EUGLOH

European University Alliance for Global Health

Deliverable

DL4.6 Survey on the needs analysis of the job market

WP4 – PROFESSIONAL AND INDIVIDUAL DEVELOPMENT & EMPLOYABILITY

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WP4 Activities:

A4.1: Schools on entrepreneurship and professional skills development (with student mobility)

A4.2: Online courses on entrepreneurship and professional skills development

A4.3: Joint workshops on "hot topics" and SGDs

A4.4: Online tutorial and mentoring on "entrepreneurial mind-set"

A4.5: Set of activities to enforce individual skills of the disadvantaged student population

A4.6: Fairs with industrials and other potential employers of the 5 EU regions

A4.7: Submission of EU projects and fundraising to sustain the activities

A4.8: Dissemination of best outputs and practices with industrials and other stakeholders for the improvement of the employability

A4.9: Monitoring of the activities and their impact

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Publishable Summary

The present study was produced in the framework of the European University Alliance for Global Health (EUGLOH), funded by the European Commission, within the Erasmus+ Programme.

EUGLOH's vision is to strengthen its role in training highly qualified human resources with strong knowledge, transversal "forward-looking" competencies, as well as European values and attitudes, thus reinforcing European Union's Higher Education (HE) competitiveness, attractiveness and impact on employability, lifelong learning and responsible citizenship. By exploring synergies, across all corners of the knowledge square, between education; research; innovation and civil society, EUGLOH aims at ensuring HE students are prepared to solve societal challenges and equipped with skills and competencies needed for their personal as well as professional development.

This approach benefits from the involvement of the relevant stakeholders (e.g. Spin-offs, Start-ups, SMEs, Large enterprises, or other institutions), mostly from the Human Health sector, the ICT sector and the Professional, Scientific and Technical Activity sector (NACE Rev. 2), within the EUGLOH Alliance's surrounding socioeconomic environment, by exploiting creativity, fostering excellence and cooperation among EUGLOH local and regional ecosystems, as well as by encouraging them to review strategies, activities and identify enablers and obstacles to institutional practices.

The conclusions emerging from a survey questionnaire provide insights into the current "demand side" perspective on these topics, highlighting the need for the EUGLOH Alliance to further develop traineeship programs, with these external stakeholders, focused on more action-related skills (e.g. autonomy in work, application of previous knowledge and ICT skills), as well as promoting joint R&D+i projects and ideation spaces to facilitate academia-business collaboration.

Introduction

To become a knowledge-based society, Europe needs to innovate, ensure a rapid recovery from COVID-19 and adjust to the changes caused by technological advances and digitalisation of the economy, as well as by the green transition. These transformative drivers defy ways of teaching & learning, demanding citizens to develop new skills to meet challenges such as job polarisation, the requirements of emerging sectors, and diverse types of work and environments.

Within its institutional transformation agenda and structured cooperation among partner Universities and external actors, the EUGLOH Alliance is committed to strengthening academia-business cooperation in the education, research and innovation areas and contribute to strengthening the competitiveness and attractiveness of the partner Universities involved in the European Higher Education Area (EHEA). Such efforts are fully aligned with EU political priorities, and the strategic objectives of its partner Universities, including Higher Education cooperation policies with society.

In light of this, through EUGLOH and EUGLOHRIA work plans, partner Universities aim at: (i) strengthening the training of highly (re)qualified and prepared human resources to solve societal challenges, with solid knowledge and skills tailored to the needs of the labour market; (ii) modernising and enlarging educational opportunities, through innovative and entrepreneurial teaching & learning embedded into curricula; (iii) involving external experts in teaching-learning processes, to ensure a structured and sustainable dialogue, promoting experimental and practical teaching that contributes to improve lifelong learning employability and adjust education to the real needs of the economy and society; (iv) fostering innovation and reinforcing the cooperation with external stakeholders to exploit synergies across all corners of the knowledge square education – research – innovation – civil society, while addressing societal challenges.

To this end, EUGLOH stimulates interdisciplinary and collaborative work, in line with European, and international trends and strategies and with the removal of barriers to multidisciplinary and strict compartmentalisation of areas such as economics, entrepreneurship, digital technologies, life sciences and health. Thus far, activities were oriented towards interdisciplinary topics related to Global Health and emerging themes, contributing to solving societal challenges and promoting economic growth in the medium and long term. A few examples are the broad use of digital technologies, in the various areas of the economy and society, as well as the promotion of digital and health literacy; a better understanding of the repercussions of entrepreneurship, including social entrepreneurship, intrapreneurship and its sustainability. Additionally, EUGLOH

activities propose the development, testing/implementation of teaching and learning methods and practices that enhance employability and lifelong learning of future graduates and professionals, such as peer learning and work in multidisciplinary teams; participatory and student-centred learning; close contact with practitioners from the "real world" and entrepreneurship experts; competition (hackathon); coaching, mentoring and tutorial support.

By supporting the development of innovative, multidisciplinary, flexible and accessible pedagogical activities and resources – widely undertaken/used by students, researchers, teaching, technical and administrative staff - contributes to the acquisition of knowledge and skills needed by individuals to perform new jobs and update their competencies throughout life. This approach is in line with the developments of the European approach to *microcredentials* and encourages effective education responses to the COVID-19 Pandemic, to build the capacity of EU's Higher Education graduates to tackle the socioeconomic changes and challenges imposed by the aforementioned vectors transforming labour markets. EUGLOH activities also contribute to the achievement of the strategic objectives defined by the Labour Market and Relevance Outcomes (LMRO) project, as they are oriented towards solving societal challenges, through research and innovation, entrepreneurship, problem-solving and digital skills.

As part of the ongoing work to strengthen academia-business cooperation in the education, research and innovation areas, partners exchange and analyse good practices and cooperation policies with external organisations, at the level of education, scientific research activities and projects, as well as their policies of cooperation with business, at different levels, contributing to local, regional and national development.

To this end, in 2022, a questionnaire survey was conducted to assess and analyse the needs of the job market in terms of education and training activities promoted in Higher Education, as foreseen in the EUGLOH WP4 Workplan (A4.6). It also emerges from the need to identify the businesses and other stakeholders' perspectives in regards to academia-business cooperation in research, development and innovation, to design action plans that ignite and densify local academia-business-society networks within the EUGLOH ecosystem, as expected from the work package 4 Workplan of the EUGLOHRIA project.

With the collaboration of the EUGLOH associate partners'[1] network of contacts and relevant actors (e.g. Spin-offs, Start-ups, SMEs, Large enterprises, or other institutions, such as ONGs and

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[1] Within an Erasmus+ project, "associated partners" are organisations from the public or private sector that contribute to the implementation of the project tasks and activities, in this case, in the areas of education, research and innovation, as well as support its promotion and sustainability.

Municipalities) from the five cross-industry ecosystems, this report highlights the needs of the labour market, building upon the results of the survey questionnaire, on education and the "business" perspective on academia-business cooperation in research and innovation, stimulating a deeper understanding of what drives stakeholders' commitment and what key elements may enable deeper, facilitated more sustainable and structured cooperation.

Methodology and survey respondents

The work packages 4 teams of EUGLOH and EUGLOHRIA projects, composed of academic and technical experts, from the five EUGLOH partner Universities, closely collaborated on the construction of the questionnaire survey. Its elaboration, structure and adequate implementation strategies were thoroughly discussed and validated by partners during the work package meetings, from September 2021 to December 2022. Moreover, the approach of undertaking a joint consultation was adopted to create effective synergies and mitigate a potentially lower response rate, if two different surveys were conducted.

The joint survey was conducted among the universe of organisations with current active ties to the Universities of the EUGLOH Alliance, which was self-administered in electronic format through the University of Porto's service (inqueritos.up.pt) for the production and management of questionnaires (Lime Survey Software), following the methodological guidelines applicable to this type of inquiry. A non-probabilistic sample of convenience was chosen, established through the network of contacts of external stakeholders of each partner institution of the Alliance, as the goal of this study is to develop an initial understanding of this population. Although the method of convenience sampling was preferred, some principles to the process of selection of organisations were still applied.

Firstly, partner universities worked on constructing their list of organisations (e.g. Spin-offs, Start-ups, SMEs, Large enterprises, or other institutions, such as ONGs, Municipalities), following the agreed-upon principles for the construction of this sample: at least 30 external stakeholders, of which at least 10 could be spin-offs or start-ups, so as to guarantee balanced participation in the number of external stakeholders, identified by each partner university. Secondly, each partner sent the invitation to participate in the questionnaire to their selected list of external stakeholders, between January 2022 and March 2022. The methods of contact were thereby the first contact by e-mail and a second contact by phone and follow-up e-mail, to ensure an adequate response rate.

The questionnaire comprises 4 parts (see Annexe). The first section conveys details regarding the purpose of the initiative to the participant, with a consent request for participation in this study, allowing the data collected to be used for this report and confirming all the information was read and understood. The first part of the survey was developed to answer the objectives pursued in the EUGLOH task A4.6, more specifically aiming at understanding organisations' views on the priorities the Alliance should consider regarding the needs of the job market. The second part focused on the objectives of EUGLOHRIA WP4 of identifying the needs of

businesses, within the local and regional ecosystems, to support the design of a thorough action plan to ignite and densify local academia-business networks. Finally, the last section consists of questions to define general information regarding the characteristics of participant organisations. A final sample of 47 valid questionnaires was obtained and analysed.

Organisations characteristics

In this section, an overview of some of the features of the organisations is presented to describe the characteristics and types of organisations answering this survey.

Regarding the business activity of the surveyed organisations, 26% (Table 1) were from the "Human Health and Social Work Activities" economic sector, followed by "Information and Communication" (19%, Table 1) and "Professional, Scientific and Technical Activities" (15%, Table 1). More than half of the organisations, participating in the survey, are from the private sector (74%, Table 1), and from these, 54% (Table 1) are mature companies. Most of the surveyed organisations (88%) were based in the same countries as the five partner universities of the EUGLOH Alliance: 32% were based in France; 30% were based in Portugal; followed by 15% in Sweden; and 11% in Hungary. Furthermore, more than half of the organisations have less than 50 employees (55%) and most of these organisations had less than 25% of their sales in international markets (68%).

Most of the start-ups were part of the "Human Health and Social Work Activities" (26%, Table 2), followed by the "Information and Communication" (19%, Table 2) business activity.

