



**European Alliance for Global Health - Transformation through
Joint Research & Innovation Action**

Deliverable 4.2

Summary Report on best practices and promotion of innovation in the EUGLOH

**WP4 - Fostering innovation and reinforcing the cooperation of the
EUGLOH Alliance with businesses and other stakeholders**

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Task 4.2: Sharing best practices and promoting innovation in global health

Task 4.3: Development of an impact assessment and action plan for a global health observatory

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ABBREVIATIONS AND ACRONYMS



AI	Artificial intelligence
ANI	Agência Nacional de Inovação
BIP	Business Ignition Programme
BMC	Biomedical Center Munich
CAUP	Centro de Astrofísica da Universidade do Porto
CEIRDI	Centre of Excellence for Interdisciplinary Research, Development, and Innovation
CeNS	Center for NanoScience
CET	Central European Time
CIIMAR	Interdisciplinary Centre of Marine and Environmental Research
CIPES	Centre for Research in Higher Education Policies
CNRS	French Centre for Scientific Research
CoLABs	Collaborative Laboratories
DGSD	Directorate-General for Strategy and Development
EARTO	European Association of Research and Technology Organisations
EC	European Commission
EIE	European Innovation Ecosystems
ELI-ALPS	Extreme Light Infrastructure Attosecond Light Pulse Source
EPA	Etablissement Publique d'aménagement
ERC	European research council
EUGLOH	European University Alliance for Global Health
EUGLOHRIA	The European University Alliance for Global Health – Transformation through Joint Research and Innovation Action
FCT	Foundation for Science and Technology
HSUP	Hungarian Startup University Program
HUF	Hungarian Forint
i3S	Institute for Research and Innovation in Health
ICETA	Instituto de Ciências e Tecnologias Agrárias e Agro-Alimentares
IdEX	Initiatives of Excellence
INEGI	Institute of Science and Innovation in Mechanical and Industrial Engineering
IT	Institute of Telecommunication
Labex	Laboratories of Excellence
LMU IEC	LMU Innovation and Entrepreneurship Center
LMU Munich	Ludwig-Maximilians-Universität München

ABBREVIATIONS AND ACRONYMS



LTPs	Linked-Third Parties
MBA	Master of Business Administration
NGOs	Non-governmental organizations
NKFIH	National Research Development and Innovation Office
PEIPS	Paris-Saclay Student Entrepreneurship Department
PESTLE	Political, Economic, Social, and Technological; Legal and Environmental
POC	Proof of Concept
PPE	Personal Protective Equipment
R&D	Research and Development
R&D&I	Research, Development and Innovation
R&I	Research and Innovation
REQUIMTE	Network of Chemistry and Technology
RTO	Research and Technology Organisation
SATT	Technology Transfer Office at the Paris-Saclay University
SIP	Strategic Innovation Programs
SMEs	Small and medium-sized enterprises
STREAM	Science, Technology, Reading, Engineering, Arts, and Mathematics
TBH	Transferstellen der Bayerischen Hochschulen – Transfer Offices of the Bavarian Universities
TRL	technology readiness level
TTO	Technology Transfer Office
TUM	Technical University of Munich
UI	User interface
UPIN	University of Porto Innovation
UPORTO	University of Porto
UPSACLAY	Paris-Saclay University
UPTec	Science and Technology Park of U.Porto
USZ	University of Szeged
UX	User experience
VC	Venture Capital
WP4	Work Package 4

EXECUTIVE SUMMARY



Higher education institutions educate and train the entrepreneurial talents who will contribute to shaping the future and explore creativity through joint research and innovation endeavours, providing co-creation spaces and intensifying the connectivity and cooperation between the societal actors, translating scientific knowledge into valuable solutions to societal challenges. In this sense, academia is vital in boosting innovation in Europe's diverse ecosystems.

The current state of play is full of innovations of the past, and without these, there would not be any new or enhanced health policies, systems, services, products and technologies to improve people's health and quality of life.

Within the EUGLOH Alliance institutional transformation agenda to tackle a variety of challenges related to well-being and public health, the Work Package 4 (WP4: Fostering innovation and reinforcing the cooperation of the EUGLOH Alliance with businesses and other stakeholders) of the EUGLOHRIA¹ project has among its objectives the commitment to improve and upscale EUGLOH's innovation readiness and to intensify the connectivity and cooperation between the Alliance and other stakeholders.

¹The EUGLOHRIA consortium is composed by Paris-Saclay University, Lund University, University of Szeged, University of Porto and LMU Munich.

To this end, the EUGLOHRIA WP4 members prepared this report that maps existing best practices and analyses the potential hurdles in local chains of translating research into innovations. This document establishes benchmarks and describes best practices for promoting knowledge co-creation and fostering knowledge and technology transfer. Furthermore, synergies and complementary funding sources were identified to reinforce local support mechanisms, cross-link existing structures within the partners' ecosystems and pursue potential joint translation opportunities that might arise from collaborative research projects.

1. THE EUGLOHRIA R&I ECOSYSTEMS



A Research and Innovation (R&I) ecosystem is the interconnected network of various players, stakeholders, and community members that share knowledge, capabilities, and technologies, working cooperatively and competitively to create and develop innovations².

In the case of a University, this ecosystem includes students, academics, researchers, entrepreneurs, research institutes, technology transfer offices, incubators, start-ups, large corporations, public policy actors, foundations, non-profit organisations, and civil society. Each plays a significant role in creating value in the larger ecosystem by proposing solutions to societal challenges and supporting and collaborating to make them available to the markets. Regarding academia-business relationships, these collaborations occur in many ways described in the practices of the next chapter, including events, cross-promotion, and sharing of resources.

These research and innovation ecosystems create communities that support each other's goals, missions, visions, and values.

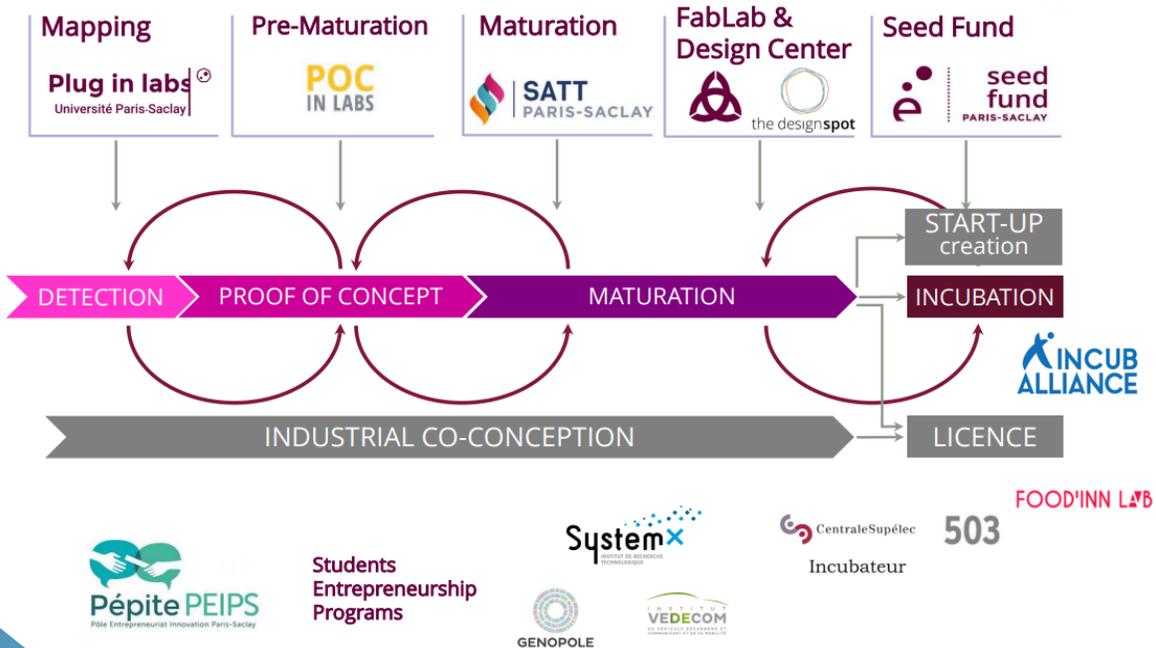
² based on the Grandstrand and Holgersson (2020) definition of "Innovation ecosystem"
[\[https://doi.org/10.1016/j.technovation.2019.102098\]](https://doi.org/10.1016/j.technovation.2019.102098)

This section summarises each partner's R&I Ecosystem and its main actors to help to know these different R&I ecosystems. This will be very helpful in identifying the best practices for promoting innovation.

Paris-Saclay University

The Paris-Saclay University is a part of the Paris-Saclay Innovation Ecosystem that is recognised as one of the world’s eight most innovative clusters, [according to the MIT Technology Review](#), bringing together academic knowledge, business actors, and civil society. The innovation and technology transfer community in UPSaclay is being coordinated, at the different stages of the value chain, by several entities belonging to the university, namely: i) Plug in labs Université Paris-Saclay, ii) POC’in Labs, iii) Technology Transfer Accelerator Office of the Paris-Saclay Cluster (herein, SATT Paris-Saclay) iv) FabLab, v) Design Center, vi) the Seed Fund and vii) Incuballiance.

UPSaclay’s R&I ecosystem value chain



Plug in Labs Université Paris-Saclay was created in 2018. It is a digital platform designed by and for research institutions, which connects companies and research structures. **Plug in Labs** provides access to exceptional scientific skills and technical platforms capable of accelerating innovation projects. The **Plug in Labs** platform aims to facilitate innovation between public laboratories and companies and, thus, to multiply sustainable cooperation that contributes to the dynamism of the territory. The **Plug in Labs** is the reference entry point for connecting interested groups to the research world.

The Paris-Saclay University has been supporting the emergence of innovative projects with an entrepreneurial dimension through calls for projects. The **POC in Labs** call for projects aims to highlight any innovation project, whether technological or societal, social and solidarity-based, from laboratories within the scope of the Paris-Saclay University. The objective is to develop the project's proof of concept, produce a valuation strategy, and propose a team for the maturation and development of the project. **POC in Labs** also aims to make project leaders aware of design within the framework of support from the **Design Spot** (a design centre) and business creation within the training framework offered by **IncubAlliance**.

