European Commission

Erasmus+ Knowledge Alliances

Targeted stakeholder consultation:
European Strategy for Universities

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1.0. Introduction

1.1. Welcome and opening statements

The meeting was moderated by **Zsuzsa Javorka, Managing Consultant, Technopolis**. She opened the meeting, welcomed the 217 participants, introduced the agenda, and then introduced the speakers.

José-Lorenzo Vallés, Head of Unit EACEA A1: European Higher Education (HE) welcomed participants to the meeting and their work to the Knowledge Alliances network. Since its launch with 10 projects in 2014 under the Erasmus+, the Knowledge Alliances (KAs) has built a broad community of 158 KAs across Europe and beyond.

He thanked participants for their active roles in contributing to the KA, also referred to the new Microsoft Teams channel set up to continue networking online and sharing good practice within the challenging Covid-19 pandemic context.

Cooperation between HE institutions, business, social enterprises and actors in the KA is of great importance for Europe and KAs should continue in this way to build an even more robust under the new Erasmus+ programme. He looked forward to a rich discussion, and to further understand how the KA initiative can contribute to the resilience and recovery process.

1.2. Policy Context

Tine Delva, Deputy Head of Unit, EAC.B.1 – Higher Education provided participants with an introduction of the policy context regarding the co-creation of incentives to accelerate the transformation of Higher Education. The Commission is currently developing an EU strategy for universities, and has been consulting the HE sector, and Member States.

The pandemic shows that we are in a transformative moment in higher education. A greater focus is now placed on the learner, through more flexible learning paths. Higher education needs to become an actor of change towards greener societies, and therefore needs to be transformed towards more open, inclusive, and diverse ecosystem. Strong academic leadership is needed in order to achieve this.

A recent meeting with HE stakeholders and Member States in May confirmed commitment and support to the EU wide strategy for innovation, international competitiveness, and employment. The Commission would like to help empower HE policy and HEIs in support of Europe's recovery from the pandemic, using the digital transformation to create the right conditions to be more interconnected, sustainable, innovative, and greener. To achieve this, it is important to link universities with their local and regional ecosystems for greater diversity, acknowledging also that institutional autonomy and academic freedom need to remain guiding principles.

Joerg Niehoff, Policy Coordinator, EAC.C.1 - Innovation and EIT noted that until the launch of the Strategy next year, the EU Commission is seeking to understand better the directionality the strategy will need to provide, the priorities for investment, at regional, national and EU level, and the tools and methodologies needs to translate the strategy into the context of the individual HEI and support its implementation. The consultation of the Knowledge Alliances as a key element of the University Business Cooperation (UBC) community allows getting specific input from those that are focusing on cooperation between HEI and business partners, and preliminary results of the recent survey would be presented in a later session. He pointed to the Recovery Plan for Europe that is unlocking unprecedented funds going into education and training, as well as the importance of resources such as KAs and HEInnovate in the next steps.

1.3. Keynote speech

Professor Guido Van Oost, Ghent University then gave the keynote speech, focused on "Erasmus Mundus Masters FUSION-EP".

Achieving Nuclear Fusion is a long-term project. Sustainable and green energy is the target, with current experimental devices looking ahead to 2050 and beyond. Therefore, education and a flowline of researchers, funding, research infrastructure, international collaboration, and business innovation are essential components.

The EU has been the world leader in magnetic fusion since the 1960s and has an R&D programme tightly coordinated by the EUROfusion Consortium[1], focused on the development of fusion energy, on behalf of EURATOM. ITER is a demonstration device., with an ambitious collaboration now building the first experimental reactor in France. There are 35 nations involved (global partnership) to build ITER, a demonstration device by 2025. The magnetic fusion device to prove the feasibility of fusion as a large-scale and carbon-free source of energy.

Fusion for Energy (F4E) is the European Union's Joint undertaking for ITER, and the development of fusion energy Fusion Industry Innovation Forum (FIIF) of the EU has a threefold mission: roadmap to fusion power; technology transfer; developing skills (FUSION-EP represented). There are strong synergies with the nuclear fission sector. The investments and research are also generating spin-offs and start-ups in the nuclear engineering field, as well as research innovation in the physics areas.

The Fusion Erasmus Master programme started 2006 at the time the EU agreed to build ITER. It was extended to a doctoral programme 2011-16 via Marie Skłodowska-Curie actions. This experience led to pave the way for the consortium to become a European University Alliance with 8 partners, combining 14 associated partners in the EU, and 11 associates around the world (mainly ITER partners). This collaboration brings a range of unique technological expertise, with strong business integration. The Master programme has a strategic advisory board that provides independent advice from all sectors and partners.

Among the alumni, 18% are females, and this represents a generic problem experienced across science and technology subject areas. Findings also show that 70% of students pursue doctoral studies after graduation, mostly in the fusion area. Many take STEM leadership positions in industry and in national labs. Broader support networks also are important to build societal understanding about the potential (and managing the risks) of fusion.

The university of Aix-Marseille took over the FUSION-EP education programme in September 2019, with the aim to make it a global reference for fusion education. Its sustainability involves a focus on the consortium network; curriculum; student enrolment; and employability through its internationalisation.

Responding to questions, Guido clarified that there exists a certification of the joint Master across universities, not a joint certificate, not a joint diploma – this recognition challenge remains an issue in HE. He also mentioned female participation being a lot higher in southern Europe than northern Europe. For recruitment, two students with the same recruitment score will lead to a female applicant being given preference. There are specific Master grants also for female students which also help. Gender balance needs to be ensured, also at the management level. It has been improving but the evolution is slow.

[1] https://www.euro-fusion.org

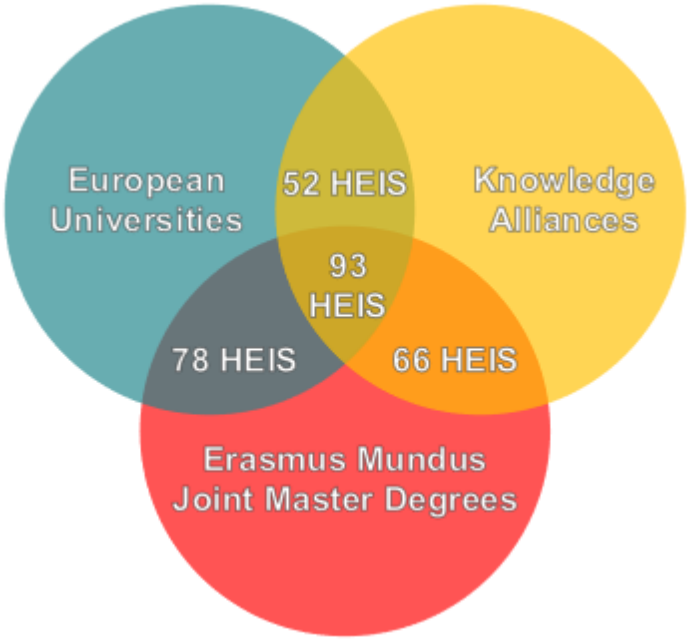
2.0. Setting the scene

2.1. Knowledge Alliances 2014-2020

Marie-Pierre Degive, Assistant Programme Manager EACEA A1: European Higher Education – Knowledge Alliances presented the key facts and figures for the Knowledge Alliances 20214-2020, acknowledging the strong synergies between KAs, Erasmus Mundus programmes, and European Universities (see Figure 2.1).

Knowledge Alliances have increased from 10 funded projects involving 116 organisations in 2014 to 32 funded projects involving 343 organisations in 2020. The countries where most participants are located are Spain, Italy, and Germany, although there is participation from across Europe as well as beyond.

