COLLABORATION ACTIVITIES

The CHARM IT-team has made **extensive contributions to meetings, seminars, events etc.** during the last two years with the purpose to ignite and support the cooperation of alliances in digitalization. This has taken place on several different levels. We will present them here.

EUROPEAN LEVEL

Several European-level institutions and organizations already exist for the purpose of knowledge exchange about digitalization of higher education. A lot of new initiatives have started during this period, some of which receive support from the European Commission. Their goals can only be achieved with active contribution from practitioners from the Higher Education institutions. In this sense, the goal of this deliverable in CHARM aligns excellently with the European-level priorities of the Digital Action Plan. We have contributed to the following initiatives:

Forum of European Universities (FOREU)

The European Universities Alliances' programme has an accompanying framework which supports topic-based collaboration. It is called FOREU (*FORum* of European Universities) and has existed since the beginning of the initiative. It has more than 20 subgroups.

One of those FOREU subgroups is the group focused on IT/Digitalization. The FOREU1 and FOREU2 IT-subgroups merged into one single group in 2023, under leadership of CIVICA and co-leadership of UNITA European University Alliances. The group holds meetings about every three months.

CHARM-EU representatives have actively participated in these sessions whenever possible. We have contributed agenda suggestions and established contact to speakers. Specifically, we helped organize a session in 2023, where a speaker from *Hochschulforum Digitalisierung* presented the results of an interoperability study which they had commissioned to the participants of FOREU.

The FOREU meetings are always very interesting and provide excellent opportunities to share good practices with other alliances. For example, we learned about the availability of the *CertiDigital* project results at a FOREU meeting. The *CertiDigital* project was run by a Spanish consortium and has provided possibilities to connect to the European Digitals for Learning platform through the *eduGAIN* federation, something that can potentially help us a lot in the micro-credentials task. We will continue to be an active member of FOREU.

EXAMPLES OF IMPACT

Supported dissemination of insights from German interoperability study to audience of European experts

Taken steps to re-use work achieved in Spanish credentialing project in CHARM

European Digital Education Hub

The European Digital Education Hub was established in June 2022 with the goal to overcome the current fragmentation of digital education policy, research, and implementation practices at European level. This was after the writing of the CHARM-EIGHT project proposal; therefore this is not a part of our deliverable text, but we believe it to be one of the major vehicles for supporting knowledge exchange in our area of expertise. We have collaborated extensively with the European Digital Education Hub. After taking part in

onboarding sessions of the EDEH, we have contributed actively to its information channels and have acted as sparring partners for its coordinators at DAAD, SURF, *Hochschulforum Digitalisierung* and the European Commission on several occasions.

One of the specific activities that we participated in, is a so-called *squad* of the EDEH, namely the squad on hybrid classrooms. The WP-member of JMU joined this squad as soon as it was set up. This was a very interesting experience, since all members of the squad had various backgrounds and experiences in the wide field of hybrid teaching and contributed from their respective view to the topic, while planning different outputs like workshops and a platform gathering material on hybrid teaching. The squad discussed challenges in the hybrid classroom, both technical and didactical.

EXAMPLES OF IMPACT
Helped reinforce the position of the European Digital Education Hub as the new (human) network for expertise in digitalization of European higher education and 'go-to' address for questions
Shared knowledge from CHARM use of hybrid classrooms with European experts working on the same topic

Our representative conducted an a very interesting interview with our CHARM teaching assistant in Utrecht, who told her in detail about this very important role in the hybrid classroom. The interview will be published on the platform and will show that many factors must be considered so that hybrid teaching works and both teachers and learners are happy with it.

Interoperability Framework of the European Digital Education Hub

There is one major activity that needs separate elaboration here: the Interoperability Framework task force. This is a large project established under the auspices of the European Digital Education Hub and financed from European Erasmus+ funds. CHARM is not an official partner and does **not get any funding from this project by any means** (= it is a parallel activity), but we have nevertheless taken a very active role in contributing our time and expertise to help this endeavor become successful.

The project started in late 2023, with a due date of the results in February 2025. The goal of this activity is to deliver a framework that will help European University Alliances to set up an IT-infrastructure that allows for cross-border virtual campuses. It envisions a future where seamless interoperability empowers educational institutions across Europe. See the factsheet linked below.

The project is mainly aimed at European University Alliances, so it needs the constructive input from the target group, both to collect the knowledge we already possess and to help design the final products. The CHARM WP-lead (UU) has been one of the most active participants from European University Alliances from the start. She participated in a multiple-day in-person event in Potsdam/Germany, where the use-cases for the interoperability framework were set up, using a design-thinking methodology. She also accepted co-



EUROPEAN DIGITAL EDUCATION HUB

European Higher Education Interoperability Framework
Under the umbrella of the European Digital Education Hub

Based on the following Objectives and Core Principles, help us make an impact by advocating for policies that promote interoperability, agreed and open standards, while engaging yourself and other stakeholders in this dialogue.

Aim
We, as the community of experts in the field of higher education are jointly developing a more **interconnected, efficient, and inclusive** European higher education landscape through enhanced interoperability. The European HE Interoperability Framework draws on collaboration within European University alliances and beyond, and existing best practices. It is being developed in an open stakeholder-driven approach, fostering co-creation.

Objectives

- Ensure high-quality and lifelong learning responding to the learners' own needs.
- Facilitate seamless mobility for students and staff across institutions and borders.
- Enhance access to educational resources and opportunities for all stakeholders.

