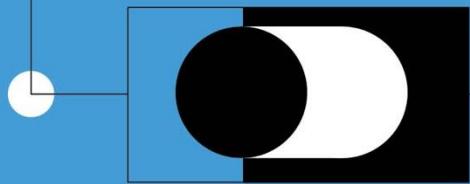




**ENHANCE**  
European Universities  
of Technology  
Alliance

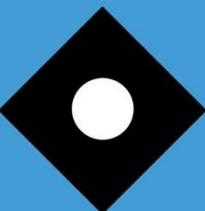


## ENHANCE POLICY PAPER

JUNE 2023

# MIND THE IMPLEMENTATION GAP

*Barriers faced by European University Alliances in their efforts to contribute to the successful realisation of the European Education Area*



## ABOUT THE PUBLISHER

© ENHANCE – European Universities of Technology Alliance

This document is available on the internet in summary with option to download the full text at  
[www.enhanceuniversity.eu](http://www.enhanceuniversity.eu)

Drafted in May 2023

## AUTHORS

Sarah Fowkes

[sarah.fowkes@enhanceuniversity.eu](mailto:sarah.fowkes@enhanceuniversity.eu)

Senior Project Officer, ENHANCE Alliance

Ana-Marija Cvitic

[strategy.officer@enhanceuniversity.eu](mailto:strategy.officer@enhanceuniversity.eu)

Strategy Officer, ENHANCE Alliance

## DISCLAIMER

This report has been co-funded by the Erasmus+ Programme of the European Union. The content of this report represents the views of the authors (ENHANCE European Universities of Technology Alliance) and is their sole responsibility. The European Commission and The Agency (EACEA) do not accept any responsibility for use that may be made of the information it contains.

## CONTENTS

<b>INTRODUCTION .....</b>	4
THE ENHANCE ALLIANCE .....	4
AMBITIONS OF THE EUROPEAN EDUCATION AREA.....	4
EUROPEAN UNIVERSITIES INITIATIVE .....	6
<b>1. IMPLEMENTATION BARRIERS: MICRO-CREDENTIALS AND OTHER JOINT SHORT-TERM LEARNING OFFERS .</b>	7
1.1 INTRODUCTION – MICRO-CREDENTIALS .....	7
1.2 NATIONAL IMPLEMENTATION OF MICRO-CREDENTIALS IN THE ENHANCE ALLIANCE .....	7
1.3 MICRO-CREDENTIAL OFFERS AT ENHANCE UNIVERSITIES.....	9
1.4 COMMON ADMINISTRATIVE CHALLENGES IN DEVELOPING JOINT OFFERS.....	12
1.5 RECOMMENDATIONS .....	14
<b>2. IMPLEMENTATION BARRIERS: SHORT-TERM AND VIRTUAL MOBILITY IN EUROPEAN UNIVERSITY ALLIANCES .....</b>	15
2.1 INTRODUCTION.....	15
2.2 COMMON CHALLENGES .....	15
2.3 STATUS OF INTERNATIONAL STUDENTS WITHIN SHORT-TERM AND VIRTUAL MOBILITIES.....	16
2.4 RECOMMENDATIONS .....	20
<b>3. CONCLUSIONS .....</b>	21

## EXECUTIVE SUMMARY

The European Commission Communication on achieving the **European Education Area (EEA)** by 2025 emphasises that this can only happen with reinforced transnational cooperation between universities, highlighting the critical role the European Universities Initiative has to play in achieving these ambitions.

ENHANCE is an Alliance of European Universities of Technology, funded under the **European Universities Initiative** in 2020. At this stage, the first two generations of European University Alliances have been running for almost three or four years respectively. Having laid the foundations for new joint offers, many activities are now being piloted and implemented, and other large-scale activities are approaching the implementation phase. We are therefore at an appropriate stage to reflect on the challenges, and more broadly on the remaining gap between the requirements placed upon universities by the EEA ambitions, and the institutional and national regulatory frameworks within which HEIs are operating. This paper draws on the experiences of ENHANCE to offer insight into the nature of these challenges, how we as an Alliance have approached these, and outline some recommendations.

The breadth of the envisaged **transformation** which touches on so many different aspects of higher education – from student mobility to innovative skills teaching, to inclusion procedures – means that the nature of challenges faced by universities is similarly **diverse**. Many of these issues are not wholly new challenges for our universities, but the nature of the transnational cooperation being pursued by the European University Alliances has brought some new matters to light.

This paper explores two major areas where European University Alliances are actively driving transformation, and examines some of the related implementation barriers, namely 1) **Micro-credentials and other joint short-term learning offers**, and 2) **Short-term and virtual mobility**. These issues are exemplary of the challenges that emerge in the pursuit of this deep transnational collaboration – such as aligning different institutional structures and fostering increased flexibility and change within these structures, balancing different national policy approaches to accreditation, student status, or quality assurance, and working within the constraints of short-term funding frameworks.

The challenges to implementation can be found at various levels. They may be linked to different **institutional** policies and practices of consortium partners, to restrictive or diverging regulatory and funding frameworks at the **national** higher education policy, to potential incompatibility of the former with policy initiatives at **European** level, or indeed often a combination of these levels.

It follows that action to address and remove these barriers is needed at all three levels – institutional, national and European. This paper outlines a number of **recommendations** for how the potential of micro-credentials and other joint short-term offers can best be supported and fully exploited, enriching our education offers and fostering increased mobility, and how more flexible mobility structures can be supported, with appropriate resource and student regulations.

The experiences outlined below highlight that we need to consider a **European approach** to micro-credentials and virtual and short-term mobility from the beginning. We urge **national policy makers** to take the needs of the European Alliances into consideration when addressing issues around accreditation, quality assurance, student status and funding mechanisms. Equally, **EU bodies** need to be aware of the long-term nature and complexity of the regulations posing barriers to mobility when setting up funding schemes. Continued **institutional efforts** to address the challenges identified here can only be successful with this complementary change at national and European levels.

## INTRODUCTION

### THE ENHANCE ALLIANCE

The ENHANCE Alliance brings together ten major European research-intensive universities with a focus on science and technology, seven of which are partners in the 2020-2023 ENHANCE Erasmus+ funded project: Chalmers University of Technology (Sweden), the Norwegian University of Science and Technology (Norway), Warsaw University of Technology (Poland), Politecnico di Milano (Italy), Universitat Politècnica de València (Spain), Rheinisch-Westfälische Technische Hochschule Aachen (Germany), and Technische Universität Berlin (Germany).

Together we were successful in our 2020 application to the Erasmus+ funding programme for European Universities on the basis of our ambition to:

*“drive responsible societal transformation by enhancing a strong alliance of European universities of technology, empowering people to develop and use science and technology responsibly and turn global challenges into opportunities”.*

The ENHANCE Alliance envisions a world where the European University plays an integral part in European society in developing responsible innovation and shaping our joint future. The ENHANCE Alliance aspires to foster a common identity amongst our university communities and overcome national borders to enable innovative and flexible joint education offers with increased mobility of our students and staff.

The ENHANCE Alliance has undertaken to drive change at three levels to realise the ambitions of the European Education Area (EEA):

- 1) ENHANCE Culture: developing a joint identity based on our shared European values and developing new formats to train future-ready graduates.
- 2) ENHANCE Structures: driving change in internal structures and procedures through long-term alignment of key strategies and administration systems.
- 3) ENHANCE Policies: promoting necessary regulatory change by developing joint solutions with external stakeholders.

This level of transformation necessitates regional, national, and European frameworks and legislation that can facilitate and embrace these changes. The strength of the European University Alliances lies in their diversity, but therein also lies a challenge. European University Alliances have embraced this challenge and are highly motivated to identify sustainable solutions to these regulatory barriers. Nonetheless, on some issues further engagement and transformation at a national or European policy level will be needed to enable this progress. This paper draws on the experience of the ENHANCE Alliance to examine some of the concrete challenges faced by university alliances and offers some recommendations as to how the HE sector and policymakers can help close this implementation gap and realise the ambitions of the EEA.