The **Technology Transfer Office at the Paris-Saclay University (SATT)**, created in 2014, supports researchers to transform public research results into innovation for companies by supporting projects throughout their journey: developing, registering licenses and patents, and onto start-up creation.

FABLAB UPSaclay is a community-based space dedicated to Research, Empowerment, to Distributed Education for the Commons, created in 2013, where mentoring, creation, and designing take place and where sharing is a rule.

Paris-Saclay University

The ***Design Spot*** is the design centre of the Paris-Saclay University, created in 2017. It aims to support students, researchers, and entrepreneurs in their R&D projects by providing them with design expertise to meet the expectations of tomorrow's society. The ***Design Spot*** organises workshops and holds meetings, conferences, and master classes to promote the design disciplines throughout the Paris-Saclay R&I ecosystem.

The ***UPSaclay Seed Fund*** was created in 2017, and it is constituted by the higher education establishments of the Paris-Saclay University, intended to promote the emergence of technology and service start-ups. Therefore, students, recent graduates, and researchers from these establishments will have access to tailor-made equity financing for their business projects. The start-ups can receive up to two and a half million euros in equity funding over multiple investment rounds. The fund is managed by Partech Ventures, one of Europe's largest venture capital investors in digital and information technology. Partech's teams are supported by Kurma Partners, which will be responsible for life sciences investments.

Incuballiance is the Paris-Saclay cluster's shared technology incubator and was created in 2005 by leading higher education and research institutions, along with businesses in the region. Its core focus is innovative entrepreneurial technology projects. These projects are spin-offs from labs or businesses. They're also led by entrepreneurs who want to be part of a well-known ecosystem and a successful incubator. The French Ministry of Research, the European Union, and regional authorities partly support the incubator.

The local dynamics of innovation and technology transfer are also promoted by initiatives prepared by industrial and research partners. These initiatives include industrial research chairs, programmes dedicated to entrepreneurship and innovation, shared institutes in several cutting-edge fields, and collaborative platforms. Actions targeting students and researchers with plans to launch their first business are conceived by the ***Paris-Saclay Student Entrepreneurship Department*** (PEIPS).

Lund University

Lund University's R&I ecosystem is an important hub for innovation and entrepreneurship. Innovation and collaboration units organised by the University centrally, in parallel with activities at the faculties, boost this ecosystem.

There is a national government agency, Vinnova, Sweden's innovation agency promoting collaboration and innovation in Lund University to support innovative ideas, with an eclectic approach in the intersection between research-innovation-change-making.

At Lund University's R&I ecosystem, there are also several players contributing to the promotion of innovation, such as i) LU Innovation, ii) LU Holding, iii) Venture Lab, iv) Sten K. Johnson Centre for Entrepreneurship, v) Ideon Science Park, vi) Medicon Village, and vii) Ideon Innovation.

LU Innovation is the hub for innovation and commercialisation at Lund University. They work with the University's researchers and students to ensure knowledge and research from Lund University benefit society, offering free business advice, verification support, and market and IP screening. In parallel, the holding company, part of LU Innovation, **LU Holding**, functions as one unit with a joint mission and management. LU Innovation is part of the Research, Collaboration, and Innovation division (FSI) consisting of five offices: LU Innovation, Research Services, the Cooperation office, the Development Office, and Lund University Commissioned Education (LUCE).

Investments are managed by **LU Holding** created in 1997, which is owned by the Swedish state but managed by Lund University. **LU Holding's** mission is to develop new businesses from ideas and research results from Lund University, which will contribute to Sweden's growth and job creation.

VentureLab is part of LU Innovation and is designed specifically for students. It encourages students and recent graduates to become entrepreneurs and helps them develop

business ideas or start their own companies. **VentureLab** offers a student incubator at Ideon Agora in Lund's Ideon Science Park.

Sten K. Johnson Centre for Entrepreneurship, formed in 2012, aims to be one of the leading centres in Europe concerning knowledge development and dissemination, aiming to strengthen entrepreneurship and entrepreneurs by providing education in, about, and for entrepreneurship, targeting national and international actors, including students from all faculties and levels of study, and external partners. The Centre conducts cutting-edge research within entrepreneurial phenomena across various contexts, serving as a foundation for the educational activities. The Centre develops strategic relations for mutual exchange with national and international universities, alumni, partners from the industry, and other actors interested in entrepreneurship, providing various activities directed at these groups, and becoming a natural meeting place for the exchange of knowledge in entrepreneurship.

Ideon Science Park, one of the first and largest science parks in Europe with a permanent commitment from the state to coordinate regional development issues and lead the work of creating a Regional Development Strategy, was founded in 1983, creating innovations within life science, software/IoT, telecommunications, energy, and new materials.

Medicon Village, created in 2012, is a life science research park in Lund. **Medicon Village** is divided into two companies - Medicon Village Fastighets AB and Medicon Village Innovation AB. Both companies are wholly owned by the Mats Paulsson Foundation for Research, Innovation, and Societal Development. At the research park, members get access to labs and equipment, offices, competencies from other members, security support, health and exercise, and a network that gathers academia, the public sector, and businesses to collaborate.

Lund University

Ideon Innovation is the business incubator in the middle of the *Ideon Science Park* in Lund that develops entrepreneurs, ideas, and companies through well-chosen, value-creating activities and support resources. They ensure the best possible support with experienced business coaching and broad collaboration with players in the innovation ecosystem.

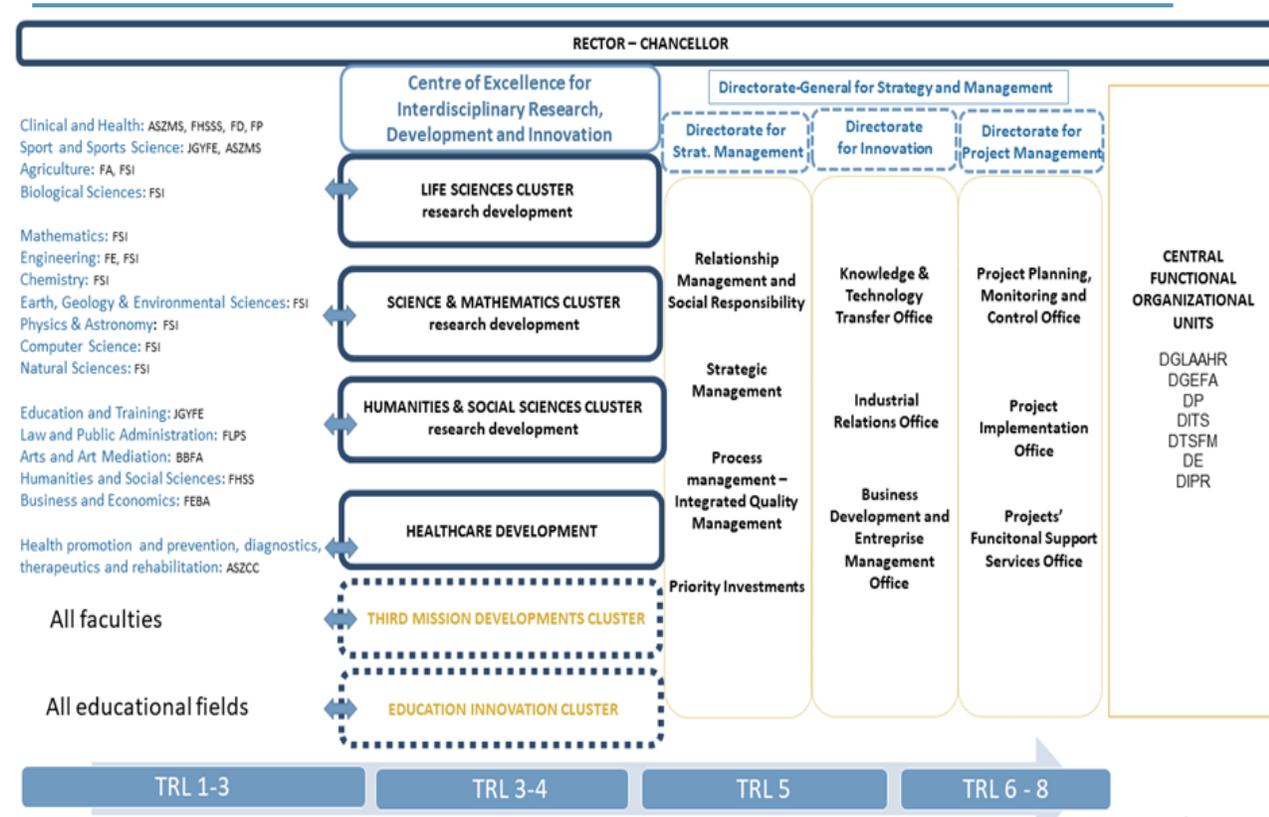
University of Szeged

The University of Szeged intends to support research and industrial projects with a specific approach and from a unique perspective, allowing for the emergence and support of excellent research results with industrial and societal benefits through the coordination of resources and strengthening cooperation between the actors in the R&D&I system.

This work is supported and achieved through the development and reorganisation of central management and administrative units. Integration of inputs is mainly the responsibility of the Directorate-General for Strategy and Development (DGSD) [link 1] [link 2]. At the same time, the alignment of outputs (development, services, etc.) is the task of the newly created **Centre of Excellence for Interdisciplinary Research, Development, and Innovation** (CEIRDI) [link]. The connection between these two units is achieved by the operational side of the dual (scientific and operational) management of CEIRDI clusters managed by DGSD. The relationship between DGSD and CEIRDI, their organisational structure, and their operation is detailed in the Figure on the right. The tasks of CEIRDI include **increasing the innovation performance** of the University, enhancing the practical **utilisation of research results**, and **strengthening the cooperation** among R&D&I actors. To bring the three inseparable and mutually supportive pillars of innovation – knowledge creation, knowledge transfer, and knowledge exploitation – into a value-added process, the innovation management staff is organised into clusters within the Centre, working together with additional staff at DGSD to be able to maximise economic and societal benefits. [link].

Within CEIRDI clusters, the existing R&D services and activities already at a developed market and societal exploitation stage are organised into **Research Groups** and **Competence Centres**. The Competence Centres are dynamically evolving and are thematically linked to the University’s Thematic Excellence Areas, which seek – in line with the sustainable development framework – solutions to problems and challenges in their own areas of competence.