Of the start-ups that participated in this survey, around 94% of the start-ups are in the initial stages of development (pre-seed stage, seed stage, early stage, growth stage). Most of these start-ups (87%, Table 2) make less than 25% of their sales in the international market, which makes sense since startups at later stages of development might have better chances of securing sales in international markets. In light of this, the number of start-ups located at an incubator should be rather high, since incubators focus on supporting early-stage start-ups that do not have a full business model in place. However, most of these start-ups (73%) are not located in an incubator.

This data indicates the need to establish connections and create activities which are compatible, not only with the needs of mature companies and public sector organisations but also with University spin-offs and start-ups (e.g. internationalisation needs that might arise).

Table 1. Summary description of EUGLOH Alliance's external stakeholders (n=47)

Overview		N	%
Economic Sector/ Business Activity	Accommodation and food service activities	1	2%
	Agriculture, Forestry and Fishing	1	2%
	Arts, entertainment and recreation	2	4%
	Construction	1	2%
	Education	1	2%
	Financial and insurance activities	2	4%
	Human Health and Social Work Activities	**12**	**26%**
	Information and Communication	9	19%
	Manufacturing	4	9%
	Professional, Scientific and Technical Activities	7	15%
	Real estate activities (including imputed rents of owner-occupied dwellings)	1	2%
	Other services	6	13%
	Total	47	100%
Number of Employees	**Less than 50 employees**	**26**	**55%**
	Between 50 and 499	8	17%
	Between 500 and 9.999	7	15%
	More than 10,000 employees	6	13%
	Total	47	100%
Country of Headquarters	France	15	32%
	Sweden	7	15%
	Portugal	14	30%
	Hungary	5	11%
	Italy	1	2%
	Spain	1	2%
	Switzerland	2	4%
	USA	2	4%
	Total	47	100%
Type of organisation	Public sector organisation	6	13%
	Private sector organisation	**35**	**74%**
	Non-Profit Organisation (third sector)	3	6%
	Other	3	6%
	Total	47	100%
Type of Private sector organisation	**Start-up**	**15**	**43%**
	Mature Company	19	54%
	Other	1	3%
	Total	35	100%
Percentage of sales in international markets	**Less than 25%**	**32**	**68%**
	From 25% to 50%	6	13%
	More than 50%	9	19%

Table 2. Summary description of EUGLOH Alliance's startups (n=35)

Startups		f	%
Economic Sector/ Business Activity	Accommodation and food service activities	1	7%
	Agriculture, Forestry and Fishing	0	0%
	Arts, entertainment and recreation	1	7%
	Construction	0	0%
	Financial and insurance activities	0	0%
	Human Health and Social Work Activities	**4**	**27%**
	Information and Communication	**4**	**27%**
	Manufacturing	2	13%
	Professional, Scientific and Technical Activities	3	20%
	Real estate activities (including imputed rents of owner-occupied dwellings)	0	0%
	Other services	0	0%
	Total	15	100%
Country of Headquarters	France	8	53%
	Sweden	0	0%
	Portugal	4	27%
	Hungary	3	20%
	Italy	0	0%
	Spain	0	0%
	Switzerland	0	0%
	USA	0	0%
	Total	15	100%
Percentage of sales in international markets	**Less than 25%**	**13**	**87%**
	From 25% to 50%	1	7%
	More than 50%	1	7%
	Total	15	100%
Located at an incubator	Yes	4	27%
	No	**11**	**73%**
	Total	15	100%
Stage of development	Pre-Seed Stage	1	7%
	Seed Stage	4	27%
	Early Stage	3	20%
	Growth Stage	**6**	**40%**
	Expansion phase	1	7%
	Exit phase	0	0%
	Total	15	100%

Organisations' knowledge of the EUGLOH Alliance

According to Figure 1, the majority of respondents (55%) were not familiar with the EUGLOH Alliance prior to this survey. Of those who were already familiarised with the Alliance, they mainly became aware of it through local partnerships, with a significant part of those getting to know EUGLOH through personal or professional contacts (Figure 2). In fact, this data matches the tendency revealed by the results obtained previously, among students, via satisfaction surveys conducted after EUGLOH training activities and/or events, and suggests that official Alliance communication channels can improve their dissemination capacity, in terms of external visibility and outreach.

Figure 1. Prior knowledge of EUGLOH before the survey
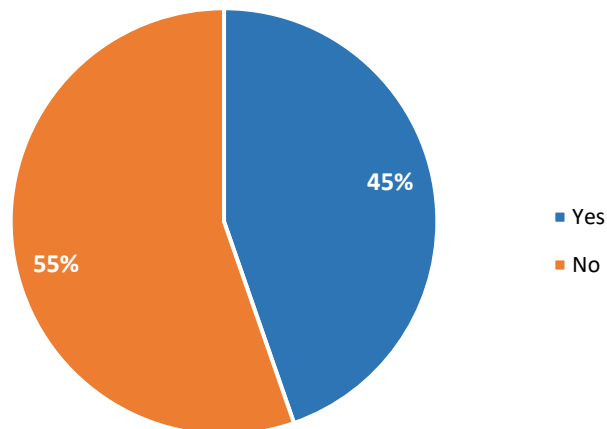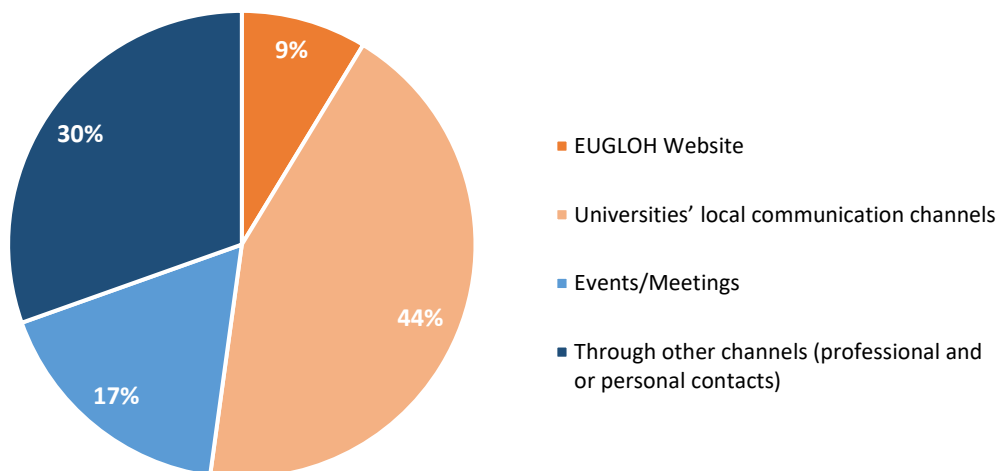Q1: *Have you heard of EUGLOH before this survey? (n=47)*

Figure 2. Channel through which external stakeholders became aware of EUGLOH
Q1.1.: *If Yes, Through which channels? (n=21)*

Part 1: Education and training

In this chapter, we aim to deepen the comprehension of the importance attributed by external organisations to certain individual characteristics, when recruiting new personnel, namely when it comes to previous international experience by applicants and possession of a combination of transversal, transferable and soft skills. This exercise, although exploratory, given the limited size of the surveyed sample, will provide some insights, from the point of view of potential employers. In turn, this will allow for a possible fine-tuning of EUGLOH's training offer, both in terms of the contents addressed and competencies to be developed, as well as the duration and format of the activities and opportunities offered to its students, to ensure they are adequately prepared to fulfil the current and increasing demands of the labour market.

Key findings

- International experience in applicants' profiles is somewhat valued, by potential employers, with longer, physical mobilities being favoured, over shorter and virtual modes;
- Transversal and soft skills are currently perceived, by most organisations, to be as important as hard skills in current recruitment processes. However, data seems to suggest that, from the business perspective, the role of Higher Education Institutions (HEIs), in the development of certain transversal skills, should be highly focused on more action related abilities (e.g. knowledge application, capacity to work autonomously, data analysis & digital competences), leaving more interpersonal or introspective competencies to be acquired, by students, through other means.

Detailed analysis

Most In-demand Transversal Skills

When it comes to valorising an international experience (Figure 3), results follow a bell-curve distribution, with the central category of the 5-point scale being the most chosen among our sample. Nearly a third of the organisations, in our sample, consider international experiences to be "not at all important" or "slightly important"; approximately a third assess it as "somewhat important" and the remaining third considers international experience to be "very or extremely important".

Figure 3. Perceived level of organisational valorisation of international experience in applicants' profiles
Q.2.: *Within recruitment processes, how much does your organisation value applicants' profiles with prior international experience (e.g. Erasmus mobility)? (n=47)*
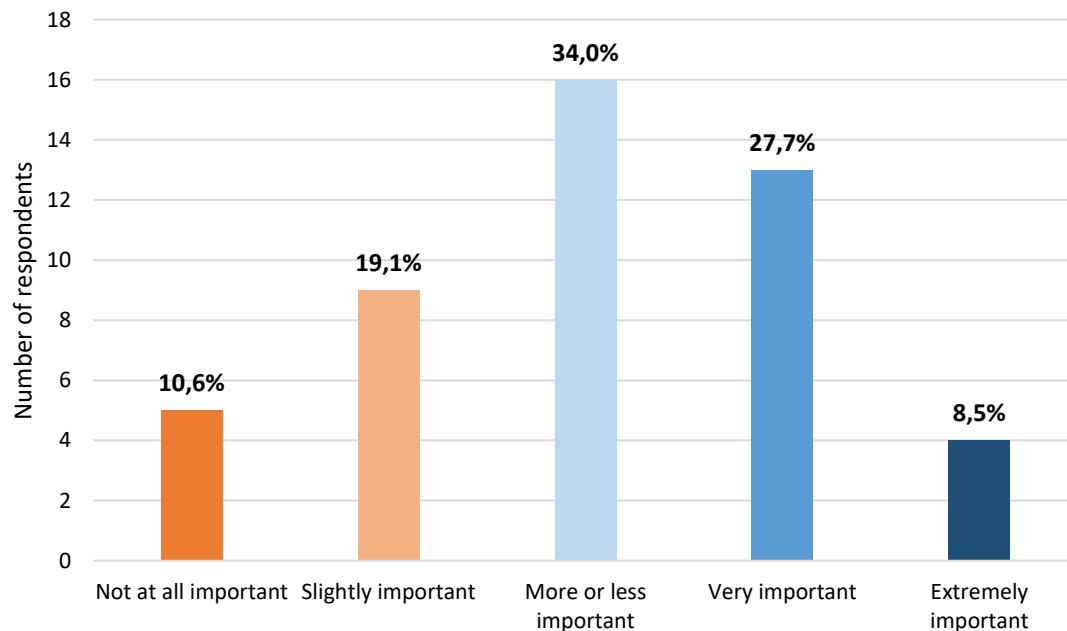
Regarding the preferred type of international experiences (Figure 4), the fact that online training only gathered about 6% of the responses reveals that physical mobility experiences are more valued by employers, than virtual mobility. Within physical mobility, there are also significant differences. On one hand, almost half of our sample selected the duration of 1 semester or more, as the type of international experience they most value in their potential employees. This was, in fact, the most chosen of the options provided. Furthermore, almost a third of organisations selected traineeships abroad, as the preferred type of mobility for students and future employees, to obtain international experience. On the other hand, the experience provided by short physical mobilities was only selected as preferential by less than 5% of our sample. This data suggests that, alongside physical mobility, recruiters overwhelmingly value experience obtained via longer-term mobility. For the EUGLOH Alliance, these results inform the need to adapt its current training offer and invest more in the promotion of semester and academic year-based mobility periods, as well as in the development of targeted traineeship programmes with these external organisations.