### AMBITIONS OF THE EUROPEAN EDUCATION AREA

The development of the European Education Area (EEA) and the European Higher Education Area is shaped by two overlapping forms of international governance. One is the Bologna Process, a voluntary mechanism launched by the Bologna Declaration of 1999, the other governance process involves European Commission initiatives designed to shape the European Education Area, such as the European Universities Initiative, which we look at more closely below.

The European Commission Communication on achieving the EEA by 2025<sup>1</sup> emphasises that the development of such a consolidated education area can only happen with reinforced transnational cooperation between universities, who are then strengthened in their capacity to equip their students, lifelong learners and

researchers with the necessary competences and skills. Due to the subsidiarity principle, the role of individual member states cannot be underestimated here. In the field of European higher education, transformative policy action is largely dependent on member states and the extent to which they are willing to support the development of a European Education Area or programmes such as the European University Initiative. The overall perception towards European integration efforts within the member states is therefore important context when looking at the capacity of different actors to support the implementation of the EEA ambitions.

The EEA foresees development in six different dimensions, 1) Quality, 2) Inclusion & Gender Equality, 3) Green & Digital Transitions, 4) Teachers & Trainers, 5) Higher Education, and 6) Geopolitical. Before examining the implementation challenges it is helpful to review some of the key EEA ambitions<sup>2</sup> around which ENHANCE and other European University Alliances have shaped their activities:

## QUALITY

- Equip young people with the necessary skills, including digital competences, to enable them to become engaged citizens and meet the needs of the future labour market.
- Support young people in mastering transversal skills e.g. critical thinking, entrepreneurship, civic engagement.
- Promote the dual freedom for learners and teachers to be mobile and for institutions to freely associate with one another in Europe and beyond.
- Foster language learning and multilingualism to enable learners and teachers to benefit from a genuine European learning space.

## INCLUSION & GENDER EQUALITY

- Decouple educational attainment and achievement from social, economic and cultural status.
- Develop robust and inclusive lifelong learning strategies.
- Develop better gender sensitivity and challenge and dissolve gender stereotypes.
- Improve representation of women in scientific fields of study including engineering, manufacturing and construction, and ICT studies.
- Work towards gender balance in leadership positions.

## GREEN & DIGITAL TRANSITIONS

- Foster behaviour change – booster skills for green economy and fostering new sustainable education infrastructure.
- Increase number of professionals working towards a climate-neutral and resource-efficient economy.
- Equip people with digital skills and other relevant competences (e.g. entrepreneurship) needed to navigate a labour market transformed by technological change.

## TEACHERS & TRAINERS

- Strengthen support and professional development opportunities for education professionals.

## GEOPOLITICAL

- Project a positive image of Europe in the world, spreading its messages and fundamental values.
- Address existing and emerging global challenges via high-quality international cooperation.

## HIGHER EDUCATION

- Test new models of deeper and more ambitious higher education cooperation, leading to more joint curriculum development and common courses.
- Closer cooperation that enables learners to move more easily between education systems in different countries.
- Develop a policy framework across borders that allows for seamless transnational cooperation.
- Pool online and physical resources, courses, expertise, data and infrastructure across disciplines.
- Work towards automatic recognition of qualifications and study periods abroad, as well as quality assurance of joint transnational activities and recognition and portability of short courses leading to micro-credentials.

## EUROPEAN UNIVERSITIES INITIATIVE

With the European Universities Initiative, the European Commission launched a policy instrument in 2019 to promote a truly integrated and globally competitive European Higher Education Area. Following the 2022 Erasmus+ call for proposals, there are now 44 European University Alliances being supported by this initiative, involving around 340 higher education institutions in both capital cities and remote regions of 31 countries, including all EU member states, as well as Iceland, Norway, Serbia, Turkey and the UK. A wide variety of legal systems are combined in the initiative.

The European University Initiative aims to support diverse models of collaboration between Higher Education institutions and remove obstacles to deeper transnational cooperation between them.

University alliances under the European Universities Initiative act within a diverse policy landscape and must respond to challenges linked to different institutional policies and practices of consortium partners, but also to restrictive or diverging regulatory and funding frameworks at the level of higher education systems, or a combination of both. Transnational cooperation activities such as establishing joint degree programmes, staff exchange, student mobility, sharing knowledge and facilities, or developing shared teaching curricula require a considerable transformation and inevitably bring challenges not only on practical levels but with regard to policy as well.

The implementation barriers faced by European University Alliances are challenges that have been partially addressed in the Bologna Process, especially in the field of quality assurance and mutual recognition, with the common European Credit Transfer and Accumulation System (ECTS) and introduction of the Bachelor and Master degree structures. The legal inconsistencies identified in the Bologna Process however persist in the framework of the European Universities Initiative.

In the following sections we will take a closer look at two major areas where ENHANCE and other European University Alliances are seeking to reach a transformative shift in the level of truly international, collaborative and flexible educational offers available to learners. We examine some of the implementation barriers faced and offer some recommendations for both national and European policymakers.

## 1. IMPLEMENTATION BARRIERS: MICRO-CREDENTIALS AND OTHER JOINT SHORT-TERM LEARNING OFFERS

### 1.1 INTRODUCTION – MICRO-CREDENTIALS

In the wake of the introduction of MOOCs (Massive Open Online Courses), new formats and credentials for digital teaching have developed in the form of micro-credentials. A micro-credential is understood in this context as a short and focused learning programme that allows individuals to develop specific skills or knowledge in a particular area inside or outside their study field. If stackable, they can be recognised as components of larger study credentials. Specifically, the EU has defined micro-credentials as “the record of the learning outcomes that a learner has acquired following a small volume of learning”<sup>3</sup>. Although the name used for these short-term learning offers vary within the ENHANCE Alliance, the majority of the member universities do have small volume learning offers, for which students and other learners can receive a form of certification, or micro-credential.

Due to the anticipated potential of micro-credentials, there are many efforts at the political level to specifically promote their implementation and to remove barriers on national and EU levels. The European Commission has responded to the development of micro-credentials in higher education with a range of policies and initiatives<sup>4</sup>.

The European Commission aims by 2025 to take the necessary measures to enable the wider use, transferability, and recognition of micro-credentials in the EU member states. With the Micro Credential Framework, the EU aims to support and develop the issuing of digital certificates at universities. The Framework outlines the following transparency tools and processes<sup>5</sup>:

- The transparency of qualifications (*European Qualifications Framework and the Qualifications Framework of the European Higher Education Area*) (Commission, 2017a; EHEA, 2005)
- Quality assurance in higher education (*Standards and Guidelines for Quality Assurance in the European Higher Education Area*) and in VET (*EQAVET*) (ENQA, 2012; Commission 2009a; Commission, 2020e)
- Credits for achieved learning (*European Credit Transfer and Accumulation System*)<sup>6</sup>
- Recognition (*Lisbon Recognition Convention and the Diploma Supplement, as well as the Council Recommendation on promoting automatic mutual recognition of higher education and upper secondary education and training qualifications and the outcomes of learning periods abroad* (*The Council of Europe, 1997; Commission, 1999; Commission, 2018b*)
- Recognition of prior learning and validation of non-formal and informal learning (Commission, 2012a)
- Lifelong learning and career management (*Europass*) (Commission, 2018a)

Regarding the issuing of micro-credentials, there is still a lack of transparency. Within the framework of the Open Badges Standard, a number of companies are developing tools to support universities with the issuing and quality assurance of badges. In addition to established signature procedures for documents or central verification databases, blockchains also offer a technology for decentrally managed, transparent and forgery-proof digital certificates.