USZ’s R&I ecosystem



University of Porto

The research ecosystem of the University of Porto drives the regional innovation ecosystem in Porto, being responsible for 23% of scientific knowledge production in Portugal, according to data published in the [Scientific Production of the University of Porto indexed in the Web of Science 2016-2020 report](#). This knowledge production contributes to the University's research, development, and innovation strategy of translating this knowledge produced into value for society. The pool of talent of the University is also creating hundreds of innovative start-ups that are transforming the city and helping to boost its economy.

The innovation, entrepreneurship, and knowledge transfer strategy involve several players belonging to the R&I ecosystem, its faculties and [R&D units, the Associated Research Institutes](#), the Science and Technology Park (UPTEC), and external partners (e.g. Bial, CaixaBank, Fraunhofer, and City Council). This dynamic innovation ecosystem of U.Porto is mainly promoted by the University of Porto Innovation (UPIN) and the University of Porto Science and Technology Park (UPTEC).

UPIN is a technology transfer office at U.Porto created in 2004 with the primary mission of supporting the value chain of innovation by acting as an interface connecting academia and businesses for the best use of the knowledge produced for society. The Technology Transfer Office (TTO) provides technical support in IP protection and supports the creation of spin-offs and their links with small or large companies. The University of Porto is the leader in the number of patents among Portuguese universities, most of which are in co-ownership with other universities or companies, with 271 granted patents and more than 300 active patents.

UPTEC is the Science and Technology Park of the University of Porto, created in 2007, acting as an incubator for start-ups and housing some innovation centres for large companies. The park is structured into four main centres, a technology centre (UPTEC TECH), a creative centre (UPTEC PINC), a sea centre (UPTEC MAR), and a biotechnology

centre (UPTEC BIO). This clustering ensures that start-ups, innovation centres and anchor projects share their resources and get the specific support needed and organised in a cross-cutting network of large and small companies, research centres, policy-makers, and other actors belonging to the innovation ecosystem. [More than 600 start-ups](#) were created over the past 15 years in a range of areas, with the creation of [1900 \(primarily highly-qualified\) jobs](#) and an impact on GDP of 284 million euros and a 49 million impact on tax revenues in 2019.

Both industrial and research partners collaborate with the University of Porto Innovation and UPTEC to promote innovation initiatives in all stages of the innovation value chain, contributing to the local innovation and technology transfer dynamics. The University of Porto Associated Research Institutes that are Linked-Third Parties in the EUGLOHRIA project, such as i3S, INEGI, and INESC TEC, play a prominent role in the process of promotion of innovation. The ***Institute for Research and Innovation in Health (i3S)*** was created in 2015, merging three research institutes (IBMC, INEB, and IPATIMUP) to face and overcome the most relevant health challenges society faces today, such as ageing, infectious diseases, cancer, regenerative medicine, and neurodegenerative diseases. The ***Institute of Science and Innovation in Mechanical and Industrial Engineering (INEGI)*** is a Research and Technology Organisation (RTO) founded in 1986 that focuses on research and technology-based innovation activities, technology transfer, consulting, and technological services oriented to the development of industry and economy. INEGI used to be a member of the Executive Board of the EARTO (European Association of Research and Technology Organisations), which ***INESC TEC*** is currently a part of. The ***INESC TEC***, created in 1985, is a private non-profit research association with Public Interest status dedicated to scientific research and technological development, technology transfer, advanced consulting and training, and pre-incubation of new technology-based companies in the domains of Computer Science, Industrial and Systems Engineering, Networked Intelligent Systems, and Power and Energy.

Ludwig-Maximilians-Universität München

LMU Munich is embedded in Munich's dynamic innovation ecosystem. Being the capital of the Free State of Bavaria and one of the largest cities in Germany, Munich has experienced a historically strong development and high dynamics of change since the Second World War from an agricultural state to a hot spot of biotechnology. The outstanding economic performance is based on consistent economic development and the Bavarian government's focus on future industries and technologies. The City of Munich and the Free State of Bavaria pursue dedicated innovation policies that result in various initiatives and programmes, among them the so-called High-Tech-Offensive and the High-Tech-Agenda.

As one of the German Universities of Excellence, LMU Munich successfully interacts with its local ecosystem, consisting of a variety of parties:

- several universities (among them LMU Munich, including the LMU Klinikum and the Technical University of Munich – TUM),
- other research institutions (e.g., Fraunhofer Society, Max Planck Society, and Helmholtz Institutes),
- Governmental institutions (the Bavarian State government as well as the local administration of the City of Munich with their policies, innovation initiatives, and programmes),
- industrial companies (e.g., MNCs like Siemens or the German headquarters of Microsoft, a considerable number of SMEs and start-ups, as well as service providers such as specialised patent attorneys),
- facilitators (including the High-Tech-Clusters, various networks and incubation organisations, and the headquarters of the European and German Patent Offices).

Apart from these aspects, the consistent growth of the city and its ecosystem can also be attributed to relatively soft factors such as Munich's attractiveness for companies and investors due to talents and the innovative potential stemming from the universities, the excellent public infrastructure, and a high quality of life – not least because of a high

economic and personal safety in the city.

Against this background, research and technology transfer is an issue in numerous parts of LMU Munich. In nearly all faculties, many collaboration projects with companies and societal institutions are conducted, and spin-offs emerge. In *LMU Munich's Clusters of Excellence* funded by the Excellence Strategy of the German federal and state governments, established researchers from various disciplines work together to find answers to current scientific questions – in close cooperation with other research institutions and non-academic business partners. Several of them have solid medical or technological relevance. As different structures have a specific focus on transfer, the *Biomedical Center Munich (BMC)* and the *Center for NanoScience (CeNS)* can be mentioned. Lastly and of relevance for EUGLOHRIA with its focus on Global Health, LMU Munich forms part of the *German Centers for Health Research* – an essential national network for translational medicine. It should be noted that LMU Munich is the only German university being part of all eight Health Research Centers.

From a scientific perspective, innovation and transfer are mainly dealt with in the *LMU Innovation and Entrepreneurship Center (LMU IEC)*. Through numerous interdisciplinary research and teaching activities, the *LMU IEC* inspires and supports the development and implementing of innovative solutions for significant societal challenges. The *LMU IEC* focuses on translational research and supports transfer activities at a very early stage. Further support to LMU Munich's researchers is offered by the *Unit for Research and Technology Transfer*, advising and supporting scientists at LMU Munich concerning the exploitation of their research findings. Specific strategies and offers include industry cooperation, cooperation with societal partners, the registration of patents, and guidance regarding the foundation of spin-off companies.

Ludwig-Maximilians-Universität München

LMU Munich's focus on basic research finds partners with a particular interest in research and high R&D investments within the Munich ecosystem. This allows the university to be robust in generating innovative research findings that can be implemented and applied in practice with partners. LMU Munich primarily works with companies from research-intensive industries that take on early projects and develop them further with their research departments. One example of this is the pharmaceutical industry.

2. METHODOLOGY FOR MAPPING EXISTING BEST PRACTICES



Through the ongoing work of Work Package 4 of EUGLOHRIA to achieve “Task 4.2 Sharing best practices and promoting innovation in global health”, the WP4 members, which include academic and technical experts, have mapped a set of selected best practices and carried out analyses of potential hurdles in local chains of translating research into innovations. To ensure the consistency of information provided by each partner, a template was developed collaboratively by all of the five partner universities during and between the WP4 meetings and then implemented through LimeSurvey (using the U.Porto license).

This template included the identification of the partner university (i.e. the Paris-Saclay University, Lund University, University of Szeged, University of Porto or LMU Munich) and the characterisation of best practice regarding the type of practice (to be selected among a set of categories, such as co-creation programs, proof of concept programs, validation programs, relevant regulations, academia equity investment, academia presence on corporate boards, venture capital, technology transfer and entrepreneurship private and public funding sources), name of the practice, promoter of the practice, date of creation, objectives, description of the practice, the hurdles/needs addressed by the practice, target group, main outputs/results, resources needed for implementing the practice, challenges in the

implementation of the practice and the potential added value at the Alliance level. The template was developed to compile uniform and compatible best practices and confer consistency across data collection processes. This process of mapping best practices was carried out at the local level by contacting the key players involved in actions related to the innovation value chain of the partner universities who were in charge of selecting the most representative/ impactful practices in their local ecosystems (the set of local key players has included a wide diversity of profiles, such as Schools’ administration, TTOs and incubators representatives, etc.). In the case of U.Porto, the Linked-Third Parties have also been involved in the mapping exercise (e.g., i3S, INEGI, INESCTEC, ISPUP and UPTEC).

As a result, the report presents twenty-four local practices (five from the Paris-Saclay University, five from Lund University, five from the University of Szeged, five from the University of Porto and four from LMU Munich) that contribute to the promotion of innovation. Most of these practices were identified as “Proof of concept programs” (eleven practices). The University of Szeged and the Paris-Saclay University particularly emphasised this practice category.

Methodology for mapping existing best practices

As expected, most of these practices target the scientific community and business actors with access to and co-create knowledge. In addition, the main goals of the selected practices relate to the promotion of knowledge and the pursuit of entrepreneurship training and fostering academia-business cooperation, which aligns with the European Commission's (EC) vision of reinforcing public-private academia-business cooperation in research and innovation.

The majority of practices turn out to be very recent, which was to be expected if we consider that the positioning of Universities as leading innovation actors is relatively recent³.

³see European University Association's report (March, 2022) – "Universities as key drivers of sustainable innovation ecosystems: Results of the EUA survey on universities and innovation" [available [here](#)]

3. BEST PRACTICES OF KNOWLEDGE AND TECHNOLOGY TRANSFER



This section presents the selected best practices in the five innovation ecosystems. The aim is to deepen the knowledge of the dynamics of the various ecosystems and to foster best practices exchange among ecosystems, thus contributing to nurturing innovation within the EUGLOH Alliance while boosting local innovation ecosystems through the exchange of best practices among partner universities.

Although exploratory, given the limited size of the practices collected and the discretionary approach to selecting practices, this exercise helps provide

some insights into the different innovation ecosystems. In turn, this will allow for the promotion of possible synergies among EUGLOHRIA's innovation ecosystems, in terms of the innovation strategies pursued and best practices implemented, and to support the translation of knowledge into innovation, thus, adequately responding to societal challenges. At the same time, it fostered the discussion on the possibility of scaling up local initiatives and programmes to EUGLOH partners, opening and strengthening local innovation ecosystems.

