

CALL: HORIZON 2020

TOPIC: SCIENCE WITH AND FOR SOCIETY

PROJECT: European Digital UniverCity - Research and Innovation with and for Society (EDUC-SHARE). <https://educalliance.eu/research/>

SCOPE OF THE POLICY BRIEF

In this policy brief, the European Universities pilot Alliances report on the progress made through cooperation in selected R&I areas and provide a first set of recommendations to the European Commission for further policy development.

Policy background:

In order to strengthen strategic partnerships across the EU amongst higher education institutions, the European Commission targets the emergence of “European Universities” by 2024 by funding alliances from across Europe. The ambitious mandate aims to trigger systemic, structural and sustainable institutionalized cooperation between higher education institutions. As a complement to the Erasmus+ action geared towards supporting higher education cooperation models, Horizon 2020 support is dedicated to contributing to the research and innovation dimension of the alliances between European universities, in line with their shared, integrated, long-term joint strategy and in synergy with their education dimension.

This initiative is one of the flagships of the [European strategy for universities](#) that aims at supporting and enabling universities to adapt to changing conditions, to thrive and to take a leading role in the recovery of Europe, and in making our society greener, more inclusive and more digital. The adoption of this strategy was accompanied by a Commission [proposal for a Council recommendation on building bridges](#) for effective European higher education cooperation.

In parallel, the [European Research Area Policy Agenda](#) sets out 20 voluntary actions for the period 2022-2024, including several of which are relevant for universities.

FEEDBACK ON PROGRESS (MAX 1.5P)

1. Please describe the **challenges** your Alliance encountered regarding cooperation between universities in the field of R&I in relation to the institutional change areas (transformation modules) foreseen.

Alliances are certainly a relevant tool to compare different institutional organisations and drive transformations to tackle the European recommendations. By successfully responding to the H2020 SwafS Call for Proposals, the European University EDUC, in its EDUC-SHARE project, has committed itself to work on different aspects of the six Transformation modules proposed.

Below are the main challenges however, encountered for each Transformation Module (TM):

TM 1: developing a common R&I agenda and action plan

- (i) This is a long-term task, especially as EDUC's partners only had essentially bilateral cooperation - and rather in the area of education - before the creation of EDUC.
- (ii) The wide involvement of researchers at each institution is an important issue and a challenge. Not all of them seize the opportunity offered by the cooperation within the alliance. Either they already have their own network, or they do not yet have experience of international collaboration, depending on their research discipline and level of seniority, or just they are not sufficiently informed about chances offered by the alliance.
- (iii) No money dedicated to Alliances on EU level allows direct funding of R&I activities.
- (iv) Cooperation between R&I support services is sometimes made difficult by the language barrier.

TM 2: strengthening human capital, enabling balanced brain circulation and gender balance

- (v) National regulations often limit universities' autonomy for researchers' recruitment and assessment, together with a lack of funding.
- (vi) Research and career evaluation, as well as recognition systems, are quite different, including at the national level.
- (vii) HR services were heavily involved in the COVID crisis.
- (viii) Cooperation between administrative staff is also made difficult by the language barrier.

TM 3: developing shared requirements for research infrastructure and other resources and set up an action plan on how and by when such requirements could be implemented

- (ix) EDUC's partners had initially essentially bilateral agreements and cooperation, and rather in the area of education.
- (x) The level of organisation and structuring of research infrastructures and digital tools varies from one institution to another and from one discipline to another.
- (xi) IT expert shortage, reinforced by the lack of attractiveness of university salaries, slows down infrastructure changes and adaptations.

TM 4: reinforcing academia-business cooperation and innovation ecosystems

- (xii) Some territories have a poor business landscape, which can limit the cooperation with universities.
- (xiii) The systems for organising innovation and technology transfer between universities and their ecosystems are all different and often complex in themselves.
- (xiv) Competition can be strong even between different actors working in the same ecosystem, sometimes between research organisations co-funding the same research laboratories.
- (xv) Incentives for researchers (such as access to profits from IP), as well as their career evaluation (sometimes constrained by national frameworks), tools to implement innovation, etc., are diverse.