### 1.2 NATIONAL IMPLEMENTATION OF MICRO-CREDENTIALS IN THE ENHANCE ALLIANCE

The EU has launched a standardisation process to promote a uniform implementation of micro-credentials within its member states. Some member states - including Poland, for example - have set themselves the national goal of standardising, promoting and implementing micro-credentials. Other countries, like Spain, are still at the beginning of setting a framework. Norway on the other hands uses micro-credentials – for the time being – mostly in the field of vocational training.

Table 1. Country Overview: Micro-credentials implementation on national level

<b>Sweden</b>	Sweden does not yet offer a national regulatory framework for micro-credentials. On national or university level there are no legal constraints hindering the implementation of micro-credentials, as long as the national standards for quality assurance are fulfilled. Barriers in implementation relate mainly to the national system for academic records. The mandate to issue micro-credentials is limited with respect to formal degrees. The Swedish Rectors' Conference appointed a working group discussing processes of securing quality assurance in short-term offers.
<b>Norway</b>	Norway does not offer a national regulatory framework for micro-credentials per se. However, within the framework of the Norwegian qualification programme, a sectoral competence development programme (bransjeprogram) is being developed for vocational training. The government and societal partners work together to increase competence development in selected sectors. The courses are designed to fill the skills gaps identified by the partners. Some of them lead to formal certificates of achievement. Higher Education Institutions in Norway have autonomy to establish their own institutional rules and regulations and the discourse on national implementation for micro-credentials is limited. All universities are responsible for recognising and accrediting credentials that their students have obtained at other universities.
<b>Italy</b>	There are currently no national regulatory frameworks for micro-credentials in Italy. CIMEA, the Information Centre on Academic Mobility and Equivalence is leading different working groups and projects on the topic. One of the most prominent ones is MICROBOL, micro-credentials linked to the Bologna Key Commitments. CINECA, a not-for-profit consortium made up of 70 Italian universities, eight Italian research institutes and the Italian Ministry of Education, is working on badges as proof of academic achievement. The universities are using micro-credentials to increase student engagement, especially in non-academic areas (e.g. development of social and communication skills and achieving sustainable development). The digital badges can be stored on a blockchain.
<b>Germany</b>	There are no legal or governmental constraints hindering the development or issuing of micro-credentials in Germany per se. There is an ongoing discussion about modularisation and certified training supplements in vocational education. The Federal Institute for Vocational Education and Training (BIBB) was commissioned by the Federal Ministry of Education and Research (BMBF) to provide technical and administrative support for research and development studies and projects with regard to modularisation in the German vocational education and training. In many of these projects, online platforms with digital learning modules were learning modules were set up and offered. A survey by the German Academic Exchange Service (DAAD) on micro-credentials published in March 2022 shows that about 20% of German HEIs are already offering micro-credentials while another 24% are in internal discussions or an implementation process. In 2020 the German Rectors Conference (HRK) published a recommendation on the issue. While generally welcoming the idea, the HRK also brings forward some of the major criticisms on micro-credentials within the German discourse, which can be summarised as concerns of an even more scattered qualification framework and a further commercialisation of higher education.
<b>Spain</b>	Spain does not offer a national regulatory framework for micro-credentials yet. One of the objectives of the ongoing reform of the university law is to facilitate the further internationalisation of Spanish universities. In this respect, the Spanish Rectors' Conference has called for more autonomy of all universities to enable them to strengthen their transnational and international engagement in its diverse forms, independently from the question of whether they are involved in a European University Alliance. <sup>7</sup> There are brief references to micro-credentials in the Royal Decree 822/2021 with regard to the organisation of higher education as well as its quality assurance. Currently, micro-credentials should be less than 15 ECTS since they are not yet

	<p>included in official education programmes. The Spanish Ministry of High Education is currently working on a draft of the new National Law of the University System in which the concept of micro-credentials is expected to be further developed.</p>
<b>Poland</b>	<p>There are both national and institutional regulations on postgraduate non-degree programmes which can be considered micro-credentials. Polish higher education institutions can offer various types of postgraduate non-degree programmes (30+ ECTS) and other short-term learning activities. HEIs can apply for inclusion of a qualification resulting from the completion of a short-term offer to the National Qualifications Register.</p> <p>The Polish national Rectors' Conference (Conference of Rectors of Academic Schools in Poland – CRASP) is strongly supporting activities intended to promote and develop micro-credentials by Polish universities. It has appointed a working group that holds regular joint meetings with the advisory group of the Ministry for Education and Science that shall propose regulations on micro-credentials that will then become part of the Act on Higher Education and Science.</p> <p>For potentially stackable micro-credentials there is an ongoing debate on recognition of such a micro-credential as a partial fulfilment of the (Bachelor or Master) degree requirements. It is the decision of the body that offers the degree programme whether to recognise – fully or partially – ECTS points assigned to the micro-credential offered by a HEI. Such a decision is usually made based on examining the learning outcomes defined for the micro-credential. Nevertheless, the Polish Accreditation Commission deals only with degree programmes; other forms of educational provision, including micro-credentials, are outside its scope of activity.</p>

On a practical level, numerous challenges remain in the implementation of micro-credentials. These relate to the standardisation or the development of crediting regulations, the embedding of micro-credentials in quality assurance systems and, not least, the necessary mobilisation of considerable resources. We discuss some of these implementation challenges in more detail in 1.3 and 1.4.

### 1.3 MICRO-CREDENTIAL OFFERS AT ENHANCE UNIVERSITIES

Within ENHANCE, as well as developing new joint micro-credentials, academic coordinators in the member universities are examining how existing certificate programmes in designated fields such as climate action, data literacy or sustainable entrepreneurship could be further developed and opened to students from ENHANCE partners. For this purpose, the existing offers were screened and mapped.

**Table 2. Micro-Credentials at ENHANCE Universities**

<b>Chalmers University of Technology</b>	Chalmers is in the process of creating its own definition and process for micro-credentials, aligned with the ENHANCE template for micro-credentials. Chalmers does not envision issuing badges for the foreseeable future but is planning to use certificates as a way of highlighting certain skills sets that students have gained from taking a set of courses either within or separate from a degree programme. The process for issuing certificates and for establishing the course packages leading to certificates is currently being developed in an agile fashion, taking influence from Chalmers' prior experiences from offering micro-credential-like certificate programmes through EdX.
<b>Norwegian University of Science and Technology</b>	In its 2022 "Roadmap for Engineering and Technology Education Reform at NTNU" NTNU formulated main actions for collaboration, including to incentivise the development of small, digitally delivered course modules which facilitate future micro-credentials. Currently, the target group for this are lifelong learners. These courses are offered in Norwegian and require in-person attendance. Regulations concerning recognition of foreign credentials are decided at each individual higher education institution. NTNU degree courses must carry at least 7.5 ECTS. Courses