European University alliances and their virtual campuses serve as proving grounds.

Desired Impact

- Facilitated international collaboration and joint educational provision (joint programmes, joint micro-credentials, ...).
- Enhanced educational experiences.
- Improved recognition of qualifications and periods of study.
- Promotion of innovation and diversity.
- Increased efficiency and cost savings.

Core Principles
We advocate for systemic change affecting all levels of interoperability, while adhering to these core principles:

- Privacy and Security
- Stakeholder Engagement
- Open Standards
- Technological Integration
- Multilingualism and Cultural Diversity
- Lifelong Learning

We hope you share our vision and join us in implementing the European Higher Education Interoperability Framework at institutional, national, and European level.

The European Digital Education Hub (EDEH) is an initiative of the European Commission and funded by the Erasmus+ programme (2021-2027) and awarded by a consortium of 13 representatives under a service contract with the European Education and Culture Executive Agency (EACEA).
Lernberg Publishers Office of the European Union, 2024
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leadership of one of the eight use-cases that are underlying the framework, namely the use-case *educational resources*.

In this capacity, she co-hosted a series of online working group meetings in which experts from several EUAs worked together on designing a reference architecture. She was also a member of the programme committee that designed an in-person event in Brussels in June 2024. At this event, the preliminary findings of the online meetings were verified and extended. CHARM’s WP-lead hosted one of the round tables there, including making a written report afterwards. In October 2024, she co-presented the Interoperability Framework project at the Groningen Declaration Network Conference in San Diego, together with several core team members of the project, including the Director of the German Academic Exchange Service’s (DAAD’s) Director of their Brussels Office.

In the last months of 2024, the project is due to develop concrete tools and methods that European University Alliances can apply to use the Interoperability Framework in practice within their alliance. CHARM will continue to make an active contribution by reviewing the draft versions of the framework and its accompanying toolkit.

Our contribution is highly appreciated, as shown by this quote from one of the core project members:

“As part of the European Digital Education Hub (EDEH), we have convened an expert workgroup on Higher Education Interoperability. The work is steered by a Core Group consisting of 20 selected experts on the topic. CHARM-EU, represented by the IT workpackage manager Janina van Hees, has been part of the Core Group and contributed actively since day 1. CHARM-EU has contributed to several workshops, co-led a use case squad on managing educational resources and participated in several others. Thanks Janina for always keeping both the bigger vision and a hands-on perspective in mind. CHARM’s constructive contribution helps us to make sure the products that we are working on will be of practical use for the European University Alliances.”

*Colin Tück, Higher Education Policy Consultant,
connected to European Digital Education Hub*

EXAMPLES OF IMPACT
Co-organisation of face-to-face meeting in Brussel to validate the draft interoperability framework with relevant European experts
Clarifying the concept and role of European University Alliances to a global audience, by means of co-presentation at the San Diego GDN conference (online)

EduXS database

As a basic requirement for successful knowledge exchange, it's important that experts from different alliances can find each other and locate relevant expertise in a time-efficient manner. With this purpose in mind, the Dutch IT-organisation for higher education, SURF, took the initiative for a project called 'EduXS'.

This concerns a dynamic database, built in AirTable technology, which lists IT-projects of different alliances and gives status updates and provides contact information.

CHARM was one of the first alliances to give feedback on the set-up. We participated in several online workshops which were organized by SURF and the European Digital Education Hub to onboard alliances and collect initial content. Information about IT in CHARM can now be found in the beta-version of EduXS.

EXAMPLES OF IMPACT

Helped to set-up, fill and fine-tune a database where European experts on digitalization can find each other and can find info on their digitalization tools and platforms.

European Association of International Education

The European Association of International Education is a large network of professionals in international mobility. They have an annual conference, attended by several thousand participants from all over the world. In 2023, the event took place in Rotterdam/The Netherlands, and CHARM attended it with a large delegation. A CHARM booth was included in the booth rented by University of Montpellier.

Although the focus of the conference is very broad on anything connected to international mobility, there were quite a few sessions that related to IT as supporting tool for international mobility. We attended and actively participated in sessions about Erasmus Without Paper and about other Alliances' experiences with virtual mobility.

EXAMPLES OF IMPACT

Active contribution from CHARM in a session about automatic recognition of study results from virtual mobility

The 2024 edition in Toulouse was also attended by CHARM, but with less focus (and staff) from the IT-team of CHARM.

Erasmus Without Paper

The Erasmus Without Paper consortium concerns itself with the digitalization of all processes related to physical exchange of students in higher education. They have been offering several services in the student data exchange, mobility management and European Student Card area which have relevance for CHARM-EU activities. Our alliance (primarily staff members of WP co-lead ELTE) has made an active contribution to these discussions related to planning and development, most notably through the biweekly Architect Office. While not directly involved in most services, we gain a good understanding of the overall service portfolio, continuously monitoring and considering these in relation with the IT challenges emerging in CHARM-EU – like recently in case of the Transnational Online Learning.

EXAMPLES OF IMPACT

Bringing some of the issues and obstacles related to CHARM-EU Alliance – and likely other alliances – to the discussions about further developing EWP services. Trying to find potential applications together.