Figure 4. Preferred type of international experience
Q.2.1.: *What kind of international experience is preferred? (n=47)*
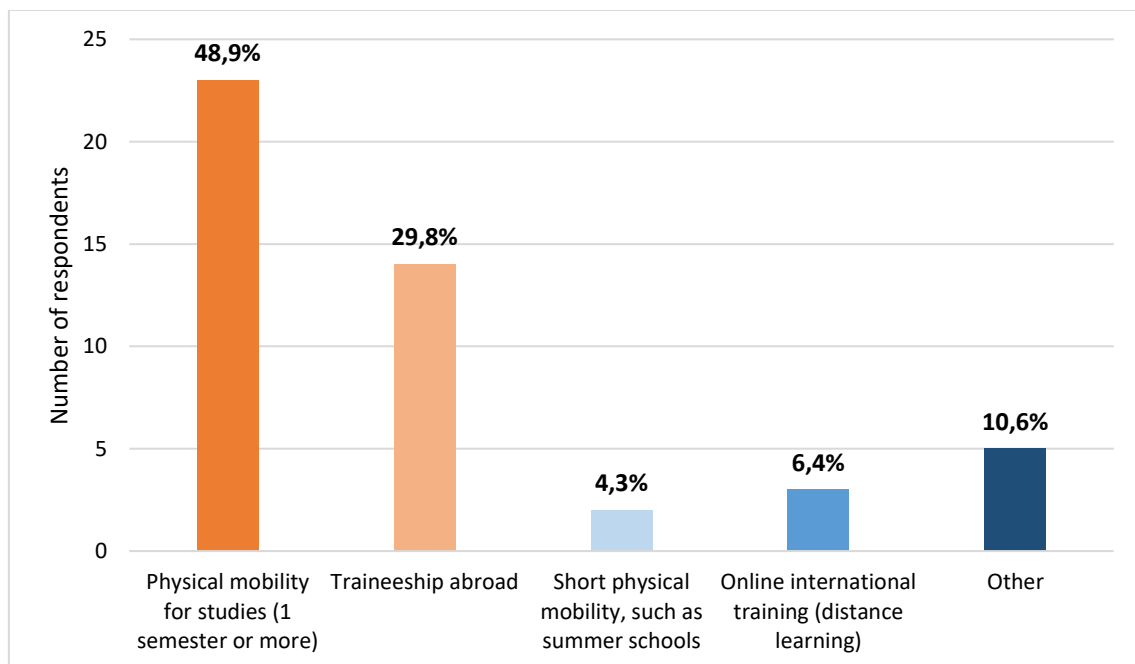
All the transversal skills listed obtained a generally positive score (Table 3), which reflects the importance attributed by employers to such a set of competencies. None of the presented skills obtained a collective negative assessment, as the sum of the two lowest categories of the scale is well below 50%, for each transversal skill presented in this survey.

When assessing the transversal or transferable skills presented in the survey, "Autonomy in learning and studying" was deemed "extremely important", by practically half of our sample. The competence "Knowing how to apply the acquired knowledge to problem analysis and practical situations" gathered a rating of "very important" or "extremely important", amongst 93% of respondents. The skills "Analyse, interpret data and diversified sources of information" and "Digital Competences" are also highly scored by respondents, given that, in both cases, more than four-fifths of our sample is concentrated in the two highest categories of the scale. All of these skills, which are rated as the most important by the companies consulted in this survey, have in common the fact that all of them are geared towards the execution of certain tasks, being more action related than the rest. On the other side of the spectrum, one of the least valued skills is "Design suitable plans for research and intervention in the various professional career paths, within your field of study", being assessed as "extremely important" by less than 10% of respondents, whilst rated as only "slightly important" by almost 20%. Likewise, the competence "Acquiring knowledge that allows to adequately understand contemporary societal challenges" obtained similar results, even being classified as "not at all important" the most, by circa 6% of our sample. Curiously, both skills appear to be linked to the ability for individual reflection. These results suggest that potential employers consider that, when it comes to transversal or transferable skills, the training offered by HEIs should be focused on more action related competencies, such as autonomy in work, application of previous knowledge and ICT skills[2]. On the contrary, competencies that are more related to the future employees' capacity to reflect upon themselves and others seem to be deemed less valuable by companies to be developed at the Higher Education level.

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[2] Which aggregates the following skills listed i) "Analyse, interpret data and diversified sources of information", ii) Digital competences (e.g. "Searching, filtering, managing, evaluating, sharing data, information and digital content"; "interact through a variety of digital technologies") and iii) "Collect, select and interpret relevant information in your field of study, taking into account its social, scientific, professional and ethical implications".

Table 3. Level of importance in recruitment processes of transversal or transferable skills provided by Universities, ordered by the proportion of "Extremely important" obtained

Q.3.: *As a recruiter, please assess the importance of the following transversal or transferable skills in the training offer provided by Universities (n=47)*

	Not at all important		Slightly important		More or less important		Very important		Extremely important		Don't know	Total valid responses
	f	Valid %	f	Valid %	f	Valid %	f	Valid %	f	Valid %		
Autonomy in learning and studying	0	(0%)	0	(0%)	6	(13%)	19	(40%)	**22**	**(47%)**	0	47
Knowing how to apply the acquired knowledge to problem analysis and practical situations	0	(0%)	0	(0%)	3	(6%)	25	(53%)	19	(40%)	0	47
Working in multicultural and multilingual contexts	1	(2%)	6	(13%)	13	(28%)	8	(17%)	18	(39%)	1	46
Communicate information, ideas, problems and solutions to audiences of experts and non-experts	0	(0%	1	(2%)	9	(19%)	20	(43%)	17	(36%)	0	47
Digital competences (e.g. "Searching, filtering, managing, evaluating, sharing data, information and digital content"; "interact through a variety of digital technologies")	0	(0%)	0	(0%)	9	(20%)	22	(48%)	15	(33%)	1	46
Analyse, interpret data and diversified sources of information	0	(0%)	0	(0%)	8	(17%)	**26**	**(55%)**	13	(28%)	0	47
Proficiency and practical use of foreign languages	1	(2%)	4	(9%)	8	(17%)	21	(46%)	12	(26%)	1	46
Collect, select and interpret relevant information in your field of study, taking into account its social, scientific, professional and ethical implications	0	(0%)	1	(2%)	12	(26%)	24	(51%)	10	(21%)	0	47
Transfer scientific knowledge to society through the creation of business models (entrepreneurship), as well as other forms of production of economic and social value for the community	0	(0%)	3	(7%)	**17**	**(38%)**	19	(42%)	6	(13%)	2	45
Acquiring knowledge that allows to adequately understand contemporary societal challenges	**3**	**(6%)**	6	(13%)	16	(34%)	16	(34%)	6	(13%)	0	47
Design suitable plans for research and intervention in the various professional career paths within your field of study	0	(0%)	**8**	**(18%)**	18	(40%)	15	(33%)	4	(9%)	2	45

When it comes to the valuation of soft skills in hiring decisions (Table 4), once more, every skill listed obtained an overall positive rating, reflecting the importance these have currently within recruitment processes. The "ability to think logically, intuitively and creatively" is the most appreciated soft skill by potential employers, as it obtained a rating of "very important" or "extremely important by more than 9 in 10 respondents. Even though the skills "Personal and social interaction skills", "practical application of knowledge" and "attitudes and values" collected equally conclusive results, only the skill connected to the ability to think was labelled as "extremely important" by more than two-thirds of our sample, which is the highest by some margin.

On the contrary, internationalisation is, by far, the least valued soft skill in the eyes of consulted organisations, with about 20% of them deeming it as "not at all important" or only "slightly important". However, this finding should be interpreted with some caution, as it could be attributed to the fact that a considerable portion of the consulted companies do not have any international projection, due to the small scale of their current operation (68% of the organisations had less than 25% of their sales in the international market, cf. Table 1), and, nonetheless, around two-fifths of the sample consider this skill as "very important" and "extremely important".

These data somehow contradict, to a certain degree, the results previously explored, as interpersonal skills ("personal and social interaction skills" and "attitudes and values") seem to be considered slightly more important, than some more action related and tangible skills (such as "proficiency in foreign languages" or "methodological skills and data/information analysis skills"). This apparent inconsistency might suggest that, even though potential employers value equally (if not more) more abstract or introspective abilities, such as interpersonal skills, Higher Education Institutions should still focus their training offer on practical skills, leaving the obtention of less practical soft or transversal skills to be acquired by students through alternative or extracurricular options. Despite constituting an interesting hypothesis, based on the current data we have available, further research on this topic needs to be conducted before conclusive evidence can be reached.