PARIS-SACLAY UNIVERSITY BEST PRACTICES



Université Paris-Saclay has improved the tools dedicated to technology transfer and entrepreneurial projects over the last twenty years, forming today a comprehensive innovation ecosystem.

The Plug in Lab portal facilitates free access to the network of more than 300 laboratories and their experiments.

The technology transfer office (SATT Paris-Saclay) deploys maturation projects through competitive requests for proposals open to laboratories and PhD students. Maturing the technology can be complemented with support

for the Design Spot and a network of Fablabs, leading to a Proof-of-Concept product that can open the door to startup creation and equity financing.

The local development authority (EPAPS) runs a complementary “Innovation Directors Club” that creates links between academia and corporations.

Paris-Saclay University

1. Plug in Labs

The [Plug in Labs](#), created in 2014, is a single web portal to gain a quick overview of the laboratories, platforms, skills, expertise and technologies available at the Paris-Saclay University (UPSaclay).

The [Plug in Labs](#) embraces 15% of French research, lists 317 laboratories, connects 10,000 researchers and 5,000 PhD students, communicates with 65,000 students and displays 10,000 scientific papers annually. Networking events called “Meet My Platform” have nurtured a living community with multiple contacts between the platforms through Plug in Labs. This centralised management portal is enriched by a backup database that requires maintenance.

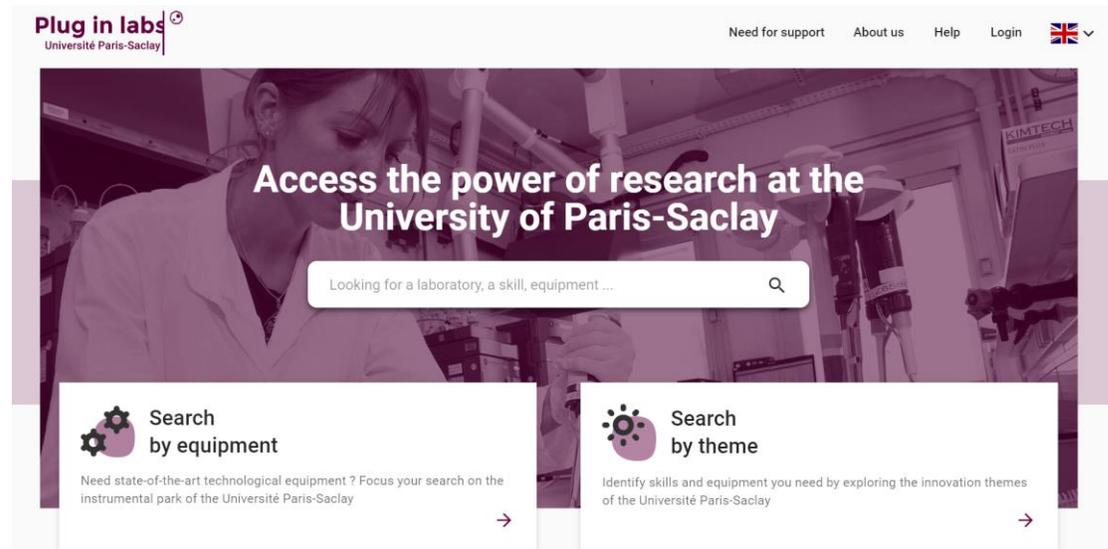
The Plug in Labs is an easy connection tool to aid in detecting opportunities for collaboration using synthesised content of each laboratory or platform fact sheet and allowing direct contact with the research community. It acts as a unique entry point to the potential of UPSaclay’s public research and the promotion of technical and scientific expertise giving better visibility to over 500 research labs and platforms, serving French and international actors. It also encourages and broadens the relationship with companies by facilitating partnerships between public and private innovation actors.

In short



- Creation: July 2014
- Shareholders: Bpifrance, Université Paris-Saclay, CNRS, Institut Polytechnique de Paris
- Quality certification: ISO 9001 : 2015
- Headcount: 50
- Investment capacity: € 66 M
Investment made: € 30 M
- Portfolio: +70 projects

This portal is promoted by both the University and SATT Paris-Saclay (Technology Transfer Accelerator Office). As a TTO for Université Paris-Saclay, the Institut Polytechnique de Paris and CNRS, SATT generates business competitiveness and creates a strong dynamic around deep-tech innovations, boosting competitiveness.



Paris-Saclay University

2. Poc in Labs

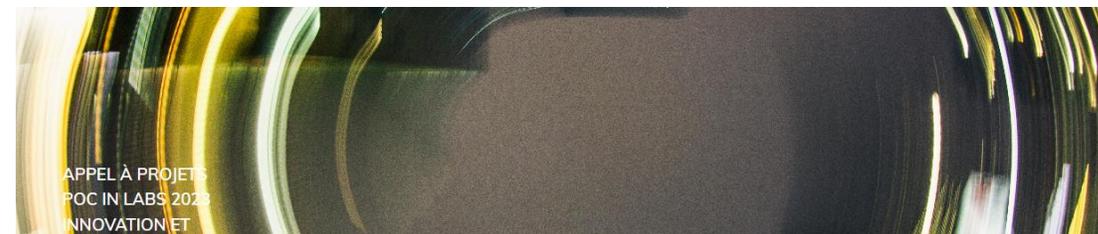
Having started in 2013, [Poc in Labs](#) Labs iS is a central initiative of Université Paris-Saclay that aims to finance and promote all innovative technological, societal and social projects of the Paris-Saclay University. The objective is to develop a proof of concept and to produce a strategy for the business development of the projects.

The activities include invention, concept validation, prototyping and incubation, pilot production and demonstration, initial market introduction, and market expansion. Poc in Labs also aims to raise awareness and support project leaders regarding business creation through training (IncubAlliance) and the Maturation Program. A jury of experts, including academics and representatives from the socio-economic world, work with researchers to develop their innovations.

Since 2013 :

- Eight calls for projects,
- About 25 projects were supported each year,
- 217 projects supported for a total budget of €14,3 m
- The average budget allocated per project: €65.000 / Funding: IdEX and Labex partners

This programme requires funding and sometimes very specialised expertise.



Appel à projets Poc in labs 2023

Innovation et entrepreneuriat

Dépôt et suivi de projets

Bienvenue sur la Plateforme de dépôt et suivi des projets de l'AAAP Poc in labs 2023.

L'AAAP Poc in labs 2023 ouvrira le lundi 6 mars 2023.

Consulter la note de cadrage et l'annexe de l'appel à projet.

La liste des lauréats 2022 est à retrouver sur la page de l'appel (site de l'Université Paris-Saclay).

Pour toute question, vous pouvez nous contacter par mail à poc.prematuration@universite-paris-saclay.fr.

Paris-Saclay University

3. Design Spot

The [Design Spot](#) is the Paris-Saclay University's design centre covering all design disciplines. The [Design Spot](#) collaborates permanently with design professionals to accomplish its missions and promotes and improves the knowledge of design disciplines in the Paris-Saclay ecosystem. It performs these tasks through various actions, including:

- Design training, which involves different short training to discover what design is;
- Conferences where professionals speak about design;
- Multidisciplinary workshops where designers and engineers work together;
- Exhibitions;
- Mentoring; giving design advice to entrepreneurs and
- Hosting Prix Design & Science.

The Design Spot provides research institutions and companies of the Paris-Saclay ecosystem with a design consultancy service that is fully flexible with solutions tailored to their needs.

The centre has been running the Prix Design & Science. This educational contest brings design and engineering students together each year to develop an innovative project based on a social theme. Access to the Design Spot is open to all students and projects selected for a Poc-in-Labs grant.

The Design Spot supports its territory's research and innovation actors, mainly through the call for projects POC in labs. This initiative, intended for research laboratories from within the University's perimeter, aims to develop the proof of concept (POC) of innovative projects and thus demonstrate the feasibility of new products, applications and services.

Attached directly to the Presidency of the University, it was created in 2017 to disseminate design in the Paris-Saclay ecosystem to familiarise students and researchers with this discipline and direct the research effort towards end users and thus improve its valorisation. The Design Spot auditions project leaders and select those who will receive support. It carries out an upstream diagnosis, offers strategic design advice to project leaders, and supervises all design developments until completion. The design support for the selected projects can be different. So far, they have mainly been related to product, interface, graphics, and motion design.

Since 2018, the Design Spot has accompanied over a hundred projects, helping design products, prototypes, demonstrators, interfaces or even presentation spaces. Design support actions can be very different as they respond to the nature and issues of each project. It also hosts a Design award event gathering engineers and designers and promotes the Design & Science Dialogs, contributing to the joint reflection of designers and scientists.



Paris-Saclay University

4. Fablabs

[Fablabs](#) is a programme created in 2013 at Paris-Saclay University.

Fablabs is a global network of more than globally distributed 2,000 local labs that enable invention by giving people access to digital fabrication tools. Paris-Saclay Fablab is considered a state-of-the-art Fablab and a Super Node of the Network and supports the progress of knowledge from the academic idea towards commercial viability. This practice requires people willing to share free and open-access innovations. The network of fablabs is open to students, researchers and the general public through a dedicated program.

The concept of Fablab is that you can use the Fablab to make just about anything (as long as it doesn't harm anyone); you must learn to make it yourself, and you must share the use of the lab with other users.

The training in the fab lab is based on projects and peer learning; you must take part in the capitalisation of knowledge and the instruction of other users. You are responsible for the following:

- Safety, knowing how to work without endangering others or damaging machines;
- Cleanliness, leaving the lab cleaner than you found;
- Continuity, helping to maintain and repair tools, manage supply inventories, and report on incidents.

Concepts and processes developed in fab labs must remain available for individual use even though the intellectual property may be protected. Business activities can be initiated in fablabs but should allow open access. They must develop beyond the lab

rather than within it and, in turn, benefit the inventors, the labs and the networks that contributed to their success.

The Fablabs includes the following activities:

- Design-research for digital-fabrication
- STREAM education (science, technology, engineering, arts, maths)
- Distributed education
- Community management
- Research support
- Design residency
- Master-classes
- Conferences
- Workshops

Some examples of Fablabs activities include a hands-on workshop for a class of Chemistry graduate school master's students, projects with the Polytech engineering students, and an undergraduate manufacturing education program.