TM 5: mainstreaming of comprehensive Open Science practices

- (xvi) Open Science strategies development and implementation were not at the same level of progress and reflection.
- (xvii) The lack of national policy in line with European strategies does not facilitate/accelerate the university's Open Science strategy in some partner countries.

TM 6: involvement of citizens, civil society and public/cities authorities in research and innovation, including implementing the Green Deal at home

- (xviii) Different local ecosystems, organisational and legal set-ups, and levels of citizen engagement as well as a variety of engagement frameworks at the EDUC partners (ranging from science communication level to fully-fledged co-creation).
- (xix) More close connections to be developed with local authorities making them more aware of the strategic importance of the alliance even for the territory.

Other general remarks:

- (xx) Overlap between the two funded projects (Erasmus+ and SWAFS) made the Alliance difficult to understand for many people at our universities.
- (xxi) The grant writing periods SwafS and E+2022 were very stressful for many involved. Too often in both projects, project teams lacked time to develop genuinely useful and strategic collaboration activities.
- (xxii) Different levels of implementation of some institutional changes are closely related to the limits due to the regional and national legal frameworks. An adaptation of State Members' strategies to European policies is required.
- (xxiii) Language barriers not only at staff level, but also at the public information level (websites and project information of interest to all partners often only available in local languages)

2. Please describe how you tackled or intend to **tackle these challenges**. Based on your project's experience so far (and if applicable), briefly outline case(s) that you consider as **good practice** and of interest to other universities or to policy-makers.

(i); (ii) **challenges**: In the EDUC E+ Pilot we had anticipated the importance of starting to initiate substantial work so that researchers from different members get to know each other through the organisation of Research Seminars in topics connected to the Smart Specialisation Strategies of each partner's ecosystem. The Covid crisis did not facilitate this work, as many seminars had to be held online.

In parallel, we have initiated an online meeting between the EDUC vice-presidents in charge of research to cross-reference their current strategies. A brainstorming session will take place in presence in Fall 2022.

We also organised meetings between research support services. As for all the services in our universities, one of the major difficulties in cooperation is the language barrier, so that specific efforts were initiated in the framework of the EDUC E+ pilot (see below).

A networking platform (see D4.1) has been set-up to connect researchers and the local ecosystems in order to develop the cooperation in view of new projects, starting from common research areas and societal challenges identified at Alliance level.

(iv);(viii);(xxi) challenges: we build on the groundwork laid in the EDUC E+ pilot which has dedicated work packages for inter-service cooperation and specific actions to advance multilingualism (e.g. language tandem training between staff members). It is however a long term transformation and the recognition of this effort in the career is largely to be built.

(v);(vi);(xv)-(xvii) challenges: The Alliance helps to overcome some difficulties and to put the basis for some changes (e.g., Action Plans, common recommendations and procedures (see D2.1 on Open Science)) taking advantage of the experience and good practices of partner universities more advanced on some actions. It needs however coordination with State Members' policies.

In particular in the framework of WP5 dedicated to HRS4R based on mentoring, we are on the way to implementing the HRS4R process in all partner universities (see D5.1) and increasing awareness of HRS4R processes at the national level. We are confident to have all EDUC members labelled "HR Excellence in research" by the end of the project or very soon thereafter.

(i);(ii);(ix);(x) challenges: we have chosen to use methodological / technological platforms as hubs or facilitators of interaction (see WP2 and WP4 of EDUC-SHARE). At the same time as we are building a network of our platforms, two partners (MU and UR1) happened to be involved (lead and co-lead) in a European infrastructure on the chemical exposome (EIRENE, <https://www.eirene-ri.eu>).

(xii)-(xv) challenges: synergies with recent European funding like NextGenerationEU, will reinforce the technology transfer capacity and support the development of existing SMEs in cooperation with universities or the creations of new start-ups or spin-offs, so creating synergies with the TM objectives.

It is worth noting that pragmatic and adaptable interpretation of the grant agreement is required as the projects evolve. Unlike Horizon Europe projects, these project proposals are often not written by the same people who will execute them, or for sure many new people need to be involved during the implementation phase.