In early 2024, the other Lot of EWP – focusing on the European Student Card implementation (ESC) – established a new governance structure, including a Strategic Committee, managed by NTTDATA, to which we were invited to contribute. So far, the activity there has been limited, but we could get a glimpse of the

new ESC solution and specifications, as well as test and evaluate the status and provide feedback on the development, also from the perspective of CHARM-EU's potential needs.

PORTFOLIO project

This European-level project (financed by Erasmus+) is aimed at exploring inter-connected education through a distributed and blended European Entrepreneurship Minor. It aims to provide Higher Education institutions with evidence-based knowledge and know-how concerning innovative learning- and teaching practices. One of our WP-members (ELTE) gave a key-note speech at their so-called Multiplier event, explaining the approach that CHARM-EU has taken, through our innovative use of hybrid active learning classrooms.

EXAMPLES OF IMPACT

Dissemination of our lessons learnt about hybrid classrooms to a relevant European audience

INTER-ALLIANCE LEVEL

A few collaboration activities were not exactly European level, but they do involve several different alliances. We have contributed to the following initiatives:

Hochschulforum Digitalisierung: Interoperability study

The Hochschulforum Digitalisierung (HFD), or German Forum for Higher Education in the Digital Age, is a nation-wide think-&do tank supporting digitalization of higher education in Germany. It is a joint initiative of the Stifterverband, the CHE Centre for Higher Education and the German Rectors' Conference (HRK) and is funded by the Federal Ministry of Education and Research (BMBF). They take the international perspective well into account, and there are close connections to CHARM, among other European University Alliances. In 2022 and 2023, CHARM representatives contributed actively to a publication commissioned by HfD with the title '[Making Interoperability Work – Challenges and Solutions for an Interoperable Higher Education System](#)'. This publication looked at Interoperability in European University Alliances in four dimensions: legal, technical, semantic and organizational interoperability. We contributed ideas to the potential set-up and design of this study, we provided content to the study in terms of the experiences and knowledge of CHARM, and we also helped the project by giving detailed feedback to the draft report from the perspective of usability of the report for European University Alliances.

It was very fruitful both to contribute to and to benefit from this publication, as it gives a lot of insights into the state of affairs of interoperability in different alliances and points towards workable solutions for common problems.

CHARM's input contributed substantially to the success of this influential report, says the programme manager:

“Janina van Hees, in her role as project manager for at CHARM-EU and EuroTeQ, played a key role on the advisory committee for the publication “Making Interoperability Work” (Berger, F., Galati, N., Witteler, S. (2023). Arbeitspapier Nr. 72. Berlin: Hochschulforum Digitalisierung - HFD), providing invaluable feedback that was critical to the European uptake of this study. Her expertise guided the strategic direction of the research and offered nuanced interpretations of the findings, ensuring their validity and relevance for European University Alliances. Given the complexity of the issue, her expert involvement was essential, enabling the multifaceted interoperability challenges to be addressed with precision and clarity. Van Hees' involvement not only ensured the quality and depth of the study, but also contributed to its resonance within the higher education community. It was presented at several meetings and events in the sector (e.g. 1EdTech, Online Educa Berlin and the European Commission's LLLP), as well as at alliances (e.g. EuroTeQ, EUGreen and FOREU) and was shared within the HFD community, DAAD's programme for German members of European Universities, and with European and German policy makers as well.”

Channa van der Brug, programme manager for Internationalization/EU at Hochschulforum Digitalisierung/Stifterverband

EXAMPLES OF IMPACT
Substantial contribution to a very well-received German study on interoperability in EUAs, which laid important groundwork

Workshop and events from other alliances

We have been active participants in workshops and events provided by other European University Alliances which are relevant to IT in CHARM. This often provides valuable know-how for both sides, leading to ideas on how to re-use knowledge or products developed in one alliance in another alliance. Attending in-person events occasionally also contributes to strengthening our personal networks among relevant institutions and other alliances.

ECIU

For example, several CHARM representatives attended an online event organized by the colleagues from ECIU on the topic of micro-credentials. In this event, ECIU presented how they had implemented the European Digital Credentials Infrastructure within their alliances. This was important information for our task group charged with researching how to issue digital credentials. We got some first-hand experience of how digital credentials issued through the European platform work.



EuroTeQ

Another example is that we attended the in-person event organized by EuroTeQ to celebrate the launch of their IT-supported course catalogue for virtual mobility. With CHARM having embarked on a very similar mission of providing Transnational Online Learning, this is an important example to consider and evaluate for its relevance to CHARM.

EXAMPLES OF IMPACT
Received hands-on experience with European platform for Digital Credentials for Learning
Indicated desire to learn from another EUA's approach how to build a joint course catalogue; manifested support for European scale-up of successful technological approaches



Panel discussion during EuroTeQ launch event, with Evelien Renders (SURF) and Channa van der Brug (HfD)

Bilateral meetings with other European University Alliances

We have fostered bilateral contacts with a number of alliances that are close to us, either in a physical sense, in our personal network or in a thematic sense. Most notably, we have had regular exchanges with representatives of the following alliances:

- **Aurora**, with leadership located in Amsterdam, we have had several chance encounters that developed into a fruitful regular topic-related exchange. For example, Aurora is researching a good technological approach for a joint course catalogue, just like we are, and they are also researching digital credentials, among others. Over the year 2025, our WP-lead will be contributing to a peer-to-peer review of

Aurora's digitalization strategy, organized at their request by the German *Hochschulforum Digitalisierung*.

