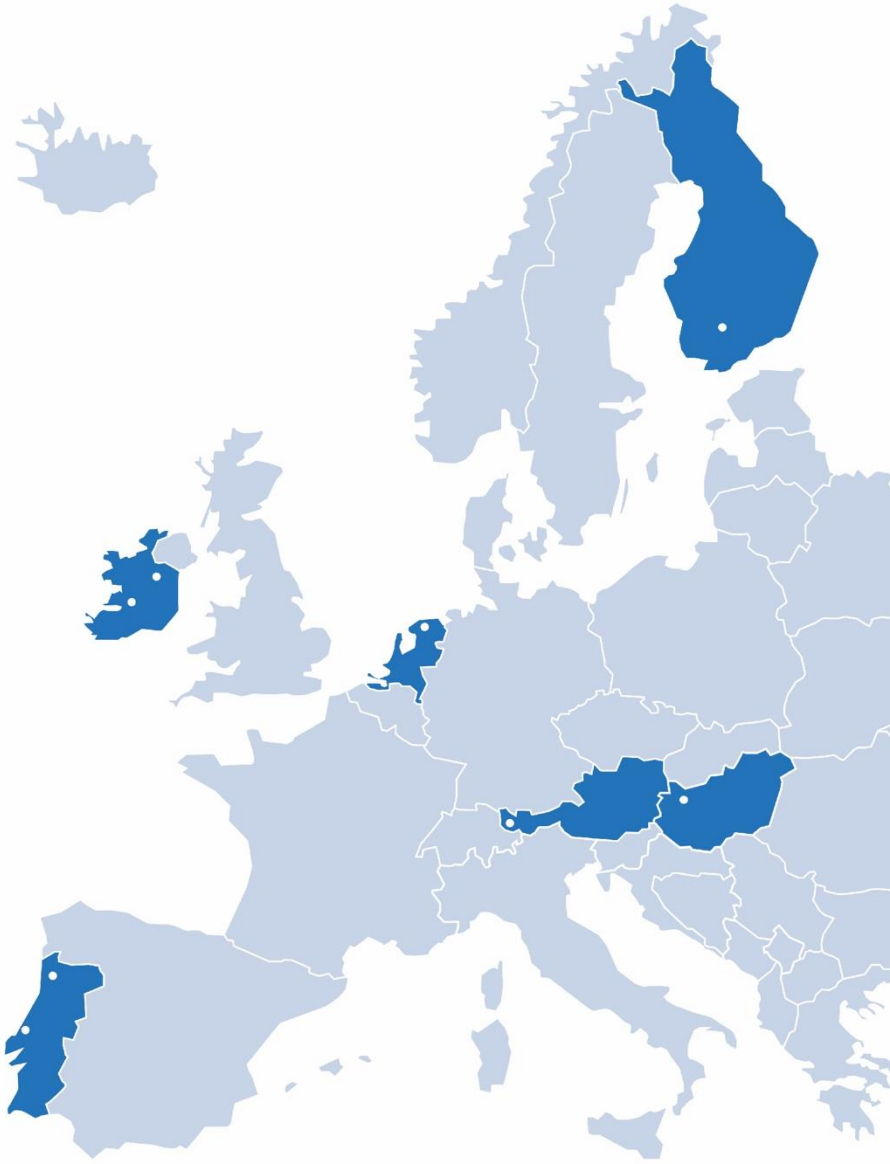
REGIONAL UNIVERSITY NETWORK

EUROPEAN UNIVERSITY



D6.1 RUN-EU PLUS INNOVATION ECOSYSTEM

Type of Deliverable: Report, Public

30 September 2022

Technological University of the Shannon: Midlands Midwest (TUS), Ireland
Széchenyi István University (SZE), Hungary

Horizon 2020
European Union Funding
for Research & Innovation

Grant Agreement Number: 101035816.

Table of Contents

Table of Figures

Table of Tables

Abbreviations

D	Deliverable
EIH	European Innovation Hub
FHV	Vorarlberg University of Applied Sciences, Austria
HAMK	Häme University of Applied Sciences, Finland
IP	Intellectual Property
IPCA	Polytechnic of Cávado and Ave, Portugal
IPL	Polytechnic of Leiria, Portugal
KPI	Key Performance Indicator
KT	Knowledge Transfer
MOU	Memorandum of Understanding
MS Forms	Microsoft Forms
MS Teams	Microsoft Teams
NDA	Non-disclosure Agreement
NHL Stenden	NHL Stenden University of Applied Sciences, The Netherlands
PI	Principal Investigator
R & I	Research and Innovation
RUN-EU	Regional University Network – European University
RUN-EU PLUS	Regional University Network – European University: Professional Research Programmes for Business and Society
SZE	University of Györ – Széchenyi István University, Hungary
T	Task
TRL	Technology Readiness Level
TT	Technology Transfer
TTO	Technology Transfer Office
TUS	Technological University of the Shannon: Midlands Midwest, Ireland
WP	Work Package

EXECUTIVE SUMMARY

The RUN European University Innovation Ecosystem will promote a knowledge sharing approach and knowledge transfer capacity, valorising the entrepreneurial mind-set amongst our researchers and innovators. Building on innovative partnerships between RUN-EU researchers and industry partners and other stakeholders, the aim is to remove existing obstacles to innovation and revolutionize the way the public and private sector work together to bring research developments and advancements to the marketplace for societal benefit. Since its launch in 2020, the RUN-EU Erasmus+ project (grant agreement no. 101004068) has already developed key pillars of this innovation ecosystem which include the introduction of 3 innovation hubs and 8 themed research clusters.

This document presents these already established key elements in addition to a review of the current innovation capacity of the RUN-EU partner institutions which was undertaken by the RUN-EU PLUS Horizon 2020 project (grant agreement no. 101035816). It proposes an Innovation Capacity Programme and a governance structure which will build the RUN-EU Innovation Ecosystem as a pan-European ecosystem of innovation embedded in all RUN-EU partner regions and allows pan-European collaboration in business, research, and education as a vehicle of regional development.

The RUN-EU Innovation Ecosystem will be managed by its Research & Innovation Committee (**Section 3.5**), a central oversight committee which will strategically lead both knowledge creation and future skills training across the RUN-EU alliance in accordance with the needs of RUN-EU regional business and societal partners. The committee will oversee the implementation of the RUN-EU PLUS Innovation Capacity Programme, offer a centralised RUN-EU technology transfer function, and create a portfolio of innovation/technology offerings which it will promote to RUN-EU regional stakeholders. The committe will also create a pan-European ecosystem for new business/academia collaborations, facilitate regional stakeholder skills needs analysis, provide pan-European Business incubation services and leverage funding opportunities for innovation development.

1. Introduction

Europe needs innovative educational partnerships that strive to maximise their societal impact providing solutions to societal challenges that are not bound by borders. In 2017, at the Gothenburg Social Summit in Sweden, the 28 EU leaders and the European Commission set out a vision for a European Education Area to improve the competitiveness of European education by bringing people together with a shared, integrated, long-term joint strategy for research and innovation with direct impactful societal benefits. The European Universities Initiative envisaging Europe as a global hub enables this new generation of Europeans to cooperate across borders, languages, and disciplines, and thus develop strong European ecosystems of research and innovation.

The RUN-EU alliance member institutes have a regional as opposed to a city focus and have a proven track record in creating local innovation ecosystems driven by regional development plans improving the national and international competitiveness of our associated regions. The underpinning RUN-EU vision to drive its mission focuses on the creation of collaborative, regionally oriented and innovative '*European Innovation Hub Ecosystems*' through the creation of advanced, multinational research and innovation units and networks with shared teams and infrastructures focussed on the creation and dissemination of cutting-edge knowledge.

We believe the existing regional innovation clusters of the partners constitute one of the central pillars of sustainable regional development and will therefore underpin the collaborative activities to be developed within the framework of RUN-EU and RUN-EU PLUS. With a view to enhancing the collective research and innovation capabilities of the partners it is proposed to focus on developing a detailed audit characterisation and understanding of each partner's existing regional innovation ecosystem cluster activities and capacity with a view to identifying potential areas for cooperation and collaboration and creation of a European wide '*super-innovation ecosystem*.' We will utilise a quadruple helix approach to the collaborative design and co-creation of our innovation ecosystem and engagement activities by involving associated partners from each country drawn from industry and enterprise, regional government and society thus ensuring the maximum relevance and impact of the activities to be developed and implemented.

By taking such an approach it is envisaged this will ultimately lead to the development of a new type of multinational European Zone for Inter-regional Development (EZ-ID), made up of the constituent regions of RUN-EU. The EZ-ID will also as a driver for the implementation of Smart Specialisation Strategies and the promotion of common European values and identity.