Figure 2.1: KAs in the Erasmus+ Higher Education panorama



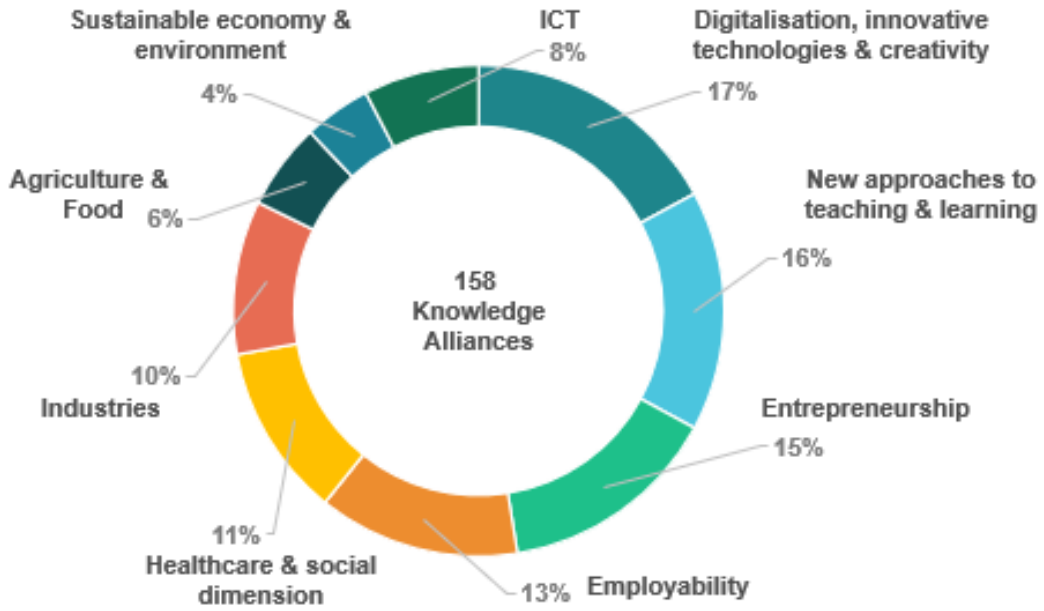
Source: *European Commission*

In total, there have been **1,306 unique organisations participating in the 158 KA from 2014-2020**, ranging across HEIs (32%), SMEs (31%), NGOs (12%), enterprises (10%), research institute and centres (5%), public bodies (5%), EU-wide networks and counselling bodies (2%) and social partners (2%).

The most common thematic areas around which KA partners have collaborated from 2014to 2020 have been digitalisation (17%) and new approaches to teaching and learning (16%), followed by entrepreneurship (15%) (see Figure 2.2).

When looking at the six Commission priorities, on third of KAs contribute to Europe for the digital age (32%), followed by a European Green Deal (21%), and an economy that works for all people (20%).

Figure 2.2: Thematic Areas 2014-2020



Source: European Commission PowerPoint

Collaboration has been particularly important for SMEs, and the Commission promotes the lessons learned from KAs (e.g. organising events, clusters, UBC, producing success stories, factsheets, etc.). Over the years, the use of learning mobility has also become an important feature.

Ms Degive thanked participants for their efforts and resilience shown to adapt to the pandemic. She pointed to links for further informant on dissemination sheets for the projects from 2014 until 2018[2]; Erasmus+ Project Results platform[3]; Knowledge Alliances Thematic Cluster Meeting 2018[4]; and 8th European University Business Forum[5]. Finally, she encouraged people to actively use the online community on Microsoft Teams.

2.2. The Erasmus+ Programme 2021-2027

Paul Tzimas, Policy Officer, EAC.C.1 - Innovation and EIT presented the Partnerships for Innovation[6].

There are two kinds of partnerships which will be supported under Erasmus+ to strengthen Europe's innovation capacity. These include **Alliances for Innovation**, and **Forward-Looking Partnerships**, including large scale projects which aim to identify, develop, and test innovative policy approaches.

[2] https://wayback.archive-it.org/12090/20210122005337/https:/eacea.ec.europa.eu/erasmus-plus/actions/key-action-2-cooperation-for-innovation-and-exchange-good-practices/knowledge_en

[3] https://ec.europa.eu/programmes/erasmus-plus/projects_en

[4] https://wayback.archive-it.org/12090/20210122005337/https:/eacea.ec.europa.eu/erasmus-plus/actions/key-action-2-cooperation-for-innovation-and-exchange-good-practices/knowledge_en

[5] https://ec.europa.eu/education/events/8th-university-business-forum_en

[6] https://ec.europa.eu/programmes/erasmus-plus/opportunities/partnerships-cooperation_en

Transforming HE is an important topic in the policy agenda, involving also a rethinking of the roles of VET and HE. Commission actions include initiatives such as the Skills Agenda, The Pact for Skills, the Higher Education Transformation, building the European Education Area, the European Research Area, Centres of VET Excellence, and European University Alliances.

Alliances for Innovation aim to reinforce the innovation capacity in Europe for HE, VET, and enterprises; not only supporting development of skills but also supporting entrepreneurial mindsets by facilitating the flow of knowledge and correcting skills mismatches.

Alliances for Innovation[7] are divided in two Lots.

- **Lot 1: The Alliances for Education and Enterprises** can involve applications can sectoral or cross-sectoral projects. They can be labour market orientated, or beyond. In each proposal there must be a minimum of one HE institution and one VET provider as full partners.
- **Lot 2: The Alliances for Sectoral Cooperation on Skills** aims to decrease skills mismatches. It is sectoral, aiming at creating new strategic approaches and cooperation for concrete skills development solutions in the 14 Industrial Ecosystems of the New Industrial Strategy for Europe. It is a combination of VET and HE.

Both lots will make use of European instruments and tools such as the Open Method of Coordination[8], ESCO[9], Europass[10] and EQAVET[11]. There will be learning mobility activities of students, teachers, researchers, and staff, insofar as they support and complement the main activities of the partnerships and bring added value to the project's activities. Activities are prescriptive and need to be followed. He invited participants to read more details in Erasmus+ programme guide[12].

[7] https://ec.europa.eu/programmes/erasmus-plus/programme-guide/part-b/key-action-2/partnerships-cooperation/alliances-innovation_en

[8] https://eur-lex.europa.eu/summary/glossary/open_method_coordination.html

[9] https://ec.europa.eu/esco/portal/home

[10] https://europa.eu/europass/es

[11] https://ec.europa.eu/social/main.jsp?catId=1536&langId=en

[12] https://ec.europa.eu/programmes/erasmus-plus/programme-guide/introduction_en

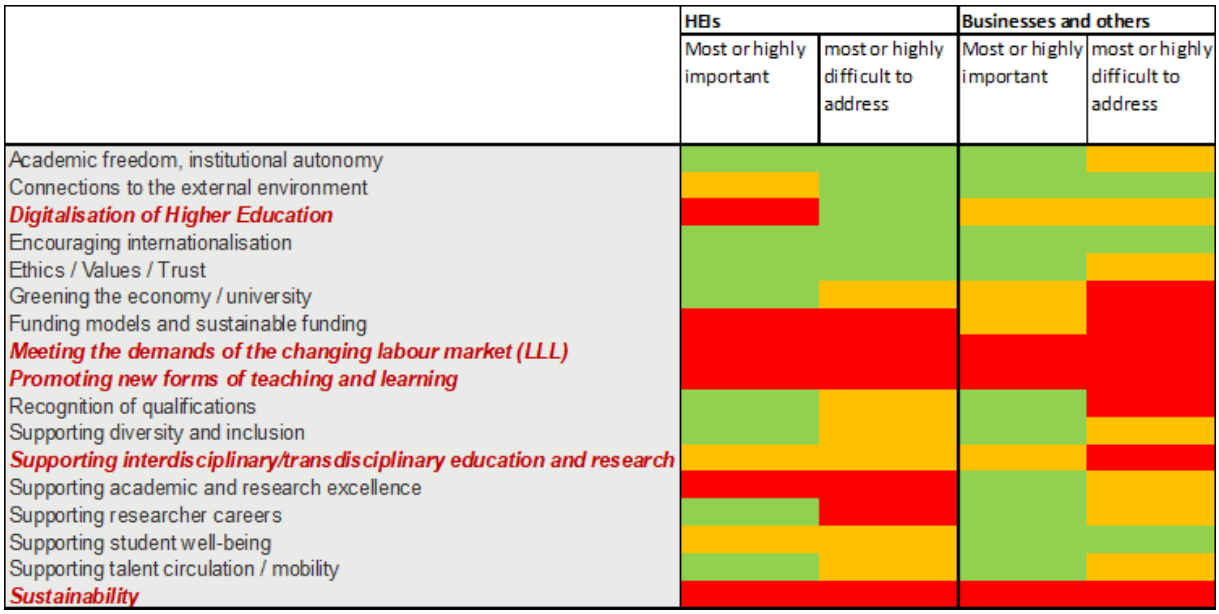
2.3. Preliminary survey results

Joerg Niehoff, Policy Coordinator, EAC.C.1 - Innovation and EIT presented the preliminary results from the consultation survey, thanking everyone who had participated in the survey.

The survey received 245 responses, covering 15% of KA participants and 61% of KAs. There was good coverage from both HEIs and business partners.

In the responses to survey questions prior to this event, participants were asked to gauge the extent to which issues were both important, and those that were the most difficult to address. Responses showed there was strong linkage between the issues considered the most important as well as most difficult to address, with **sustainability, meeting the demands of the changing labour market, and promoting new forms of teaching and learning** being considered the most important and most difficult to address by both HEIs and their business partners (Figure 2.3)**.**

Figure 2.3: Challenges for HEIs Importance, difficulty to address



Source: European Commission

In addition, when looking in more detail in terms of the split of type respondent, the heat map (Figure 2.3) shows some nuances on certain issues, e.g.: *digitalization of higher education, greening the economy / university, supporting interdisciplinary/transdisciplinary education and research, or supporting research careers*.