During the COVID pandemic, the initiative favoured open access to innovative designs for Personal Protective Equipment (PPE), and the production of PPE was possible despite the closure of major manufacturers.

Paris-Saclay University

5. Innovation Directors Club

The Innovation Directors Club, developed by EPA Paris Saclay⁴, was started in 2010 and promoted the Paris-Saclay ecosystem abroad to attract new international players and to have the reputation of being the “place to be” for corporations carrying out R&D in France. Also, they coordinate activities in the territory and structure the ecosystem through meetings to share best practices and build awareness of each other’s new projects. The Club organises meetings four times a year focusing on a specific topic. At these meetings, there are also startup pitch opportunities. More precisely, two startups are selected to present their products to potential clients, allowing academic and industrial players to collaborate. The meetings have been done digitally during the COVID-19 pandemic but are usually hosted in labs. These meetings have already mobilised 160 innovation directors, averaging 35-40 participants per meeting.

The Innovation Directors Club and the French Tech Paris-Saclay have created a digital platform to support startups. Additionally, they participate in the organisation of the Paris Spring, the largest B2B event in Paris, with conferences, debates, and invited keynote speakers. It gathers almost 700 visitors per year. Participants also visit R&D centres, which allows them to see the innovation as it happens daily with its dynamics and potential.

Within the Innovation Directors Club, 100 startups are created a year, and there is a pool of 400 active startups. This platform gives them visibility for investors and other opportunities. It also includes 33 innovation spaces, including fablabs, coworking spaces, incubators and learning expeditions for industrial partners.



⁴Etablissement Public d'aménagement for Paris Saclay is the Local Development Authority for Paris-Saclay territory

LUND UNIVERSITY BEST PRACTICES



The innovation ecosystem surrounding Lund University (LU) rests on several pillars.

First, the University runs several initiatives supporting innovation and technology transfer. The core of this is LU Innovation, a part of the University and the main inroad for researchers with ideas to bring their research towards commercialisation, including researchers seeking impact for social innovation. The University, via LU Innovation, also runs the student incubator, Venture Lab, and has close ties to the Holding Company, LU Holding.

Second, the University has made a solid commitment to pre-innovation research-and-collaboration activities. The Strategic Collaboration Initiatives is the flagship example of this, funding initiatives that build on cross-disciplinary collaboration within the University and close collaboration with external parties from business, the public sector, and NGOs.

Finally, an essential part of the innovation-support system is anchored at the national level. The Strategic Innovation Program is a crucial example of national initiatives bringing academic institutions and actors from practice together in development-and-innovation projects tied to societal challenges.

Other collaborative activities at the University also support this ecosystem and its environment, including the Medicon Village Science Park with a focus on life science, innovation support by the County Regional government of Skåne, the Sten K. Johnson Center for Entrepreneurship at the University, and several incubators in Lund and Malmö.



Lund University

1. LU Innovation

[LU Innovation](#) is the hub for innovation and commercialisation and the Tech Transfer Office at Lund University. The organisation contains experience from research, industry, and the public sector and an extensive national and international network. The services offered are freely available to researchers and students at all faculties at Lund University, regardless of the discipline.

Thus, LU Innovation meets the need to conduct tech transfer based on Lund University activities, and the target groups are constituted of researchers and students at Lund University.

The main activities of LU Innovation are business development; patenting; funding; and legal advice.

The outputs resulting from LU Innovation activities are constituted by considerable commercialisation and startup activity, some going into the Lund University venture-capital company, LU Holding.

The resources needed for implementing the practice are provided annually by University funding of about €3 million; the resources are predominantly spent directly on personnel for the main activities and support services.



LU Innovation

THE LINK BETWEEN
ACADEMIA AND BUSINESS

2. Venture Lab

[Venture Lab](#) is a Student incubator at Lund University with the purpose of inspiring students and new graduates at Lund University to test their ideas and try entrepreneurship and innovation. The practice serves Lund University students, Lund University, and society by broadly promoting innovation through student innovation.

The main activities are ideas coaching, startup programs, office space, an extensive network and a supportive community. The main output is a large number of startups initiated and continuing their development.

The primary source of resources and funding is the dedicated support from the University via the LU Innovation unit.

VentureLab
by Lund University

Lund University

3. LU Holding

[LU Holding](#) is a holding company taking an early-stage ownership stake in companies that spring from Lund University activities. The holding company's mission is to create new companies based on knowledge and research results from Lund University, contributing to growth and employment in Sweden.

Thus, the main purpose is to bring companies of the ridge from innovative ideas towards commercial viability. The leading target group is start-up companies originating from Lund University's ideas.

In sum, the activities of LU Holding are investments combined with support and advice.

The output of LU Holding has resulted in the creation of more than 130 companies over the last 20 years plus (1999-2022). The funding underlying LU Holding is an initial sum of seed money from the government (capitalization of 10 MEUR initially).



4. Thematic Collaboration Initiatives

[Thematic Collaboration](#) Initiatives are University-funded initiatives for challenge-driven research that must be interdisciplinary and in collaboration with external parties, such as companies, public-sector bodies, and NGOs.

The thematic collaboration initiatives aim to promote and nurture research and development that cut across the boundaries between disciplines and the hurdle to working with external stakeholders.

Researchers at Lund University constitute the target for the initiatives and collaboration parties outside the University, and the activities are formed by research & development projects. Examples include:

- “e-Health@LU: Joining forces for Sustainable eHealth Development”;
- “Cultural heritage, migration and mobility in an open democratic society”; and
- “Urban Arena Testbeds”.

These examples illustrate the breadth of the initiatives. The main output of the initiatives is the joint impact on the scientific community and a large set of relevant practitioners. The resources needed for implementing the practice are provided by University funding and strong commitments to in-kind contributions from external parties.



Lund University

5. Strategic Innovation Programs

[Strategic Innovation Programs](#) (SIP) are arenas for collaboration between academia and business. Businesses, academia and organisations join forces under the umbrella of these programmes to develop the sustainable products and services of the future.

The objective of the SIPs is to develop research and innovation that cut across the boundaries between academia and practice.

The target group for these programs are industry and society actors benefitting from innovation and researchers and universities taking part.

The main activities of the practices are constituted by research & innovation projects on themes such as Bio-innovation, Lightweight materials, and Medical technology.

The main output of the programs is a strong push for policy-supported innovation in areas driven by grand challenges.

The resources mobilized for implementing this practice are public funding at the national level in Sweden.



UNIVERSITY OF SZEGED BEST PRACTICES



The strategic priorities of the University involve research, development and innovation; the highest-level implementation of the most advanced methodologies in all levels and fields of education, commitment to society, health and healthcare; the maintenance and improvement of the quality of lives; the development of an entrepreneurial approach, the strengthening of the Institution's role in the economic development of the region.

The Science Park Szeged constitutes a key element of the University's entrepreneurial goals. This national priority project involves the development of a science and innovation park on a property of 85 hectares. With the establishment of the Science Park Szeged, USZ's current collaboration partners and other R&D&I enterprises can settle near the Institution and the ELI-ALPS Laser Centre. This will create an innovation ecosystem with a multiplier effect, mutually supportive and inspiring for partners and significantly stimulates the regional economy. In the Science Park Szeged, the Incubator House will be the headquarters of the Hungarian Centre of Excellence for Molecular Medicine.

The tasks of the newly created Centre of Excellence for Interdisciplinary Research, Development and Innovation Centre include increasing the innovation performance of the University, enhancing the practical utilisation of research

results, and strengthening the cooperation among R&D&I actors. To bring the three inseparable and mutually supportive pillars of innovation – knowledge creation, knowledge transfer, and knowledge exploitation – into a value-added process, the innovation management staff is organised into clusters within the Centre, working together with other staff at Directorate-General for Strategy and Development to be able to maximise economic and societal benefits.

The driving force behind the entrepreneurial activities of USZ is the Directorate-General for Strategy and Development, whose Knowledge and Technology Transfer, Industrial Relations and Business Development and Enterprise Management Offices operating within the Directorate for Innovation run the major programmes related to patenting, exploitation and entrepreneurship promotion. The Institution supports academic-industrial cooperation and the industrial utilisation of intellectual property, and it could successfully launch different innovative initiatives. Such an initiative is the Virtus Entrepreneurship Catalyst Programme which, as an “umbrella-programme”, brings together DEMOLA, using design thinking methodology, the extensive entrepreneurship education provided by EUGLOH, and various other programmes and opportunities, thus creating the serious potential for USZ to become and act as an entrepreneurial university.

University of Szeged

1. Hungarian Startup University Program

The Hungarian Startup University Program (HSUP) educates students with the help of interactive, playful study materials and personalised content. Thanks to the online teaching interface, each student can progress and learn at their own pace, as the entire semester curriculum is constantly available online and can be resumed from where it left off. The curriculum creators and the University staff continuously aid the acquisition of useful knowledge in case any student needs assistance. The target group consists of university students regardless of training level and area. Many students have innovative ideas, but in most cases, they can't implement them because they do not have the opportunity to share them with others or don't have the right skills for development. Without the support of experienced professionals, they cannot overcome the first major obstacles. A problem might be that the students are at a different knowledge levels, so it is hard to identify the content and detail level of the modules. During the two semesters, the program introduces 12 modules, personal supporting development of innovative ideas, validation and integration into the business world.

The first semester of HSUP consists of 7 modules:

1. What is innovation? What is a startup?
2. Idea validation - how do I know if my idea is good enough?
3. Business and financial planning
4. Market entry strategies
5. Protection of intellectual property
6. The world of investors
7. Pitch - presentation of the idea

The second semester of HSUP consists of 5 modules:

1. Team building and roles - group or team?
2. Market analysis and market entry strategy
3. Business and financial planning, raising capital
4. Lean Start-up methodology and prototyping
5. Pitch - presentation of the idea

These topics are complemented by continuous professional mentoring, supportive training, workshops, and video lessons produced by experts for even more effective progress. This programme is founded by NKFIH - HSUP grants (National Research Development and Innovation Fund).



University of Szeged

2. Joint Innovation Challenges

[Joint Innovation Challenges](#) aims to challenge students to work on real-life cases (industrial or research-oriented) in a multidisciplinary, international team based on co-creation principles.

Each case has a dedicated project owner with a proven research track record in the field. From 2020 to 2022, 157 students participated in 26 challenges. Besides the project owners, Demola facilitators and academic and business mentors guided students throughout the event.