Table 4. Level of importance of soft skills in recruitment processes, ordered by the proportion of "Extremely important" obtained

Q.4.: *As a recruiter, please assess the importance of the following soft skills, according to their weight, in your hiring decisions (n=47)*

	Not at all important		Slightly important		More or less important		Very important		Extremely important		Don't know	Total valid responses
	f	Valid %	f	Valid %	f	Valid %	f	Valid %	f	Valid %		
Ability to think logically, intuitively and creatively	0	(0%)	0	(0%)	3	(6%)	12	(26%)	**32**	**(68%)**	0	47
Attitudes and values	0	(0%)	2	(4%)	1	(2%)	16	(35%)	27	(59%)	1	46
Personal and social interaction skills	0	(0%)	1	(2%)	3	(6%)	20	(43%)	23	(49%)	0	47
Practical application of knowledge (involving the use of methods, materials and tools)	0	(0%)	1	(2%)	4	(9%)	24	(51%)	18	(38%)	0	47
Proficiency in foreign languages	1	(2%)	2	(4%)	11	(24%)	23	(51%)	8	(18%)	2	45
Methodological skills and data/information analysis skills	0	(0%)	0	(0%)	7	(15%)	**31**	**(67%)**	8	(17%)	1	46
Internationalisation (e.g.: International mobility; participation in international scientific projects and events; international publications)	**2**	**(4%)**	**7**	**(15%)**	**19**	**(40%)**	14	(30%)	5	(11%)	0	47

Considering the relative importance of hard and soft skills, more than three-fourths of the employers surveyed agree or strongly agree that both have equal importance in the workforce's qualifications. (Table 5) Similarly, the same proportion of companies disagree or strongly disagree that only hard skills can be defined, tested and evaluated. These data corroborate the results previously shown, with employers currently having a very high regard for soft and transversal skills, not being solely focused on recruiting the most capable individuals in a specific hard skill. This point is additionally proven by the last statement of Table 5, in which more than 80% of respondents agreed that their respective organisation values, within their current recruitment processes, applicants possessing a combination of soft and hard skills.

Regarding the importance of Higher Education networks, such as EUGLOH, both in enhancing the capacity of staff to adapt to the changes in the labour market and in the improvement of quality of training in Europe, the overall assessment is highly positive. Nevertheless, the main takeaway from the results obtained from both statements is the fact that the percentage of respondents that answered "don't know" is disproportionally high. Such data seem to reveal a widespread lack of general awareness about EUGLOH's scope of action (and even existence, as demonstrated before) among our sample, which further suggests that dissemination of EUGLOH to external stakeholders could be improved, as discussed (cf. Figures 1 & 2).

Despite that, promisingly, recruiters seem to value what EUGLOH and similar Alliances could potentially offer, both for their organisations and for Europe's competitiveness and economic growth. At least, this is what the gathered data seem to indicate in that regard. The vast majority of respondents agree that their organisation will benefit by hiring workers with a strong sense of European values, and intercultural skills, as well as individuals with an "entrepreneurial mindset". They also overwhelmingly agree that the construction of joint innovation ecosystems across Europe is crucial for the improvement of its innovation capacity and worldwide competitiveness. As so, the challenge seems now to convince potential employers that EUGLOH and similar Alliances can be a vehicle to achieve these goals.

Table 5. Level of agreement with statements regarding soft skills and the importance of Alliances like EUGLOH

Q.6.: *Consider the following statements and indicate to what extent you agree or disagree (n=47)*

	Strongly Disagree		Disagree		Neither agree or disagree		Agree		Strongly Agree		Don't know	Total valid responses
	f	Valid %	f	Valid %	f	Valid %	f	valid %	f	valid %		
1. In the workforce, soft skills are equally as important as hard skills.	1	(2%)	4	(9%)	6	(13%)	19	(40%)	**17**	**(36%)**	0	47
2. Only hard skills can be defined, evaluated, tested and measured.	**10**	**(21%)**	**26**	**(55%)**	6	(13%)	4	(9%)	1	(2%)	0	47
3. Alliances such as EUGLOH are decisive to enhance the quality of training in Europe (i.e.: significant added value resulting from the combination of the institution's best resources).	0	(0%)	1	(3%)	7	(21%)	19	(56%)	7	(21%)	13	34
4. The construction of joint innovation ecosystems is critical to improve Europe's innovation capacity and worldwide competitiveness.	0	(0%)	0	(0%)	5	(12%)	**24**	**(57%)**	13	(31%)	5	42
5. Alliances such as EUGLOH are strategic to enhance employers' capacity to adapt to the labour market changes, by offering innovative and differentiated lifelong learning training programmes (e.g.: re-skilling and upskilling initiatives).	0	(0%)	0	(0%)	8	(23%)	17	(49%)	10	(29%)	12	35
6. My organisation competitiveness will be improved by hiring workers with a strong sense of European values, intercultural communication and personal development skills.	0	(0%)	2	(4%)	8	(17%)	20	(43%)	16	(35%)	1	46
7. My organisation values applicants with an "entrepreneurial mindset", within our current recruitment processes.	1	(2%)	4	(9%)	8	(18%)	20	(44%)	12	(27%)	2	45
8. My organisation values applicants with a blend of soft and hard skills, within our current recruitment processes.	0	(0%)	1	(2%)	6	(13%)	22	(48%)	**17**	**(37%)**	1	46

Regarding the best learning mode for developing transversal skills (Table 6), blended learning is the preferred option for a little over half of the respondents. When those who selected this option were further questioned, in an open-ended question (Q5.1: Please explain why Virtual/ Hybrid learning mode is better to develop transversal skills) to justify why this was their favourite learning mode, blended learning was praised for its adaptability, flexibility and overall efficiency, as it requires fewer resources than fully in-person training. Even so, face-to-face training was still chosen as the preferential method by around one-third of our sample. However, the most revealing figure is that none of the respondents selected fully online training as the best option, unveiling that, from their point of view, it does not constitute a valid option for the development of transversal skills - not even (or perhaps particularly) after the experience provided by the successive lockdown measures imposed to curtail the widespread transmission of Covid-19. Nonetheless, this result might be a product of the timing in which the survey was conducted, right in the aftermath of months of mandatory remote working and learning, during the pandemic. One must not disregard the possibility of the apparent rejection of virtual learning by these organisations potentially being attributed to a growing sentiment of fatigue with this mode of interaction and a wish to return to, at least partially, face-to-face work.

Table 6. Perceived best mode for students to develop transversal skills
Q.5.: *In your opinion, what learning mode is better to develop transversal skills? (n=47)*

	f	%
Virtual	0	0,0%
Face-to-Face	17	36,2%
Blended learning/Hybrid	27	57,4%
Not important	3	6,4%
Total	47	100%

Joint Cooperation in Education and Training

When it comes to possible cooperation formats (Table 7), organisations clearly favour the synergies with HEIs through involvement in seminars, invited talks or workshops, being the only activity that obtained the approval of more than two-thirds of respondents. Providing internship offers and taking part in classes as an invited lecturer are the remaining settings, in which a majority of companies (> 50%) would be interested in taking part. By contrast, the least favoured option is co-supervision of dissertations and thesis, being only selected as a possible mean of cooperation by about a quarter of our sample. Curiously, recruitment activities, such as job fairs, which constitute a common practice and a traditional path of cooperation between potential employers and HEIs, only gathered about one-third of interest among the companies surveyed. In the reverse scenery, having students visit companies also obtained a similar figure. It is also possible that the surveyed organisations already participate in plenty of these activities, in cooperation with Universities and wish to explore other activities within EUGLOH.

Table 7. Level of willingness for involvement with EUGLOH education and training activities, by type
Q.7.: *In which of the following education and training activities would you be available to participate/collaborate, within EUGLOH settings? (n=47)*

	Yes		No	
	f	%	f	%
Classes as Invited lecturer	24	51,1%	23	48,9%
Internship offers	25	53,2%	22	46,8%
Co-creation of training courses	21	44,7%	26	55,3%
Seminars/Invited Talks/Workshops	33	70,2%	14	29,8%
Case studies and practical challenges	21	44,7%	26	55,3%
Mentorship	18	38,3%	29	61,7%
Co-supervision of dissertations and thesis	12	25,5%	35	74,5%
Recruitment activities (e.g. job fairs)	16	34,0%	31	66,0%
Students' field visits to companies	18	38,3%	29	61,7%

This data (Table 7) suggests that short-time activities, such as seminars or workshops, are favoured, as a format of cooperation between HEIs and external stakeholders, the exception being the offer of internships, which can extend over a larger period of time, perhaps since the surveyed organisations often carry out this activity and are experienced in it, which can offset the time and resources invested. In light of this, more time-consuming activities, that require more resources or that are more academic by nature, are generally not as well received by the vast majority of respondents.

Of those who selected "invited lecturer", upon questioning, most would prefer to collaborate at the Master's Degree level, followed by a relevant interest in organising lectures geared towards students enrolled in doctoral programmes (Table 8). On the opposite side, data indicates that collaboration in

lectures at the Bachelor's level or in lifelong learning courses is less appealing to organisations, which can be explained by the fact that students at these levels of studies might be still a few years away from joining the workforce (in the case of bachelor students) or already part of it (in case of lifelong learning participants).

Table 8. Preference of collaboration in EUGLOH activities as invited lecturer, by study cycle
Q.7.1.: *Regarding your availability to participate in activities as Invited lecturer, please indicate at which level of studies is collaboration preferred (n=24)*

	f	%
Bachelor	2	8,3%
Master	9	37,5%
PhD	7	29,2%
Lifelong learning	2	8,3%
Not important	4	16,7%
Total	24	100%

Furthermore, through an open-ended question (Q.8: How can the EUGLOH academia-business ecosystem jointly improve students' acquisition of soft skills that respond to companies' needs?), the surveyed organisations referred to "co-design of training programmes" and "mixed hybrid courses including both industrials and academics" as possible solutions. This data indicates the need, from the business perspective, for Higher Education to engage with "practitioners" and provide more hands-on training, with "real-economy situations" and cases, such as "real projects of real companies".

Part 2: Innovation and Academia-Business Cooperation

This part aims at contributing to the EUGLOH Alliance's understanding of the business perspective on academia-business cooperation concerning research and innovation, in the five local and regional innovation ecosystems. While acknowledging limitations relating to the conclusions of these results, due to the size of the sample collected, they provide positive signs both for the present and for the future of academia-business cooperation, while also indicating activities that require stronger development.

The analysis of the data collected allowed us to identify the main priorities of the demand side defined here as the organisations (e.g. large corporations, start-ups, NGOs, etc.) collaborating with the EUGLOH partner universities.

Key findings

- The demand side selected "Research, Development and Innovation (R&D+i) projects" and "Partnerships, through international Networks" as the top two academia-business cooperation activities representing the best opportunities to further develop, within the EUGLOH Alliance.
- "Access to knowledge", "Recruitment of international talent" and "Visibility" are the main motivators of academia-business cooperation from a business perspective.
- Concerning the potential benefits of academia-business cooperation within EUGLOH, the three main benefits are "Joint knowledge generation", "Stronger ability to attract joint funding schemes", "Joint innovation hubs" and the "Use of synergy and ideation spaces".