3.0. Higher Education Transformation – Discussion

3.1. Case Studies

Next on the agenda were short presentations of five Knowledge Alliances (Kas) and their activities, aimed at illustrating how KAs are already contributing to the new Commission strategic objectives. The material which follows draws on the KA presentations and websites, and we encourage readers to visit their websites to explore more.

3.1.1. People & Active8

Gregor Cerinšek, presented People & Active8 projects. The projects aim to demonstrate how the humanities, anthropology and social sciences can be directed towards, and contribute to, industrial processes: how to involve people as co-creators of more meaningful and sustainable products and services. The project has built interdisciplinary teams of teachers, students. Seeing the practical value of their contributions enabled social sciences students to acquire valuable skills and confidence, with three out of four students finding employment in efficiency sector/energy. Businesses also valued the people-centred methodologies.

The project helped to **shift from an expert mindset to people-centred mindset**. The next step is to make it planet-centred, which is what the Active8 new project aims to achieve. It is not only enough to *teach about* change, as HEs and KAs we must *respond and contribute to* change, in particular responding to the demand for change from young people by not only teaching and equipping students with the skills, but also give them **a suitable platform to take sustainable actions**.

PEOPLE
People-Centred Development Approaches in Practical and Learning Environments

People: http://people-project.net/news/

ACTIVE8 PLANET

Active8: https://active8-planet.eu/

3.1.2. KINESIS

Johanna Monti, project coordinator, University of Naples presented KINESIS, a Knowledge Alliance for Social innovation in Shrinking Villages, a project that started in started in January 2021 and will run until 2023. The main aim is to create a Knowledge Alliance among academia, NGOs, communities, local authorities, businesses, to develop a programme of multidisciplinary activities in shrinking areas with the aim of promoting and fostering ideas, projects, workforce, productivity and attractiveness.

The focus of KiNESIS is to **converge the interest of different stakeholders** by recalling various skills around abandoned villages to make them "smart" and "attractive". The KINESIS Knowledge alliance addresses the topic of international cooperation focused on shrinking areas since it creates an **international living lab** to exchange best practices and innovative

ideas developed across Europe. The project aims at fostering social dialogue between different stakeholders (academia, businesses, local bodies, citizens, NGOs) as one of the key elements to revitalise shrinking and marginalised areas.

Keeping in mind the triangular objectives of cooperation and innovation of research, higher education and business of the Knowledge Alliance action, the KINESIS particular aims are: i) revitalising depopulated areas by stimulating entrepreneurship and entrepreneurial skills; ii) creating local living laboratories, shared at European level, in which the exchange of knowledge, best practices, experiences can help **promote social inclusion and entrepreneurial development**; iii) experimenting new, innovative and multidisciplinary approaches in teaching and learning; iv) facilitating the exchange, flow and co-creation of knowledge at a local and global level.

Partners and associate partners benefit from the exchange. Students enrol in internships to develop skills and methods for the future careers. The innovation is achieved by the interaction of all the different actors.

kinesis
Knowledge alliance for Social Innovation in Shrinking villages

Website: http://www.kinesis-network.eu/homesite/1/1/home-page.html

3.1.3. BUILDs

Chiara Farinea, head of European Projects, Institute for Advanced Architecture of Catalonia (IAAC), Spain, presented Building Urban Intelligent Living Design Solutions project (BUILDs).

The project aims at setting up **transdisciplinary cooperation among universities and businesses** by engaging students, teachers, and researchers and providing them with the necessary entrepreneurial skills and connections to create and **bring intelligent living solutions to the market**, through research of biological systems, the development of smart design prototypes, business plans, start-ups and by working with accelerators.

The project brings together three HEIs (Université de Lorraine, Institute for Advanced Architecture (IAAC), and Vienna University of Economics and Business) together with several businesses each bringing different knowledge and practice. The KA aims to offer an educational programme in one year that is embedded in academic projects through interdisciplinary/transdisciplinary groups of students from different backgrounds (biology, business, and agriculture) to **develop prototypes of natural based solutions and a start-up business plan**.

There were five groups of students involved. The winners were awarded the development of their projects during one month in Copenhagen. However, all five projects were very successful and participated in many competitions. The programme ended in June 2020 and three of the start-ups are still running. There is a new call for papers which is launching on website. She invited people to participate in the symposium and learn more on the project.

Website: https://www.build-solutions.org/

3.1.4. DLT4ALL

Soulla Louca, presented the DLT4ALL, a Knowledge Alliance for Blockchain in Academic, Entrepreneurial and Investment Training with the goal to **make Blockchain and Distributed Ledger Technologies (DLT) and their applications understandable**.

Given it is a relatively new area, there is a lack of educational material on the topic of block chain. This also means it gives a fragmented view of the topic. This creates a challenge. While there is a need to co-create, there is a lack of knowledge on the benefits when adopting blockchain technologies both in terms of growth and innovation. In order to overcome the challenge, DLT4All creates intense collaboration between academic and business partners.

DLT4ALL contributes to the HE agenda. The project helps strengthen the education and innovation dimension of universities. The synergies created are assisting in research through new research collaborations among the partners It has opened new research avenues for the students Offers inclusive education – education open for all.

Among the project results are eight interconnected training modules, exploring the DLT phenomenon from different perspectives. This reached a wide set of target-audience (incubators, angel investors, interested parties etc). Moreover, there have been a series of live online streams **putting the curriculum to real-life test**, and a significant amount of learning material-available to all. There has been a large pool of blockchain use cases collected.

To conclude, she reminded that the knowledge triangle between research, education, and innovation, we also need to include the society and the environment – need to embrace it and understand it.

Website: https://dlt4all.eu/

3.1.5. SpinTeams

Anna Pajaron presented SpinTeams, the University Spin-offs Alliance which aims promote university spin-offs through mentoring and transnational entrepreneurial teams. The consortium includes HEIs and Chambers of Commerce which belong to the support ecosystem of entrepreneurship complementing each other to the same goal.

The KA is focused on entrepreneurship and bringing ideas to the market. The project **supports the student through the journey of setting up a business**. It gives training to students and teachers inside HEIs to help detect possible ideas and help researchers, guide them, encourage them towards setting up business.

There is also training through nine webinars on entrepreneurship skills and competences. There is a mentoring phase provided by chambers of Commerce allowing students to be guided. The KA promotes networking through an online platform where mentors, investors, organisations supporting entrepreneurship connect. Lastly, all projects contribute to **building a support ecosystem** to help increase the success rate of the spin-offs, scaling up and bringing knowledge from innovation to society.

Website: https://www.spinteams.eu/

3.2. Break-out discussions

Next, the participants were divided in breakout groups to discuss the five themes which were highlighted in the survey as being highly important and challenging to address to support the transformation of higher education. Each group was asked to focus on two of the five themes, and, and the discussions were moderated by one of the group participants. A rapporteur was also assigned to report back during the plenary session.

The five themes which participants were asked to discuss were the following:

(1) Sustainability

(2) Promoting new forms of teaching and learning

(3) Digitalisation of Higher Education

(4) Meeting the demands of the changing labour market

(5) Supporting interdisciplinary and transdisciplinary education and research

A summary of the outcomes from each group discussion is presented in the following pages.

Group 1

Group 1 was moderated by **Davide Pettenella (GREEN4C)**. The group discussed the topics sustainability and promoting new forms of teaching and learning. The rapporteur assigned to report back on the discussion during the plenary session was **Trayana Nedeva (Bio-Save), Sofia University St. Kliment Ohridski (BG)**.

There was a ‘tour de table’ and a general exchange of views at the beginning of the group discussion. The moderator then prompted participants to respond to the topics and the guiding questions.

New forms of teaching and learning need different organisational cultures. Approaches that promote closer collaboration with stakeholders (rather than just having stakeholder representation on committees) should be prioritised. Participants also discussed social inclusion should be considered through a universal design approach. The use of challenge-based learning and co-creation are also vital approaches. Overall, new forms of teaching and

learning should provide empowerment by combining top-down and bottom-up approaches, overcoming the hierarchical models to date.

The role of networks and how to use interconnectivity of projects was discussed, covering training needs assessment, data collection, and dissemination. Participants also emphasized open sources formats, and it was noted that there is an existing platform for clustering for the KAs.