1.1 European Innovation Ecosystems

The European University Association (EUA) recognises the key role that universities play in the development of Europe's innovation ecosystems European Innovation Ecosystems (eua.eu). They see universities as drivers of innovation through their research activities, playing a crucial role in developing, attracting, and retaining human talent, promoting business, and facilitating uptake of innovative technologies through cooperation with business as well as through start-ups and spinouts. The EUA believes that the direct and indirect contributions of European universities go far beyond marketable products, including innovations that promote sustainability across society. Universities are also seen as ideally suited to "connect the dots" in innovation ecosystems because they are impartial, and they are driven by curiosity and long-term perspectives, rather than by commercial interests and short-term goals.

1.2 RUN-EU Innovation Ecosystem

The research portfolio of each RUN-EU partner has been determined by the RUN European University and has been presented in Deliverable 5.2 of the RUN-EU project (Erasmus+ funded, GA No. 101004068). From this, the RUN European University has already developed Research Cluster Areas which are aligned to the Horizon Europe Vision research cluster areas. These clusters will be presented in more detail in **Section 2** of this document.

RUN-EU has developed 3 cutting-edge knowledge networks to drive innovation and collaboration in targeted areas which will support the regional development of the alliance partners. These European Innovation Hubs (EIH) are in the thematic areas of Future Sustainable Industries, Bioeconomy and Social Innovation and are presented in **Section 3**.

A suite of common research and IP agreement templates have been established (RUN-EU D5.3 Erasmus+ funded, GA No. 101004068) to include how material, knowledge and Intellectual property transfer within the consortium will be managed.

The RUN-EU PLUS Innovation Capacity Programme, presented in **Section 7** of this report, has been developed from gaps identified in the innovation management capacity of individual partner universities. This programme, implemented by the RUN-EU PLUS project, will support progression of the RUN European University towards the institutional transformation of the alliance in the field of research and innovation, considering the diverse level of transformation readiness of the individual RUN-EU alliance members.

A network of Research & Innovation Ambassadors has been created to strengthen the research capacity between business and academia and to consolidate the connection of the RUN European University with other actors of the ecosystem including agencies, investors and

the wider business and social community. An overview of the RUN-EU PLUS R&I Ambassador Network is provided in **Section 3.2**.

2. Current RUN-EU Innovation Ecosystem

2.1 RUN-EU Research Cluster Areas

The RUN-EU PLUS project aims to complement our RUN-EU European University research and innovation action plans (avoiding replication) through an integrated long-term strategy for research and innovation (R&I) within our university, mapped within the European Innovation Hubs (WP2) and the RUN Discovery Program (WP5) of the RUN-EU project. We believe the existing members' regional innovation clusters and the collaborative European Innovation Hubs to be developed from them constitute one of the central pillars of sustainable regional development and will, therefore, underpin the collaborative activities to be developed within this European University.

The RUN-EU Discovery Programme (Work package 5 of RUN-EU) has built European future-looking Research, Development, and Innovation (RDI) teams of researchers, research students, academic staff, and regional partners (businesses and social) to address societal challenges in a multi-disciplinary approach thus delivering innovative solutions adaptable to different regions in Europe. Following an audit and characterisation of RUN-EU alliance Research, Development, and Innovation, **eight** RUN-EU Research Cluster Areas have been identified. The areas are (**Figure 1**):

Research Area 1: Creative Art, Design and Materials Thinking (Cluster lead: IPCA)

Research Area 2: Food & Biotechnology (Cluster lead: HAMK)

Research Area 3: Tourism (Cluster lead: TUS)

Research Area 4: IOT & Cybersecurity (Cluster lead: FHV)

Research Area 5: Smart, Sustainable and Advanced Manufacturing (Cluster lead: TUS/SZE)

Research Area 6: Climate Change – Circular Economy & Decarbonisation (Cluster lead: IPL)

Research Area 7: Education & Social Sciences (Cluster lead: NHL Stenden)

Research Area 8: Health & Wellbeing (Cluster lead: IPCA)

These clusters have each carried out a characterisation of each member's existing regional innovation cluster activities and capacity with a view to identifying areas for cooperation and collaboration particularly aligned with the Horizon Europe, Erasmus, Creative Europe etc. research and innovation actions and programmes. To date R&I projects including jointly supervised researcher programs have been developed and successfully funded both nationally and within the EC Commission funding mechanisms across the consortium clusters.

Figure 1- RUN-EU 8 future-looking joint RUN-EU RDI teams indicative research areas

Characterisation of member research unit skills and infrastructures has been completed. This has identified

I) technological systems and infrastructures that are available across the RUN-EU alliance.

II) good practice approaches to our activities with a view to developing complementary collective expertise and knowledge.

III) existing Intellectual Property/Knowledge Know-how and tools have been completed.

The future-looking RDI teams will evolve in a broad spectrum of areas, including: Creative art and design and materials thinking; Food and Biotechnology; Tourism; IoT and Cybersecurity; Advanced Manufacturing; Climate change – Circular economy & decarbonisation and Education and Social Sciences aligned to the Horizon Europe Vision research cluster areas and the broader EU initiatives and directives encompassed with the Sustainable Development, Digital compass, Green Deal, Erasmus+ and other research, innovation and educational programs (**Figure 2**).

Figure 2 Horizon Europe Vision

As teams, these research clusters bring together researchers from multiple members of the RUN European University and it is envisaged the utilisation of our collective expertise, knowledge and facilities will deliver on a larger number, and scale of innovative educational, training and research activities across the alliance. The ambition of our long-term vision and researcher ecosystem within RUN-EU continues to be shaped by international policies and initiatives including Horizon Europe which has a sustainable and prosperous future for people and the planet as its vision, thereby helping to achieve the sustainable development goals.

'*This ambitious EU research and innovation framework programme (2021-2027) aims to strengthen the EU's scientific and technological bases and the European Research Area (ERA) and to boost Europe's innovation capacity, competitiveness, and jobs to deliver on citizens priorities and sustain our socioeconomic model and values*'.

2.2 RUN-EU European Innovation Hubs (EIH)

WP2 (European Innovation Hubs) of the Erasmus+ RUN-EU project focuses on the creation and growth of sustainable cutting-edge knowledge networks to drive innovation and collaboration in targeted areas, through the development of advanced, pan-European Innovation Hubs which are thematically aligned and have shared teams and infrastructures. Within the alliance, it is considered that the existing Innovation Hubs constitute one of the central pillars of sustainable regional development underpinning the collaborative activities to be developed within the framework of this European University, driving collaborative, regionally oriented and novel mobility led education, research, and innovation. EIHs are unique educational platforms where joint interregional research, innovation and regional stakeholder engagement activities are created and nurtured. EIHs collaborate with associated partners in government, business, society and uniquely with the OECD Secretariat of Higher Education and its labour market relevance and outcomes. It is envisaged that the outcomes of this collaborative approach will not only feed back into education, research, and innovation development opportunities within the regions of the alliance but could also inform innovative solutions for labour market relevance and outcomes which would be adaptable to different regions of Europe.

The principal output of these hubs will be the delivery of interregional Research, Development, and Innovation (RD&I) activities designed to deliver on societal transformation requirements, within the framework of the relevant Smart Specialisation Strategies (RIS3) and the UN goals for sustainable development. The RUN-EU EIHs will support and influence the members' regions economic global competitiveness, environmental responsibility, and inclusive social policies, as well as guiding higher education strategies, future skills programmes, interregional activities and joint applications to European research and innovation calls by alliance members. The aim is to promote collaborative teaching and research excellence through the development of student-centred cutting edge pedagogical, research, innovation, and engagement activities, using the strong links between the alliance members and their local ecosystems and businesses. It is envisaged the creation of innovative mobility opportunities through new multinational academies and hubs will improve the national and international competitiveness of the associated regions and their academic community thus allowing them to:

(i) complement existing capital and large city regions,
(ii) retain and attract young talent and
(iii) correct existing unfavourable bias in development trends in peripheral European regions.