- **EPICUR** contacted us to learn about our use of student journey maps in CHARM and how this has helped us to select focus areas for improvements in terms of IT. Vice versa, we have had exchanges with them to learn from their approach of connecting their local student authentication systems to a centralized systems that they built for their Alliance.
- **YUFE**, with IT leadership located in Maastricht, is a partner for exchanging knowledge and approaches concerning the best joint set-up for IT services and also how to handle digital credentials. This last topic has been a focus point for YUFE from the start, and there is a lot we can learn from their experiences.
- **EuroTeQ** is a source of strong personal connections, as our current WP-lead (UU) used to work for this alliance previously and is well acquainted with their team and their technological approach. Most notably we are looking at the way they have set up the IT-support for the course catalogue, including the automation of student enrollment to the shared courses. They have performed important pioneering work that is very relevant for CHARM.

EXAMPLES OF IMPACT

Shared our know-how of making student journeys with EPICUR

Learned from EuroTeQ how to a joint course catalogue can be set up with far-reaching IT-integration

NATIONAL LEVEL

In some of the member states of the CHARM alliances, there is a lively national-level network on the topic of digitalization. This is notably the case in The Netherlands, Finland, Hungary, and Germany. We have contributed to the knowledge exchange wherever possible.

Netherlands

Many of the digitalization activities in Dutch higher education are instigated by SURF, the Dutch organization for IT collaboration in higher education. They are a well-established organization with a long history of innovation. Whilst they traditionally focused on the support of Dutch institutions, they have now also turned towards the support of European University Alliances in recent year. This is partly due to our own and our fellow EUA's frequent requests to support this part of our institutions' work, too.

SURF Next Cloud Pilot

In the 'Next Cloud pilot' project which ran in 2023, SURF was investigating possible alternatives for commercial communication tools such as Microsoft Teams. The idea was to research the quality of open source tools with comparable functionality and to see whether this could potentially be a usable alternative for higher education institutions, in order to strengthen our position and become more independent

from the products of 'big tech'. CHARM participated in this pilot to add the perspective of an Alliance. We created a test environment, ran a test session with participants from several countries and filled in the feedback form at the end of the pilot. The conclusion was that such an environment can fulfill a need, although the current quality of the different functionalities is not up to par for some of the necessary elements. The decision on how to proceed remains with SURF.



SURF Education days

2023 edition

The Dutch organization for IT collaboration in higher education organizes a large annual digitalization conference, the “SURF Education Days”. In the 2023 conference, CHARM took the initiative and leadership for organizing a session at this conference, located in Den Bosch. The topic of the session was “Can your IT set-up cross border”? The session included co-speakers from EuroTeQ, SURF and the *Hochschulforum Digitalisierung*. The session had a medium-sized audience of some 25 participants and featured qualitatively very good round table discussions.

Alex Lodder and Janina van Hees (UU) giving a presentation about Alliances’ IT set-up at SURF Education Days 2023



2024 edition

Also in the 2024 edition, CHARM made two active contributions. We presented CHARM’s approach to IT architecture at a session with the title ‘Soepel samenwerken’, ‘smooth collaboration’ in English translation. In this session, we explained to the ca 20 participants from different Dutch educational institutions how (and why) we made a student journey map of our joint Master’s programme and how we analysed our IT-setup.

In another session, we presented our deliverable ‘Model for CHARM Hybrid Classrooms’ to an audience of about 35 representatives of Dutch higher education. We explained how we work with hybrid classrooms and how (and why) we agreed on minimum requirements for the set-up of such classrooms in the CHARM Alliance.



Ecca Berhиту (WP member UU) giving a presentation about CHARM’s IT architecture at SURF Education Days 2024

Publications in Dutch IT Media: SURF Communities

SURF is offering an online communication environment in which staff members of higher education institutions can subscribe to news about certain digitalization topics. This environment is <https://communities.surf.nl/>

Two articles featuring CHARM were published here; in both cases this concerned the experiences with hybrid classrooms:

- one article was written by CHARM-staff (<https://communities.surf.nl/learning-spaces/artikel/hybrid-classrooms-in-de-praktijk-simultaan-lesgeven-in-5-landen>) and
- one article was prepared by SURF on the basis of an interview with CHARM representatives (<https://communities.surf.nl/vraagbaak-online-onderwijs/artikel/grenzen-verleggen-met-hybride-onderwijs>).

KAIWOO presentation

KAIWOO is a national-level meeting forum for IT-managers in Dutch higher education. Hosted by rotation, they meet several times a year at one of the Dutch universities to discuss a specific topic. CHARM was invited as special guest in this meeting in Spring 2024. We gave a presentation about the topic 'The need for interoperability in the day-to-day life of a European University Alliance'. One of the ensuing discussion questions was about the relationship between IT-projects of the Alliance and the IT-projects that are running at the local university internally – in how far do these two influence each other? The discussion drew a lot of interest.