Participants briefly discussed the topic of **sustainability**. It is important that UBC activities feed back into the education process, across placements, projects, and curriculum. Different levels of education and different curricula across the EU require careful working together to make pan-EU programmes coherent. A focus on assessment and recognition was considered important, and participants provided examples, such as EfESC which works with the certification Chainsaw certificate[13], and also regarding forest certification[14]. As a whole, sustainability of projects and training programmes was a concern among participants, who discussed the topic should be embedded in all areas at the institutional level (teaching, research, travel, subsistence, etc.).

Group 2

Group 2 discussion was moderated by **Marika Huber (DIFME), Malta Business Foundation (Business).** The group discussed the topics of digitalisation of Higher Education and supporting interdisciplinary and transdisciplinary education and research. The rapporteur assigned to report back on the discussion during the plenary session was **Carsten Wolff (ProDiT), Fachhochschule Dortmund (DE).**

In the context of **digitalisation of higher education**, attendees discussed the development of microcredentials and microdegrees. One of the challenges in developing these further is that the public and education stakeholders themselves often have limited knowledge about them. For example, Germany, Austria, and Belgium all have a different interpretation of what a microcredential is. There is a general understanding that they could range between 5-30 ECTS, but it appears that people are waiting for a 'top-down' process and a "trusted authority" (such as the EU) to define what a micro credential is, and to provide some authenticity and quality assurance for them.

At the same time, however, attendees recognised that national authorities are likely to be reluctant to give away their powers related to the recognition and awarding of qualifications. Attendees agreed that it will probably be easier for the higher education sector to incorporate microcredentials in the future, and the Bologna Process provides some helpful precedent in terms of standardisation and equivalence. However, there was caution about microcredentials being used to accumulate ECTS credits, and then claiming equivalence to a traditional higher education qualification, such as a Bachelors degree. In the VET sector, there are likely to be similar difficulties as when ECVET was introduced, and there remains a lot of work to do to shape the concept.

Attendees discussed how HEIs should respond to ongoing technological developments, and whether they should adopt the role of "technology watchers" to really observe in society what the technological trends are and what will drive future developments, such as virtual world tools, which may be as standard in ten years' time as Microsoft Office and YouTube are today.

A major barrier to HEIs and businesses becoming more digitalised is the difficult for many stakeholders to imagine the possibilities – this is something that needs to be taught. This transfer to digitalisation will not be easy for all subjects, and further tools may need to be

[13] https://efesc.org/

[14] https://www.eduforest.eu/?lang=fr&titre=quality-forest-2017-2019&rub=1&srub=6&body=51

developed. It is also likely to be the case that as the Covid-19 pandemic restrictions are eased, some digital tools are abandoned in favour of returning to a face-to-face environment, while others will be retained and will evolve further.

There was discussion about the implications of digitalisation for student and staff mobility. Pre-pandemic there was much physical mobility that in today's circumstances might be viewed as unnecessary. This meeting itself was evidence that transnational trips are not always required to have transnational meetings, and that there are economic and environmental savings to be had. There are more virtual reality applications being developed that will help to replace the need for physical mobility, and HEIs can help to develop the thinking around this. The most likely way forward is a type of blended approach, where some shorter-term periods of physical mobility are combined with digital learning across borders.

While digitalisation can help to overcome financial, employment and cultural barriers that hinder physical mobility, there are some risks associated with digitalisation in terms of ensuring that HEIs are inclusive spaces for education. Not all students have access to IT hardware and internet connections in conducive learning environments, even though it is often assumed so. Digitalisation can also depersonalise education and demotivate those involved, for example, lecturers speaking to blank screens in online classes as learners turn their cameras off.

Finally, attendees discussed how HEIs could support **inter- and transdisciplinary teaching and learning**. This can be difficult to achieve when the funding system for higher education does not incentivise these activities, for example, HEIs are often primarily focused on their research activity, and not for promoting interdisciplinary teaching. The demand and push for more inter- and transdisciplinary teaching and learning has to come from outside the sector, i.e. from the market, and there is already some evidence of this when one examines the calls from research schemes.

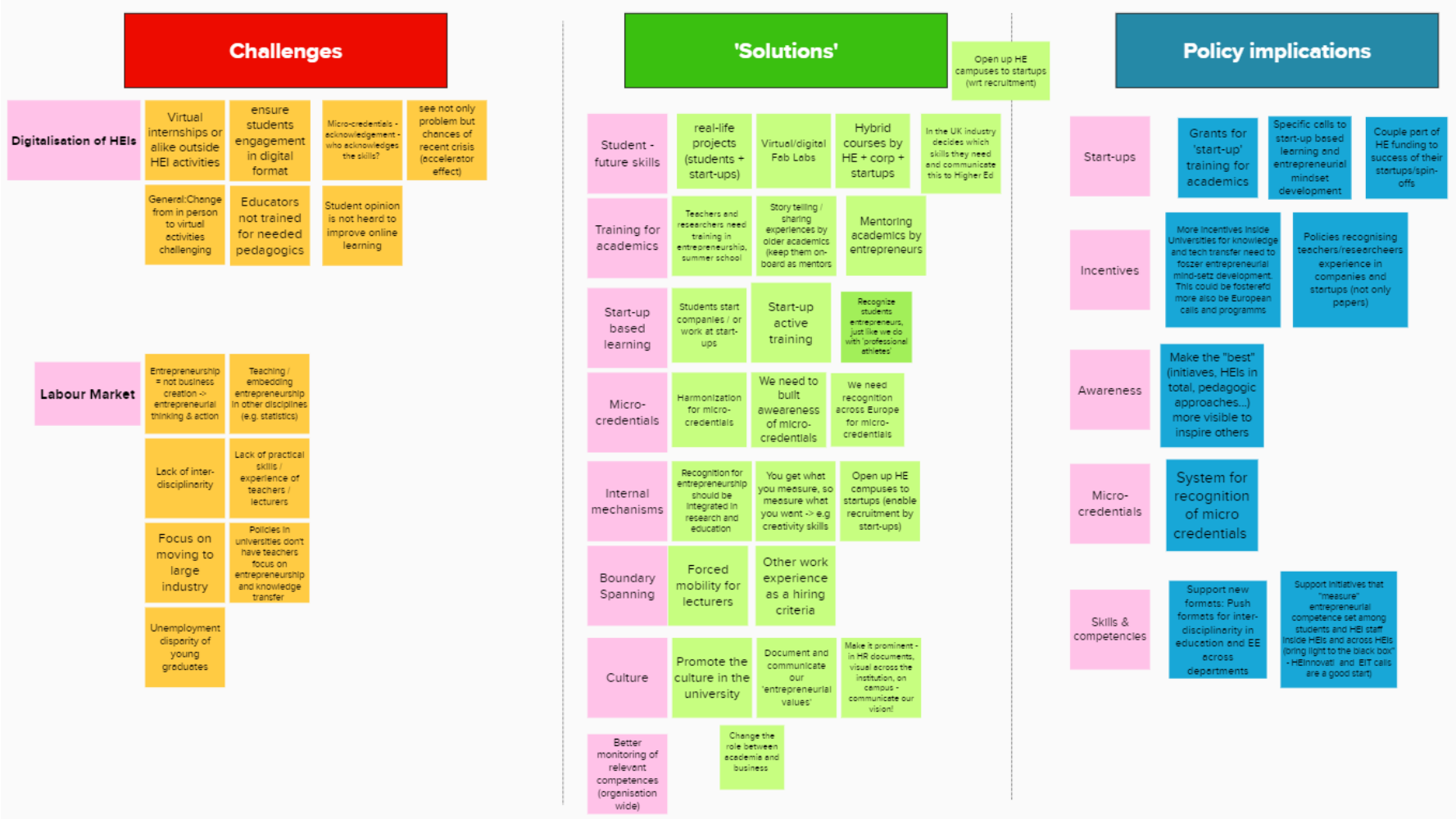
One attendee pointed out that their institution runs a "listen to the labour market" survey every year where employers tell the HEI what they want and need, and this is viewed as a successful approach. The institution also forms its own internal interdisciplinary courses by getting different schools and faculties to work together. On the other hand, another attendee cautioned that interdisciplinarity is only part of the picture, and that students require many other competences in order to find employment. Furthermore, most curricula are already full in terms of content, and it may be difficult to add more.

Group 3

Group 3 discussion was moderated by **Arno Meerman (ReVALUE), University Business Innovation Network (NL).** The group discussed the topics of meeting the demands of the changing labour market and digitalisation of Higher Education. The rapporteur assigned to report back on the discussion during the plenary session was **Florian Bratzke (EICAA), Univations Gmbh (DE).** The group summarised their discussions in an online mural (Figure 3.2)[15].