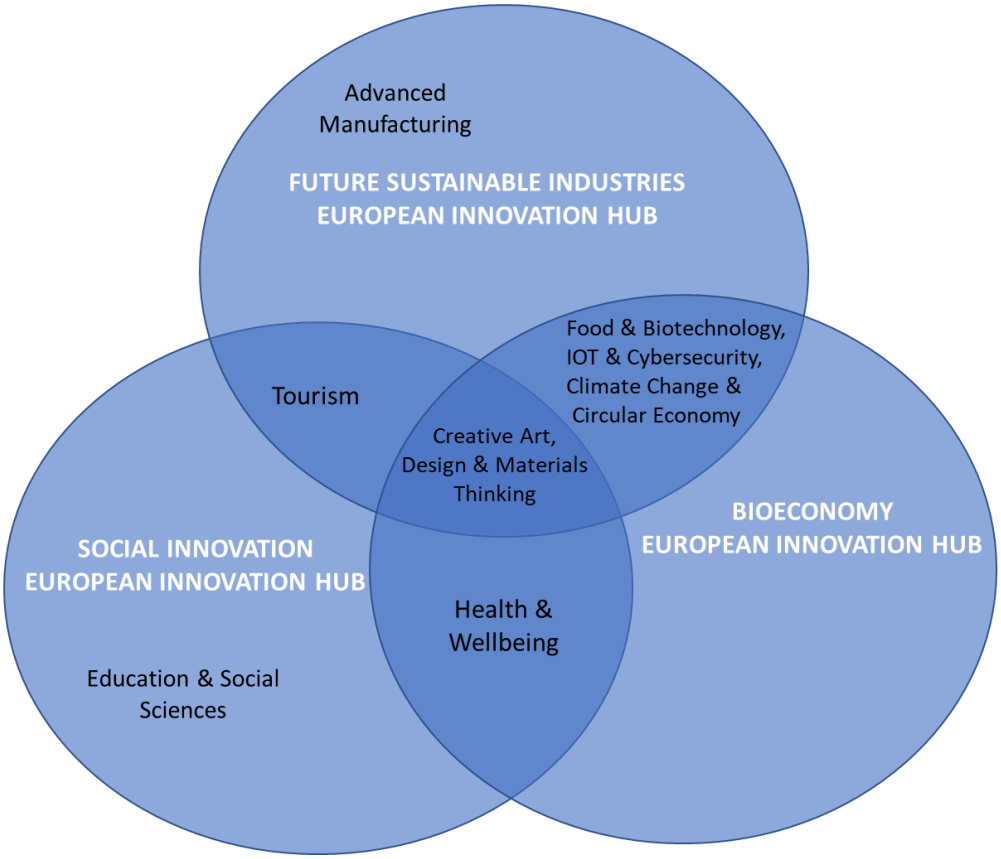
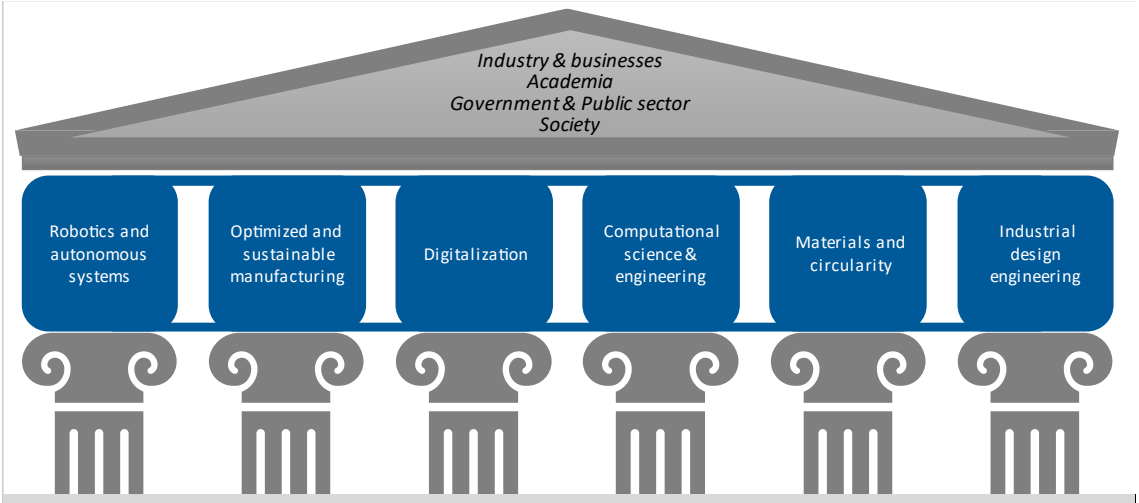


Figure 3 RUN-EU Research Area Clusters and Integration in European Innovation Hubs

WP2 of the RUN-EU project has conducted a detailed audit and characterization of the existing regional innovation clusters and their activities. The outputs from the audit identified clear strategic target goals including alignment of the EIH's (**Figure 3**) with clusters and hubs of similar critical mass across the network and within each thematic area aligned for immediate collaborative opportunities on a regional, national, or European stage. This will include strategies of interlinking activities with other RUN-EU activities including the RUN-EU PLUS project goals and objectives to further the overarching mission and vision of RUN-EU. This involves cross representation on other working groups by EIH working group members and sharing of activities and outputs to further enrich the knowledge base and collaborative opportunities. Further targeting of research groups/centres/clusters in early stages of development and partnering them with a well-established Cluster(s) to enable activation and nurturing of early-stage talent thus accelerating their development through partnership with the identified Cluster(s) and associated partners.



RUN partner	*Research Group*	Area 1 - Robotics and autonomous systems	Area 2 - Optimized and sustainable manufacturing	Area 3 - Digitalization	Area 4 - Computational science & engineering	Area 5 - Materials and circularity	Area 6 - Industrial design and product engineering
FHV	User centered technologies	●	●		●	●	●
FHV	Business Informatics	●	●	●	●	●	
HAMK	Long term durability					●	
HAMK	Robotics	●			●		
HAMK	Reverse engineering		●				●
HAMK	Energy		○				
IPCA	2Ai	●	●		●		●
IPL	CDRSP		●	●		●	●
IPL	INESCC	●	●	●	●	●	
IPL	IT				●		
NHL	Circular plastics		●			●	●
NHL	CESSM	●	●			●	
NHL	Computer vision				○		
NHL	Serious gaming				●		
SZE	Digitalization and automation	●		●	●		
TUS	MRI		●	●	●	●	
TUS	ACORN	●	●	●	●		
TUS	CEEDD		●			●	
TUS	SRI	●		●			
TUS	IDEAM	●	●	●	●	●	
TUS	ATIM Cluster		●		●	●	

Figure 4 EIH Future and Sustainable Industries

Within RUN-EU PLUS we aim to build from these research cluster alliances to develop academic-business collaborations particularly in the delivery of our structured research degree programs to promote competitiveness and growth in association with the industry, business, and societal stakeholders. The work of the international RDI teams formed in the RUN-EU Discovery Program (WP 5) will be progressively integrated in a sustainable manner into the relevant EIH's through sustainable Inter-regional Research and Innovation projects. By means of example, **Figure 4** indicates how RUN-EU research groups integrate into the structure of the EIH in **Future and Sustainable Industries**. A similar model is adopted by the 2 additional EIHs in the **Bio-economy** and **Social Innovation.**

The intention in the medium term is for RUN-EU WP5 research clusters to merge during the project to become research and innovation actors within our EIHs driving the strategic development of our professional practice-based research degrees with business, industry and societal stakeholders in these common research areas aligned with the European Research Areas.

A key focus of these EIHs is on strengthening academic and business partnerships in R&I, in which the RUN-EU PLUS Horizon 2020 project plays a pivotal role. A key function of the RUN-EU PLUS R&I ambassadors is to work at the interface between our RUN-EU academic partners and regional stakeholders and to build an R&I agenda, collaborative action plan and inform the design of collaborative accredited professional practice-based research degree programmes at both masters and doctoral level in association with RUN-EU regional industry, business, and societal stakeholders.

Table 2 lists examples of existing organisations and initiatives with who the RUN European University are engaging.

Table 1 RUN-EU PLUS Stakeholder initiatives and engagements

Name/type of Industry associate parent/stakeholder initiative	Brief description + Linkage with the project
Limerick for Engineering (LfE)	TUS is a founding member of this industry-led initiative which has the support of the education and training providers in the region. The primary goal of LfE is to increase the quality and quantity of engineering talent (apprentice, technicians, and engineers) available in the region and support the other regional areas within RUN-EU PLUS. Besides, LfE will be a forum for discussion of RUN-EU PLUS activities regarding Academia-Business collaboration in research and education.
National Research Degree Programme for Digitalisation of Manufacturing	Developed by TUS in collaboration with an industry association, this programme is currently engaged in 20 research projects based in industry. Its outcomes will be a source of good practices and lessons learned for the European Professional Practice-based Research Degrees and other R&I activities of RUN-EU PLUS.