	carrying fewer ECTS may only be accepted on a case by case basis after applying to the Rectorate.
<b>Politecnico di Milano</b>	PoliMi offers short-term courses leading to the award of micro-credentials, so-called digital badges. All courses are presented in the so-called "Passion in Action" catalogue that includes all open participation teaching activities PoliMi offers to students to support the development of transversal, soft and social skills and to encourage students in enriching their personal, cultural, and professional experience. Students can participate in any of the courses, regardless of whether they are related to their study programme or not. Acquired skills are accredited in the Diploma Supplement. PoliMi issues the digital credentials through Bestr, a digital platform made available by CINECA, a consortium composed by 113 Italian universities and public institutions. In addition, PoliMi has introduced high-level training courses as part of the MSc Educational Training. Students must acquire at least 30 ECTS in professional courses related to the fields of green technologies, smart infrastructures of inclusivity design. An 'Ambassador certification' relating to the respective field is reported in the student's Diploma Supplement, alongside a digital badge.
<b>RWTH Aachen</b>	RWTH is currently developing a framework that distinguishes between badges and basic or advanced micro-degrees. In exchange with other German universities, common standards (e.g. for naming, ECTS issuance, target group, etc.) are formulated. There is a parallel approach to develop an overarching examination regulation for micro-credential programmes in order to regulate the awarding of micro-degrees that are composed of stackable modules on a specific topic combining at least 10 ECTS. The target group of RWTH-internal micro-credentials is primarily considered to be RWTH students. Whether ECTS are recognised as part of a regular study degree depends on the extent to which the micro-credential modules are regularly anchored in the courses of study (curricula).
<b>TU Berlin</b>	At TU Berlin various internal stakeholders are currently in the process of implementing micro-credentials, and micro-credentials can certainly be regarded as part of the university strategy. This is also reflected in the fact that in 2019 the latest change of TU Berlin's General Study and Examination Regulation introduced the possibility to implement so-called "Certificate Programmes" (ranging from 12 to 30 ECTS) as a new study offer next to single study modules and regular degree programmes. Since then, various certificate programmes (e.g. on "Sustainability", "Gender in STEM", and "Ethics") have been implemented. In addition, TU Berlin's Quality Management Committee has recently begun to establish a quality process for these certificate programmes to streamline them in accordance with the European Approach in 2023. However, these micro-credentials will still be paper based as the issuance of digital credentials has not yet been tackled systematically. The main target group for the certificate programmes are TU Berlin students. In spring 2023, the TU Berlin Academy for Professional Education was launched as TU Berlin's lifelong learning centre. The Academy will offer a broad range of micro-credentials and badges to professionals/lifelong learners.
<b>Universitat Politècnica de València</b>	UPV has not yet defined an internal micro-credential strategy, however, the ENHANCE micro-credential template is currently being analysed in its implementation. Some experiments are currently being designed to test its applicability for the UPV educational offer and administrative procedures. An important issue at UPV is the definition of an internal quality assurance process that fulfils the future regulation that is expected to be approved by the Spanish National Quality Assurance Agency (ANECA).
<b>Warsaw University of Technology</b>	Micro-credentials, as they are defined in the European Commission's recommendation from 2022, are part of the new WUT development strategy, adopted by the WUT Senate in 2022. According to that definition, micro-credentials summarise separate learning modules with certificates, documenting the acquisition of knowledge and skills within them. WUT offers various types of postgraduate non-

degree programmes (30+ ECTS) and other short-term learning activities targeting students, external students, and lifelong learners.

There are several challenges to provide access to the above-described micro-credential programmes for other external target groups (i.e. lifelong learners).

Micro-credentials are an essential part of the ENHANCE joint educational strategy and within the regulatory frameworks outlined above, the Alliance has developed its own approach to the development of ENHANCE micro-credential offers. The member universities are aiming to create synergies between the existing certificate programmes and try in dedicated areas to create joint learning opportunities that open existing offers to all ENHANCE students.

In that regard, a number of common pillars were identified which shape the successful development of micro-credentials:

- A common definition which is communicated transparently
- A defined list of critical information elements to describe micro-credentials
- Alignment to National Qualifications Frameworks (NQFs) and the European Qualifications Framework (EQF): defined levels, standards for describing learning outcomes
- Defined quality assurance standards
- Defined credits: European Credit Transfer and Accumulation System (ECTS), defined learning outcomes and notional workload
- Defined recognition: for further studies and/or employment purposes
- Defined portability: issuing, storage and sharing of micro-credentials
- Identification of platform solutions for the provision and promotion of courses leading to micro-credentials
- Identification of incentives to stimulate the uptake of micro-credentials

ENHANCE redefined this list of common pillars in the “ENHANCE Micro-credentials Framework” which is first and foremost concerned with the definition of a shared micro-credentials typology (taxonomy).

The ENHANCE micro-credentials typology, as the name indicates, defines the types of micro-credentials. Each type is defined by its name and its basic characteristics that include:

- primary target group (traditional students, lifelong learners),
- profile (focus/orientation of learning outcomes and content),
- typical forms of learning activity (course/group of courses, special purpose MOOC(s), summer schools etc.),
- quality assurance mechanisms, including methods for assessment of learning outcomes,
- specification of the workload (indication of number of ECTS awarded or not, if so, the range of ECTS points that may be gained),
- specification of the level (whether or not the reference/assignment to the EQF level is given),
- stackability (whether or not it may be combined into larger credentials or qualifications),
- examples from the ENHANCE Proposal,
- examples from the educational offer of the ENHANCE universities.

In the proposed typology of ENHANCE micro-credentials, there are two basic groups of micro-credentials:

1. Certificates
2. Badges

In this way we distinguish between ECTS-bearing micro-credentials with the rigid quality assurance which includes thorough formal assessment of learning outcomes (certificates), and a second type of micro-credentials (badges).

There are further two subcategories of ENHANCE certificates:

- **Certificates of academic achievement** with learning outcomes and content - comprising an essential component of knowledge - focused on a specific (sub)area/discipline of engineering or transdisciplinary competences. Such certificates are primarily intended for traditional Bachelor, Master or Doctoral students.

- **Certificates of specialisation/professional achievement** with learning outcomes and content focused on application of knowledge and/or development of skills in some (sub)area/discipline relevant for the labour market or professional development/career. Such certificates are primarily intended for lifelong learners who want to adjust their skills portfolio to increase their competitiveness in the labour market.

The certificates of both subcategories are assigned ECTS points and an EQF level; some of them are stackable which means that they can be recognised as the components of larger credentials.

Unlike certificates, badges can be awarded with rather non-formal methods of assessment of learning outcomes or even based on participation in learning activities. They are not assigned ECTS points or EQF level and are, in general, non-stackable.

As in the case of certificates, there are two subcategories of ENHANCE badges:

- badges of achievement which are based on a wide spectrum of education provision open to the general public (traditional and non-traditional students of all age groups); this can include some courses developed for the purpose of degree programmes or continuing education, made available (usually in the form of MOOCs) to other learners with no credits awarded, but also special offerings that respond to the needs of various groups of society (secondary school students, senior citizens etc.),
- badges awarded for service-based learning and volunteering, offered primarily to traditional students for their work for the benefit of local communities or society at large.

Different forms of learning activities that could lead to an ENHANCE micro-credential (both certificates and badges) are envisioned. These forms can be classified with regard to:

- the mode of delivery (on-site/on-campus, online, blended, hybrid),
- organisation of the learning activity (course(s), in particular, MOOC(s), training session, workshop, summer school, service-based learning, volunteering etc.).

Anticipating challenges similar to those encountered when joint degrees or diplomas are issued by institutions from different countries, the ENHANCE Alliance has opted to award its micro-credentials by individual members universities - members of the ENHANCE Alliance may award a student a micro-credential on behalf of the Alliance. This means that the certification document will be signed by an eligible person from the relevant university and both the logo of that university and the logo of the ENHANCE Alliance will appear on the printed version of the document.

The ENHANCE Alliance has developed the following certificate programmes:

- Certificate in Sustainable Entrepreneurship
- Certificate in Climate Action
- Certificate in Data Literacy
- MOOC Innovators of Tomorrow
- Certificate in Sustainability
- Certificate in Digital Transformation

Most of these certificate programmes are composed of a set of different learning activities, often combining mandatory components, such as summer or winter schools, and elective components. ENHANCE therefore certifies other forms of joint learning activities, besides micro-credentials, such as summer or winter schools. Some of these are components of complex micro-credentials, and other short-term offers, such as ENHANCE training offers on Gender and Diversity, are not.

#### 1.4 COMMON ADMINISTRATIVE CHALLENGES IN DEVELOPING JOINT OFFERS

In the administrative reality of universities, there are, however, still numerous challenges in the practical implementation of micro-credentials which relate to standardisation or the development of crediting rules, embedding in quality assurance systems and, not least, the mobilisation of considerable resources. The management and coordination of joint offers within a university alliance poses several administrative challenges. Incompatible administration systems (see section 2 on virtual mobility), strict national regulations (e.g. regarding

issuing joint certificates), lack of clarity over institutional responsibility (e.g. for student support, course coordination or awarding of the degree) all present university alliances with potential barriers to overcome.