[15] https://app.mural.co/t/uiin5376/m/uiin5376/1622714719665/a6f0d5d410d4e43526a58c9c25cb87e4235afcc8

Figure 3.2: Online Mural summary of discussions



Source: app.mural.co

Regarding **meeting the demands of the changing labour market**, the moderator prompted attendees on the issue of how to drive change. How should teachers drive the digital transformation in higher education? What role do they play? How can universities become more agile? How can entrepreneurial thinking and acting be driven among students? How can transversal and soft skills be taught within curricula? Should we move towards move more towards micro-credentials to empower life-long learning?

Attendees exchanged their views on some of the key issues. In member states where there is high unemployment entrepreneurship can play a big role. Social mobility is also slow, and in some parts of Europe there are unemployment issues, in other places there is more an issue of the lack of local human capital.

The skills mismatch between the labour market and graduate skills remains, and students should have more opportunities to learn soft and transversal skills. Participants also discussed working for big companies is still the easiest path for most graduates, and perhaps more should be done to incentivise getting jobs in start-ups which could help meet the demands of the changing labour market. The question was posed as to whether a special call in Erasmus+ should developed to focus on start-up learning.

Participants shared some best practices. For example, Ghent University recognises start-up activities as a 'top sport' and gives exemptions to students who are working on a start-up. In Spain, there are university practices encouraging internships in start-ups, which helps to promote skills that are demanded in the changing labour market.

The group also discussed how university academics need to be incentivised to participate in industry work and knowledge transfer. Knowledge transfer/innovation is still seen too much as 'separate' or 'additional' in teaching and research, and should be embedded in all teaching and learning activities. For example, universities should be linked to a pool of companies to collaborate with which could also add value to students: in **Austria** there is a requirement for professors to have at a number of years of experience working in companies before getting a position.

In addition, the group discussed the topic of **digitalisation of higher education**, accentuated within the context of the covid pandemic that forced universities to change their approach to teaching and learning. The group discussed challenges associated to the change by some universities who are not so technically oriented or technical universities where practice-based learning is more practiced. The need to change mind-sets and infrastructures was discussed and differences in preference to teaching methods. Participants discussed students could be more involved in decision making process around how digital education is developed.

In-person and online pedagogy needs to be differentiated and approached tailored to each. Training programmes are lacking on how to teach effectively in an online format. One participant highlighted a successful MOOC experience to show its scalability, although reminded that not all content is appropriate for online learning. HEIs should consider this in the digitalisation within the transformation of higher education.

Group 4

Group 4 discussion was moderated by **Alessio Cavicchi (TWL), University of Macerata (IT).** The group discussed the topics of sustainability and promoting new forms of teaching and learning. The rapporteur assigned to report back on the discussion during the plenary session was Silva **Goretti (INCOME), Instituto Politécnico de Viana do Castelo (PT).**

Firstly, the group discussed the many differences of **sustainability** and how higher education institutes can make an active contribution. One participant shared their good experiences when

developing entrepreneur courses that fit market demand. They would develop the curricula together with businesses and students' feedback and combine courses with work-based learning.

Other participants further shared that they looked for universities to work and teach more holistically across departmental silos: for example, it is unusual for an economist to be introduced to green issues, despite the economy and environment being connected in the global economy. Reforming the curriculum and developing course materials for sustainable development requires collaboration between departments and faculties at universities, and courses and teaching materials should be adopted to the conditions in their local community.

An example of a holistic approach for teaching is a university where all students, no matter their area of study, would have one semester together with students from different fields of study, that would build a basis knowledge and understanding for everyone. In especially a few sectors, there is still a long way to go for incorporating sustainable measures and these would benefit from learning for how sustainability is addressed in other sectors. Collaboration is the way forward to creating a holistic view on: for example, green certification for supply chains, and building maps for the paths towards a sustainable business model, without falling into the pitfall of initiatives improving one aspect of sustainability but hurting another.

For higher education institutions to engage in substantial partnerships with local communities, business etc, sustainability needs to be integrated into the strategy and vision of the university. If sustainability is not part of the vision, then people will not see why they should act on it. Such a top-down approach will need to be coupled with bottom-up initiatives but relying solely on a bottom-up approach will only lead to uneven and often short-term change.

The group highlighted collaboration as the crucial element for promoting and developing **new forms of teaching and learning**. Start with building cross-disciplinary teams at universities to prepare staff to develop collaboration with non-higher education actors. Digitalisation is another way to create new forms of teaching but requires a high level of personal responsibility of students. Covid-19 showed that though many students have hardly had problems with distance learning, others have struggled to engage themselves. New forms of teaching and learning will need to work for the many types of students. Combing distance learning with location-based teaching via local collaborations could be a way to motivate different forms of students.

Another barrier is that for many university staff is that teaching comes second to research. Universities do not always reward or motivate staff to deliver good or innovative teaching, but instead reward research.

Group 5

Group 5 discussion was moderated by **Mark Majewsky Anderson (SIKE**. He invited participants to reflect on the outcomes of the survey in the context of the two questions for discussion in this breakout group: **N°4 Meeting the demands of the changing labour market;** and "**supporting interdisciplinary and transdisciplinary education and research**"[16]. The rapporteur assigned to report back on the discussion during the plenary session was **Alan Briones Delgado, ATHIKA, Ramon Llull University (ES).**

Participants first discussed the topic of **meeting the demands of the labour market**. This requires close collaboration between universities and industry/businesses but often still does not take place as a part of the everyday operations of universities, nor of businesses. The project modus means that collaborative efforts are initiated, networks established, projects set up, incubators created, internships established, real-life challenges to use in teaching is

[16] Group 5 originally was planned to discuss the topic of sustainability.

collected and used – and after three years, it all stops, and collaboration never becomes systemic.

Universities are in a very competitive environment with respect to funding – implementation of project findings is not supported, and when the funding runs out, it is difficult to maintain long-term collaboration or build lasting networks. In addition, the structure and governance of universities makes it difficult to escape from the dependence on project funding and moving towards investing in the future.

On the side of businesses, it was a common experience of the universities that external partners often emphasise that it is not their role to help universities or contribute to the employability of graduates, but to run a business effectively and efficiently. When they are interested, the project is often seen as a potential vehicle for recruitment, for example when universities send students to work with or for companies, as interns or in shared projects. Faced with such approaches, universities sometimes find it difficult to present prospective partners with an attractive platform for collaboration, and the universities are not always geared to take full responsibility for the collaboration.

It was pointed out, however, that at project level some of these challenges can be tackled by managing expectations from the onset, starting in the application phase. Project coordinators need to be very clear about the main objective of the project (to improve teaching and learning) and about the main beneficiaries (the students). Companies tend to ask ‘what is in it for me?’, and the reply needs to be that the project cannot always fulfil all company needs, and that all partners need to invest to create good outcomes. A concrete way to manage expectations is to co-draft memoranda of understanding.

Although efforts to strengthen university-business collaboration have been ongoing since the 1990s, there have been significant changes in the scope of the cooperation. It has evolved from a narrow focus on technology transfer and creation of spinoff companies towards a more holistic focus on social innovation and sustainability in a broader sense.

Several of the projects present in the group had carried out some form of skills needs assessment in their sector or local area. In one project, the focus was on the needs of SMEs for digital, soft, and green skills. The results of the needs assessment indicated that these types of skills were in demand among SMEs, and even more so after the event of Covid-19. The results are being used to develop a joint Master degree.

Another project developed within the field of journalism develops training programmes for students that they expect will increase employability. They have found that skills enabling the participant to communicate with specialists in other fields, and hence enabling better and more sustainable solutions to current challenges are in high demand.

Participants moved to discussing the topic of “**supporting interdisciplinary and transdisciplinary education and research**”. Overall, there was a broad consensus in the group that curricula should not be overloaded with transversal skills, but that the real efforts should be targeted at enabling students to work in trans-disciplinary teams. Projects often provide ample opportunities for establishing learning environments in the form of challenge-based learning in diverse project teams including students from different academic disciplines, teachers, researcher, staff in companies and in local or regional administrations, and citizens.

The need for digital skills was briefly touched upon. The participants found that it is difficult to establish which types of digital skills and at which level of complexity should be taught to non-IT-students. However, the group agreed that while students should not generally be taught specialised IT skills, they need to have at least a basic understanding of the technologies behind the user interfaces in order to be sufficiently critical. Most importantly, though, students should learn to self-reflect and self-regulate to enable them to be ready for a life full of learning.

Group 6

The session was moderated by **Demetrios Sampson (L2A), University of Piraeus Research Centre (EL).** The rapporteur assigned to report back on the discussion during the plenary session was **Katja Pesjak (ProCare), Angela Boškin Faculty of Health Care (SI).**

Sustainability is generally understood as the capacity to develop and innovate in a way that is respectful and does not endanger economic, social and societal growth for future generations. Current trends show that HEIs are increasingly adopting comprehensive "place-based" local strategies, and also shape global engagement around sustainability strategies, policies and implementation plans for their education, research and daily operations.