Detailed analysis

Current and Forward-Looking Academia-Business Cooperation:

The surveyed external organisations seem to recognise the unique role of European Universities, as anchors within local communities and innovation ecosystems, in tackling societal challenges and intensifying international cooperation, in line with the 2030 Vision of the European Commission (EC). In fact, Figure 5 shows how "Research, Development and Innovation (R&D+i) projects" is the activity in which most (66%) organisations collaborate in with Higher Education Institutions (HEIs). This selection might not come as a surprise, since HEIs are important research-performing actors and, in the case of the EUGLOH Alliance, the partner Universities are internationally recognised as research-intense Universities. As expected, R&D+I projects remain the number one activity selected by surveyed organisations to be further developed in the future with the EUGLOH Alliance, with an increase of 4 percentage points (p.p.) in regards to the R&D+i projects that organisations currently cooperate with academia.

Furthermore, organisations indicated that "Joint education and training activities" (40%) are the second most performed activity with Universities, followed by "Partnerships, through international Networks and Student recruitment activities" (both at 38%) (Figure 5). The education and employment dimensions seem to, admittedly, be greatly explored in the EUGLOH partner Universities, through joint training and student recruitment activities with external organisations. In fact, the increase in 5 p.p. in the selection of "Joint education and training activities" can be considered as one of the best opportunities to further develop in the future.

However, "Student Recruitment Activities" is not one of the most selected as the best opportunity to further develop with EUGLOH Universities by the surveyed organisations (a fall of 10 p.p.), presumably, because there are already experiences with this type of cooperation (Figure 5). This result falls in line with the findings from Table 7, where surveyed organisations showed less availability to collaborate, in recruitment activities, when compared with other of the listed activities.

"Partnerships, through international Networks" is suggested by the surveyed organisations as one of the top two activities representing the best opportunity to further develop within the EUGLOH Alliance (49%, an increase of around 11 p.p., Figure 5). This result could be expected, perhaps since the organisations regard the EUGLOH Alliance as a European network that could lead to the consolidation of partnerships.

On the other side, "Staff exchanges" (9%), "Joint branding opportunities" (6%) and "Equity investment" (2%) seem to be the Academia-Business Cooperation formats the surveyed organisations least

participate in. Either these activities might not be as highly valued by the organisations, or they might not have ever been performed by the partner Universities and so, are considered uncharted territory. When comparing these results with the ones regarding the cooperation that organisations consider the best opportunities to further develop with EUGLOH Universities, "Joint branding opportunities" appear with a higher percentage (15%), indicating that some Universities might not have currently this type of cooperation with the organisation, but there is interest on the business side for this type of cooperation (Figure 5).

In the same direction, activities such as "Consultancy programmes" and "International mobility programmes" are currently being developed in cooperation, with only a few of the surveyed organisations (15% and 18%, respectively), however, are considered as best opportunities for several more organisations of academia-business cooperation to be further developed (32% and 26%, respectively, Figure 5).
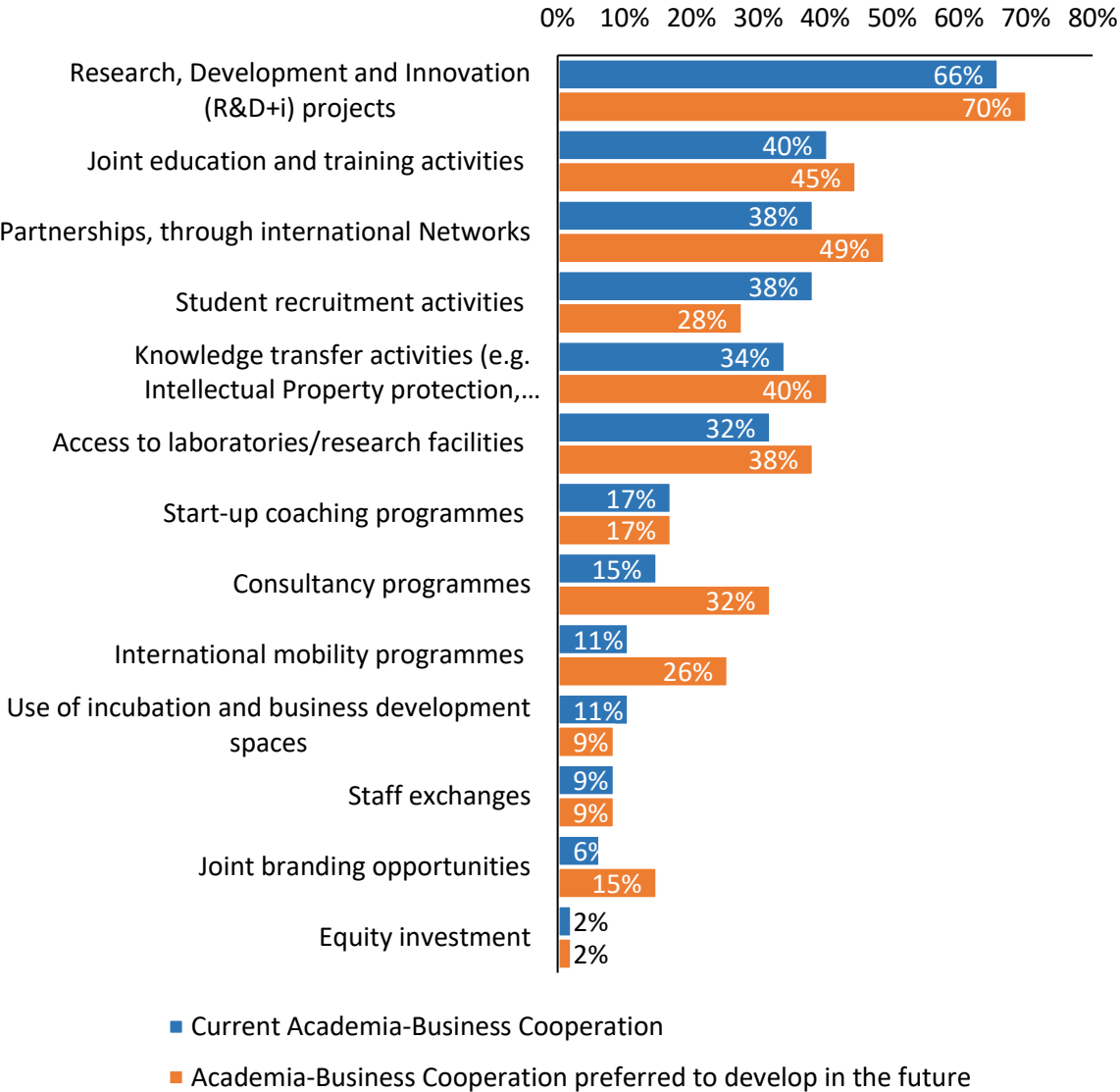
There seems to be a common demand for R&D+i projects, as the main activity to further develop with the EUGLOH Alliance (around 70% of the surveyed organisations). This result could indicate the need to focus the Alliance's efforts on promoting Research and Innovation projects between the EUGLOH partner Universities and/or with their business partners to ensure the direction towards the 2030 vision for the future of Universities in Europe, in the field of R&I in Europe. Defining this priority could contribute to the creation of partnerships, through international networks, which appear to be the second most demanded activity to develop in the future, by the surveyed organisations (49%, Figure 5).

Additionally, the EUGLOH Alliance could work to suffice the demand for academia-business relations related to "Joint education and training activities" (45%), "Knowledge transfer activities" (40%) and "Access to laboratories/research facilities" (38%, Figure 5). In fact, upon questioning, approximately three-fourths indicated that these activities are not yet jointly developed with the consulted organisations and the EUGLOH Alliance (Q.9.1: Are any of those activities developed within the EUGLOH?).

Figure 5. Academia-Business Cooperation: Current and forward-looking

Q.9.: *In what type of activities is your organisation currently cooperating with academia?*
Q.10.: *Please indicate the types of cooperation that your organisation considers as best opportunities to further develop with EUGLOH Universities.*

Activity	Current Academia-Business Cooperation	Academia-Business Cooperation preferred to develop in the future
Research, Development and Innovation (R&D+i) projects	66%	70%
Joint education and training activities	40%	45%
Partnerships, through international Networks	38%	49%
Student recruitment activities	38%	28%
Knowledge transfer activities (e.g. Intellectual Property protection,…)	34%	40%
Access to laboratories/research facilities	32%	38%
Start-up coaching programmes	17%	17%
Consultancy programmes	15%	32%
International mobility programmes	11%	26%
Use of incubation and business development spaces	11%	9%
Staff exchanges	9%	9%
Joint branding opportunities	6%	15%
Equity investment	2%	2%

■ Current Academia-Business Cooperation
■ Academia-Business Cooperation preferred to develop in the future

Motivations for Academia-Business Cooperation

In an effort to understand what would motivate the different types of businesses to cooperate with the EUGLOH Alliance, different types of aspects were listed for organisations to select from. The main motivation to cooperate with the EUGLOH Alliance for the organisations that currently have links with, at least, one of the partner Universities is "Access to knowledge" (53%, Figure 6). Generally, business actors cooperate with Universities to improve their R&D+i capacity by obtaining access to new knowledge, so this result is not surprising, taking into account the results from the previous section. It seems that innovation capacity is placed at the centre of business strategies and is more crucial than ever.

With student recruitment activities emerging on top of the academia-business cooperation activities, currently developed with the partner Universities, it comes as no surprise that "Recruitment of international talent" is one of the main motivations to cooperate with the EUGLOH Alliance, due to the potential exposure to the international talent this European University Initiative may offer (51%, Figure 6).

The attention the EUGLOH Alliance might bring to the organisations involved in some of the education and training, research and innovation activities, as well as through joint branding opportunities, place "Visibility" as one of the main motivators to collaborate with the EUGLOH Alliance (47%, Figure 6).

Furthermore, motivations such as "Intercultural exchange" (45%), "Social responsibility", and "Access to the wider network of laboratories/research facilities" (both at 43%), as well as "Access to funding" (40%, Figure 6) are also numerously indicated as factors motivating the business sector that should be considered when developing academia-business cooperation.