3. Please describe the **tangible progress** that individual partners as well as the Alliance as a whole have made in terms of introducing changes in their entities as a result of this project. Please elaborate on whether the inclusive and integrated cooperation approach of your alliance helps accelerate institutional change of all partners (e.g. through sharing of practices from institutions with strong expertise or infrastructure in specific areas to institutions without).

Although it is too early to confirm, we believe that the EDUC Research Infrastructure survey and the subsequent generation of a catalogue accessible on a digital platform will be a complementary way (with research seminars) for research cooperation, as well as for knowledge and technology transfer and sharing. At the same time as we are building a network of our platforms, two partners (MU and UR1) happened to be involved (lead and co-lead) in a European infrastructure on the chemical exposome (EIRENE, <https://www.eirene-ri.eu>). We took advantage of the EDUC Alliance to reinforce the visibility of this partnership by organising an event in Brussels the 15th of March 2022 in the framework of the French Presidency of the Council of the European Union (and another is planned for November 2022 during the CEU Czech Presidency). Consideration is being given to the participation of EDUC in training programmes related to this research theme to reinforce the link between education and research and innovation.

The implementation of the HRS4R at all the partner institutions, taking advantage of the experience and good practices of the three already labelled universities with the HR Excellence in Research, is offering the opportunity to improve the work environment for researchers by revising some internal processes and developing actions, like specific training, to go in the direction of strengthening human capital in research and innovation and becoming more attractive.

More generally, we clearly see that taking advantage of the experience and good practices of partner universities more advanced on some transformations, the Alliance clearly helps to overcome some difficulties and to promote and accelerate changes in some areas: HR strategies (including soft skill training), Open Science policies, internal Research Infrastructures structuring, Science with and for citizen practices and policies, joint citizen engagement and nudging towards a green transformation of campuses, etc.

POLICY RECOMMENDATIONS (MAX 3P)

In this section, the European Universities pilot Alliances make recommendations in relation to the following policy topics.

1. Policy topic 1: facilitating transnational cooperation

- Knowing that the Commission proposed a [Council recommendation to facilitate transnational collaboration between universities](#), which action should be prioritised to address the challenges you encountered as an Alliance in sharing capacities, infrastructures, resources or staff in R&I?
 - Action 1: Legal status of Alliance
 - Action 5: Commit to sustaining financial support for European Universities alliances
 - Action 10: Involve learners, academics and researchers more in the governance

2. Policy topic 2: strengthening careers

- Is there a need to develop a model tenure-track system at European level to contribute to solving precariousness of early career researchers? If you believe so, how do you think it should be structured?

Some Member States are in the process of setting up such systems. This is a politically sensitive issue within some of our universities, in particular because this mode of recruitment has to coexist with the standard national modes of recruitment and may pose problems of career positioning and differences in working conditions. A model tenure-track system at European level might contribute to make these recruitment methods more interoperable and better recognised internationally to make them more attractive.

It is still to be demonstrated that such a scheme would contribute to solving precariousness of early career researchers. It should also be taken into account the personal lives of researchers (e.g. adaptation and family constraints). Substantial financial resources and enhanced support for the host ecosystem would be essential for the successful implementation of such a scheme. A European tenure-track system might only do little to ease precariousness of early career researchers (ECRs), because the structural problem is a large surplus of ECRs in relation to available positions. A much better initiative would be to help ECRs transition out of academia (as many will be forced to do anyway) and bring in a duty of care clause for supervisors (e.g. via HRS4R) requiring them to explain the risks and opportunities of beginning a research career.

Such new tenure track model does not mean that other contractual positions should be abandoned since they offer the opportunity to ECRs to have a research experience in a stimulating environment and enrich their CV in view of a career mobility

- In light of the [policy process on the reform of assessment](#) of research and institutions, what are your recommendations on how to address academic/researcher career assessment?

Although we have appointed a contact person, an academic member of the Alliance from Paris Nanterre (Vice-president for research) who is a national expert on the subject, this is a topic that we have not yet been able to address as such within EDUC. We are aware of that a plan for reforming research assessment in Europe has been published recently (https://eua.eu/downloads/news/2022_07_19_rra_agreement_final.pdf).