Clusters	IPL belongs to several clusters composed by companies and HEI in specific fields: InovCluster (Agro industries), Knowledge and Sea Economy, Engineering & Tooling, TICE.PT (ICT cluster). These clusters and their members are natural partners for the development of joint R&D projects, as well as hosting research work and internships in the frame of RUN-EU PLUS.
Business Associations, Technological and Innovation Centres & Business Incubators	IPL is a partner of several business incubators (IDD, OPEN, OBITEC), as well as business associations (NERLEI) and other technology centres where RUN-EU PLUS will look for partners to host Professional research trainees.
TUS Learning Enhancement Initiatives	TUS has ongoing engagement in the Irish National Forum on Teaching and Learning. Through this fund AIT is driving the recognition of professional practice and work placements as an integral part of the learner experience. Outcomes of this process will be a source of good practices and lessons learned for the European Collaborative Professional Practice-based Research Degrees and other RDI activities of RUN-EU PLUS.
Midlands Manufacturing Cluster	TUS provides training and upskilling to this cluster. RUN-EU PLUS will be able to use a range of partners from the cluster to give input into programme design and to provide training opportunities for international students.
CONFIRM	Ireland's Smart Manufacturing Research Centre – As a member, TUS can provide access to much research-active companies in a range of advanced disciplines.
WORKPEDA - Work-integrated Pedagogy in Higher Education	This project developed by HAMK creates operational models for the development of students' working-life skills, for curricular reforms, for work-integrated pedagogy and guidance as well as for the linkage between RD&I activities and education. Its results will feed RUN-EU PLUS activities.
IBC- Industrial Biotechnology Cluster	HAMK belongs to this cluster where Industries could be forerunners in the 'Industrial PhD' programme developing under RUN-EU PLUS and evaluation of the overall process.
PPIN - Portugal Polytechnics International Network	IPCA is member of this project for the internationalisation of the PT Polytechnic HE Institutions and the business/industry sectors, strengthening their collaboration and competitiveness. The mechanisms and frameworks of collaboration devised in PPIN will serve as inspiration for RUN-EU PLUS activities.
National pilot for Professional Doctorates	Through its Department of Education, Research & Internationalisation, NHL Stenden is involved in the national pilot for Professional Doctorates at Universities of Applied Sciences for disciplines for which there is no academic peer. The experience of this pilot will feed the activities of RUN-EU PLUS.
Területi Innovációs Platform	SZE belongs to this Territorial Innovation Platform aimed at strengthening links between actors at local level: HE and research institutions, businesses, professional organizations, policymakers. The initiative is highly relevant for the implementation of WP5, being a platform at the interface of academia-business connections.

Photonics Explorer and Photonics Austria	FHV was a pioneer in Europe bringing European Key Enabling Technologies (KETs) into the schools with a special focus on enhancing the interest of female students in technology and thereby improving the gender balance in technical areas. FHV is also represented in the board of directors of the Austrian photonics platform which aims to improve the collaboration between academic research and industry, guaranteeing a good alignment between industrial roadmaps and academic R&I. Both experiences are of added value for RUN-EU PLUS ambitions and activities.

2.3 RUN-EU Future and Advanced Skills Academies (FASAs)

The RUN European University focuses on delivering future and advanced skills for societal transformation in its EU regions. To drive this mission, RUN-EU has developed a unique new educational platform called the Future and Advanced Skills Academies (FASAs) which will be responsible for the development and promotion of new forward-looking skills programmes which apply innovative pedagogical models and practices.

The RUN-EU PLUS project is focused on working with regional partners to identify their needs for specialist knowledge, skills, and talent in particular domain areas as required by their strategic development plans. The RUN European Innovation Hubs, described previously in **Section 2.2**, will be the vehicle through which future skills requirements of regional stakeholders will be identified which will inform the skills programmes to be developed by the FASAs.

The RUN-EU PLUS project is proposing the creation of the Advanced Research Skills Training Academy. The model through which this FASA will identify the future skills requirements of RUN-EU regional business/industry and develop training and education courses to meet these requirements is presented in **Figure 5**.

In addition to delivering joint practice-based master's and doctoral programmes in key domain areas identified by external partners, RUN-EU PLUS is also focused on strengthening the human capital capacity of the region by implementing generic and research skills training programmes in addition to advanced technology training in areas of expertise developed by the RUN-EU Research Clusters, previously introduced in **Section 2.1**.

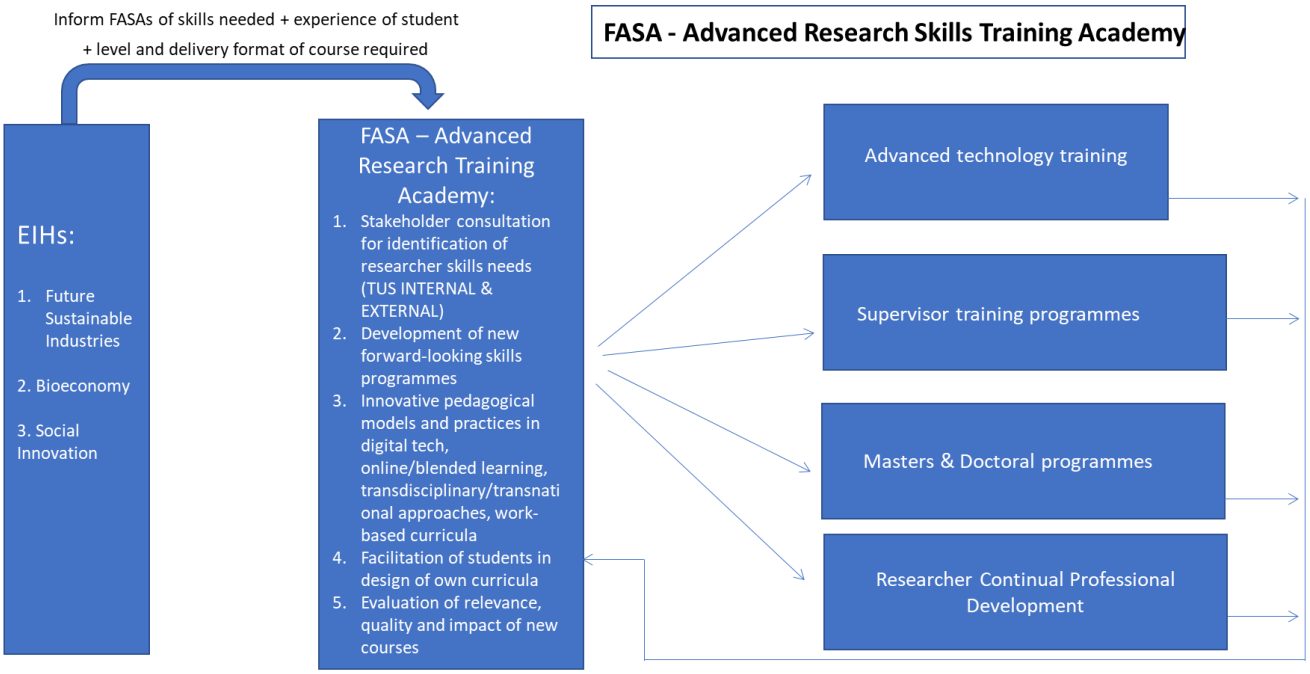


Figure 5 RUN-EU model for the identification of regional business/industry needs for specialist knowledge and skills in specific domain areas and development of education programmes through RUN-EU PLUS Advanced Research Skills Training Academy.

2.4 RUN-EU Knowledge Transfer Template Agreements

Knowledge transfer, including commercialisation, resulting from RUN-EU research activity, is an important element of the RUN-EU Discovery Research Programme (RUN-EU WP5). A suite of model template agreement forms has been developed by RUN-EU (RUN-EU D5.3) which will serve as the central point of reference for internal RUN-EU-alliance and industry-RUN-EU alliance research partnerships from the perspective of knowledge transfer (KT). The template KT forms are designed to be suitable for research transactions assisting in removing ambiguity in KT by encouraging predictability and transparency across the RUN-EU KT system. The model agreements are offered in a 'clean' form Word document, ready to download and use as a starting point for drafting and discussion with research partners.

This suite of common research and IP agreement templates have been established to include how material, knowledge and intellectual property transfer within the RUN-EU Innovation Ecosystem will be managed. The basis of the agreements is based on the results of European best practice across the partnership members following partner consultations. The RUN-EU suite of research documents and the information documents concerning IP management and commercialization available through the European Commission IP Helpdesk (https://intellectual-property-helpdesk.ec.europa.eu) will provide exemplar templates for engagement. All the draft templates will be made available on the RUN-EU PLUS cloud of knowledge portal for access by RUN-EU members.