Figure 6. Motivations for Academia-Business Cooperation
Q.11.: *On top of your cooperation with one of the Universities of the Alliance, what would motivate your organisation to cooperate with EUGLOH Research and innovation activities?*

Additionally, some organisations indicated the academia-business cooperation activities that they considered could only be developed within European initiatives, such as EUGLOH, in question 12 (Q12: *Please specify the academia-business cooperation activities that, in your opinion, can only be developed within European initiatives like EUGLOH*). These respondents specified "very large and complex initiatives" such as, "interdisciplinary studies, lifelong training and recruitment", as well as "service provision to industrial partners" and the development of "internships opportunity and staff exchange". Interestingly, one respondent indicated the possibility of creating and "mutualise platforms and data that exist nowhere else except within the alliance" that could be made available to the businesses as valuable information to foster academia-business cooperation.

Benefits of Academia-Business Cooperation

To understand the business perspective on the potential benefits of cooperation within EUGLOH, organisations were asked to rank 9 of the proposed benefits, with the option to list as many options as deemed fit or select none of the benefits mentioned.

Figure 7 shows how "Joint Knowledge Generation" appears to be ranked as the most beneficial of the potential benefits of academia-business cooperation within the EUGLOH Alliance (around 68% of the surveyed organisations positioned it in the top 3). This result confirms the recognition of Universities as knowledge generators and research-performing actors and is in line with the results of the previous sections, namely, the most motivating factor for academia-business cooperation being the "Access to Knowledge", as previously mentioned.

Following this, a "Stronger ability to attract joint funding schemes", "Joint innovation hubs" and the "Use of synergy and ideation spaces" were well ranked in the top 3 positions as benefits of academia-business cooperation, within EUGLOH (respectively, around 30%, 36% and 28% of the surveyed organisations, Figure 7).
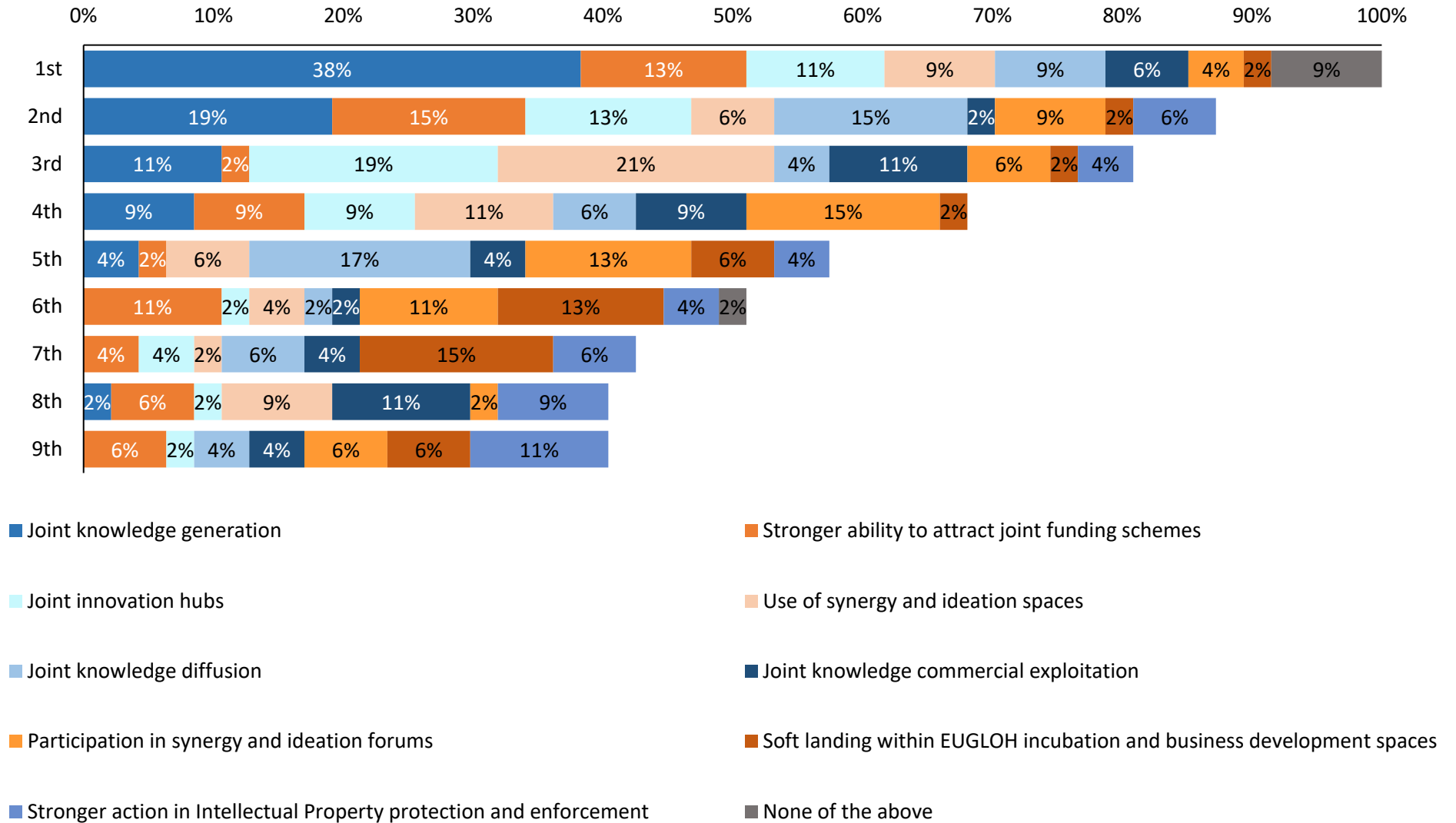
On the contrary, the benefit listed as "Stronger action in Intellectual Property protection and enforcement" appears to be selected in the lowest ranks (around 26% of the surveyed organisations positioning it in the 7th, 8th and 9th rank, Figure 7). Followed by the "Soft landing within EUGLOH incubation and business development spaces" and "Joint knowledge commercial exploitation" were mostly selected in the lowest ranked as least beneficial (around 21% and 19%, respectively, of the surveyed organisations, positioning these in the 7th, 8th and 9th, in Figure 7). Perhaps, these benefits are already felt in the local innovation ecosystems of the partner Universities, or possibly, these benefits concern mainly academia-business cooperation benefits involving start-ups, which among the surveyed organisations were in lower numbers.

In this context, the EUGLOH Alliance should focus their efforts on promoting academia-business relations associated with joint R&D+i projects to contribute to joint knowledge generation. Additionally, the EUGLOH Alliance should create and promote meeting points (existing labs, offices or workspaces) for these organisations (industry, governments) to meet with researchers and/or academia representatives, in order to share research results, come up with solutions and/or emerging technologies, as well as, address business and societal challenges, i.e. joint innovation hubs and ideation spaces. Furthermore, the Alliance should jointly explore funding sources to support the application of the research results or the development of specific joint R&D+I projects since the

"Stronger ability to attract joint funding schemes" was considered one of the most advantageous aspects of academia-business cooperation within EUGLOH.

Figure 7. Benefits of Academia-Business Cooperation

Q.13: *Consider the following potential benefits of academia-business cooperation within EUGLOH and rank them, from most to least beneficial dimensions.*

- ■ Joint knowledge generation
- ■ Joint innovation hubs
- ■ Joint knowledge diffusion
- ■ Participation in synergy and ideation forums
- ■ Stronger action in Intellectual Property protection and enforcement

- ■ Stronger ability to attract joint funding schemes
- ■ Use of synergy and ideation spaces
- ■ Joint knowledge commercial exploitation
- ■ Soft landing within EUGLOH incubation and business development spaces
- ■ None of the above

Barriers to Academia-Business Cooperation

To understand how to best foster this academia-business cooperation the surveyed organisations were asked about barriers to Academia-Business relations that could emerge within EUGLOH. Well-known barriers to this cooperation were listed and requested to be categorised as "Difficult to overcome", "Easy to overcome" or "Not a barrier" (Figure 8).

Businesses pointed out time-related issues as the main barrier ("Time-consuming decision-making processes" and "Differences between University and Industry priorities" are considered as difficult to overcome by 64% and 51%, respectively, of the surveyed organisations - Figure 8), perhaps because business actors are hindered by the inflexible cooperating processes with academia and the supposedly insufficient working hours allocated by Universities to these collaborative relations. In the open-ended question about other barriers to Academia-Business relations within EUGLOH, a respondent indicated the fact that HEIs seem to mostly be oriented toward scientific production and that "developing solutions to industry problems does not give the Academics necessary curriculum for career advancement".

Even though research is one of the top priorities of HEIs, transferring it into the market and the resources allocated to the promotion of the knowledge and technology exchange seems to be lacking, which is noticeable by the fact that "Lack of flexibility" and "Lack of people with business knowledge/background in universities" were featured as part of the top 4 barriers that are difficult to overcome from the business perspective (51% and 49%, respectively, of the surveyed organisations). Likewise, the limited financial resources invested in academia-business cooperation by Universities is identified as a barrier difficult to overcome (Lack of funding 49%, Figure 8). In this respect, it could be reasoned that academia-business cooperation for HEIs and Business actors became a priority only recently.

The "Lack of information about accessible services and infrastructures" was considered a barrier easy to overcome (55% of the surveyed organisations, Figure 8), possibly, since most of this information has been delivered before, through bilateral communications or rather that the information is already available but not easily accessible or found.

Positively, most surveyed organisations consider "Cultural differences" and "Geographical distance" among the EUGLOH Universities either not a barrier or very easy to overcome. In an ever more globalised world, organisations consider having intercultural competencies to communicate and understand how to navigate through cultural differences. In the same direction, geographical distance, as a barrier to academia-business cooperation, has been mitigated by easier mobility conditions, as

well as by digital tools available to support this cross-country cooperation, accelerated by the reality of the COVID-19 pandemic.

In light of this, and in line with the 2030 Vision of the European Commission, public and institutional strategies should begin to place academia-business cooperation into the Universities' priorities, recognising its role as agents in society, as well as improving the agility of decision-making processes associated to these collaboration activities, namely by reducing the bureaucracy and thus facilitating these relationships. Promoting academia-business collaboration that considers the barriers previously underlined, as difficult to overcome, will in turn facilitate and contribute to the acceleration and further development of the academia-business relationships.