3. Policy topic 3: digital transition

- What are the specific needs of the Alliances to accelerate their digital transition in the R&I dimension, and how can this be addressed at the EU level?
- In particular, do you see a need for *additional* dedicated e-infrastructures for data storage and management that are distributed and interoperable? Please take into account progress regarding the development of the federated e-infrastructure for research outputs (EOSC, see [ERA Policy Agenda](#)), and the implementation of a digital platform for cooperation in higher education (see the [European strategy for universities](#)).

Most of our universities face the IT expert shortage, the lack of competitiveness of salaries that they can offer as well as a lack of financial investment in the infrastructure and human resources needed for digitalisation. Dedicated e-infrastructure at the European level might help, however the task is difficult, not only because of interoperability issues but also because of data security.

EDUC, through three EDUC-SHARE representatives, has been actively involved in the FOREU Research and Innovation subgroup meetings for 18 months. A “Digital transformation” input paper was produced addressing the two items above, and is reported as Annex at the end of this document.

4. Policy topic 4: access to excellence

- What is your advice on how to accelerate access to excellence in science and in value creation for all participants for higher education institutions across the entire ERA, through the European Universities Initiative?

A better communication, explanation and organisation of the initiative (esp. better explanation of aims and objectives) should be considered by the European Commission. It may be worth looking at how the initiative was presented in different national contexts (e.g. French government presentation materials seem much clearer than Commission ones). The Commission should consider wholesale rebranding the concept of "European Universities" as "European University Alliances" or similar – referring to the alliances as "European Universities" only generates confusion when trying to explain the initiative.

EDUC is one of the winners of the 2022 European Universities call for proposals to which EDUC applied to ensure enhanced reach and ambition of its missions. As underlined by the FOREU R&I subgroups however, there is currently no certainty of a complimentary call to support the further development of the Research and innovation agenda leaving a disconnect not just for an integrated mission approach but also for the inclusion of new partners. In order to achieve the ambitious strategic objectives set out for the European Universities Initiative and serve as a model for accessing excellence for all higher education institutions, it is important that European University Alliances are enabled – both in terms of targeted policy and funding support – to realise their full potential. Although a competitive funding channel is under consideration by the DGRTD which is to be welcomed, it should be regarded as an interim solution to a more required sustainable programmatic approach combining overarching education and R&I funding programmes. This funding instrument should be granted on the basis of quality, excellence and impact and be sufficiently flexible to allow existing alliances to continue to develop in line with their vision and mission thus strengthening the programmatic systemic transformative European cooperation that is at the heart of the European Universities.

In addition, it is important mentioning that one of the keys to accelerating excellence in science is linked to the reform of national policies related to Open Science strategies and academic recruitment in line with ERA strategies. In addition, the implementation of specific training activities specifically dedicated to early-stage researchers to reinforce their skills in several transversal areas (such as science communication, knowledge and technology transfer, etc.) is urgently needed. It would also be important to value such excellence in personal assessment schemes by measuring individual achievements and outputs.

5. Policy topic 5: increasing global competitiveness

- Europe’s relative weight at a global level when it comes to research-intensive universities is shrinking. In light of this, a European Excellence Initiative will be established to improve global competitiveness of Europe’s universities, in synergy with the European Universities Initiative of Erasmus+. In your view, what would be key elements of such an Initiative? Secondly, could you envisage that such an initiative specifically targets EU objectives such as the Green Deal or European Missions?

The process for submitting European funding bids (across all funding instruments) should be radically simplified and much better communicated (i.e. rethink the entire system with a view to accessibility). The obvious advantage of Alliances is that they provide partners in several countries, which is a pre-condition for many European funding bids. It should be made easier to leverage this advantage. Such an Initiative therefore, not only course-based collaborative projects should be fostered, but also research teams/groups with the aspiration to become able to apply for EU and other multilateral funding.

Targeting some EU objectives such as the Green Deal or European Missions for such initiatives could be valuable as many universities - in the framework of the “Recovery plan for Europe” - are redefining their strategies in the light of major transitions (Green, Digital, Health) and social challenges, many being covered by the Missions. We believe that Sustainable Development Goals should also be considered as they are at the heart of many internal HEI policies and education programmes.