Table 2 RUN-EU Template Knowledge Transfer Agreements (RUN-EU D5.3 RUN-EU Research Framework-Research, Material, Intellectual and Knowledge Transfer Agreements)

RUN-EU Model Agreement Type:	Appendix No:
Research Consortium Agreement	1
Collaborative Research Agreement (Part Industry Funded)	2
Collaborative Research Agreement (Wholly Industry Funded)	3
Material Transfer Agreement Outward	4
Material Transfer Agreement Inward	5
Innovation/IP Disclosure Form	6
Joint Ownership and Management Agreement	7
Exclusive License Agreement	8
Non-exclusive License Agreement	9
Option and Evaluation Agreement	10
Confirmatory Assignment Agreement	11
Contract Research Agreement	12
Learner MOU	13

These agreements are key enablers in the development and maintenance of strong collaborative research links between the RUN European University and regional stakeholders with whom we co-design and co-deliver research and innovation.

3. RUN-EU PLUS Support Actions for RUN-EU Innovation Ecosystem

As lead partner of the RUN European University, Polytechnic of Leiria have, during the project to date, provided clear and effective guidelines and tools for implementation of the project goals and objectives (particularly as they relate to the priority research domains for R&I with society) against RUN-EU regional challenges in ultimately leading to the design, implementation and delivery of joint and collaborative accredited professional practice-based research degree programmes at both masters and PhD level, including transfer pathways, across the RUN-EU alliance that will drive research and innovation for and in association with industry, business and societal stakeholders. We will address the challenges and convergences in postgraduate research priorities of the 'European University' members and the specification of the long-term roadmap for research activities aligned with shared challenges linked to UN SDGs, EU Missions, Green Deal, Digital Europe, or other societal challenges. The priority domains relevant to the RUN-EU European University in terms of R&I with Society have been assessed in cooperation through our network of associate partners and will drive the formation of collaborative action teams to support the development of the necessary

specialist research degrees informed by the needs of our regions piloting the implementation of initial cohorts of collaborative professional practice-based research degrees in partnership with our regional industry/business partners responding to the societal challenges they are facing.

The RUN-EU PLUS project aims to progress the construction of the new, shared, interdisciplinary RUN-EU innovation ecosystem which will facilitate the creation of a research-driven inter-university RUN-EU campus, embedded in all its regions, and in collaboration with all its relevant stakeholders, incentivising high-quality researchers and innovators to work together to transform the innovation landscape of the RUN-EU regions. The value of an effective innovation system is that it provides access to innovation processes for companies and supports the effective flow of information for its stakeholders.

As identified in the RUN-EU PLUS Grant Agreement (101035816), RUN-EU PLUS will analyse industry/business needs for specialist knowledge, skills, and talent in specific domain areas. The project will undertake activities which will engage with stakeholders to strengthen academia/business co-operation, engage with regional innovation networks/associations and national and European initiatives to promote innovation. Focus by the RUN-EU PLUS project will also be placed on activities to promote entrepreneurial mindset among its research community.

The following RUN-EU PLUS strategic research objectives and implementation plans, as presented in RUN-EU PLUS D3.1 Strategic Research Priority Areas, are key enablers of the RUN-EU innovation ecosystem:

Strategic Objective 1 (SO1): Implement shared resources and infrastructures across RUN-EU and its research systems to improve scientific and innovation cooperation which will inform WP3 of the RUN-EU PLUS project - Common R&I agenda - to facilitate the continued identification of the strategic research priority areas and associated action plans of regional stakeholders.
Implementation SO1: The work of the Erasmus+ RUN-EU project will be essential to the accomplishment of the RUN-EU PLUS objectives. WP5 of the RUN-EU Erasmus+ - RUN-EU Discovery Programme - Sustainable Inter-regional R&I Projects - focuses on the operationalisation of the research activities, increasing and embedding sustainable inter-regional R&I projects across the alliance.

The development of the RUN-EU PLUS Innovation Capacity Programme, referred to previously in **Section 1.2**, is being supported by the RUN-EU PLUS Research & Innovation ambassador network who will drive its implementation with other stakeholders in the RUN-EU innovation ecosystem. **Section 3.3** of this report presents a review of the current innovation capacity of RUN-EU. This RUN-EU partner audit identifies current structures, policies and procedures across the RUN-EU alliance which support innovation and will inform the development of a

new Innovation Capacity Programme which, when implemented over the lifetime of the RUN-EU PLUS project, will increase the innovation capacity of the RUN European University through the development of an innovation detection scheme for RUN-EU, through exploitation of innovation management services, identification of means of accessing new sources of innovation as well as advancing engagement with external stakeholders.

Strategic Objective 2 (SO2): Focus on the strengthening of academic-business partnerships in R&I and to reinforce co-operation in R&I activities across and between alliance members and their associated industry, business and societal stakeholders and partners.
Implementation SO2: RUN-EU PLUS will build a network of R&I ambassadors who will work closely with regional stakeholders to build appropriate mechanisms to support collaboration between them and the RUN-EU research clusters and European Innovation Hubs.

Strategic Objective 3 (SO3): Facilitating the engagement with business and society for deployment of the RUN-EU PLUS Professional Practice-based Research Degrees, addressed in WP5 of the RUN-EU PLUS project, reinforcing academia-business cooperation in R&I and embedding citizens and society.
Implementation SO3: In collaboration with WP7 of the RUN-EU Erasmus+ project, RUN-EU PLUS continues to participate in the schedule of Group Exploratory Missions as presented in **Table 1**. Each mission brings together RUN European University academic staff and programme leaders from a specific domain area. The focus is on the design and delivery of collaborative European degrees, which will include regionally relevant double and joint degree programmes from Bachelor to Doctoral level as well as research exchanges and collaborations.

Table 3 Group Exploratory missions including research and researcher exchange

Subject area	***Organizer***	***Time period***
Arts & Design	TUS Midwest	26.04.2022 – 27.04.2022
Built Environment	TUS Midwest	20.09.2022 – 21.09.2022
Hospitality & Tourism	NHL Stenden	22.03.2022 – 23.03.2022
Business & Management	HAMK	05.04.2022 – 07.04.2022
Engineering	FHV	08.03.2022 – 10.03.2022
Health & Sport	TUS Midlands	08.06.2022 – 09.06.2022
Information Technology	IPCA	13.09.2022 – 15.09.2022
Life & Physical Science	TUS Midlands	08.06.2022 – 09.06.2022
Social Sciences and Education	IPL	10.05.2022 – 12.05.2022
Agriculture & Food	SZE	05.04.2022 – 07.04.2022

3.1 Identification of Regional Strategic Priority Areas

A review of strategic development plans for the regions of RUN-EU partners was undertaken by the RUN-EU PLUS project and regional strategic priority areas were identified and are summarised for each RUN-EU partner region in RUN-EU PLUS Deliverable 3.1 (D3.1 Strategic Research Priorities Report). This report presents an analysis of RUN-EU regional priority domains for research and innovation (R&I) with business and society, including an overview of the regional research interests and regional priorities that can be leveraged in the creation of RUN-EU Professional Practice-based Research Degree programmes that will attract the support of business and society.

The priority areas identified by each region as per their regional strategic plans have been aligned with the RUN-EU research cluster expertise and RUN-EU EIHs which ultimately will collectively inform the priority research areas in the creation of collaborative Professional Practice-based research degrees.

Sustainability, **Digitalisation** and **Social Innovation** were selected as the priority research domains by the RUN-EU PLUS project management committee in March 2022 following a review of D3.1 Strategic Research Priorities Report.

These broad themes will support the development of research masters and doctoral programmes within the specific specialisation areas of the RUN-EU European Innovation Hubs (Future and Sustainable Industries, Bio-economy and Social Innovation) and well as enabling cross-fertilization of research discipline areas through interdisciplinary RUN-EU research projects and masters and doctoral supervision teams. They are aligned to the Horizon Europe Vision research cluster areas and the broader EU initiatives and directives encompassed with the Sustainable Development, Digital compass, Green Deal, Erasmus+ and other research, innovation and educational programmes as previously discussed in **Section 2.0** of this report.

Figure 6 below portrays priority areas for strategic regional development as identified in the strategic development plans of RUN-EU partner regions, their categorisation in accordance with the established RUN-EU European Innovation Hubs and classification into thematic areas for the development of RUN-EU PLUS research master's and doctoral programmes. It is in these areas of Sustainability, Digitalisation and Social Innovation which RUN-EU PLUS will design and develop joint and collaborative professional practice-based research degree programmes at both master's and doctoral level. These programmes will be delivered across the RUN-EU alliance and will drive research and innovation in association with industry, business, and societal stakeholders.