Figure 8. Benefits of Academia-Business Cooperation
Q.14: *From the following list, please assess according to the level of complexity to solve them, which are, in your perspective, the main barriers to Academia-Business relations in the EUGLOH settings.*
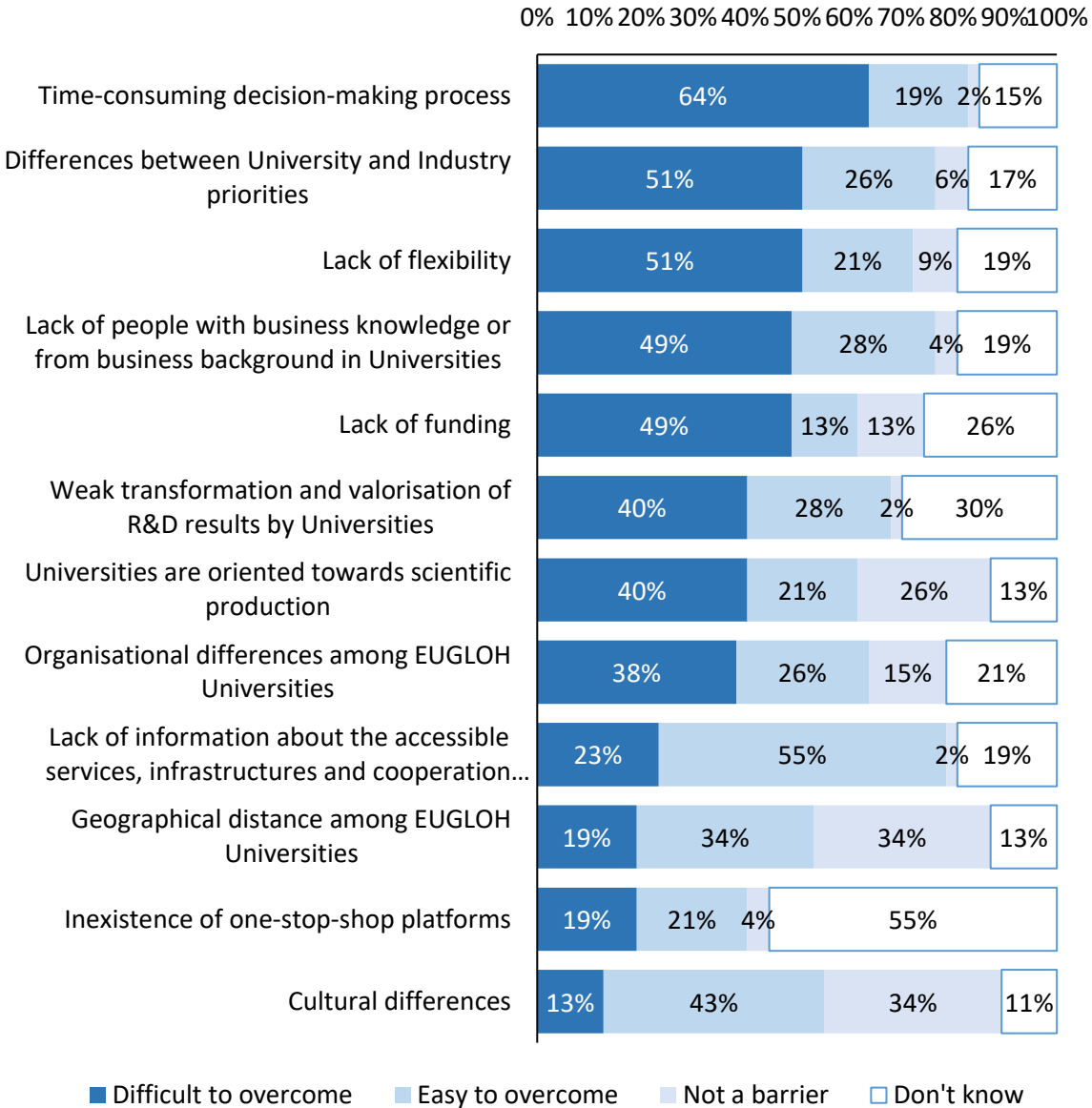
Conclusions and recommendations

Within the EUGLOH Alliance's pursuit to foster creativity and excellence in the EUGLOH ecosystem and ensure students are equipped with the skills and competencies necessary for their personal and professional development, in line with the objectives set by the "European Skills Agenda", the results of this survey questionnaire provide useful insights on the current perspectives of potential employers and innovation partners. More specifically, highlights the needs of the job market concerning education and training, as well as the business perspective on academia-business cooperation targeting research and innovation, fostering a deeper understanding of what drives this commitment, what are the identified gains and what may enable further and structured cooperation.

For the EUGLOH Alliance, these results confirm that international experience is valued by employers and inform the need to rethink current training offer, by expanding it to immersive activities of longer periods, as well as developing structured traineeship programmes with these external organisations. Additionally, the education offered by HEIs should be focused on more action-related abilities, like autonomy in work, application of previous knowledge and ICT skills. These results also indicate that businesses value workers with a strong sense of European values and intercultural skills, as well as individuals having an "entrepreneurial mindset".

For academia-business cooperation, on the dimensions of Research and Innovation, the Alliance should focus their efforts on promoting R&D+I projects between the EUGLOH universities, in cooperation with business partners, thus contributing to joint knowledge generation and the creation of partnerships and academia-business networks. To achieve this, the Alliance should pursue joint funding schemes for the application of the research results or the development of specific joint R&D+I projects, since it was identified as one of the core benefits of academia-business cooperation within EUGLOH. Furthermore, EUGLOH could create specific mechanisms to promote meeting points (existing labs, offices or workspaces) and facilitate collaboration, allowing these organisations (industry, governments) to meet with researchers and/or academia representatives and decision makers to share research results and generate innovation, come up with solutions and/or emerging technologies to address business and societal challenges, i.e. joint innovation hubs and ideation spaces.

Contributing to improving the compatibility of the education offer with the needs of the labour market, as well as facilitating and boosting academia-business relations, in Research and Innovation will require not only commitment at Higher Education institutional level but also at the National and European policy-making level. Nevertheless, these conclusions may contribute to the Alliance's strategic planning by University leaders and governing bodies about building joint innovative training offers and

linking HEIs to local and regional innovation ecosystems, thus creating sustainable and interconnected academia-business networks and promoting best practices in Research and Innovation.

Annexe: Survey questionnaire

European University Alliances: Academia-business cooperation

The European University Alliance for Global Health (EUGLOH) is an alliance of European universities created in the context of the **"European Universities" Initiative** funded by the European Commission. The goal of this initiative is to build the European Universities of the future by (i) fostering deep and sustainable cooperation within the European Education Area, (ii) promoting innovative teaching and learning models, and (iii) bringing together a new generation of creative citizens able to cooperate across sectors, languages, borders, and disciplines to address societal challenges and skills shortages faced in Europe.

The EUGLOH consortium is composed of the University of Paris-Saclay (UPSaclay, France), Lund University (LU, Sweden), Ludwig-Maximilians University Munich (LMU, Germany), University of Porto (U.Porto, Portugal) and the University of Szeged (USZ, Hungary). This European Alliance has also provided fertile ground to consolidate cooperation in the dimension of Research and Innovation, leading to the creation of synergies through a European H2020 project called **EUGLOHRIA – Transformation through Research and Innovation**. This project aims at fostering the institutional transformation of the EUGLOH alliance in the areas of research and innovation.

This survey aims at collecting your views on how academia-business relationships may strengthen (and benefit) from EUGLOH activities. You and your organization's contributions are very important to help us to identify the priorities of the Alliance.

This Survey is anonymous and divided into two parts:

- Part 1 aims at understanding organisations' views on the priorities the Alliance should consider regarding the design of innovative **training offers**.

- Part 2 aims to identify opportunities within the Alliance for **academia-business cooperation** in the domains of research and innovation.

Participant information

- What are the potential benefits and risks of this study?

Participating in this study does not entail any risk for you, your co-workers or your organisation. The potential benefits arising from your participation translate into better knowledge on views on how academia-business relationships may strengthen (and benefit) from EUGLOH activities.

- What are the rights of participants?

Your participation is completely voluntary and unpaid. If you accept to participate, but later, while filling out the questionnaire, change your mind, you can withdraw from the study at any time, without any consequences, ensuring that the answers given in the meantime will not be considered.

If you do not wish to participate, you do not need to indicate why. The decision not to participate will not be made known to anyone, nor will it entail any consequences.

You will not be asked questions whose crossing allows you to be identified. The collection of responses is done anonymously and the database that will be created from this collection will be completely anonymised.

The completion of the questionnaire takes approximately 10 minutes. In order for us to obtain valid information, it is important that you candidly answer all questions.

- ○ I declare that I have read all the information, that I became aware of the objectives and that I agree to participate in this study, allowing the use of the data collected for the purposes stated.

Kindly click the NEXT button to start answering the online survey.

Glossary (Definitions of concepts that appear in the survey)

Soft Skills are a set of personal qualities, traits, attributes, habits, and attitudes that can be used in many different types of jobs, such as empathy, leadership, sense of responsibility, integrity, self-esteem, self-management, motivation, flexibility, sociability, time management and making decisions. (Adapted from UNESCO-IBE, 2013).

Transversal or *transferable skills* are skills not specifically related to a particular job, task, academic discipline, or area of knowledge, but as skills that can be used in a wide variety of situations and work settings (IBE 2013). Some examples include critical and innovative thinking, interpersonal skills (communication skills, organisational skills, teamwork, etc.), intra-personal skills (see "soft skills" above), global citizenship (tolerance, openness, respect for diversity, etc.) as well as media and information literacy. (Adapted from UNESCO, 2014C).

Entrepreneurship as a competence is defined as the capacity to act upon opportunities and ideas to create social, cultural, or financial value for others. This competence is recognised as the opportunity to be entrepreneurial in any situation: from academic settings to innovating in the workplace, from community initiatives to applied learning at university.

(Adapted from https://publications.jrc.ec.europa.eu/repository/handle/JRC109128)

Part 1: Education and training

Questions 1-8 are about understanding organisations' views on the priorities the Alliance should consider regarding the design of innovative training offers.