The program takes nine weeks, and students will present their final results to a professional jury at the end of the program. Joint Innovation Challenges' target groups are students (any level) and researchers.

In Joint Innovation Challenges, student teams work on one real-life case focusing on innovation and future insights. They learn about different tools, such as

- Personal mind map
- PESTLE analysis
- User group and stakeholder mapping
- Design research
- Interviews, observations, surveys (how to make and carry out)
- Synthesis of the design research insights

- Megatrends
- Future persona profile creation
- Analysing and packaging the results
- Pitching

Participants continuously contact Demola Global's facilitators and have weekly meetings. In addition, academic and business mentors have bi-weekly meetings with students and facilitators where students can ask questions regarding their findings and how to proceed further.

This challenge funded through the first EUGLOH project has an initial cost of €50,000 (initial service fee for Demola) and the cost of the mentors/facilitators, organizing and marketing costs funded by HUN grants (National Talent Programme, HSUP-Hungarian Start-Up University Programme, EFOP 3.6.1).

University of Szeged

3. Idea Challenge

The [Idea Challenge](#) is an intense 3-day brainstorming competition where participating teams are tasked with finding a solution to a real business problem and presenting it to a professional jury. The multidisciplinary teams are assisted throughout the 3-day competitions by entrepreneurs and mentors to get the best possible ideas by the end of the challenge. Participants can bring their innovative idea into the competition, but it is also open for open-minded young changemakers who want to work on someone's idea. The Idea Challenge is not limited to one area or industry. Business partners can propose different problems, products, or service ideas, from inventions of social benefit to IT solutions. The competition focuses on effective problem-solving, value creation, and feasibility. The event is co-organized by local ecosystem players devoted to shaping the future and advocates of promoting innovation and entrepreneurial education.

The target group of Idea Challenge consists of open-minded students, individuals, unemployed persons, startup/spin-off companies, entrepreneurs, university students, and NGO representatives working in the same field in all participating countries.

Mentors assist in the elaboration of ideas during the competition. Other events like preparatory workshops, company visits, social events and lectures are organised during the programme. At the end of the programme, the professional jury selects the best teams and solutions. The best ideas receive valuable prizes, and in addition, they can be presented to investors as well.

The Idea Challenges involved more than 300 participants from different countries between 2018-2022, divided into 30 multidisciplinary and multinational teams.

The commitment of the business partners to provide the industrial problems, strengthen the mentor team, and be part of the jury is very important for the success of this

challenge.

The Challenge is funded by the International V4 grant (Széchenyi 2020 – EFOP 3.6.1) and private sponsorship. Sponsors/investors can even support students and researchers to develop their ideas further. Close collaboration within the innovation ecosystem players is crucial to create synergies and effectively allocating scarce resources.



University of Szeged

4. Virtus Mentoring Program

The Virtus Mentoring Program provides personalised mentoring activities to elaborate the best market strategy and business model to support many talented researchers and students that aspire to realise innovative ideas or start their businesses to meet their goals.

This is very important as academic ideas need personalised mentoring and a professional network of experienced entrepreneurs to move on to the technological readiness level (TRL) and to get an investment or an opportunity to be implemented.

The target group of the Virtus Mentoring Program are University of Szeged students and researchers, and it is currently supported by nine professional mentors that provide support in the following areas:

- Informatics, website creation, AI, UX / UI knowledge, Big Data topics
- Mechanical engineering, 3D design and printing, robotics, electronics, and basic circuits
- Marketing, market research, validation
- Business plan and business model development, financial planning, further economic directions
- Necessary rules, protocols, examinations, and licensing in the field of medicine

Additionally, the programme continuously organises training, hackathons and workshops where participants can learn about innovation and entrepreneurship and improve their transversal skills.

In the first three years of the programme (2018-2021), more than 25 innovative ideas were developed and supported by mentoring activities.

This activity is funded by NKFIH – HSUP grants (University Innovation Ecosystem) and the generosity of professionals that contribute pro-bono as mentors and participate in events organized by the Program (holding presentations and jury members).



University of Szeged

5. Proof-of-Concept Program

The [Proof-of-Concept Program](#) supports promising discoveries or inventions. The program helps fill the gap between the concept validation of research and development and a successfully demonstrated product or technology in a relevant environment.

The Proof-of-Concept Program aims to strengthen University of Szeged-based research innovation and development projects. This program provides funding (a financial resource from National Research, Development and Innovation Office) for innovation and commercialisation research that is not otherwise accessible. Funds from this program help support activities directly related to processing validation and proof-of-concept research. The expected result of the Program is the development of a prototype suitable for business use.

The target group of the Proof-of-Concept Program are University of Szeged researchers and students. The program is supported by professional mentors who help researchers find the most optimal solutions.

Applications are evaluated in a competitive review process involving members of the academic and industry communities using the following criteria:

- The Focus of the objectives of the project and the proposal communicate a clear direction and strategic focus
- The project leader and team members have the capacity and qualifications to ensure the project's overall success
- The project will incorporate or drive innovation in its proposed methods or tangible outcomes

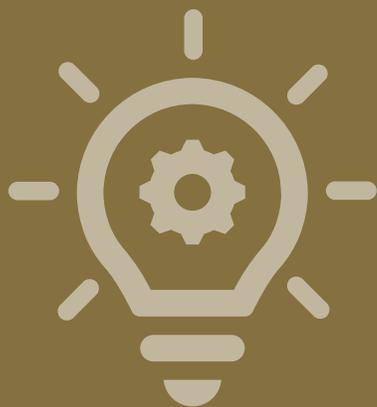
- The degree to which planned outcomes demonstrate commercial potential

From 2020 to 2022, 56 projects were involved, of which 17 were supported, with a total value of HUF 114 million.

The Program is funded by HUN grants (NKFIH - University Innovation Ecosystem) and later VC & Angel Investors.



UNIVERSITY OF PORTO BEST PRACTICES



The University of Porto (U.Porto) drives the ecosystem of Porto by implementing a strategy of innovation, entrepreneurship and knowledge transfer involving several actors belonging to its community from the 14 schools, 48 R&D units and the technology transfer office (U.Porto Innovation) to the Science and Technology Park (UPTEC), the 11 Associated Research Institutes (CAUP; CIIMAR; CIPES; i3S; ICETA; INEGI; INESC TEC; ISPUP; IT – Institute of Telecommunication; REQUIMTE; BIOPOLIS) and partner companies (University of Porto participates in 22 Collaborative Laboratories (CoLABs)⁴.

These actors promote this R&I ecosystem by implementing practices regarding the academia-business relationship, promoting knowledge co-creation, and fostering knowledge and technology transfer. Innovation is one of the four core mission areas of U.Porto, and the promotion of economic development of the region is a part of the six priorities of U.Porto for the decade (constituting one of the six global positioning goals of U.Porto 2030)⁵.

The five best practices selected are implemented by different actors (namely, the Faculty of Engineering of the University of Porto, U.Porto Innovation, i3S and UPTEC) belonging to the U.Porto's R&I ecosystem.

⁴see U.Porto Research (2018-2021) [available [here](#)]

In this respect, it is worth mentioning that U.Porto's strategic positioning is aligned with the view that academia may play a vital role in promoting innovation and the economic development of territories. The University strategy in these domains is implemented mainly by U.Porto Inovação (the TTO of U.Porto that centrally supports the entire value chain of innovation at U.Porto, including IP protection and technology commercialisation) and UPTEC (the Science and Technology Park of the University of Porto) that is responsible for hosting hundreds of entrepreneurial projects since its inception, in 2008. In addition to these central structures, U.Porto benefits from local structures (set in place in some schools or research institutes) that work near the research teams to help them throughout the different stages of the innovation value chain.

In light of this comprehensive approach, U.Porto has in place a large and diversified number of practices conceived to nurture its innovation ecosystem in close collaboration with other stakeholders such as companies, sectorial associations and clusters, municipalities, and public institutions participating in the local, regional, national and international ecosystems.

⁵see U.Porto Strategic Plan 2030 [available [here](#)]



University of Porto

1. Business Ignition Programme (BIP)

Launched in 2012, the Business Ignition Programme (BIP) is an entrepreneurship training activity organised by the technology transfer office at the University of Porto – U.Porto Innovation. It aims to support the U.Porto scientific community to initiate the validation and develop their entrepreneurial projects by exploring the potential of existing knowledge and technologies developed at the University.

This activity has emerged from identifying academic inventors lacking the management tools to ignite businesses, negatively affecting the translation of the research into innovations.

BIP has two streams: BIP Ignition, a short programme coupled with the University of Porto business idea contest for the ignition of entrepreneurial projects, and BIP Acceleration, a more extended programme for the acceleration of mature valorisation projects.

This programme runs for several weeks, is divided into modules, and uses the lean startup approach for technologies and scientific results produced at the University. BIP allows to build and test alternative business models for technologies developed in academia. Furthermore, It provides the participants with the necessary skills for creating value and marketability of technologies by participating in immersive working sessions and seminars where experienced tutors share their experience and strategies for defining and validating business models, meeting with selected mentors, and networking events.

The implementation of the activity is funded by public funding. However, sponsors are contacted to fund prizes that recognise the best projects. The programme demands the dedication of a considerable pool of staff and resources before, during and after the execution of the programme.

This activity has contributed to several valorisation projects led by researchers from different areas at the University of Porto. In particular, it is worth highlighting the critical role of this programme in the enlargement of the participants' network of contacts, the creation of new companies and the licensing of technologies to companies established in the market.



University of Porto

2. BIP PROOF

The [BIP PROOF](#), initiated in 2018, is a proof of concept programme promoted by U.Porto Innovation (U.Porto's TTO) to support the validation and the advancement of the TRL (Technology Readiness Level) of U.Porto's promising research results. Proof of concept projects may translate into the construction of prototypes, technical feasibility analysis, in vitro / in vivo tests, market studies and economic validation, among other activities that add value to the investigation results.

This practice was launched after a low TRL of research results was identified in the local chain of translating research into innovations, i.e., there was a high uncertainty and a long time to market research results and intellectual property.