Based on our experience with the development and implementation of ENHANCE micro-credentials and other forms of joint short-term offers, below we give a brief overview of some of the barriers that can emerge when working to integrate common learning content reciprocally into courses and offering it to students either as a curricular or extra-curricular course. We then provide some recommendations on how outstanding barriers or challenges in the field of micro-credentials and other joint short-term offers may be addressed.

#### 1.4.1 COMMON LEARNING GOALS

Creating and maintaining jointly offered micro-credential programmes requires universities to develop new curriculum structures or modify existing ones. This involves identifying the specific skills or knowledge areas to be addressed, designing the learning outcomes, determining the assessment methods, and ensuring alignment with industry or professional standards. Usually, individual HEIs and their respective faculties have well-established learning goals for their curricular and extra-curricular courses which are often challenged when developing joint learning offers such as micro-credentials. As the learning goals are mostly formalised in the intra-university laws there is often limited flexibility possible when it comes to aligning these criteria with those of other institutions to support joint micro-credentials.

There are also varying degrees of specificity within the learning goals, with some institutions detailing these to such a level that makes change or even small adaptations challenging. The same issues apply to finding alignment in course prerequisites, when seeking to facilitate the participation of students in joint micro-credential programmes even though they may not be able to fulfil the usual requirements of a selected partner institution.

#### 1.4.2 ACADEMIC CALENDARS

Within one European University Alliance members must contend with a number of different academic calendars – with different semester structures, exam periods and holiday duration. This has always been a limiting factor for student exchange but in particular can be a barrier to the development of joint educational offers involving several universities. An alignment of semester and exam dates across Europe is not a realistic goal in the near future and so institutions are forced to work around the constraints of the academic calendar.

#### 1.4.3 LANGUAGE OF INSTRUCTION

European University Alliances are well placed to contribute to multilingualism in the EEA by fostering language learning amongst students. Nonetheless, the language of instruction is unavoidably a limiting factor on the breadth of courses that are taken up in joint learning offers. Across European universities many courses, particularly at Bachelor's degree level, are taught in the respective language of the institution and are not available in English. Even though language of instruction may not be a criterion for inclusion of a course within a joint education offer, students are still less likely to select courses held in languages other than English.

#### 1.4.4 ENROLMENT LIMITATIONS

For attractive courses in high demand that are offered in online/hybrid mode, the number of places is often limited. In some countries, such as Spain and Germany, home students are granted priority access to courses within their study programme. This means that incoming international students (including those who are members of the same University Alliance) will only be able to participate in some courses if other home students opt-out and there are spaces available.

An important prerequisite to enabling more virtual participation in micro-credentials however, is of course the capacity of individual universities to offer courses remotely. Virtual mobility refers here to the concept of participating in educational or cultural experiences without physically traveling to a different location. This can include both hybrid and fully online courses. During the pandemic many European universities have invested more in the technology and tools needed to offer more classes remotely, nonetheless limitations remain. The number of classrooms equipped with this capacity may still be small, the number of learners per class is usually limited, and many universities face administrative challenges in enrolling students who participate in online courses only.

## 1.5 RECOMMENDATIONS

- ◆ In order to ensure that the potential of micro-credentials to foster greater mobility across sectors, regions and educational institutions can be realised, a **common understanding of micro-credentials** is needed. It would therefore be necessary to reach a **minimum consensus not only at national but also European level**, with regard to how a micro-credential should be defined as well as which forms of learning can lead to such a qualification.
- ◆ It is clear that learners can already choose from a wide range of offers (both national and international). However, they are confronted with the problem that the respective micro-credentials exist independently of each other and are often not compatible with each other, making it difficult for learners to compare different offers and assess which may be best suited to their needs. This is also problematic for employers, who are interested in being able to easily assess the competences acquired through different micro-credentials. If micro-credentials are to generate added value for learners in the education and labour market system, **uniform rules and procedures** would be needed at the European level, especially with regard to the **issuing of micro-credentials**. This would make it easier for employers and learners, as well as for education and training institutions, to obtain information and **assurance about the reliability and quality** of micro-credentials issued by different national providers.
- ◆ In this context, it should also be examined whether a national micro-credentials ecosystem would be helpful or whether the existing **open badge platforms** can guarantee transferability of the badges into another environment without any problems. Regarding the **digital solution of certificates**, whatever the chosen system, further clarification is also needed regarding the storage, publication, secure authentication and data protection.
- ◆ In terms of resources required for micro-credentials, **infrastructures and financial outlay** need to be considered. Online platforms are usually required for embedding, marketing and distributing micro-credentials. These platforms could be **integrated** into existing higher education platforms where appropriate or **outsourced** to external service providers or commercial providers.
- ◆ Despite the limited scope of micro-credentials - as with other digital formats - the effort required to produce them is high. As a rule, conception, production, and operation usually cannot be afforded by individual teachers, but should be ensured in interdisciplinary teamwork with the contribution of professional, methodological-didactic, and technical expertise. The expenditure for infrastructure and especially for personnel is so high that individual specific scientific micro-degrees cannot usually be financed from the budgets of the faculties developing a micro-credential. For this reason, the dominant funding model tends to be pilot projects that are **financed by project funds or (for strategic purposes) central funds**. A **cooperation between HEIs with the private sector** could also help fund the development of new forms of micro-credentials.
- ◆ Virtual mobility can also be utilised to deliver micro-credential programmes to learners who are unable to attend traditional in-person courses. By leveraging **online platforms and tools**, educational institutions and organisations can offer micro-credentials to a broader audience, including learners from different countries or regions. Combining in-person classes with distance teaching can in part help to overcome scheduling challenges, as does the growing offer of partly or fully virtual mobilities. This flexibility supports students in creating their own study pathway. Further flexibility could be explored in the future with **digital exams** that can be taken at the home university after a physical mobility.

## 2. IMPLEMENTATION BARRIERS: SHORT-TERM AND VIRTUAL MOBILITY IN EUROPEAN UNIVERSITY ALLIANCES

### 2.1 INTRODUCTION

The European Education Area foresees increased student mobility, and European University Alliances are called upon to ensure at least 50% of students can benefit from seamless mobility opportunities (physical, virtual, or blended)<sup>8</sup>. The path towards this mobility target calls on universities to address a number of obstacles, including the availability of financial support for students, access to student services, and new questions posed by the increase in virtual and other flexible mobility offers.

The drive for increased mobility in higher education contributes to the internationalisation of higher education and research, to the recruitment of excellent academics at all career levels, and to the promotion of foreign language skills and the development of intercultural and personal competences among graduates. The transformative approach of European University Alliances offers a foundation for increased mobility without a corresponding increase in administrative burden.

Short-term physical mobility and virtual mobility offers both give international mobility opportunities to students seeking more accessible, flexible mobility models, and can support universities with the development of more innovative, digital teaching methods. Virtual mobility in addition can contribute to institutional climate goals. The pandemic has encouraged a rapid acceleration of more flexible mobility offers in many countries, but many new disruptive models do not fit comfortably into the established structures, which, beyond traditional Erasmus+ KA1 mobility, are largely restricted to short-term virtual mobility, micro-credentials or more recently, BIPs (Blended Intensive Programmes). The development of new models has therefore brought new administrative challenges and highlighted the limitations of the current structures.

If we are to enable students to take full advantage of the opportunities presented by increasingly flexible mobility offers then universities, national legislators, and European policymakers all have a role to play in addressing the barriers to effective implementation of these diverse mobility models.