Challenged-based and problem-based forms of teaching and learning are gaining ground, but they need to be streamlined and developed at scale across all educational programmes and academic disciplines in universities.

Societal challenges are global and require at the same time local, national and global actions plans, in multiple ecosystems. At the local level sustainability is often narrowly understood to be about urban regeneration through infrastructure. Policy-makers should understand that human capital development emerges in local spaces and smart cities through the connections between multiple players and cross-organizational interactions of workers, citizens and local communities to produce value and new sustainable and inclusive approaches, products and services. The need for "Sustainable Smart Citizenship Competences "is increasingly emerging.

Global and local multistakeholder interaction is a critical success factor for sustainability, recognising the need for radical changes of perspectives, broadening mindsets to understand that people create social, economic and private values in their local communities.

Sustainable innovation requires interdisciplinary approaches across academic disciplines in universities, across faculties, departments, and in close connection with other types of stakeholders from private and public sector organisations. A wealth of knowledge and different type of expertise exist in local communities that can be brought back inside universities for in-depth analysis and new research avenues.

Through EU policy and interventions, a high priority should be given to the recognition and accreditation of relevant sustainability competencies gained outside any formal degree education. An EU-wide "Sustainability Competence" profile and certificate is recommended, in the form of Digital badges and microcredentials awarded on the basis of assessed learning.

An EU label for "Sustainable" HEIs could also be considered, awarded to those institutions that take a strong leadership role in major sustainable developments and foster sustainability values and principles for students and staff across the entire institution and in their wider community. Self-assessment tools for benchmarking could be developed to assist individual institutions with self-diagnosis tools and good practice sharing.

When discussing the topic on **meeting the demands of the changing labour market**, the group discussed that the labour market is changing very rapidly in the current technology-driven economies, demanding new skills, upskilling, and reskilling. Curricula need to be modernized in terms of the latest knowledge in the field, made more flexible for personalised learning paths instead of the one-size fits approach. They should include spaces for different forms of learning in which internships and placements in industry can be integrated, support provided to take new ideas to the market (from micro and high-growth enterprises, creating employment and economic growth), community project work or engagement with NGOs. Connections outside the academic environment are important for students to develop professional networks in the field to enhance their future employment prospects.

In a perspective of lifelong learning the provision of degree education should also be supplemented with a wide offer of “on-demand” and “in-context” highly specialized courses relevant to the labour market, for example through accredited microcredentials, integrated in degree programmes or offered as stand-alone courses.

Group 7

Group 7 was moderated by **Dominique Scalarone (CAPuS**), who invited participants to briefly introduce themselves at the start of the session. The rapporteur assigned to report on the discussion during the plenary session was **Arien Jansen (A4SEE), Delft University of Technology (NL).**

The group began discussing the topic of **sustainability** and optimal strategies to turn HEIs into green, low carbon, plastic-free, and environmentally sustainable institutions require cultural changes which require time. Sustainable solutions require sharing resources between business, universities as well as society (education, training, equipment, etc.).

Some good examples of universities and businesses already implementing initiatives were given. The University Delft collects and recycles coffee cups, and it now has implemented a full vegetarian menu in its canteen. In implementing these initiatives, one needs to consider the balance of the whole life cycle approach however, as recycling can have a different impact (for example, recycling cups can increase CO_2 from their transportation).

The group discussed **social sustainability** could be promoted though virtual mobility. Giving peer meetings online could be a concept that could enrich the mobility programme, offering more opportunities of experiencing international experiences[17]. This could also promote transdisciplinarity – giving all students despite differences in social and economic context to these skills and opportunities.

The group discussed how HEIs can embed **global sustainability** and SDGs across all academic disciplines, and can play a role in mitigating the loss of biodiversity and ecosystems. An example of how HEIs can play a role in the loss of biodiversity and eco-systems is through collaboration with agricultural sector for the preservation of specific plants/seeds typical in Mediterranean regions. Here there is collaboration to cultivate seeds with the agricultural sector and gave opportunity to unemployed people also to export them.

Bottom-up approaches were highlighted such as initiatives launched for monitoring physical health of employees, or where students find solutions to challenges they would like to address linked to SDGs.

Finally, within the topic of sustainability, participants also discussed the importance to find financially viable solutions to environmentally friendly alternatives, and the importance to get big players involved and on-board.

The group also discussed **digitalisation of higher education**. Firstly, they discussed possible ways to accelerate the development of microcredentials and microdegrees so that they achieve wider recognition by academia and employers. The group agreed there is an increasing demand for shorter programmes that better and more quickly address market needs. New approaches are needed although it is important to remember not everything can be done online and it is important to promote project-based learning.

A possible solution would be to modularisation of programmes so that it is more likely for workers to take them up and continue education. Another way would be to promote

[17] https://virtualmobility.eadtu.eu/

microcredits for long-life learning of workers so that businesses are incentivised to give value to long-life learning.

A *microcredential framework*[18] was shared by one of the participants, and the *DigiTeL project*[19] as an example of hybrid education formats blending digital education/face to face and teacher training digitalisation.

Group 8

Group 9 discussion was moderated by **Johan de Jong (COP4HL), Hanzehogeschool Groningen (NL).** The group discussed firstly the topic of promoting new forms of teaching and learning, and secondly, the topic of meeting the demands of the changing labour market. The rapporteur assigned to report on the discussion during the plenary session was **Giovanni Mummolo, Politecnico di Bari (IT)**

Regarding new forms of teaching and learning, the group discussed that the best approaches to empower teachers and students to create more resilient forms of teaching and learning are gamification modules and online laboratories. Gamification is consistent with the new emerging IT platforms. In the Netherlands, there is an experimental approach called living labs where education providers meet practitioners. Living labs provide space for multiple actors including citizens, businesses, local education providers to contribute to the overarching goal.

The group also discussed that in the online learning, there is a limited practical application for the students, therefore, practical examples or a training based on a life experience could help in developing new types of teaching and learning. For example, online training with postgraduate students could be very limited, therefore, it is hard to engage them. Interdisciplinary view is a key for technical profile students.

The pandemic empowered and accelerated the renewal process of higher education. Universities are resilient and adopted to the online learning and training quickly; however, there is a tendency to come back to 'normal' practices and it is important to ensure that the best practise examples (online trainings) remain in place after the pandemic.

In addition, the group discussed It is important to meet the demands of the changing labour market. This could be through alumni networks, or universities and companies having open and intensive discussions. Universities in general should be more open in building bridges with a private sector in adopting push/pull strategies to exchange knowledge in both ways.

Regarding the acquisition of soft skills, it is important to increase awareness of the demands of the labour market which could be achieved through the cooperation with companies and education providers. There should be more ties between universities and CEOs or representatives from the companies as guest lecturers, or members of a company board as they will provide much needed real-life perspective.

There is a need to acknowledge and promote informal learning which is unpopular and not well recognised across countries. It contributes to the mindset of the students thinking that informal learning is not as important as formal learning.

Group 9

The Group 9 discussion was moderated by **Hanna Harilainen (SDG4BIZ), Metropolia University of Applied Sciences (FI),** which focused on topics **"**Promoting new forms of teaching and learning**" "s**upporting interdisciplinary and transdisciplinary education and

[18] https://emc.eadtu.eu/cmf-awarded-programmes

[19] https://digitelpro.eadtu.eu/

research”**.** The rapporteur assigned to report back on the discussion during the plenary session was **Andrea Hofer, OECD-EDU.**

The group first discussed **promoting new forms of teaching and learning.** The group agreed that there needs to be a greater emphasis on participatory learning pedagogies. In particular, the group highlighted the importance of problem-solving approaches rather than a continued reliance on traditional passive forms of academic instruction. The group discussed how these models of learning can create more open approaches that encourage self-direction and motivation amongst students.

At the same time the group also noted how these approaches can create more opportunities to engage community and business in the learning process and its outcomes. Furthermore, there is a need to review how credentials can properly recognise the wider range of skills and abilities that students can acquire through these models of learning beyond just knowledge of curricula.

To support the development of new approaches to teaching and learning the group identified two key areas that could be addressed, the pedagogical competencies of academics and the flexibility of the systems that they work in.

First, the group discussed how academics need to be properly supported to develop the skills and competencies necessary to design and deliver education in this type of way. Professional development initiatives should support academics to develop the knowledge and skills required to redesign approaches to education, including the effective creation of team-based learning in online spaces.

Second, the group also discussed how institutional frameworks that promote control and standardisation of learning processes can hinder the development of new approaches to teaching and learning. Processes need to foster spaces for experimentation and innovation whilst quality assurance arrangements, including curriculum requirements and qualification recognition, also need to be flexible to different types of approaches.