This programme opens yearly, being a competitive call awarding €10.000 per awarded project, and runs for six months culminating with a public presentation of results. To implement this programme, U.Porto mobilises human resources (in charge of managing the programme) and the funding allowance (to be allocated to the research teams). This funding often combines public funding with patronage funding. The need to attract patronage funding implies a yearly cycle of reporting, communication and commercial actions to maintain or attract this funding. Furthermore, the number of applications for the programme has been increasing substantially, which shows the increasing awareness of research teams to improve the TRL of their research results. Still, it also brings pressure to increase the budget allocated to this programme. The first five editions of the programme have received 170 applications and have supported 32 proof-of-concept projects, translated in University support amounting to €320.000.

 BIP PROOF

University of Porto

3. RESOLVE Program

[RESOLVE program](#) started in 2016 and is promoted by research institute i3S through public competitive funding and sponsors; it aims at fostering the transfer of knowledge in the health sector, leading to patent licensing and startups launched by teams of researchers and entrepreneurs. This program is designed to provide support and management tools to early-stage projects, and startups in the health sector focused on transforming innovative research into profitable ventures.

The program consists of 3 central actions:

- Action 1: Development of tools to address obstacles to the valorisation of knowledge in the healthcare/biomedical areas: Validation of Prototype and Proofs of Concept; End-users Forum; Fast Track for Clinical Studies; Team Building with MBA; Observatory of Open Innovation Platforms; Licensing Contact List; Meeting with Investors.
- Action 2: Select seed and technology-based projects in the health sector from the North of Portugal.
- Action 3: The entrepreneurial projects selected in Action 2 will be provided with targeted and intelligent support from Action 1 to maximise their consolidation and valorisation potential.

RESOLVE program was developed to support the progress of knowledge from the academic idea towards commercial viability and targets both the scientific community and the business actors. During the execution of the program, stakeholder involvement was the most challenging task. Stakeholder involvement implies using scarce resources, particularly health professionals' time. To mitigate this obstacle, an informatic tool was developed where stakeholders and entrepreneurs could easily communicate through an

"end users forum". In terms of achieved milestones, RESOLVE has registered 60 applications, nine roadshows in 5 cities, 26 interviews by an international jury, 15 supported projects/technologies, four investor meeting events, seven patents submitted, five startups (3 created plus two submitted), and 23 official partners and stakeholders.

To continue the program that started in 2016, RESOLVE 2.0 is underway. This new edition works more deeply on valorising innovative ideas with stakeholders and end-users in continuous co-creation. To this end, we highlight the support to the startup teams with several tools, including Proofs of Concept and prototypes validation, operating in the setting of Living Labs in 3 key health innovation areas. RESOLVE 2.0 also promotes bootcamps, in which researchers immerse themselves in a retreat dedicated to creating a business plan.



University of Porto

4. School of Startups

The [School of Startups](#) is an entrepreneurship training programme created in 2013 and promoted by UPTEC, designed to prepare entrepreneurs for the challenges of creating and developing a new business project, such as the identification of the market opportunities for potential products/services resulting from research and providing the participants with the necessary skills for the creation of value and new technology-based business opportunities.

This acceleration programme targets researchers and entrepreneurs and runs for three months. Participants can interact with new tools and concepts, contact experts and access a network of partners to help validate the idea in the market. This programme emerged from the need to strengthen inventors' management tools and skills by offering mentoring and pitch training sessions, co-work spaces and access to a dense network of entrepreneurs, business partners, knowledge production centers, investors and other partners. The activity is mainly funded by tuition fees and also competitive public funding.

In the first 11 editions of this programme, 202 projects were supported, more than 70 new companies were created, and a total of 487 participants enrolled in this programme. The programme has benefited from interdisciplinary connections relying on the mixture of participants with very heterogenous backgrounds that bring a considerable curricular diversity to the existing curricula in schools. Furthermore, the adjustment to the digital formats (during pandemics) has raised challenges related to the need for more engagement and team building, emphasizing the importance of face-to-face contact and peer-to-peer interaction to achieve its goals and learning outcomes.

The logo for UPTEC ESCOLA DE STARTUPS is displayed in a large, bold, sans-serif font. "UPTEC" is in black, while "ESCOLA DE STARTUPS" is in orange. The text is arranged in three lines: "UPTEC" on the top line, "ESCOLA" on the middle line, and "DE STARTUPS" on the bottom line.

University of Porto

5. CoLABs

U.Porto participates in several CoLabs, covering a wide range of scientific domains. For illustrative purposes, one of these CoLabs ("Vasco da Gama") has been selected for presentation. By looking at the case of Vasco da Gama, it is possible to understand the rationale behind the launch of CoLABs, providing an overview of the opportunities and challenges currently faced by these entities.

Collaborative Laboratory (CoLAB) is a private non-profit association or a company whose main objective is the collaboration of its members in the pursuit of common short and medium-term research and innovation agendas oriented towards creating skilled jobs with economic and social value.

The CoLABs are the opportunity for scientific and academic institutions, in close collaboration with economic, social and cultural actors, to contribute to the construction, in Portugal, of projects of international relevance, with an effective impact on society, stimulating job creation qualified in Portugal.

The Vasco da Gama CoLAB (VC CoLAB) was created in 2020 by the Faculty of Engineering of the University of Porto. It aims to bridge scientific knowledge in technological products and solutions related to electrochemical energy storage, particularly redox flow batteries and supercapacitors, power electronics and energy management.

VG CoLAB employs highly qualified human resources, contributing to attracting and securing talent in Portugal to develop, produce and commercialise global energy storage technologies. It contributes to implementing the European energy transition agendas: electrochemical energy storage, power electronics conversion and intelligent energy management.

The CoLAB was created to address the hurdle of low TRL of research results identified in the local chain of translating research into innovations, more specifically to bridge the "death valley", moving from TRL 4 to higher TRL, and reducing the gap between companies and research institutions to address societal challenges collectively. The funding of this initiative is mainly ensured by competitive public funding. However, it is also directly financed by partners and sponsoring companies. Even though the launch of CoLABs was supported by and is still dependent on public funding, it is expected to become sustainable in the medium term. This funding structure results from a legal obligation related to the funding rules for CoLABs imposed by [Foundation for Science and Technology](#) (FCT) and [Agência Nacional de Inovação](#) (ANI)⁶.

Regarding results, Vasco da Gama counts eight strategic projects, i.e. projects led by a limited number of partners and framed within each of the strategic pillars, and three transversal projects, i.e. collaborative and integrated development between all pillars, involving a broad number of partners.



⁶More information is available [here](#).

LMU MUNICH BEST PRACTICES



The Munich Innovation Ecosystem is characterised by a high dynamic and a variety of players, such as several universities and research institutions, governmental institutions, and national and international industrial companies, as well as facilitators for incubation and economic growth.

Based on consistent development in the previous decades, Munich has advanced into an outstanding economic hub and a hot spot for biotechnology. The excellent public infrastructure and high quality of life contribute to the city's attractiveness to companies and investors.

Together with the other local universities, LMU Munich makes an important contribution to innovation and technology transfer advancements. The practices selected for this deliverable underline the broad approach of our university regarding research and teaching, but also the exploitation of research findings and the focus on collaboration and cooperation are concerned.

Support to LMU Munich's researchers is offered by the Unit for Research and Technology Transfer, giving advice and supporting scientists at the whole university.

From a scientific perspective, innovation and transfer are mainly dealt with at the LMU Munich Innovation & Entrepreneurship Center (LMU Munich IEC).

The Unit for Research and Technology Transfer at LMU Munich is also responsible for the project management of HOCHSPRUNG, the entrepreneurship network of all Bavarian higher education institutions.

Lastly, LMU Munich is part of the TBH network focusing on the interconnection between universities, the economy and society in Bavaria.



Ludwig-Maximilians-Universität München (LMU Munich)

1. Unit for Research and Technology Transfer (Spin-off Service)

Support to LMU Munich's researchers is offered by [the Unit for Research and Technology Transfer](#), giving advice and supporting scientists at LMU Munich concerning the exploitation of their research findings. Specific strategies and offers include industry cooperation, cooperation with societal partners, patent registration, and guidance regarding the foundation of spin-off companies. As far as spin-offs are concerned, the service guides researchers through the whole process, from the initial idea to its realisation, by providing regular coaching sessions. These sessions generally focus on the formulation of a business plan, the acquisition of funding and the development of entrepreneurial skills. A wide range of public funding programs set up by Federal and State Governments are specifically designed to encourage the formation of university-based spin-off firms. LMU's Spin-off Service is ready to help researchers find the appropriate program for their needs and give assistance regarding funding applications. The first step toward establishing a business is formulating the essential idea and a detailed financial plan for implementing the idea. LMU's Spin-off Service advises in that regard.

UNIT FOR
RESEARCH
& TECHNOLOGY
TRANSFER

2. LMU IEC

From a scientific perspective, innovation and knowledge transfer are mainly dealt with by the LMU Munich Innovation & Entrepreneurship Center (LMU IEC). The LMU IEC is a platform that drives and hosts the interdisciplinary and international dialogue on innovation and entrepreneurship. Through interdisciplinary research and teaching, the LMU Munich IEC inspires and supports the development and implementation of innovative solutions, thereby pursuing a holistic value-creation perspective on performance. The LMU Munich IEC focuses on translational research and supports transfer activities at a very early stage, i.e., through the LMU Innovation Incubator.

The [LMU Innovation Incubator](#) is an exclusive 3-month early-stage startup program for researchers, current and alumni LMU students, and staff. In our Incubator, we explore and validate ideas for impactful innovation at the nexus of academia, science and business. Through our IEC Incubation Program, we want to help participants explore if implementing their idea into an innovative and impactful business is a potential career path for them. E. g., the program offers workshop modules to learn and implement start-up methods and tools, tailored advisory and individual coaching sessions for participants, Innovation and Startup-related keynotes, and webinars from experts and fellow LMU founders. (No. of participants to date: 14 teams in two program runs.)



Ludwig-Maximilians-Universität München (LMU Munich)

3. HOCHSPRUNG

[HOCHSPRUNG](#) was founded in the year 2000. The Bavarian State Ministry of Science and the Arts funds the project, and its management lies in the hands of the Unit for Research and Technology Transfer at LMU Munich. HOCHSPRUNG is the entrepreneurship network of all Bavarian higher education institutions. As an essential part of the Bavarian startup ecosystem, it aims to support the entrepreneurship culture by providing information, exchange and qualification to the Bavarian universities.