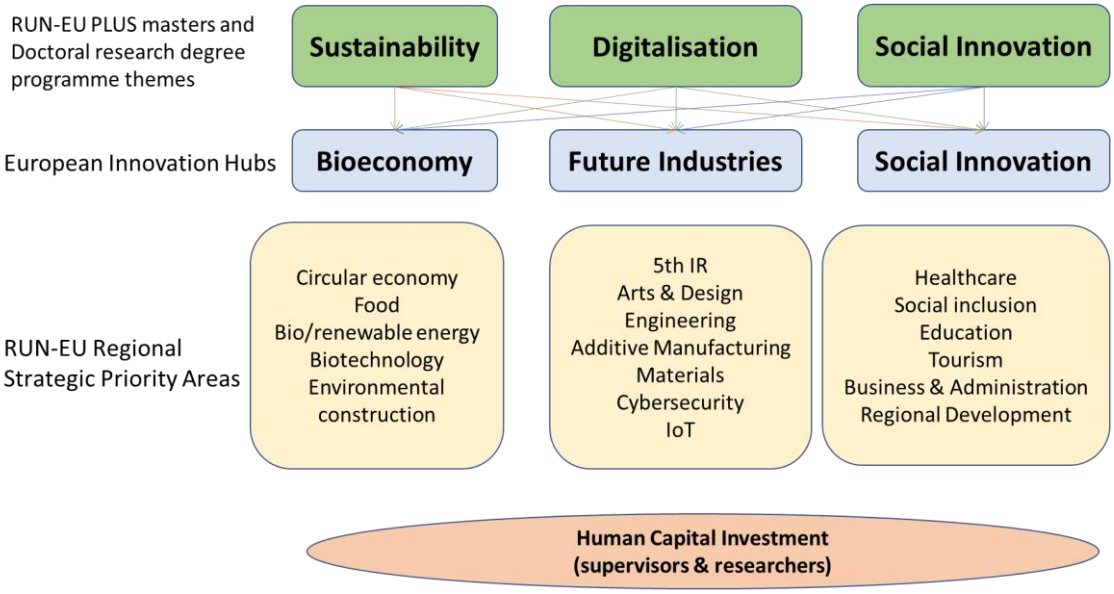


Figure 6 Alignment of RUN-EU PLUS Master's and Doctoral Programme thematic areas to RUN-EU regional strategic priority areas

Common to all regional strategic plans was recognition of the requirement for the development of human capital in these priority areas. A key objective of the RUN-EU PLUS project is to strengthen the capacity of the human capital engaged in research and innovation activities. Within the RUN-EU alliance, research staff and academics will be upskilled to undertake innovation development and research supervision in conjunction with regional partners. Researchers will be supported in identifying clear personal career paths and trained in researcher skills such as critical thinking, disciplinary knowledge and concepts, research methods, research ethics, IPR issues and data analysis methods in addition to state-of-the-art discipline-specific innovations as well as entrepreneurial skills.
A cloud of knowledge portal and a career evaluation system will be developed to support this human capital development.

3.2 Research and Innovation (R&I) Ambassadors

The role of the RUN-EU R&I Ambassadors is to support innovation development by consolidating the connection of the RUN European University with other actors of the R&I ecosystem including the wider business community, agencies, and investors.

Represented by two ambassadors from each partner, the network will develop strategies to strengthen the engagement with business and society, inducing collaboration between researchers, students and academic staff, and local companies and institutions. It will advise the RUN-EU alliance on the best policies for strengthening the academia-business cooperation.

The R&I ambassadors play a key role in developing the innovation capacity within their institution, assisting with implementation of the Innovation Capacity Programme (**Section 3.4**). They are members of the RUN-EU Research & Innovation Committee (**Section 3.5**) where they facilitate knowledge transfer between their institution's researchers and research centres/groups, their regional strategies, and the larger RUN-EU Innovation Ecosystem.

Profiles of the RUN-EU PLUS R&I ambassadors are presented in **Table 4**. Two members of the RUN-EU co-ordination team lead the network. Ambassadors each possess a significant track record in external stakeholder engagement and innovation development.

Table 4 RUN-EU PLUS Research and Innovation Ambassador Network

RUN-EU PLUS Research & Innovation Ambassador Network			
R&I Network Managers:			
 Siobhán Moane	Technological University of the Shannon: Midlands Midwest	RUN-EU PLUS Project Manager, Director of LIFE Health and Biosciences Research Institute	Academic
 Patrick Murray	Technological University of the Shannon: Midlands Midwest	Head of Research and Technology Transfer, Director of LIFE Health and Biosciences Research Institute	Academic
R&I Network Members:			
 John Cosgrove	Technological University of the Shannon: Midlands Midwest	Director of Smart Manufacturing	Academic
 Nuno Rodrigues	Polytechnic of Leiria	RUN-EU Coordinator, VP Research	Professor
 Ana Sargento	Polytechnic of Leiria	VP Social Engagement and Innovation	Professor

 Annukka Pakarinen	Häme University of Applied Sciences	Head of Research, Director of HAMK Bio Research Unit	Director
 Jari Jussila	Häme University of Applied Sciences	Director of HAMK Design Factory	Academic
 João Vilaça	IPCA – Polytechnic Institute of Cávado and Ave	Pro-president for Research and Development, Director of Applied Artificial Intelligence Laboratory, 2Ai	Associate Professor
 Pedro Morais	IPCA – Polytechnic Institute of Cávado and Ave	Research Lead of Applied Artificial Intelligence Laboratory, 2Ai	Research Manager
 Stephen McCombie	NHL Stenden	Professor of Maritime IT Security	Professor
 Jeroen Rijnhart	NHL Stenden	Director of Centre of Expertise Water Technology	Associate Professor

 Katalin Czakó	Széchenyi István University	PhD Programmes Manager	Assistant Professor
 Tibor Dőry	Széchenyi István University	Chair of Management Campus Competence Centre	Associate Professor
 Markus Preißinger	Vorarlberg University of Applied Sciences	Head of Research, Director of Energy Research Centre	Professor
 Katrin Paldan	Vorarlberg University of Applied Sciences	User-Centred Technologies Research Centre & Chair of FHV Ethics committee	Senior Researcher

3.3 Review of Innovation Capacity of RUN-EU Alliance Members

RUN-EU PLUS set out to design and implement an Innovation Capacity Programme which forms the corner stone of the RUN-EU PLUS Innovation Eco-system being developed across the partner organisations of RUN-EU. This Innovation Capacity Programme is designed to promote the sharing of knowledge, the identification of skills needs and the valorisation of an entrepreneurial mindset amongst the RUN-EU research community and partners. It will help to lead research and innovation (R&I) development across the consortium, supported by an innovation detection scheme to identify new innovations and innovators. The programme will integrate technology transfer functions across RUN-EU, including innovation support staff and business incubators.

Designed to enhance the regional R&I eco-system within the RUN university alliance, the Innovation Capacity Programme will be applied to strengthen the collaborative research capacity between business and academia, to support innovation development and to develop & mainstream entrepreneurship and transversal skills.
A review of RUN-EU partner institutions in terms of their organisational supports for innovation detection, IP management and supports for business start-ups was undertaken to identify gaps in the innovation ecosystem across RUN-EU. Findings informed the Innovation Capacity Programme which is presented later in **Section 7**.

3.3.1 Innovation Management

Partner institutions of the RUN-EU alliance vary in how innovation/technology transfer activities are managed within the organisation. While a number have dedicated technology transfer functions, in other institutions this function is undertaken by research leaders in a specific discipline area. **Table 5** provides a summary of the organisational structures in place to support technology transfer across the RUN-EU alliance.