The group emphasised that **interdisciplinary and transdisciplinary education and research** was essential for addressing complex real-world problems. The necessary skills could be taught and developed through the collaborative problem-based learning approaches, creating attitudes and skills for working in interdisciplinary projects, including using tools such as systems thinking and causal loop diagrams.

Effective interdisciplinary approaches can be challenging and must navigate the real barriers that can exist between different disciplines. Approaches to creating interdisciplinary approaches included encouraging community building measures within HEIs and more emphasis on collaborative pedagogy. However, there needs to be support available for teachers to give them space to try out new collaborative approaches to learning and to ensure that bureaucracy and systems were more flexible to create these spaces for innovation.

A further challenge for interdisciplinary working was the need to speed up the way that academics collaborate and engage with society to create solutions as traditional mechanisms such as journals can be very slow in comparison to innovation in the private sphere and the evolving needs of society.

Group 10

Group 10 discussion was moderated by **Liga Kuzmane (POWER), European University Foundation (LU).** The discussion in Group 10 focused on the following topics: **digitalisation of higher education and supporting interdisciplinary and transdisciplinary education**

and research. The rapporteur assigned to report back on the discussion during the plenary session was **Shelley Doolan (AHEH), University of Wales Trinity Saint David (UK).**

Regarding the **digitalisation of the higher education**, participants pointed out that a mix of blended learning that can make the best out of each mode of learning (physical or digital) appears to be the way forward. Participants stated that while digital technologies bring advantages such as making education more inclusive to people from rural or otherwise disadvantaged areas, they can cause fatigue (e.g., virtual, "Zoom" fatigue) and deprive learners from social, networking and other opportunities.

At the same time, although digital technologies can greatly facilitate learning through virtual reality (VR) and affiliated techniques that can simulate real-life environments, often learners' physical presence is necessary, for example, in laboratory or other real-world settings.

Participants noted the acceleration of micro-credential and micro-degrees. There is a general appetite for microcredentials on behalf of both industry and learners, but there are outstanding issues that have to do with the harmonisation, accreditation, and quality assurance of such mediums of learning. They noted the important role of the European Commission in facilitating harmonisation between academic institutions across Member States.

Regarding **supporting interdisciplinary and transdisciplinary education and research**, participants did not view existing silos as particular characteristics of Higher Education Institutions (HEIs). On the contrary, representatives from the industry pointed out that such silos also exist within businesses. Therefore, the conclusion was that there is a need to address this issue at an institutional level to enable cross-fertilisation of different disciplines. In HEIs, participants stated that a potential way to achieve this would be though challenge- or idea-based learning that would encourage learners from different disciplines to collaborate to advance the understanding of, and solutions for, a real-world scenario.

Interdisciplinary should be seen as dynamic. For example, while the design of a solution might not require the collaboration of different disciplines at its initial stages, it might do so, as the solution evolves. In this respect, the collaboration / integration of different teams can prove to be particularly useful.

3.3. Key findings

This section presents the main findings of the group discussions for each of the five key issues discussed on the transformation of higher education. Rapporteurs were asked to feed back on the breakout sessions discussion, keeping in mind the following questions:

(1) What are the **key issues** as they are being experienced in your institutions and (local, regional) innovation ecosystems?

(2) What are the **success factors** in how your institutions (administrators, researchers, teachers) that enable university-business cooperation, and innovation (including social innovation)?

(3) What are the **priority actions** at the European (added value) level that will accelerate the challenges of building back better?

The findings are presented according to the answers to these questions.

3.3.1. Sustainability

The summary of the group discussions was reported by the following group rapporteurs: **Arien Jansen (A4SEE), Goretti Silva (INCOME), Katja Pesjak (ProCare), Trayana Nedeva (Bio-Save)**.

Key issues	Success factors	Priority actions
(4) Changing **culture** in HEIs and businesses and encouraging challenge-based learning. (5) **Strategic initiatives** by HEIs around sustainability (including sustainability considerations in strategic policies, campus operations, links with the local community, research, teaching and learning). (6) Ensuring a balance between **international and national/local interplay**. (7) **Sustainable smart cities (SSCs)**: not only an issue of infrastructure, but also requires new sustainable smart citizenship competences to be developed (develop human capital that understands and functions efficiently in SSCs).	(8) **Universities** can play a key role in supporting collaboration platforms with businesses and local society. (9) Closer **collaboration with society** can help to embed processes in their development, particularly more local cooperation for more impact into sector/community. (10) **Interdisciplinary teaching, research and collaboration with local communities** can help implement change in everyday life. (11) **Challenge-based** & problem-based teaching & learning approaches. (12) Promising **bottom-up initiatives** from individuals & communities.	(13) Develop and recognise **leadership in sustainable development** in the university sector & foster sustainability values and principles for students, employees and the wider community. (14) Develop a common **repository of good practices on sustainability in HEIs and businesses**, which can facilitate the exchange of experience and scaling up. (15) Assessment/certification in form of digital badges & micro-credentials and recognition and accreditation of **"sustainability competences"**. (16) Establish an **EU label for a "sustainable" HEI** and (17) Support the development of a **self-assessment tool for HEI sustainability**, which would allow (international) benchmarking.

3.3.2. Promoting new forms of teaching and learning

The summary of the group discussions was reported by the group rapporteurs: **Trayana Nedeva (Bio-Save); Goretti Silva (INCOME), Giovanni Mummolo (IE3), Andrea Hofer (OECD-EDU)**.

Key issues	Success factors	Priority actions
(18) Logistical challenges: teaching across multiple time zones, work and family commitments, different semester structures (e.g. students graduating at different times). (19) Still a lot of **red-tape in universities** around non-traditional classroom teaching	(23) (Online) **short seminars** are good ways to engage business and mother community actors into university teaching and research. (24) **Cooperation between HE and business** allow sharing of resources and skillsets. (25) Innovative pedagogies can **attract a more diverse and pan-**	(29) **Train the trainers** (on teaching, mentoring, performance). (30) Provide **training opportunities for teaching staff** around innovative teaching methods, and how they can be used to increase community engagement in teaching and research.

– including lack of funding to support new pedagogies. (20) Insufficient know-how in universities around using digital tools for **participatory learning** (more space needed for project-based learning). (21) **Assessment** requirements (e.g. trainers to make up exams to fulfil requirements). (22) (Innovative and high-quality) **teaching insufficiently rewarded** in universities alongside academic research.	**European student body**, increasing university income. (26) Innovative pedagogies support the **development of key transversal skills among students and staff.** (27) Use the **sustainability argument** to support the development of more innovative pedagogies (including digital education). (28) **Gamification** modules in teaching and learning which are also consistent with IT platforms, and online labs (another option that can empower teaching and learning).	(31) Pedagogical design should **build on the innovations of disruptive technologies** and active learning/project-based learning approaches. (32) Provide **more space the curricula** for community-based learning and assessment, social and cultural practices. (33) **Empower and incentivise students** to co-create new pedagogical approaches, including the use of digital tools.

3.3.3. Digitalisation of Higher Education

The summary of the group discussions was reported by the group rapporteurs: **Carsten Wolff (ProDiT), Arien Jansen (A4SEE), Shellet Doolan (AHEH), Florian Bratzke (EICCAA)**

Key issues	Success factors	Priority actions
(34) Shifting to digital learning can have negative consequences as experienced during pandemic (e.g. digital fatigue). (35) **Students' opinions not heard enough** regarding online learning; however, they are experienced and can contribute developing online forms of teaching. **(36)** Demand for micro-credentials but **lack of harmonisation and accreditation of micro-credentials** / concerns regarding quality assurance. (37) **Digital inclusion of rural communities** has considerations (socio-economic considerations limit access to laptops and broadband or a safe and secure home-working environment).	(38) Development of technical guides and training can support make digitalisation transition possible in an efficient way. (39) Digital education can **support and valorise lifelong learning**. (40) Digitalisation offers **new ways of engaging with business** and integrate their needs into teaching and research, and to identify future skills needs. (41) **Covid-19 pandemic** has forced and accelerated the digital shift, with most educators and learners adapting surprisingly well. (42) **Digital inclusion of rural communities**, which have benefited from digital training.	(43) Develop **digital innovation hub** to facilitate interconnection between business, research and wider stakeholders. (44) European approach to harmonisation of **micro-credential accreditation and quality assurance**. (45) Investigate appropriate strategies for **assessment of informal learning**. (46) Initiatives such as **digital innovation hubs** that co-locate business, students and educators to support collaboration and innovation. (47) Explore the full potential for **VR in training**. (48) Create **hybrid models for teaching and learning** with particular consideration of need for social interaction.