### 2.2 COMMON CHALLENGES

#### 2.2.1 DEVELOPING MOBILITY-FRIENDLY STUDY STRUCTURES

Recognition of credit mobility can encounter obstacles driven by the design of study programmes. Often these are not designed in a way that is amenable to new flexible mobility models. Flexible structures that, for example, are more competence-oriented, include both curricular and non-curricular elements, and courses with a range of ECTS can help accommodate different mobility models, but incorporating new elements such as these effectively, and in a manner that is compatible with partner institutions, takes time. Establishing effective recognition procedures is however essential if European universities are to successfully foster increased mobility. National accreditation agencies and established quality assurance mechanisms offer a platform to address the associated challenges, but there is still a need to secure a common approach on some key issues. Beyond these regulatory frameworks, it is also a question of mindset. For many within our university communities, automatically recognising courses from a partner university is still seen as a radical idea and more needs to be done to achieve a positive recognition culture across faculties, with the benefits and necessity of student mobility more widely acknowledged. As a consequence, many students still struggle with partial recognition, and even in cases where recognition seems to have been fully granted, the mobility period may not always be recognised as a part of the core curriculum, resulting in an extension of studies for the mobile students. These barriers call for enhanced mobility support schemes and better organisational practices at both home and host universities.<sup>9</sup> As new mobility formats are introduced, European University Alliances can offer a model for institutionalised cooperation structures that can gradually support the smooth administration of these diverse offers, on a basis of mutual exchange and trust. For example, measures such as mobility windows can improve the flexibility of local study programmes by encouraging mobility and facilitating the integration of recognised offers.

## 2.2.2 ALIGNED IMPLEMENTATION OF NEW ERASMUS+ MOBILITY FORMATS

For the first time, new mobility formats under the Erasmus+ 2021-2027 programme enable short-term mobilities below staff level to be funded through traditional Erasmus+ KA1 mobility funding. This is a very welcome addition, but the implications for universities seeking to implement these programmes, in particular the BIPs and Doctoral mobilities, are not entirely clear. This is in part due to the fact that different National Agencies for Erasmus+ have reached different interpretations of the mobility frameworks. For example, the German and Polish National Agencies take an opposing position as to whether it is mandatory for BIPs to be developed in a co-design process by several universities or not. These new mobility formats do offer potential additional sources of funding to support European University Alliances in increasing mobility, however the implementation of these new short-term mobility offers also requires additional human resources (and associated funding) to manage their administration. Increased coordination between National Agencies would support universities to manage this transition and reduce the administration burden.

## 2.2.3 FUNDING

Whereas traditional Erasmus+ mobility offers well-established funding avenues for students to study abroad, mobility activities as part of a university alliance can pose funding challenges. Universities are currently reliant on traditional Erasmus+ semester mobility funding and existing mobility agreements, however this is not a sustainable solution on its own for the intended growth in mobility, nor is it very flexible in its structures and requirements. If no changes are foreseen that would allow the Erasmus+ funding awarded to successful European University Alliances to, for example, be used to fund student scholarships at a broader scale, the proportion of physical mobility reached within the target of 50% student mobility will be necessarily limited. Moreover, scholarships as a funding model for student mobility may not be the optimal solution when the aim is to facilitate extremely high levels of mobility for a diverse student body and not to target a limited selection of scholarship students. A sustainable model to finance the necessary centralised functions and offer the desired new services and offers to students will therefore require alternative funding sources. Virtual mobilities clearly offer an attractive alternative – whilst there may be associated administration costs, there is no financial burden on individual students. Yet the current funding structures makes the adoption of increasingly disruptive study pathways, such as the ENHANCE European Education Pathways (EEP) model, challenging. Potential alternative avenues being considered by ENHANCE and other alliances include the possibility of scholarship funds, accommodating free movers within new mobility formats, exploiting the potential of BIPs or expanding virtual mobility, although this brings its own challenges.

## 2.2.4 ACCESS TO STUDENT SERVICES

Ensuring equal and easy access to student services and infrastructures for an increased number of international students is an important element of seamless mobility offers. True seamless mobility requires improved alignment between administrative services responsible for enrolment, course registration, exam registration, student welfare, libraries, and external services including healthcare and housing. While access to these services has been duly implemented for students on traditional semester mobility, the diversification of mobility formats brings a new level of complexity in this regard. This is in part due to the fact that the provision and administration of these services – normally via the International Office – are closely interlinked with Erasmus+ structures. Accommodating new disruptive education offers within these structures raises many questions. And although various projects under the umbrella of the European Student Card Initiative have embarked on tackling the issue, many universities are still struggling to ensure easy access to their respective administrative services to students on new mobility formats such as short-term or virtual mobility. A timely implementation of the European Student Card, alongside closer co-creation with the European Universities Initiative would be necessary to ensure alignment with the real needs of European University Alliances.

## 2.3 STATUS OF INTERNATIONAL STUDENTS WITHIN SHORT-TERM AND VIRTUAL MOBILITIES

### 2.3.1 INTRODUCTION

One particularly complex and urgent implementation barrier when it comes to more flexible mobility opportunities is student status. Blended or hybrid curricular courses are important elements of university alliance educational offers, providing increased flexibility to students, ensuring accessibility to a diverse student body, and employing innovative teaching methods. However, the lack of distinguished student status for virtual mobility students as a prerequisite to grant access to university infrastructures poses a significant barrier.

Moreover, the current structures do not accommodate flexible mobility offers where students may undertake very short physical mobilities (e.g. one week in-person kick-off before resuming remainder of course virtually). Comprehensive enrolment requirements (and local healthcare or other obligations) also do not make sense for students where the majority of their mobility is virtual. We take a closer look at the differentiated approach to student status in ENHANCE countries below.

The gradual diversification of mobility formats, including virtual and short-term mobilities, has quickly come up against the limitations of the established structures for international student registration. Existing student status options for international students have been based on the needs of students undertaking a physical mobility of several months or longer. European University Alliances and their member universities, alongside other HEIs, are working to increase the flexibility of their educational offers and improve accessibility, in order to increase international mobility of all learners. However, this ambition, together with the European Commission's own call for improved access to virtual, hybrid or physical international mobility, requires a corresponding change in the approach to international student status.

### 2.3.2 NATIONAL POLICY APPROACH: VIRTUAL AND SHORT-TERM MOBILITY STUDENT STATUS

This is an issue that urgently needs action on a national level. Universities and relevant HEI associations are in conversations with national governments to explore the barriers and try to find common solutions. Progress is, however, slow, and this risks negatively impacting the number of students able to take advantage of the increasingly flexible mobility models available. University and alliance pilot projects are in the meantime exploring potential solutions available within the boundaries of existing regulatory frameworks in order to address some of the limitations placed on students undertaking non-traditional mobilities. However, wholly satisfactory solutions to this challenge cannot be established at institutional level, but rather warrant decisive attention at both national and European levels.

The below table offers an overview of the current possibilities for virtual and short-term mobility students at ENHANCE member universities. Evidently the picture remains quite fragmented, as universities explore the options available within the constraints of their national regulatory environments. This only highlights the potential for more support from national governments, and continued dialogue at European level, to identify more long-term solutions.

Table 3. ENHANCE Universities: Virtual & short-term mobility student status

	STUDENT STATUS: VIRTUAL MOBILITY	STUDENT STATUS: SHORT-TERM MOBILITY
<b>Chalmers University</b>	There is currently no centrally organised virtual mobility at Chalmers, but there have been instances at the local level. Student status depends on the nature of admission. For instance, students participating in MOOCs are not registered as regular students and are not bound to any obligations for physical mobility students.	There is currently no structured process for short-term mobility nor any definition, but discussions of formalising a process are ongoing as short-term mobility increases in numbers every year. Short-term mobility students are enrolled as exchange students and have the same rights and obligations as exchange students on longer-term mobility, but if the mobility is of 7,5 ECTS credits or fewer, the mandatory student union fee is waived.
<b>Norwegian University of Science and Technology</b>	There is currently no virtual mobility at the Norwegian University of Science and Technology.	Short-term mobility students have the same rights and obligations as international students on longer-term mobility (full semester or degree programme). In addition to students visiting under exchange agreements, there is a growing number of students undertaking short-term mobilities for project work or thesis work.