Table 5 RUN-EU Member Innovation Management Structures

IPL	A dedicated technology transfer office - called "Centre for Knowledge Sharing and Valorisation" (CPVC - https://cpvc.ipleiria.pt/), is supported by 3 full time staff, who respond directly to the members of the Presidency team. This Centre undertakes other tasks, rather than strictly technology transfer. In the Presidency team, this area is explicitly considered as one of the main competencies allocated to one of the 3 Vice-Presidents, along with academic and international maters (1 VP) and research (1 VP).
TUS	Research, Development, and Innovation (RDI) are central to the TUS strategic plan and its innovation/technology transfer management systems have been in place for more than 15 years. The focus of TUS is on excellence with meaningful impact through industrial leadership and stakeholder engagement. Enterprise and development services form the foundation of research excellence at TUS. Through innovative partnerships between TUS researchers and industry partners and other stakeholders, the aim is to remove traditional obstacles to innovation and revolutionise the way the public and private sector works together to bring research developments and advancements to the marketplace for societal benefit. The objectives of the established innovation/technology transfer

	management systems reflect the overall objectives of the Technological University and are aligned with the Technological University's values of Excellence, Accessibility, Supportiveness, Innovation and Equity. The creation and exploitation of Intellectual Property contributes significantly to both institutional and regional development.
HAMK	HAMK is in the early stage of developing innovation and technology transfer mechanisms. While there are currently no specific dedicated functions, project managers, research supervisors or inventors detect innovations.
IPCA	In IPCA, a project entitled "Knowledge circle" whose key objectives is to value and transfer knowledge and technology, to convey results and intellectual property rights stemming from scientific and technological research to the marketplace and wider society, along with associated skills and procedures that can create applications for the ones who benefit from their use. This project (code: POCI-01-0246-FEDER-181295), is supported by the European Regional Development Fund (ERDF) and is developed in cooperation with IPL.
SZE	There are several established organisational structures at SZE which manage IP disclosure once it is submitted to the innovation/technology management team. A Management Campus was established in 2019 which deals with university technology transfer matters. Uni-Inno Ltd. provides a letter of intent for commercialization and valorisation for IP disclosures in addition to being responsible for managing licensing agreements. IP regulation was established in 2020 and the Business Development Committee was established which makes recommendations to university management about the approval of IP disclosures as well as coordinating and supporting decision making.
NHL Stenden	As a university of applied sciences, research conducted by NHL Stenden takes place within and in collaboration with business and society based on questions from companies and institutions. Researchers, lecturers, and students work closely together with professionals from the industry. Innovation or technology transfer management, as well as support in detection of new innovations and innovation development is not structured through dedicated technology transfer offices.
FHV	Innovation/technology transfer management within FHV is established at a low or moderate level. Although some initiatives are implemented, FHV does not have a typical "transfer centre" or similar. However, FHV supports its staff and student if any

	relevant innovations are available to progress in the direction of a patent or entrepreneurship. The first step however is initiated by the staff member or student. Some dilemmas still exist, for example, regarding health/assistant technologies the main dilemma is that proof of efficacy would have to be provided for market transfer and transfer to the health care landscape, but for proof of efficacy the technology would again have to be available to many people and evaluated (for which, however, funding is often lacking).

IPL, TUS, IPCA and SZE all have centralised, well established technology transfer functions with direct links to executive management. At HAMK, NHL Stenden and FHV, technology transfer is more in its infancy, is undertaken at the individual researcher level and is unique to each researcher-collaborator project.
A centralized RUN-EU technology transfer function would identify best practices in technology transfer, streamline detection of new innovations, maximise commercialisation opportunities and technology offerings to regional partners and provide access to TT expertise to those partners who wish to develop this function.

3.3.1(i) Detection of new innovation

Supporting the development of innovation and identifying innovation with commercial potential is a key offering of the RUN-EU Innovation Ecosystem. Foreground IP can be spun out to create a new start-up company or the technology offering can be transferred through licensing to develop a new product or process in a company. Prior to RUN-EU, many partners would have limited technology offerings available to their regional partners, however, with appropriate management structures in place, new innovations arising out of RUN-EU research clusters will be made available to all RUN-EU associated partners thereby maximising impact on both business and society.

At **IPL,** the Centre for Knowledge Sharing and Valorisation oversees the detection of new innovations, in close collaboration with the co-ordinators of IPL's 15 Research Units.

The research institutes, centres, and groups, of **TUS**, in addition to 3 nationally funded (Enterprise Ireland) Technology Gateway centres, drive market-informed research in collaboration with regional, national, and international industry and RPO (Research Performing Organisation) partners, and along with TUS's 4 campus incubators including two Enterprise Ireland New Frontiers programmes, play a central role in the regional enterprise support system. A key institutional priority of TUS is to maximise the impact, value and return of research activities by identifying, developing, and protecting new technologies and commercialising them through licencing and establishing new HPSU (High Potential Start Up) spin-out companies in the region.

While the research commercialisation function at **TUS** is mature and highly effective in terms of both the competence and experience of staff and the processes, systems and structures in place, a key constraint for the research commercialisation function has been and is a lack of case management resourcing critical to creating, supporting, and exploiting existing, pipeline and growing future research commercialisation opportunities at TUS.

No official structures are in place at **HAMK** for the detection of novel innovations and it is normally a project manager, supervisor, or inventor themselves who detect innovations.

At **IPCA** the organizational structure to support the detection of new innovations is the G3E (Office for Employment, Entrepreneurship and Business Liaison). The Pro-President for Research and Innovation is responsible for the detection of new innovations, reported by the directors of the 3 research units namely 2Ai (Applied Artificial Intelligence Laboratory), CICF (Centre for Research in Accounting and Taxation) and ID+ (Research in Design, Art, Media, and Culture).
In 2023 IPCA will introduce the "Valorisation and Innovation Center (VIC-IPCA)" whose valorization model (presented in **Figure 7**) links R&D, project management and innovation thereby supporting the detection, development, and transfer of innovations.

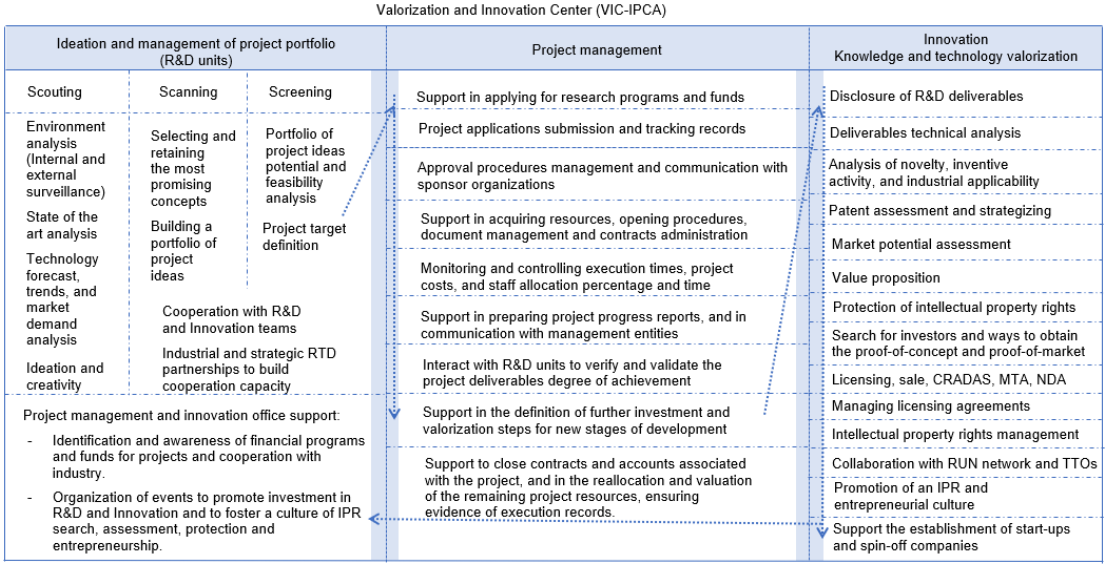


Figure 7 Commercialisation model of IPCA's proposed Valorisation and Innovation Centre

Researchers, lecturers, and students of NHL Stenden work closely together with professionals from the industry on innovative projects. Detection of new innovations and innovation development is not structured through dedicated technology transfer offices.

SZE's Management Campus has an open-door policy and regularly visits research facilities and stays in touch with researchers and their community in and around of the university. Once a

disclosure of intellectual property (IP) is submitted to the innovation/technology management, it is progressed by the established organizational supports as outlined previously.

Two **FHV** institutions undertake innovation detection activities. The **startupstube** is the Startup-Center at the Vorarlberg University of Applied Sciences. It is a service institution and supports students, alumni, and staff of FHV in becoming entrepreneurs. It nurtures the entrepreneurial mindset with specific activities and supports entrepreneurs during their entrepreneurial journey. It forms part of the Innovation Ecosystem in and around Vorarlberg. The **Business Intelligence & Innovation Hub** is a supportive, cross-organizational, and non-profit organization for regional stakeholders (and beyond: the neighbouring regions of the Federal State of Vorarlberg). In it, the Hub stakeholders (transregionally) cooperate and collaborate to expand existing R&D focuses and to establish new R&D areas and priorities that are emergent to the stakeholders of the region. Core services assigned to the Business Intelligence & Innovation Hub are about Artificial Intelligence, System/Ecosystem Collaboration, Resilience Engineering, Innovation Research & Disruptive Innovation, Methods & Tools, and Co-Creation/Networking. The services provided by the Hub stakeholders are in alignment with the research strategy of the Government of the Federal State of Vorarlberg and are as follows:

- Awareness creation of the future importance of research, technology and innovation within the region and its international cooperation
- Awareness creation for high-class research, technology and innovation within business, industry, and society
- (Further) Development of the Federal State of Vorarlberg as an important research, technology, and innovation location within the European Union and beyond
- Strengthening of organizational innovation competencies and capabilities
- (Further) Development of human resources and its qualification for business and industry
- Promoting research, technology and innovation potentials in business, industry, and society
- Promotion of a regional research, technology, and innovation “environment” – test before investing
- (Further) Development of inter-organizational research, development and innovation infrastructure and the co-creation of the involved stakeholders
- Promotion of knowledge- and technology-oriented start-up foundations
- Intensification of the international cooperation of the Vorarlberg science and research institutions
- Expansion of cooperation with economically relevant R&D facilities around Vorarlberg

It is evident that innovation detection it facilitated by IPL, TUS, IPCA and FHV via strong industry-academia collaborations with innovation detection expertise available centrally to research leaders. The deficit in case management resources identified as a gap by TUS may be filled by structures in other RUN-EU partner organisations.