*All questions with * are mandatory.*

1.   Have you heard of EUGLOH before this survey? *

- Yes

- No

1.1 (If Yes in 1.) Through which channels? *

- EUGLOH Website

- EUGLOH Social Media

- EUGLOH Newsletters

- Universities' local communication channels

- Events/Meetings

- Other (Please specify)

2.   Within recruitment processes, how much does your organisation value applicants' profiles with prior international experience (e.g. Erasmus mobility)? *

- Not at all important

- Slightly important

- More or less important

- Very important

- Extremely important

2.1 What kind of international experience is preferred? (Please indicate one) *

- Physical mobility for studies (1 semester or more)

- Traineeship abroad

- Short physical mobility, such as summer schools

- Online international training (distance learning)

- Other (Please specify)

3. As a recruiter, please assess the importance of the following transversal or transferable skills in the training offer provided by Universities: *

Transversal or *transferable skills* are skills not specifically related to a particular job, task, academic discipline, or area of knowledge, but as skills that can be used in a wide variety of situations and work settings (IBE 2013). Some examples include critical and innovative thinking, interpersonal skills (communication skills, organisational skills, teamwork, etc.), intra-personal skills (see "soft skills" above), global citizenship (tolerance, openness, respect for diversity, etc.) as well as media and information literacy. (Adapted from UNESCO, 2014C).

	Not at all important	Slightly important	More or less important	Very important	Extremely important	Don't Know
Knowing how to apply the acquired knowledge to problem analysis and practical situations						
Transfer scientific knowledge to society through the creation of business models (entrepreneurship), as well as other forms of production of economic and social value for the community						
Collect, select and interpret relevant information in your field of study, taking into account its social, scientific, professional and ethical implications						
Design suitable plans for research and intervention in the various professional career paths within your field of study						
Communicate information, ideas, problems and solutions to audiences of experts and non-experts						
Analyse, interpret data and diversified sources of information						
Proficiency and practical use of foreign languages						
Autonomy in learning and studying						
Working in multicultural and multilingual contexts						
Acquiring knowledge that allows to adequately understand contemporary societal challenges						
Digital competences (eg. "Searching, filtering, managing, evaluating, sharing data, information and digital content"; "interact through a variety of digital technologies")						

4. **As a recruiter, please assess the importance of the following *soft skills*, according to their weight, in your hiring decisions: ***

Soft Skills are a set of personal qualities, traits, attributes, habits, and attitudes that can be used in many different types of jobs, such as empathy, leadership, sense of responsibility, integrity, self-esteem, self-management, motivation, flexibility, sociability, time management and making decisions. (Adapted from UNESCO-IBE, 2013).

	Not at all important	Slightly important	More or less important	Very important	Extremely important	Don't Know
Ability to think logically, intuitively and creatively						
Proficiency in foreign languages						
Practical application of knowledge (involving the use of methods, materials and tools)						
Personal and social interaction skills						
Methodological skills and data/information analysis skills						
Attitudes and values						
Internationalisation (e.g.: International mobility; participation in international scientific projects and events; international publications)						

4.1 **[OPTIONAL] As a recruiter, please specify other skills ("soft skills" and "transferable skills") that have weight, in your hiring decisions:**

5. **In your opinion, what learning mode is better to develop transversal skills? (Please select one option) ***

- Virtual
- Face-to-Face
- Blended learning/Hybrid
- Not important

5.1 **(If Virtual or Blended learning/Hybrid is selected in 5.) Please explain why Virtual/Hybrid learning mode is better to develop transversal skills: ***

6. **Consider the following statements and indicate to what extent you agree or disagree: ***

Entrepreneurship ("entrepreneurial mindset") as a competence is defined as the capacity to act upon opportunities and ideas to create social, cultural, or financial value for others. This competence is recognised as the opportunity to be entrepreneurial in any situation: from academic settings to innovating in the workplace, from community initiatives to applied learning at university. (Adapted from https://publications.jrc.ec.europa.eu/repository/handle/JRC109128)

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Don't Know
In the workforce, soft skills are equally as important as hard skills.						
Only hard skills can be defined, evaluated, tested and measured.						
Alliances such as EUGLOH are decisive to enhance the quality of training in Europe (i.e.: significant added value resulting from the combination of the institution's best resources).						
The construction of joint innovation ecosystems is critical to improve Europe's innovation capacity and worldwide competitiveness.						
Alliances such as EUGLOH are strategic to enhance employers' capacity to adapt to the labour market changes, by offering innovative and differentiated lifelong learning training programmes (e.g.: re-skilling and upskilling initiatives).						
My organisation competitiveness will be improved by hiring workers with a strong sense of European values, intercultural communication and personal development skills.						
My organisation values applicants with an "entrepreneurial mindset", within our current recruitment processes.						

7. **In which of the following education and training activities would you be available to participate/collaborate, within EUGLOH settings? (Please, select as many as apply): ***

• Classes as an Invited lecturer

• Internship offers

• Co-creation of training courses

• Seminars/Invited Talks/Workshops

• Case studies and practical challenges

• Mentorship

• Co-supervision of dissertations and thesis

• Recruitment activities (e.g. job fairs)

• Students' field visits to companies

• Other (Please specify)

7.1 (If "Classes as Invited lecturer" was selected in 7.) Regarding your availability to participate in activities as an Invited lecturer, please indicate at which level of studies is collaboration preferred (Please select one option) *

- Bachelor

- Master

- PhD

- Lifelong learning

- Not important

- Other (please specify)

8.   [OPTIONAL] How can the EUGLOH academia-business ecosystem jointly improve students' acquisition of soft skills that respond to companies' needs?

Questions 9-14 are about academia-business cooperation in the domains of research and innovation.

All questions with * are mandatory.

9.   In what type of activities is your organisation currently cooperating with academia? (Please, select as many as apply) *

- Research, Development and Innovation (R&D+i) projects

- Access to labs

- Partnerships, through international Networks

- Knowledge transfer activities (e.g. Intellectual Property protection, commercialisation of technologies, creation of value-added services)

- Consultancy Programmes

- Joint education and training activities

- International mobility programmes

- Student recruitment activities

- Use of incubation and business development spaces

- Start-up coaching programmes

- Equity investment

- Staff exchanges

- Joint branding opportunities

- None of the above

- Other [specify]

9.1 (If any activity was selected in 9.) Are any of those activities developed within the EUGLOH? *

- Yes

- No

10. **Please indicate the types of cooperation that your organisation considers as the best opportunities to further develop with EUGLOH Universities: (Please, select as many as apply) ***

- Research, Development and Innovation (R&D+i) projects

- Access to laboratories/research facilities

- Partnerships, through international Networks

- Knowledge transfer activities (e.g. Intelectual Property protection, commercialisation of technologies, creation of value-added services)

- Consultancy Programmes

- Joint education and training activities

- International mobility programmes

- Student recruitment activities

- Use of incubation and business development spaces

- Start-up coaching programmes

- Equity investment

- Staff exchanges

- Joint branding opportunities

- None of the above

- Other [specify]

11. **On top of your cooperation with one of the universities of the alliance, what would motivate your organisation to cooperate with EUGLOH Research and innovation activities? (Please, select as many as apply) ***

- Access to knowledge

- Access to the wider network of laboratories/research facilities

- Business Development Support

- Soft landing in several European markets

- Recruit international talent

- Technology scouting and licensing

- Access to funding

- Cost-sharing

- Visibility

- Social responsibility

- Intercultural exchange

- None of the above

- Other [specify]

12. **[OPTIONAL] Please specify the academia-business cooperation activities that, in your opinion, can only be developed within European initiatives like EUGLOH:**

13. **Consider the following potential benefits of academia-business cooperation within EUGLOH and rank, from most to least beneficial dimension: ***

(Double-click or drag-and-drop items in the left list to move them to the right - your highest ranking item should be on the top right, moving through to your lowest ranking item.)

- Joint knowledge generation

- Joint knowledge of commercial exploitation

- Joint knowledge diffusion

- Stronger ability to attract joint funding schemes

- Joint innovation hubs

- Soft landing within EUGLOH incubation and business development spaces

- Stronger action in Intellectual Property protection and enforcement

- Use of synergy and ideation spaces

- Participation in synergy and ideation forums

- None of the above

13.1 **[OPTIONAL] Please indicate other potential benefits of academia-business**

cooperation within EUGLOH, that were not mentioned in the previous question:

14. **From the following list, please assess according to the level of complexity to solve them, which are, in your perspective, the main barriers to Academia-Business relations in the EUGLOH settings: ***

	Not a barrier	Easy to overcome	Difficult to overcome	Don't Know
Cultural differences				
Organisational differences among EUGLOH Universities				
Geographical distance among EUGLOH Universities				
Lack of flexibility				
Lack of information about the accessible services, infrastructures and cooperation opportunities within the EUGLOH Alliance				
Time-consuming decision-making process				
Universities are oriented towards scientific production				
Weak transformation and valorisation of R&D results by Universities				
Lack of funding				
Lack of people with business knowledge or from business background in Universities				
Differences between University and Industry priorities				
Inexistence of one-stop-shop platforms				

14.1 [OPTIONAL] Please indicate, from your perspective, other barriers to Academia-Business relations in the EUGLOH settings:

Organisation Characteristics

Questions 15-20 are about your organisation's characteristics.

*All questions with * are mandatory.*

15. **Economic Sector (or business activity), according to NACE REV.2: ***

- Agriculture, Forestry and Fishing

- Mining and Quarrying

- Manufacturing

- Electricity, Gas, Steam and Air Conditioning Supply

- Water supply, sewerage, waste management and remediation

- Construction

- Wholesale and retail trade, repair of motor vehicles and motorcycles

- Transportation and storage

- Accommodation and food service activities

- Information and Communication

- Financial and insurance activities

- Real estate activities (including imputed rents of owner-occupied dwellings)

- Professional, Scientific and Technical Activities

- Administrative and support service activities

- Public administration and defence, compulsory social security

- Education

- Human Health and Social Work Activities

- Arts, entertainment and recreation

- Other services

16. **Number of employees: ***

- Less than 50 employees

- Between 50 and 499

- Between 500 and 9.999

- More than 10.000

17.   Country of Headquarters: *

- France
- Germany
- Hungary
- Portugal
- Sweden
- Other (Please specify)

18.   Type: *

- Public sector organisation
- Private sector organisation
- Non-Profit Organisation (third sector)
- Other (Please specify)

18.1   (If Private sector is selected in 18.) Is your organisation a start-up or a mature company? *

- Start-up
- Mature Company
- Other (Please specify)

18.2   (If start-up selected in 18.1) Is your organisation located at an incubator? *

- Yes
- No

18.3   (If start-up selected in 18.1) Select the stage of development of your start-up:*

- Pre-Seed Stage
- Seed Stage
- Early Stage
- Growth Stage
- Expansion phase
- Exit phase

19.   Percentage of sales in international markets: *

•   Less than 25%

•   Between 25% and 50%

•   More than 50%

20.   Year of Creation of your organisation: *