6. Other recommendations

The future success of European University Alliances depends on communities of academics and researchers being supported to drive transnational collaboration across our research and research informed educational approaches. The development of targeted instruments to incentivise these bottom-up research collaborations are crucial not only to strengthen the ties between individual academics/researchers/professional support staff across our institutions but to build a joint inter-university community open to and shaped by society, with a strong common sense of belonging and to realise a true European University across all university’s missions.



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Digital Transformation

Challenge and opportunity for the European Higher Education Sector: the case for European Universities

I. Context

The digital world is constructed by a multitude of technical infrastructures and instruments providing information that enable cooperation and the creation of social and economic values. Information is the most valuable asset for the world's economies and whoever owns information will be able to use information as a power in economic and social relations.

Under the conditions of a digitally transformed social world, actors in the European Education and Research Area are handling most valuable and critical assets, in particular when they cooperate in creating information within their field of activity in research, innovation and education. Content that is created on private servers can easily be analysed and used by competitors for creating concurrent information or innovations.¹ Regulations, tools, services are confronted with the challenge of securing data.

Turned positively, the digital transformation and the relevant, rightful and efficient administration and analysis of data allows for their use in support of strategic decision-making. Decisions which rely *inter alia* on a jointly defined "correctness" of data contribute to trust in and reliability of administrations. High-performing tools, applications, digital services and technical infrastructures are needed to collect, store and analyse data for supporting efficient administrative and strategic decision-making.

II. The case for European Universities: connectivity and interoperability

In establishing their structured and long-term oriented partnerships European Universities are confronted with the need to extract and share information between their partner institutions and to create corresponding efficient digital infrastructures. By establishing virtual campuses that integrate part or in the long term even the majority of their university activities and services, the interoperability of the partners' digital environment is one of the most important challenge. This interoperability depends, however, on the relevant individual institutional equipment, the continuous support for the set-up and maintenance of digital infrastructure and its specifications, but also on the available services, innovative digital tools and European platforms for harmonization across borders on technical, legal, pedagogical, research, administrative and strategic levels.

European universities refer to the information systems of the countries to which they belong, which operate in very different modalities. The effectiveness of either approach in administering the digital university services should be compared based on a few key elements:

¹ The so-called "Cloud Act" is a prominent example of how US based technology companies can be forced to issue data stored on their servers

1. The overall technical reliability: hyper-speed connections, server architecture, high performance computing,
2. The compliance with the GDPR legal framework: common interpretation and application of GDPR rules, national obligations of data transfer of student numbers and degree/diploma data and the European student card
3. The availability of advanced online teaching tools: “European Learning Management System” (such as Moodle), European digital learning environment
4. The availability of high-performing research support systems: tools such as secured databases and analytical software, highly competitive high-performance and quantum computing.
5. The reliability of data flow between institutions for strategic decision-making: a structured and coherent administrative information system, an accessible and secured transnational data exchange system
6. An efficient IT service with minimal environmental impact: the “carbon foot-print” of digital behaviour
7. A trustworthy technology which takes in count cybersecurity issues

Depending on the level of integration envisaged by the Alliances and depending on the kind of joint activities the Alliances focus on, the success and sustainability of the cooperation will highly depend on the ability of the partners to effectively harmonise their systems on the respective levels.

There is also an impact for political decision-making on the European level to be considered. Gradual harmonisation of information systems in the EEA and ERA that provide comparable data could be a basic building block for the creation of a more harmonized European area for education and research. European Universities can contribute to this development by leading the test-ground for tools, services, applications that promote this development.

III. Experiences from ongoing activities

European Universities have created an inter-university campus in virtual reality². It is an environment which can be accessed from anywhere and anytime to be fully immersed into interaction and co-creation together with others.

The virtual campus provides instant collaboration opportunities for the University community throughout Europe. There are challenges to be solved together, and individual, agile, flexible opportunities for skills and competence development. People feel psychologically immersed as if they were physically present in the same space.

The Virtual Campus Learning Platforms (VCLP)^{3 4} developed by many European University Alliances is also implementing a central Learning Management System (LMS). The VCLP enables all students of partner universities to view and access courses using their existing home institutional account. These courses can be hosted on the local LMS (Moodle, Ilias) of the partners, the VCLP allows a seamless access to locally hosted courses without the need of creating new accounts.