As part of its portfolio, the HOCHSPRUNG project team at LMU supports six selected project consortia. It is also responsible for the execution of activities targeted at networking and exchange within a new funding programme [on impact-oriented entrepreneurship qualification](#). This four-year programme with an annual funding volume of around €2.8 million aims to foster and expand entrepreneurship training and qualification at 14 higher education institutions in Bavaria per the Triple Bottom Line: economically stable, socially effective and ecologically sustainable.



Figure 1: Group photo with the Bavarian State Minister for Science and the Arts (© Niklas Bornemann)

4. TBH (Transferstellen der Bayerischen Hochschulen – Transfer Offices of the Bavarian Universities)

LMU Munich is also part of the [TBH network](#). The Transfer Offices and persons responsible at the eleven Bavarian Universities and 19 Bavarian Universities of Applied Sciences serve as the intermediaries between universities, the economy and society. As the first points of contact for enterprises, societal actors, and scientists, they offer various services to promote knowledge transfer (e.g. support regarding academia-business-society cooperation, assistance with patents and the exploitation of inventions, support regarding company foundations).

In the network, the knowledge of all participating universities in Bavaria is pooled. In addition to the individual offers by the transfer offices named above, the network can thus benefit from exchanging practices and know-how among all partners. Furthermore, several projects and joint initiatives exist, e.g. an online portal or joint booths at technology fairs.

4. SYNERGIES AND COMPLEMENTARY FUNDING SOURCES



The best practices described earlier illustrate the vast diversity of existing actions to foster innovation and entrepreneurship. The selected set of practices also allows us to make two important points.

First, we show that the consolidation of Universities' role in fostering strong innovation ecosystems requires Universities to foster synergies among all areas of their mission (education, research, knowledge valorisation and service to society) since the innovation practices covered in this report cover the entire innovation value chain, involving training and education programmes, strong research groups, improving the TRL of research programmes, mobilising external stakeholders and founders, etc.

Second, the set of selected practices is enough to illustrate the considerable amount of resources needed to implement the practices (e.g., human resources, mentoring, proof of concept funding), leading to significant funding challenges, especially in countries where innovation activities do not benefit yet from public programmatic (multi-year) funding.

In light of this, this section of the report raises the possibility of exploiting synergies and increasing complementary funding sources by starting to nurture a EUGLOH Innovation Ecosystem that

densifies the connections among academic structures, EUGLOH researchers, inventors, entrepreneurs and other business actors, with the final goal of creating the basis for future collaborations among these players.

A brainstorming exercise was organised within the hybrid workshop on "Funding opportunities for the promotion of innovation in global health" held on the 29th of September at 14:00 CET at Lund University.

This workshop has counted 20 participants (remotely and physically), and the focus was to identify complementary funding sources to promote innovation in the EUGLOH R&I ecosystem.

In this workshop, the EUGLOHRIA consortium presented and discussed different funding initiatives from each innovation ecosystem and at the European level. With the presence of the European Commission and the local (Sweden) innovation agency (Vinnova), there was the opportunity to brainstorm potential funding opportunities for developing a EUGLOH Innovation ecosystem. More precisely, the workshop's first part has focused on presenting current and future European and complementary funding sources for innovation, namely the Horizon Europe Programme.

Synergies and complementary funding sources

Institutional transformational projects (such as the EUGLOHRIA consortium) were considered an important asset to improve mutual knowledge of the five universities, provide a platform for best-practice exchange and provide knowledge and direction to the EUGLOH R&I ecosystems for upcoming initiatives. Additionally, it was recommended to capitalise on the thematic orientation of EUGLOH towards global health by joining existing "European Partnerships", namely "European Partnership for Global Health (EDCTP 3)" and "European Partnership on Pandemic Preparedness", as well as participating in the Global Europe programme, to connect with stakeholders working towards the same goals and to generate synergies.

The workshop has also allowed partners to improve their understanding of the funding mechanisms supporting the innovation activities promoted by each of the EUGLOH Universities. This has proved to be an exciting discussion contributing to the debate on future funding sources and securing the sustainability of the Alliance. The innovation funding for the five partner universities is decomposed into competitive public (European, national, local) funding, participation fees (from startups, members) and private investment. However, the weight of each funding source considerably depends from University to University.

Two possible avenues were discussed to secure the sustainability of EUGLOH in the R&I domains: (i) pursue funding for continuing EUGLOHRIA 2.0 or (ii) identify topic-specific calls that target strategic goals in the R&I ecosystems.

In this respect, the works of WP4 allowed consortium members to start sharing details to facilitate future cooperation possibilities within the Horizon Europe Programme. *Experts* from the five EUGLOH partner Universities will work to collect information such as strategic goals that could be addressed through joint proposals, flagship programs and

initiatives that could be easily adapted within a partnership, list of programmes/initiatives that partners would like to implement at the local R&I ecosystem and EU calls considered relevant in the near future.

Strategic goals have been shared within the five R&I ecosystems, identifying common goals and avenues for future research programmes that could be addressed within joint proposals. The results of the brainstorming discussion promoted have also highlighted the relevance of identifying funding opportunities specifically targeted to promote innovation, fostering activities and programmes aiming at raising the technology readiness level of promising research results, speeding up the introduction of scientific knowledge-based innovations, accelerating and scaling up technology transfer projects and providing early-stage equity funding to spin-offs. The workshop participants have agreed that the aspects above could be prioritised and pursued by more than one partner.

Furthermore, the funding opportunities in the context of Horizon Europe's Pillar III, namely within European Innovation Ecosystems (EIE), could support the different initiatives identified within the WP4 to be developed with and for the five partner universities, contributing to improving and upscaling EUGLOH's innovation readiness across the entire chain of translation. Likewise, programmes such as Horizon Europe's WIDERA programme present different calls that the EUGLOHRIA consortium could pursue as possible avenues to continue to share best practices and promote innovation in fields related to global health.

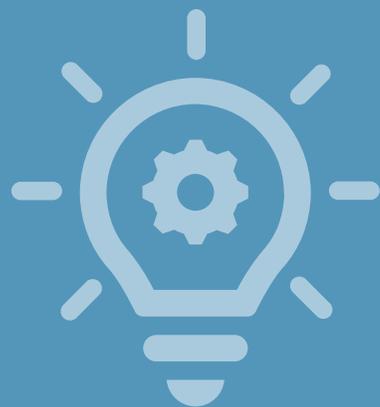
Synergies and complementary funding sources

Notably, through the second EUGLOH project (EUGLOH 2.0) co-funded by the Erasmus+ programme of the European Union, the EUGLOH Alliance⁷ will extend and continue the work of exchange of best practices of translating research into innovations, more specifically, EUGLOH 2.0 will allow for the implementation of actions that promote the advancement of the exchange of best practices and joint training opportunities (WP4, WP6)⁸. Even though the focus of this project is not on concrete R&I activities, synergies and the strategic potential of the Alliance should be highlighted, allowing the Alliance to look for alternative avenues for cooperation in the domains of innovation and knowledge transfer.

⁷ composed of 9 partner Universities since 2023: Paris-Saclay University, Lund University, the University of Szeged, the University of Porto, Ludwig-Maximilians-Universität München, the University of Alcalá, Tromsø University - The Arctic University of Norway, the University of Novi Sad and Universität Hamburg.

⁸ WP4 will focus on co-designing innovative joint training activities with external stakeholders, and WP6 will concentrate on best-practices exchanges of knowledge transfer with external stakeholders.

CONCLUSION AND FUTURE WORK



Within the EUGLOHRIA's strategy of working towards ensuring the long-term realisation of its joint transformation effort and securing additional resources at regional, national and EU levels, as well as leveraging Universities' and the Alliance's capacity to transfer R&I into the market and detect innovation opportunities, this report serves as the first groundwork to map a selected set of existing best practices and explore complementary funding sources as regards to the promotion of co-creation of knowledge and the fostering of knowledge and technology transfer.

Through the mapping of the best practices performed at each partner R&I ecosystem, it was noticeable the existence of programmes and initiatives within all the mission areas of Universities, such as:

- (i) Training programmes to foster a transversal culture of innovation and the development of entrepreneurship as a competency;
- (ii) Research-oriented activities relying on ideation and proof of concept programmes;
- (iii) Service to society programmes, engaging external stakeholders (e.g., companies, NGOs, municipalities, etc.) into joint research ventures and the Universities' innovation

ecosystem. Analysing each local ecosystem allowed us to identify a dense network of collaborations, with key structures within the University ecosystems to foster and facilitate this translation of knowledge into innovation, such as central TTO, incubators and local innovation offices.

This mapping has allowed us to obtain a clearer picture of the innovation strategies and practices implemented to promote innovation at the five EUGLOHRIA Universities ecosystems to respond to societal challenges in Global Health, identifying objective opportunities for future collaboration (e.g. by opening local activities to EUGLOHRIA Universities, by replicating locally a set of initiatives already in place in other EUGLOHRIA Universities or by identifying activities to be jointly organised in the near future).

Regarding funding sources, most practices implemented at the different partners are funded with competitive public funds, participation fees or private investments (it is worth noting that although these revenue sources are common to all universities, the structure of revenues exhibits considerable differences, with some universities showing a much higher weight of public funding than other universities).

Conclusion and future work

Partner universities will develop efforts to pursue funding to keep this project alive to expand and deepen the institutional transformation of the participating Universities, which should lead to the successful identification of R&I teams that might jointly pursue EU topic-specific calls that could be developed to intensify research and innovation within the Alliance level while strengthening and improving the resilience of local R&I ecosystems as well as their ability to transform R&D results into innovative products and solutions with high market value. This will require the involvement of the research communities and the close collaboration of the external stakeholders through the existing and new academia-business-society networks, mapped within Deliverable 4.1 of EUGLOHRIA, the “Action plan for EUGLOH academia-business-society networks”.

The best practices described and the synergies and funding sources explored in this report may contribute to show the governing bodies at the national and European levels the resources needed to support the European Universities to increase their capacity to transfer R&I into the market and detect innovation opportunities, thus exploiting synergies across all corners of the knowledge square "education – research – innovation – civil society" in the area of global health.



**European Alliance for Global Health - Transformation through
Joint Research & Innovation Action**

Deliverable 4.2

Summary Report on best practices and promotion of innovation in the EUGLOH

**WP4 - Fostering innovation and reinforcing the cooperation of the
EUGLOH Alliance with businesses and other stakeholders**

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