Sign at Vrije Universiteit Amsterdam showing the location of the KAIWOO meeting

NPuls events

NPuls is a large national-level Dutch programme for advancing the digitalization of Dutch higher education. From CHARM, we have made two contributions so far:

- We were represented in a panel discussion at an event aimed at collaborating with EdTech companies, where we explained the need for interoperability.
- We were represented in a session that inventoried needs for national-level knowledge exchange around digital testing, including programmatic assessment and portfolio tooling. We were able to share lessons learnt from our work with programmatic assessment in the CHARM Master’s programme

EXAMPLES OF IMPACT
Brought together experts from Germany and The Netherlands in a joint session about institutions’ IT-setup for European collaboration
Discussed the relationship between IT for alliances and for the local university with a community of experts in the Netherlands
Shared lessons learned of CHARM hybrid classrooms with large audiences
Contribution in panel discussion with EdTech companies to push for modularity and interoperability in their products

HUNGARY

For CHARM-specific purposes we initiated contact with Microsec zrt., a Hungarian provider of electronic signatures, in order to acquire an “E-Seal” for ELTE University. Such a seal would allow ELTE to sign microcredentials on behalf of CHARM-EU, allowing the alliance to test and evaluate new types of microcredential frameworks. This also addresses some of CHARM-EU’s challenges that arise from not being a legal entity, potentially providing an acceptable alternative.

EXAMPLES OF IMPACT
Potentially making possible the use of the European Digital Credentials for Learning Platform

GERMANY

We have already described the extensive contacts with the German *Hochschulforum Digitalisierung*, which operates on a national level to support the digital transformation of German higher education, within the broader European context. In addition, a specific network for European University Networks exists in Germany, managed by DAAD. This works on different topics at each meeting. CHARM is following this network actively. While it has not yet tackled the topic of IT issues, this is still part of the general topics that may be addressed in the future.

EXAMPLES OF IMPACT

Close contact and knowledge exchange with other German European University Alliances

LOCAL LEVEL

Some events and workshops also took place on a local level. The most notable example comes from Würzburg:

Event series at Julius-Maximilians-Universität Würzburg (JMU)

Since JMU is one of the new partners of the alliance, we are working on creating the best conditions to connect JMU to the alliance. For succeeding we have started a working group of people who are working in different sections of the university. It is necessary to have a continuous exchange on all the topics which are relevant when joining an alliance, like the international office, career center, student office and IT service. So far, we have had four meetings (introduction, hybrid active learning classroom, microcredentials and student data portability).

To learn from others, we had invited different guest speakers, from outside the alliance but also alliance members, who spoke about Microcredentials and MOOCs, gave insights in the implementation of the Hybrid classrooms at Hochschule Ruhr West etc.

EXAMPLES OF IMPACT

Established closer connections locally at JMU between responsible for different IT-systems that are relevant for CHARM, including stronger personal network and better mutual understanding

The next meeting is planned for December and will contribute, like the past meetings, to bring JMU and CHARM closer together.

3. LESSONS LEARNT AND IMPACT ACHIEVED

Looking at this extensive list, we can conclude that knowledge exchange with other alliances and related organizations has been a high priority in these two years. In the chronological list of activities which can be found in the Annex, we are looking back at a total of 55 collaborative activities during these two years, which is more than two per month. What are the main lessons learnt from these meetings, events, seminars etc. that we have conducted with our partners from other alliances and other institutions?

LESSON LEARNT 1:

OUR CHALLENGES ARE VERY SIMILAR – SOLUTIONS COULD BE SIMILAR, TOO!

The European University Alliances are basically all working on comparable goals. All of us are trying to organize educational collaboration, including ways to achieve the KPI given by the European Commission to realize a 50% mobility rate within the alliance. For this, we all need some kind of joint virtual campus.– Since the alliances' challenges are very similar, the same conclusion potentially applies for the solutions, too. Our contact with other alliances have shown that we have a lot to learn from each other, from high-level consideration down to very practical solutions to wicked problems that we all encounter. One of the main topics to which we have already been able to contribute, is the equipment and use of hybrid active learning classrooms. CHARM has a lot of experience with this, more than most other alliances. We have been very happy to make use of the support of organizations and structures that already exist for knowledge exchange. All alliances can gain from this collaboration; the exchange of good practices evidently helps to spend our resources efficiently. CHARM is and will remain committed to this.

LESSON LEARNT 2:

INTEROPERABILITY OF OUR SYSTEMS IS THE KEY

Our starting point everywhere are the local systems that we use in the individual universities of the partnership. Most of us don't have a legal entity, which means that using the local systems for the purposes of the Alliances will remain the preferred solution for a successful IT set-up for the near future. That implies that we are not so much implementing new tools or platforms, but should rather put our efforts into making the existing tools and platforms interoperable. This really is a key word for the upcoming period.

Interoperability is what we need to push for, and we need to leverage our joint power to get IT-providers to enable this interoperability in the systems they provide.

LESSON LEARNT 3:

MAIN IT-PRIORITIES ARE IDENTITY MANAGEMENT, JOINT COURSE CATALOGUES AND DIGITAL CREDENTIALS

Through the lively discussion on IT-matters on European level, we have gradually gained a better understanding of the main priorities that we all share and to which we need to find solution. Especially the European Digital Education Hub has made a largely impact here in their work to define 8 different use cases, draw IT-architectures for them and discuss with alliances which ones of these they would be interested in implementing. If we try to summarize the topics that seem to recur most frequently, the following three priorities emerge:

- **Identity management** is a key issue that is hard to solve. Students and staff who are participating in an educational activity at one of the partner institutions, should ideally be able to bring their own identity and the related attributes, in order to make use of the services provided by the partner. Basic infrastructure for this exist, in the form of eduGAIN and MyAcademicID, but their application in daily practice is not an easy task, especially when it comes to connecting Microsoft services the alliance relies on heavily (like Teams). It will be one of the key challenges in WP8 that we will continue to work on – and the same is happening in other alliances on European level, so hopefully in two years' time, we will have gained new knowledge and experience, jointly across all alliances.
- **Joint course catalogues** are another very practical format in which European University Alliances, including CHARM, are providing opportunities to our students. The big advantage of such catalogues is that they potentially allow a significant scale-up to a large number of students. In this way, our Alliance can make an impact for all of our students, not just the select few students that are participating in our Joint Masters' programme. In order to scale up the offer, we need an IT-infrastructure that can support this, though – this need is well visible in our own initiative, the CHARM Transnational Online Learning. Several alliances are working on this; we need to tap into the knowledge that has already been developed in this regard. (That being said: the IT-infrastructure is only one of several pre-requisites to make such an initiative successful and sustainable.)
- A third priority is the provision of **digital credentials**. This is a need that we have to fulfill for all the educational opportunities that we want to provide to our students. Whether it's a micro-credential, a transcript of records for a single course or the diploma of an entire joint programme: an efficient, modern and safe way to issue a digital credential is priority. We have run our own pilot with the Edu badges platform (in collaboration with WP3) and are working on setting up a second pilot with the European Digital Credentials for Learning platform. Comparable initiatives are taking place at other alliances, too. We have also seen experiments with blockchain technology and with Open Badges technology at other alliances. Bringing this knowledge together and making our own choice among the suitable options will help prepare us for an efficient way of providing digital credentials for Alliance-level educational activities in the future.

All in all, we have gained a lot from the collaboration with other alliances and European-level organizations, and we have shared a lot from our side. We expect to continue the collaboration at the current level. The further all alliances move down their path of development, the more reasons there will be to keep in touch and learn from each other. We are very grateful for the existence of those organizational structures that are already in place to support us and all the other European University Alliances in this endeavor.

And finally the question: what impact did we make so far with our contribution to the European-level knowledge exchange and debate? In the descriptions above, we have already tried to highlight the impact of the individual activities. Our partners, especially on European level, have indicated multiple times that the contribution of CHARM-EU is very valuable to help the joint projects succeed.

Looking at the picture in its entirety, we can conclude that the collaboration across alliances and across national borders is crucial for the success not only of our own alliance, but just as well for the success of the European University initiative as a whole.

A final quote about CHARM's impact in this respect from the president of the EUNIS network:

“CHARM-EU plays a crucial role in the European Higher Education Hub and the European Higher Education Interoperability Framework (EHEIF). Their active participation in in-person workshops and online sessions provides invaluable insights, as they consistently offer constructive feedback on how deliverables work in practice within an alliance. Furthermore, CHARM-EU excels at disseminating their practical examples and lessons learned, both at the European and national levels. This combination of hands-on expertise and active knowledge sharing significantly accelerates progress and fosters broader adoption of interoperable solutions across the sector.”

Evelien Renders, Advisor international education at SURF, currently president of EUNIS network

ANNEX I: CHRONOLOGICAL OVERVIEW OF ACTIVITIES

No	Date	Involved from project	Involved from external partners	Description
1	June 5, 2023	WP-lead (UU)	FOREU1/FOREU2 Alliances, SURF, EC	Regular meeting of the recently joint FOREU1/FOREU2 groups on IT & digitalisation. Led by CIVICA and co-led by UNITA European University Alliances. This specific meeting addressed the creation of a joint mapping tool with which to create an overview of relevant IT project on European level at Home - EduXS.eu , and also a presentation from the European Commission about the digitalization priorities by the European Commission.
2	June 6, 2023	WP-lead (UU)	SURF, other Dutch universities (RUG, UvA)	Intake session of the NextCloud pilot, organized by SURF. The goal is to pre-experiment with an alternative to BigTech tools. The participating universities are asked to choose a pilot setting for collaboration and then experiment with the open source tools provided by SURF, in order to see if this could be an alternative to commercial system, in the long run.
3	June 16, 2023	WP-lead (UU)	SURF, Aurora EUA, EuroTeQ EUA, 5 others Dutch universities	Day-long meeting about the interoperability of technical standards in international collaboration projects in higher education. Discussed the European interoperability framework (4 layers: technical, legal, semantic, organizational interoperability) and gave input in a joint brainstorm about where problems arise in the current situation.
4	July 5, 2023	WP-member (Université de Montpellier), WP-co-lead (ELTE), member Executive Board (UU)	SURF	Taken a joint look at NextCloud, an open-source collaboration platform. SURF is providing this as a (pre-)pilot to Dutch higher education institutions. The question was: what use-cases could CHARM-8 use this platform for? Can it be a feasible alternative for commercial systems with comparable functionalities?
5	July 6, 2023	WP-lead (UU)	<i>Hochschulforum Digitalisierung</i> , Technopolis	WP-lead was Sounding Board member for a report commissioned by <i>Hochschulforum Digitalisierung</i> to investigate interoperability issues that European University Alliances encounter: for joint course catalogues, for joint enrolment, joint VLEs and for micro-credentials. Study is due to be published in September.
6	Aug 25, 2023	WP-member (UM)	ECIU and other EUAs	Discuss micro-credentials in EUAs, including technology used by other alliances for this purpose
7	Sept 12, 2023	WP-lead (UU)	European Digital Education Hub	Participation in webinar about micro-credentials