² For example: <https://www.eciu.org/news/first-pioneering-steps-into-virtual-reality-with-eciu-xr-campus/>,

³ For example: <https://epicur.education/introduction-to-the-inter-university-campus/>

⁴ For example: <https://www.eu-conexus.eu/en/smart-campus/>

Some Alliances' partner universities have engaged collectively in applying for edugain membership which allows for facilitating the authentication process for several jointly developed applications/platforms.

Major challenges:

1. A general information system architecture for collaboration and administrative data exchange is at many Alliances in a very early conceptual phase and may suffer in general from **unbalanced resource distribution at the partner institutions**. The expertise of the IT departments in partner universities are different or focused on different features of an information system and its services. At some partners the IT services are externalized. A rather time-consuming process is needed to understand each other and create a common vocabulary for interaction and collaboration.
2. There is a need of **sufficient time for deep reflection** when creating an interconnected and extensive information system for a university encompassing a lot of different missions, services, and data. In order to create a more efficient system, we need time to **reflect on the main features** of an interconnected system from a political (autonomy versus efficiency and economies of scale), institutional (special needs of partners) and technical (technical readiness and availability of infrastructure and equipment) point of view. This reflection is opening up and closing down potential solutions continuously and is therefore not perfectly predictable. This instability of timeline and workplan stands in contrast with the need to respect project deliverables which obliges to make compromises and create intermediate short-term solutions.
3. Out of experiences during the ongoing development of the interconnected European university campus, the implementation of the hard- and software of the digital environment of European Universities is costly and needs much **more human and financial resources** as actually available.
4. The **heterogeneity of information systems** at partner sites makes systemic interconnection and the exchange of data difficult. For the time being, the collection and exchange of data has to rely on the use of excel sheets which is not the most effective way of exchange of data (highly time-consuming data treatment).
5. If we decide to go for a common information system, we have to decide **where to host** it. There is no shared European datacenter for the Higher Education and Research sector. Under these circumstances European University Alliances tend to distribute its common platforms, instruments and tools between its partner sites. The administration and usability of this distributed information system is very complex.
6. When creating **common tools**, the partners rely more often than not on their specific tools already in use. As a partnership, solutions have to be negotiated not imposed. In order to get to common tool, a long and time-consuming negotiation process is needed in order to convince everybody to implement a certain solution. This was the case for the consensus making process on the LMS Moodle.
7. We would like to implement a **joint virtual library**. Each country seems to have negotiated access rights with editors, but only for a limited number of students. As far we know, there is no international agreement which allows us to give access to a common corpus to students from different universities.

IV. The European action plan

European policies and programmes could support the digital transformation of European University Alliances by

1. promoting **the further alignment of national policies** in developing and investing in the necessary technical infrastructures (cloud services, high performance computing, etc.). The "Recovery and

Resilience Facility” already includes investments on high-capacity broadband connectivity. National co-financing of European Universities could be oriented via coordinated investments in digital infrastructures.

2. supporting the development of a “**model information system**” for European University Alliances
3. Practical guidance on **how to handle data hosting and security** in compliance with GDPR, IPR, etc.
4. supporting the **development of digital infrastructures** (information systems, online learning facilities, digital campuses, collaboration platforms, data storage etc.) for portability, storage and exchange of data (in cooperation with companies?).
5. Financial support for developing costly **software**
6. support the **exchange of best-practices of the use of digital tools and methodologies** including Artificial intelligence, big data, block chain in research and education
7. conducting **studies and support research on benefits/shortcomings of the application of new technologies in education**. Pedagogical innovation and changing practices have multiple consequences for capacity, operation, function and results for the Higher Education and Research sector.
8. strengthening the **transversal requirement for promoting sustainable digital behaviour** for European University Alliances and in all funding programmes.
9. promoting the use of **European applications for e.g. awarding** (joint) degrees and other learning outputs such as micro-credentials digitally (extension of Europass).
10. opening-up existing centres or creating **European centres** of HPC or quantum computing would boost the research potential of European Universities to deliver on innovation