<b>Politecnico di Milano</b>	New initiatives and pilots on this topic have been tested during the pandemic – 1) virtual mobility students registered as virtual exchange students with access to online services, right to sit exams, but no established process for this exceptional option, 2) collaborative classes project for which students are awarded a specific status which gives them access to resources, and a certificate of attendance. EduGAIN used to set up registration option for online services.	There is currently no structured system available – short-term mobility students are not enrolled and do not have access to other university services.
<b>RWTH Aachen</b>	A change in enrolment regulations has provided the legal basis for a new student status, which in future will cover virtually mobile students. The status includes an exemption from both obligatory health insurance and any student fees. In a next step, virtually mobile students will be assigned a unique status in the university CMS, giving them access to virtual lectures and exams. Discussions are currently being held to plan for the technical implementation of this new status.	International students undertaking short-term mobility do not have a specific student status for the duration of the stay at RWTH – usually one or two weeks. Such students are not enrolled, and as such do not have access to all university services.
<b>TU Berlin</b>	There is no status specific to virtually mobile students – the same options apply as for those on short-term stays (see next column), although they are poorly suited to virtual students who have no need for local health insurance, public transport, or access to on-site student services.	There is no status specific to short-term mobility students. Students studying at TU Berlin for longer than 1 month in-person are given 'exchange student' status – this grants them access to a TU Berlin account, and also requires payment of health insurance and a semester contribution fee, which includes access to student services and a public transport pass. For mobility periods under 1 month, or fully virtual stays, students are given 'visiting student' status which incurs no costs, but students are not enrolled at the university and do not have access to all services (e.g. student accommodation, reduced price in student canteens).
<b>Universitat Politècnica de València</b>	With the exception of Erasmus+ BIPs (Blended Intensive Programmes), where students are then not registered in the host university system), the only virtual mobility currently taking place at UPV is via MOOC courses, where the institution hosts online learning students. These learners are not considered exchange or international students.	Short-term mobility students are enrolled at the university and have exchange student status. The application, admission and enrolment processes are currently being simplified.
<b>Warsaw University of Technology</b>	With the exception of Erasmus+ BIPs (Blended Intensive Programmes, where students are then not registered in the host university system) there is currently no virtual mobility at the Warsaw University of Technology.	Short-term mobility students have the same rights and obligations as international students on longer-term mobility (full semester of degree programme).

Table 4. Country Focus: Virtual &amp; short-term mobility student status in Germany

CASE STUDY: GERMANY
<p>In general, the German higher education system differentiates between three different student statuses, besides the regular degree student: 1) exchange student (<i>Austauschstudent</i>), 2) visiting student (<i>Nebenhörer</i>), and 3) guest auditor (<i>Gasthörer</i>). To receive a university account and gain access to the university's technical infrastructure, a student must normally hold one of these official statuses. Currently no specific status for students on short-term or virtual mobility exists in Germany. There are some differences at federal level, for example in Baden-Württemberg the state higher education law has recently been changed to permit students on short-term mobilities to participate in courses and exams without enrolling at a university. The below text however concentrates on NRW and Berlin (states where ENHANCE member universities are located).</p> <p>Only exchange students are fully enrolled and thus count as members of the university. They have the same rights (and obligations) as home students including a public transportation ticket, a student ID card that includes library access, the possibility to pay the student fare in the university canteens, and access to the student dorms. For the enrolment process, however, a German health insurance is mandatory as well as the payment of the so-called semester contribution (fee differs across German states, but approx. €300). Therefore, at ENHANCE member University TU Berlin, for example, the exchange student status is only used for a mobility duration exceeding one month, as shorter durations usually do not justify the payment of the fees.</p> <p>For mobility periods under one month, or fully virtual stays, TU Berlin registers international students (provided a university account is needed) as visiting students. This is free of charge and offers full access to the university IT infrastructure. Visiting students are however not members of the university – this means they do not receive a student ID card or a public transport ticket and cannot take advantage of the services offered by the Student Welfare Service (student fare in the canteens, student dorms). In addition, visiting students at TU Berlin are only able to join courses with limited capacities if open spots remain after regular students and exchange students have made their course selection.</p> <p>Similarly, students on a virtual mobility are most commonly registered as visiting students. This status, however, also appears to be problematic in this case as it requires German HEIs to collect a rather comprehensive data set based on the German Higher Education Statistics Law. While collecting a lot of (partly very Germany-specific) data might be somehow justified for students on a physical mobility, granting easy access to online or hybrid courses would seem to be an essential pre-requisite for the successful implementation of any virtual mobility scheme.</p> <p>Many universities are working on initiatives and pilot schemes to develop more flexible solutions for the status of virtual and/or short-term mobility students. TU Berlin is for example currently evaluating opportunities to register students on a virtual or short-term mobility as guest auditors, as the corresponding registration process would by far be the simplest of those currently available. But some legal questions still remain unclear such as the general possibility to allow guest auditors to sit exams and thus receive ECTS points. In addition, students with guest auditor status are ranked even lower than visiting students with regard to access to courses with limited capacities.</p> <p>Possible digital solutions are also being explored at ENHANCE member university RWTH Aachen. RWTH Aachen has introduced a technical solution for a new student status (e.g. for virtual mobility) in the campus management system. A similar solution has been developed to facilitate access to student IT offers (e.g. Moodle) without enrolment. This is based on a coupon system and was also implemented as part of the RWTH ZEGL project – the project explores solutions for access of external groups to teaching and learning offers at RWTH Aachen. TU Berlin is also in the process of developing a digitalised (self-) registration process for both visiting students and guest auditors. In the long-term it is foreseen that students will be able to self-register in the university system using an online form.</p>

## 2.4 RECOMMENDATIONS

- ◆ If European University Alliances and their members are to achieve the ambitious goals of the EEA, support is urgently needed from national governments with regard to **student status and enrolment** procedures. The existing frameworks for student enrolment are no longer suited to the needs of rapidly developing models, whereby students may participate in short-term collaborative online learning projects, in partially or fully virtual mobility periods, or in individual hybrid courses. A new and truly European student status allowing for easy access to administrative services and facilitating credit acquisition without enrolment at all EU member state universities would greatly support our ability to offer maximum flexibility to our students and increase the attractiveness of the European University Alliance model.
- ◆ In many member states increased flexibility is also needed with regard to **social security and health insurance obligations for students** undertaking virtual mobility periods. This could also be achieved by reviewing student status and enrolment procedures, for example combining a new enrolment status with a digital identity that would exempt students from relevant tax payments. Currently many students are faced with compulsory health insurance and also public transport fees due to their student status, even if their mobility period is fully virtual. That is clearly not a sensible policy, and adds an additional unnecessary financial burden for students.
- ◆ The above two points point to the overall need to **develop mobility-friendly structures** at an institutional level. National policy changes have the potential to have a big impact on this issue, but it will also require **institutional level change** to incorporate more flexibility into mobility structures and accommodate new innovative models. Ongoing open dialogue between universities, alliances and local and national governments on the possibilities and concrete requirements here will be key.
- ◆ Sustainable solutions can only be developed with **clarity on funding structures** for new mobility models which cannot be funded under Erasmus+ KA1 mobility, or are not yet adequately supported by other schemes. If European University Alliances are to fulfil their potential to reach the EEA goal of 50% student mobility, then there must also be a more long-term strategy for funding mobility – and to avoid a patchwork of solutions and approaches, this needs to be at European level. European University Alliances, National Agencies and other networks are already engaged on this issue but a more **targeted dialogue with the European Commission** could determine the essential elements of new funding support, how to ensure long-term certainty for HEIs and learners, and how equal access can be secured.
- ◆ Whilst virtual mobility has obvious benefits with regard to the minimal costs for individual learners, an increase in the availability of virtual mobility places nonetheless requires continued investment. Many institutions have invested heavily in equipping classrooms with necessary **digital equipment** and **supporting software** during the pandemic, but this requires ongoing commitment – both financial and in terms of **training of staff**. European University Alliances experimenting with new models of collaboration are exploring the potential of these models and can support institutions in beginning **internal discussions** about related challenges, such as the desired balance of in-person and virtual offers, or the number of courses available in English to virtual learners from other institutions.
- ◆ The EEA ambitions require not only transformation at a practical implementation level, but in many cases a real **shift in culture** – for example, accommodating more flexible mobility models. This adjustment can take time in individual institutions, and HEIs must be supported in this transformation. There is not always alignment between the **timeline** of European (or national) policy initiatives and the real-world capacity of institutions, who need the flexibility to be able to handle implementation challenges as they emerge, and support their staff in adapting to these. **Stronger co-creation with European University Alliances** and individual institutions will therefore always be important, as well as close cooperation with national and local governments, given many of points of course touch on areas of national competency.