8	Sept 21, 2023	WP-lead (UU)	EuroTeQ	Attendance of launch event of EuroTeQ course catalogue in Brussels
9	Sept 27	WP-lead (UU)	European Association for International Education	Participation in EAIE conference in Rotterdam, with a lot of workshops with relevance to IT in European University Alliances
10	Oct 10, 2023	WP-lead (UU)	EPICUR	Bilateral meeting with EPICUR representative to discuss the use of student journey maps
11	Oct 19, 2023	WP-lead (UU)	FOREU-IT	Participation in the FOREU-IT meeting organized for all IT responsables in all EUAs. Helped with arranging a presentation of <i>Hochschulforum Digitalisierung</i> report on interoperability during this session.
12	Oct 23, 2023	WP-lead (UU)	European Digital Education Hub	Participation in kick-off meeting for Interoperability Framework
13	Nov 2, 2023	WP-lead (UU)	SURF	Participation in an online session dedicated to visualizing interoperability issues for Educational Credentials
14	Nov 13, 2023	WP-lead (UU)	Aurora	Bilateral meeting about the IT-solutions for creating course catalogues in EUAs
15	Nov 15, 2023	WP-member (UU) and WP-lead (UU)	EuroTeQ, SURF, <i>Hochschulforum Digitalisierung</i>	Joint organization of a session about the digitalization strategy for European University Alliances; organized during the SURF Education Days (Dutch national congress about IT in HEI)
16	Nov 17, 2023	WP-member (JMU), WP-lead (UU)	ECIU	Attendance of webinar organized by ECIU about e-sealed micro-credentials
17	Nov 20, 2023	WP-lead (UU)	European Digital Education Hub	Participation in the core group that is meant to establish an Interoperability Framework for IT in higher education
18	Dec 8, 2023	WP-members (JMU)	TU Eindhoven, EuroTeQ, participants from different universities	Presentation from professor of TU Eindhoven about challenge-based learning, followed by discussion

19	Dec 13, 2023	WP-members (UM and JMU)	EuroTeQ	Attendance of Q&A session Deep Dive into the technical aspects behind the EuroTeQ Course Catalogue
20	Dec 15, 2023	WP-members (JMU) and WP-lead (UU)	TU Graz, UNITE!, participants from different universities	Presentation from professor of TU Graz about MOOCs and microcredentials, discussion
21	Dec 15, 2023	WP-co-lead (ELTE) and WP-lead (UU)	SURF / European Digital Education Hub	Participation in a session on EduXS.edu, which is developing into an overview platform for project on European level
22	Dec 18, 2023	WP-lead (UU) and WP-member (UM)	SURF Communities	Posted article about Lessons learnt on hybrid classrooms in Dutch national level forum: Learning Spaces SURF Communities
23	Jan 18-19, 2024	WP-lead (UU)	European Digital Education Hub/Interoperability Working Group	Participation in a Design Thinking Workshop organized by the European Digital Education Hub. Aimed at formulating use cases that should later be solved by the Interoperability Framework that we are due to develop.
24	Jan 25, 2024	WP-lead (UU)	KAIWOO meeting of Dutch universities' IT-experts	Gave a presentation with the title 'The need for interoperability in the day-to-day-life of a European University Alliance'. Also EuroTeQ alliance and SURF gave presentations; a joint discussion with the participants followed.
25	Jan 25, 2024	WP-lead (UU)	Bilateral meeting with AURORA EUA	Meeting with director of the AURORA alliance. We discussed our CHARM-EU IT set-up and how this relates to AURORA setup.
26	Feb 7, 2024	WP-co-lead (ELTE)	NTT Data	Participation in the ESC Business Needs Forum, presenting the current version of ESC-Router as well as gathering feedback on the development and about ESC-related business needs.
27	Feb 26, 2024	WP-lead (UU) and WP member (UU)	Bilateral meeting with YUFE EUA	Meeting with digitalisation manager of YUFE alliance, to compare status quo and challenges related to IT in our respective alliances.

28	March 4, 2024	WP-lead (UU)	National-level meeting of EUAs with Dutch ministry of education	Participation in a national level meeting in the Netherlands, in which almost all EUAs were represented. Dedicated catch-up with IT-colleagues from other alliances which were present (EuroTeQ, ENHANCE).
29	March 5, 2024	WP-lead (UU), WP-co-lead (ELTE), WP-members (UU and ELTE)	SURF	Meeting with SURF to discuss their support possibilities for European University Alliances, specifically on the topic of identity- and access management.
30	March 8, 2024	WP-lead (UU)	European Digital Education Hub	Participation in a meeting for European University Alliances to map the tools and platform they use for interoperability. Input shared among others with UNITA Alliance and EU Green Alliance and T4EU.
31	March 14, 2024	WP-lead (UU)	NPuls EdTech Day	Panel member at a Dutch national-level event about Education Technology. Presented the implications of European University Alliances to educational standardization at European level.
32	March 16, 2024	WP-lead (UU)	LinkedIN posting about CHARM edubadges	Made a re-posting of the LinkedIn message about the pilot CHARM-EU ran with issuing edubadges, with the re-posting stressing the technology aspect. This re-post generated 35 likes and 4 comments, of which 4 or 5 were from different European University Alliances who were interested in this approach.
33	March 19, 2024 April 2, 2024 April 12, 2024	WP-lead (UU)	EDEH Squad 2	Participation in Interoperability Framework Group, squad 2, topic 'Apply and get recognition'
34	March 26, 2024	WP-lead (UU), WP-co-lead (ELTE), WP-member (UU)	SURF	Follow-up meeting to discuss the usability of SRAM for European University Alliances in general and CHARM specifically
35	April 2, 2024	WP-member (ELTE)	NTT Data	Discussion with NTT Data about the use of eSeal for European University Alliances in general and CHARM specifically
36	April 5, 2024	WP-lead (UU)	Aurora EUA	Catch-up with director of Aurora about the IT developments in CHARM and Aurora