3.3.4. Meeting the demands of the changing labour market

The summary of the group discussions was reported by the group rapporteurs: **Florian Bratzke (EICAA), Alan Briones Delgado (ATHIKA), Katja Peskaj (ProCare), Giovanni Mummolo (IE3).**

Key issues	Success factors	Priority actions
(49) **Graduate unemployment** remains high and **social mobility** remains slow in several EU Member States. **(50) Traditional career paths**: knowledge transfer/innovation is still seen too much as 'separate' or 'additional' to teaching and research. (51) **Legal barriers**: in many institutions collaboration with business and local community remains hampered by institutional and other legal barriers at regional or national level. (52) University education remains **too focused on knowledge transfer** rather than transversal skills training. (53)	(54) **Interdisciplinarity of learning** to create entrepreneurial mindset in learners. (55) **Co-designing curricula** with businesses and other community actors. (56) **University participation in business**, finding solutions to real world problems. Universities should be linked to a pool of companies to collaborate with. (57) Start with the teachers: **financial and non-financial staff incentives** to become more entrepreneurial. (58) Some universities recognise start-up activities as a 'top sport' and gives exemptions to students who are working on a start-up. (59)	(60) Need **more actions to foster entrepreneurship mindsets** (in addition to HEinnovate). (61) Larger push for implementation and use of **Open Educational Resources** (at national, international and local level). (62) **EU label on HEIs' graduate employability capacity**, comparable at national and EU level. (63) Development of an **EU micro-credential recognition system**.

3.3.5. Supporting interdisciplinary and transdisciplinary education and research

The summary of the group discussions was reported by the group rapporteurs: **Carsten Worlff (ProDiT), Alan Briones Delgado (ATHIKA), Andrea Hofer (OECD-EDU), Shelley Doolan (AHEH).**

Key issues	Success factors	Priority actions
(64) The frameworks pertaining to each discipline are hard to break even through **students are motivated to get involved in interdisciplinary forms of learning**. (65) **Disciplinary stereotypes and stigma** still exist and need to be broken down when building interdisciplinary education and research.	(68) **Live briefs/exchanges** in curricula with external stakeholders/enterprises. (69) **Challenge-based learning** and constructivist approaches. (70) Where collaboration does not happen organically, **building a framework to support it**. Bring together different disciplines, different operators (HEI staff and	(74) Embed guidelines for interdisciplinary and transdisciplinary education and research in curricula (e.g. formats including soft skills and project based/design thinking). (75) Explore **models for more agile management** within HEIs to better foster inter/trans-disciplinary collaboration.

Key issues	Success factors	Priority actions
(66) **'Bureaucratic iron cage'**: challenging to find room in curricula, and need for more agile management. (67) **Silos/separation of disciplines** in HEIs *and* businesses stifle cooperation.	students, 3rd sector, industry etc) and scale of organisations. (71) Tailored training, support and mentoring for teachers and students. (72) **Project-based learning** can help to bring different disciplines together. (73) Anchoring learning outcomes and transversal skills in curricula related to joining different disciplines, such as system thinking and complexity, are transversal skills.	(76) **Making good practice visible**, including examples of application of training in different contexts / disciplines. (77) **Community building measures within HEIs**. Create conditions for understanding across disciplines, avoid stigmatising of roles. (78) More **emphasis on interdisciplinary didactics/pedagogy**. HEIs as highest level of education use the lowest level of didactics.

4.0. Conclusions

4.1. Summing up: Higher Education Transformation

Prof. Michael Blakemore, Director, ECORYS provided a snap summary of the day's outcomes. He started by saying that the event highlighted clearly that **sustainability, health, energy, resources, and green, are global challenges requiring major investments in the long-term** – no one source of funding can solve the challenges. The ITER Fusion project showed how long-term commitment will be and development of one of its biggest sections is the HEI and income from grants instead of a focus on investment. This highlights the importance of the EU strategy on Recovery and Resilience.

There was an understanding that financial sustainability required long-term commitments from partners, and a diversity of funding sources. HEIs still tend to be too focused on projects run on grant income. **The need regional and international partnerships is increasingly clear** – energy, health (pandemics), climate change, are issues that will not 'wait' for HE organisational transformation. We now know how unprepared we were, in spite of the changes that had been made. We need to work at global speed and not institutional speed.

The **challenges need a strong flowline of human capital and expertise that cannot simply be 'drip-fed' by separate institutions**. Teaching and learning needs 'people'-focused methodologies, and much more challenge-based learning, learning from the pandemic 'force majeure' and building back better. Much more emphasis is needed on HE modernisation and continuous training of teachers (reward, time, recognition). Curricula need to be dynamically sensitive to the needs of societies. It cannot change every five years and produce in the same old ways. Problems still exist in recognitions, assessments, and certifications as learned by the ITER project.

HEIs should be better at **unlocking latent knowledge and capacity across all groups of society** (e.g. unemployed persons also have relevant skills). Curricula therefore need to be dynamically sensitive to innovations and research developments. International living labs for villages was a good example. The business and commercial involvement and spin-offs create a supporting environment and feed-back further innovative knowledge. There needs to be a constant dialogue and collaboration between universities, businesses, and society. The examples provided by the case study session showed many successful ways in which this is being achieved in blockchain, for example with the DLT4All Knowledge Alliance. KAs have strong SME involvement. The challenge is to increase the social enterprises involved. Sharing and common purpose is central to successful partnerships.

The **lower speed of change in assessment and certification** still shows university institutional resistance – the marketplace is recognising the outcomes much more flexibly – European instruments helping to change to mindset at least at the 'consumer' area. European Forestry and Environmental Skills Council (EFESC) Chainsaw Certificate is an excellent example. There is also an emphasis on micro-credentials and there are still big steps to achieve to close the skills gap of graduates and to better match the demands of the labour market. The 'qualifications' that are most formally recognised are sometimes those that are least relevant to economy and society. EU recognition tools have been vital in motivating change in recognition. KAs are centre stage in showing the ways forward. (More) clustering across the diverse collage of initiatives can help disseminate the excellent practices.

Lastly, Prof. Blakemore highlighted the **value of collaboration and digital modes of interaction**. Going forward, the experiences will allow to build back to better hybrid blended events. Prof. Blakemore ended his summary thanking participants and organisers and the European Commission noting the event showed the value of collaboration.

4.2. Closing remarks

Joerg Niehoff then closed the meeting by thanking all organisers and participants for their contributions to the fruitful discussions. He announced the presentations and materials of the meetings would be available for participants.

5.0. Annex

5.1. Agenda

EUROPEAN COMMISSION
Directorate General for Education, Youth, Sport and CultureEuropean Education and Culture Executive Agency

Erasmus+ Knowledge Alliances
On-line Consultation Meeting on Higher Education Transformation3
June 2021 09hr30 – 13hr30 ***Venue:*** *Zoom Meeting Invitation:*

	Agenda
09:30	Welcome and opening statements: Zsuzsa Javorka, *Managing Consultant, Technopolis;* José-Lorenzo Vallés*, Head of Unit EACEA A1: European Higher Education*
09:40	Policy Context - Co-creation of incentives to accelerate the transformation ofHigher Education *Tine Delva, Deputy Head of Unit, EAC.B.1 – Higher Education* *Joerg Niehoff, Policy Coordinator, EAC.C.1 - Innovation and EIT*
09:50	Key Note Speech: Professor Guido Van Oost, Ghent University: "ErasmusMundus Masters FUSION-EP"
10:20	Key Facts and Figures from the Knowledge Alliances 2014-2020 *Marie-Pierre Degive, Assistant Programme Manager EACEA A1: European Higher Education – Knowledge Alliances*
10:30	The New Erasmus Programme 2021-2027 – the Partnerships for Innovation *Paul Tzimas, Policy Officer, EAC.C.1 - Innovation and EIT*
10:40	Setting the scene – presenting the preliminary results from your replies to thesurvey *Joerg Niehoff, Policy Coordinator, EAC.C.1 - Innovation and EIT*
10:50	Coffee Break
11:00	Five Case Studies: Knowledge Alliance pitch presenting *"People & Active8" – Gregor Cerinšek; "KINESIS" – Johanna Monti; "BUILDS" – Chiara Farinea; "DLT4ALL" – Soulla Louca; "SpinTeams" – Anna Pajaron*
11:25	Higher Education Transformation - Consultation Break-out Discussions
12:40	Feedback on Higher Education Transformation Consultation by grouprapporteurs: Summary of the Group Discussions Presented in Plenary
13:10	Summing up: Higher Education Transformation (ECORYS)
13:25	Closing Remarks (Joerg Niehoff)
13.30	End of the meeting