### 3. CONCLUSIONS

The ambitious vision outlined by the European Commission acknowledges that to make the EEA a reality **substantial transformation**, including **new policy frameworks**, will be needed. And indeed, the implementation challenges outlined in this paper cut across institutional, national and European level infrastructure and regulatory frameworks. European University Alliances are therefore called upon to explore remedial actions at these different levels in order to overcome these barriers and advance with the EEA ambitions.

Whilst some of these points are known challenges affecting other modes of transnational cooperation, alliances financed through the European University Initiative are working within a particular project timeframe and in many cases the successful implementation of activities central to their ambitions will depend on **effective solutions** being found quickly.

Institutions are therefore motivated to dedicate what resources they can to addressing these challenges. A number of actions can be taken at institutional and alliance level, including both short-term initiatives and more long-term strategic transformation. Some examples from ENHANCE mentioned in this paper can help illustrate this. However, a number of the challenges presented in this paper require a more fundamental shift at either **national or European level**.

We have seen in recent policy debate that many of these issues are gaining increased attention, often strongly supported by the engagement of individual institutions and National Agencies. However it is clear that continued engagement and, in many cases, decisive and rapid action is needed if these challenges are to be adequately addressed. We welcome the **resolution approved by Education Ministers of the EU member states in May 2023<sup>10</sup>** on the EEA, which calls for increased coordination between EU institutions and the member states and acknowledges that tackling administrative barriers and focusing on implementation at both national and European levels will be key.

With **commitment to the necessary regulatory changes** across the different levels, European University Alliances will be well placed to fulfil their potential to reach the ambitions of the EEA. This paper is by no means exhaustive and as alliances continue to explore new, transformative models for cooperation, other challenges will come to light and collectively the higher education community and policymakers must be ready and willing to address these.

We also welcome the European Commission's intention to support European University Alliances and their members in examining the need for and feasibility of an **institutionalised cooperation instrument**, for example via the Pilot Call published in June 2022.<sup>11</sup> A compounding challenge for alliances can be the difficulty to efficiently pool human and other resources, share infrastructure and transfer technology. Whilst some alliances have already chosen to pursue national legal entity solutions, a European level instrument specifically designed for the needs of large transnational higher education alliances would have great potential to alleviate some of the administrative challenges which currently cost alliances significant time and resource.

Finally, whilst beyond the scope of this paper, it is important to also consider how potential institutional solutions or policy developments targeted at these challenges could also contribute to the ambitions of the **European Research Area (ERA)**. The EEA is of course closely linked to the ERA and many of the transformative processes being pursued by the European University Alliances will impact both. As we continue these conversations in different fora, we should therefore reflect on how efforts to close the EEA implementation gap could also support the ERA goals. The European Council resolution referenced above echoes the importance of promoting these synergies between the EEA and ERA.

We hope the challenges explored in this paper and the corresponding recommendations will **provoke further engagement and action** at the necessary levels and welcome **complementary perspectives** from other European University Alliances and institutions working to overcome these and similar barriers to the full implementation of the European Education Area.

## REFERENCES

**1** COM (September 2020) *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on achieving the European Education Area by 2025* [online]. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0625&from=EN> [Accessed 25 May 2023].

**2** COM (September 2020) *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on achieving the European Education Area by 2025* [online]. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0625&from=EN> [Accessed 25 May 2023].

**3** Council of the European Union (May 2022) *Council Recommendation on a European approach to micro-credentials for lifelong learning and employability* [online]. Available from: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02)) [Accessed 25 May 2023].

**4** Council of the European Union (May 2022) *Council Recommendation on a European approach to micro-credentials for lifelong learning and employability* [online]. Available from: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627\(02\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02)) [Accessed 25 May 2023].

**5** European Education and Culture Executive Agency (no date) *A European approach to micro-credentials*. [online]. Available from: <https://education.ec.europa.eu/education-levels/higher-education/micro-credentials> [Accessed 25 May 2023].

**6** European Commission, Directorate-General for Education, Youth, Sport and Culture (2017). *ECTS users' guide 2015* [online]. Available from: [https://education.ec.europa.eu/sites/default/files/document-library-docs/ects-users-guide\\_en.pdf](https://education.ec.europa.eu/sites/default/files/document-library-docs/ects-users-guide_en.pdf) [Accessed 25 May 2023].

**7** Claeys-Kulik, A., Bennetor Pruvot, E., Estermann T., and Jørgensen, T. (October 2022) *The European Universities Initiative and system level reforms: Current challenges and considerations for the future*. [online]. Available from: [https://eua.eu/downloads/publications/briefing\\_eui%20impact%20on%20system%20level%20reforms.pdf](https://eua.eu/downloads/publications/briefing_eui%20impact%20on%20system%20level%20reforms.pdf) [Accessed 25 May 2023].

**8** European Education and Culture Executive Agency (2023) *Erasmus+ Programme Call for Proposals: Partnerships for Excellence – European Universities – ERASMUS-EDU-2023-EUR-UNIV* [online]. Available from: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/erasmus/wp-call/2023/call-fiche\\_erasmus-edu-2023-eur-univ\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/erasmus/wp-call/2023/call-fiche_erasmus-edu-2023-eur-univ_en.pdf) [Accessed 25 May 2023].

**9** European Education and Culture Executive Agency, Eurydice, (2020) *The European higher education area in 2020 – Bologna process implementation report*. p. 124-134 [online]. Available from: <https://eurydice.eacea.ec.europa.eu/publications/european-higher-education-area-2020-bologna-process-implementation-report> [Accessed 25 May 2023].

**10** Council of the European Union (May 2023) Council Resolution on The European Education Area: Looking to 2025 and beyond [online]. Available from: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023G0526\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023G0526(01)) [Accessed 02 June 2023].

**11** EACEA (2022) *Erasmus+ Programme (ERASMUS) Call for Proposals: European policy experimentation in higher education ERASMUS-EDU-2022-POL-EXP* [online]. Available from: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/erasmus/wp-call/2022/call-fiche\\_erasmus-edu-2022-pol-exp-he\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/erasmus/wp-call/2022/call-fiche_erasmus-edu-2022-pol-exp-he_en.pdf) [Accessed 25 May 2023].

## ACKNOWLEDGEMENTS

The authors wish to thank colleagues from the ENHANCE member universities for their valuable contributions to the paper, including Julian Irlenaeuser, Dr. Ulrike Hillemann-Delaney, Prof. Andrzej Krasniewski, Francesca Andrich, Barbara del Sole, Dr. Nuria Llobregat-Gomez, Florian Hilfinger, Sabine Derichs, Sophie Schenkat, Jennifer Roseboom, Wolfgang Laschet, Eirin Bakken, Oddrun Walstad Maaø and Mattias Bingerud.

We thank our late colleague Jörgen Sjöberg for his valuable guidance in the process.