37	April 9, 2024	WP-lead (UU)	EDEH Squad 3	Participation in Interoperability Framework Group, squad 3, topic 'Access tools'
38	April 17, 2024	WP-lead (UU)	NPuls meeting about digital testing	National-level meeting of HEI to discuss the needs for collaboration on the topic of assessment and testing in higher education
39	April 19, 2024 April 30, 2024 May 14, 2024	WP-lead (UU)	EDEH Squad 4	Participation in Interoperability Framework Group, squad 4, topic 'Generate educational resources'
40	April 24, 2024	WP-lead (UU)	EWUU meeting	Yearly conference with two Dutch collaboration partners of UU, namely WUR and TU/e. Discussion of various topics of collaboration.
41	May 16, 2024	WP-member (ELTE)	Erasmus+ Multiplier event	Event on Tools, Models and Best Practices for implementing distributed and blended European Education. We presented the CHARM-EU hybrid classroom.
42	June 11, 2024	WP-lead (UU), WP-co-lead (ELTE)	FOREU	Participation in FOREU IT meeting about the topic of digital credentials.
43	June 26, 2024	WP-lead (UU)	EDEH	In-person meeting to validate the preliminary findings of the Interoperability Squads
44	Sept 18, 2024	WP-members (UM)	EuroTeQ	Discussion with French EuroTeQ colleagues about how they navigated the French national level IT systems with regards to sending information to the joint course catalogue of the alliance
45	Sept 19, 2024	WP-lead (UU)	EDEH	Webinar to discuss implementation guidelines for Reference Architecture for interoperability
46	Oct 9, 2024	WP-lead (UU)	Groningen Declaration Network Annual Conference	Co-presentation in a session at the Groningen Declaration Network conference about the role of IT for European University Alliances in the bigger picture of interoperability. On invitation by German Academic Exchange Service (DAAD).
47	Oct 29, 2024	WP-lead (UU)	EDEH	Testing workshop to talk about draft final products of Reference for Architecture for interoperability
48	Nov 5, 2024	WP-lead (UU)	CHARM Annual Conference	Workshop to discuss how to work together in Joint Virtual Offices. Representatives of two other European University Alliances were present.
49	Nov 12, 2024	WP-member (UU) and WP-lead (UU)	SURF Education Days	Presentation and workshop with representatives of Dutch education institutions about the IT Architecture of CHARM-EU

50	Nov 13, 2024	WP-member (UU) and WP-lead (UU)	SURF Education Days	Presentation about the use of hybrid classrooms in CHARM-EU
51	Nov 14, 2024 Oct 21, 2024	WP-member (UU) and WP-lead (UU)	EuroTeQ EUA	Bilateral meet-up with counterparts from EuroTeQ to update each other on technology for course catalogues
52	Nov 18, 2024	WP-lead (UU), co-lead (ELTE), WP-member (UM), Alliance manager	aUPaEU	Demo of the portal developed by aUPaEU and discussion about usability for CHARM
53	Nov 19, 2024	WP-co-lead (ELTE), WP-lead (UU)	Géant	Discussion about usability of MyAcademicID for the purposes of identity- and access management in CHARM
55	Nov 19, 2024	WP-co-lead (ELTE)	NTT Data	Participation in the European Student Card Technical Development Forum, presenting draft specification for a digital ESC, gathering feedback for integration into the final version
54	Nov 21, 2024	WP-member (JMU, ELTE) and WP-lead (UU)	Danish Technical University	Discussion about the digitally signed diplomas that DTU colleagues are working with and whether this could be applicable to CHARM
56	Nov 21, 2024	WP-lead (UU)	Finnish NREN CSC	Participation in International Roundtable on Digital Transformation
57	Nov 22, 2024	WP-co-lead (ELTE)	FOREU	Participation in the FOREU IT & Digitalisation meeting dedicated to linking libraries
58	Nov 26, 2024	WP-co-lead (ELTE)	NTT Data	Participation in the European Student Card Webinar focusing on the new ESC digital platform (ESC-Router)
59	Dec 6, 2024	WP-lead (UU)	Hochschulform Digitalisierung / Aurora European University Alliance	Start of peer-to-peer review process for the Aurora European University Alliance's digitalization plans

ANNEX II: LIST OF CITATIONS

- European Commission: Directorate-General for Education, Youth, Sport and Culture, *European higher education interoperability framework – Under the umbrella of the European Digital Education Hub*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2766/851374>
- Berger, F., Galati, N., Witteler, S. (2023). Making Interoperability Work, Arbeitspapier Nr. 72. Berlin: *Hochschulforum Digitalisierung*.
https://hochschulforumdigitalisierung.de/wp-content/uploads/2023/10/HFD_report_no.72_Making_interoperability_work.pdf - URL visited on 23-08-2024
- CHARM-EU Hybrid Classroom Model, September 2024, <https://charm-eu.eu/resource/hybrid-classroom-model/>