3.3.1(ii) Innovation Development Support

RUN-EU Research Clusters, previously described in **Section 2.1** of this report, undertake cutting-edge research in the areas of Food & Biotechnology, Tourism, IoT & Cybersecurity, Advanced Manufacturing, Climate Change (Circular Economy & Decarbonisation), Education & Social Sciences, Health & Wellbeing and Creative Art & Design and Materials Thinking, and play a pivotal role in the development of technology offerings in these specialist areas. New innovations will be developed and licenced to business partners, co-developed and licenced to business partners or spun out as a campus company thereby contributing to regional development.

As it does for innovation detection, **IPL's** CPVC assumes the supporting role for innovation development, in close collaboration with the coordinators of IPL's 15 research units.

The Research Commercialisation function at **TUS** is responsible for leading the management and commercialisation of intellectual property created at TUS. Working closely with TUS researchers, the Research Commercialisation function (**Figure 8**) is central to:

- Building and managing a pipeline of potential technology and knowledge transfer opportunities.
- Evaluating, capturing, and protecting commercially valuable IP at TUS.
- Advising researchers on optimum IP protection and commercialisation strategies.
- Acting as a point of contact for, and developing value-creating relationships with, industry.
- Creating regional and national impact from TUS created IP - though identifying licensing opportunities and/or the creation of HPSU spin-out companies.
- Supporting a culture of innovation and commercialisation on our campuses.
- Implementing best practice in the management of TUS Intellectual Property.
- Acting as technology transfer point of contact for, and reporting to, funding agencies and stakeholders, including KTI (Knowledge Transfer Ireland) and Enterprise Ireland.

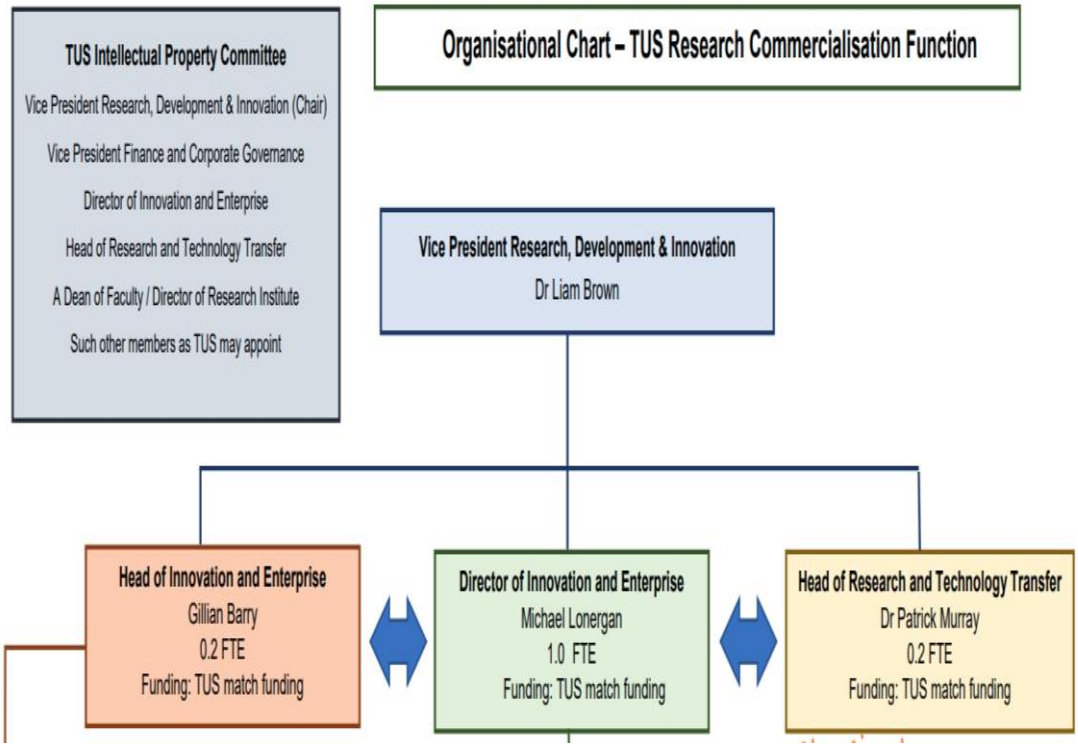


Figure 8 Organisational structure of Research Commercialisation at TUS

At **HAMK,** 4 research units are coordinating research and innovation in their research areas (Bio, Edu, Tech and SMART). There is some variation between units and several things are under development. Activities in schools such as a design factory, amazing business train, start-up business school and some module projects are supporting students to innovate new ideas and/or businesses.

The organizational structure to support innovation development at **IPCA** is the G3E (Office for Employment, Entrepreneurship and Business Liaison). IPCA has a Vice-President for internationalization, communication, and culture. Also, within the scope of internationalization, there is a flexible transversal unit for cooperation and internationalization. There are also three Pro-Presidents in areas of (1) Research and innovation, (2) Employment, Entrepreneurship and Alumni, and (3) Pedagogical Innovation. Together they support innovation development.

Innovation or technology transfer management, as well as support in detection of new innovations and innovation development is not structured at **NHL Stenden.** While a dedicated function to support its management does not exist, innovation development occurs through collaborative projects with companies and the Centres of Expertise in which NHL Stenden

participates namely Water Technology, Green PAC, Smart Sustainable Manufacturing, Leisure, Tourism & Hospitality (CELTH) and KennisDC Logistiek.

In addition, the 'Open innovation Network NHL Stenden' (*Dutch only*) enables the aforementioned through laboratories and educational studios (*ateliers* in which students work together with researchers and business on solving problems from companies and institutions), design factories and innovation hubs.

Business developers at Uni-Inno Ltd., **SZE,** prepare business plans and suggest business development supports. They meet with industrial partners and develop plans to exploit IP and find joint business development opportunities through licensing agreements.

Described previously in **Section 3.3.1**, startupstube and the Business Intelligence and Innovation Hub both support innovation development at **FHV**. Innovation Development training is offered as part of several courses offered at FHV which include Innovation Class: Sustainability, Innovation Class: Build your own Startup, Lean Startup Bootcamp, and Innovation Projects. It is also embedded in undergraduate curricula development.

Each RUN-EU partner has well established research institutes, centres, and groups in strategic research areas to support innovation development. These research groupings are all members of a RUN-EU research cluster. By supporting and enabling effective engagement between these RUN-EU research clusters and RUN-EU's European Innovation Hubs in Bioeconomy, Future and Sustainable Industries and Social Innovation, the transfer of new technologies developed by RUN-EU to regional partners will be maximised thereby supporting the economic and social development of the RUN-EU regions.

3.3.1(iii) Technology Transfer (TT) Support

Effective technology transfer is pivotal to any successful innovation eco-system. To reach its full impact potential (commercial or societal transformation), new knowledge developed either by a RUN-EU researcher alone or with collaborators must be adequately protected and an appropriate route to commercialisation or application identified and agreed prior to knowledge transfer activities.

At **IPL,** coordinators of research units collaborate with the CPVC who oversees technology transfer activities.

The enterprise and innovation mission of **TUS** is "to turn ideas into innovation and innovation into thriving business, helping to drive economic growth within our region and across Ireland." The technology transfer function at TUS, shown previously in **Figure 6**, facilitates the technology transfer requirements of the research institutes / centres / groups which include

areas of strength in biotechnology, biosciences, smart drug delivery, materials, polymer engineering, sensor technology, manufacturing technology, software, ICT, cybersecurity, and sustainable energy. TUS hosts three Technology Gateways – Shannon Applied Biotechnology Centre (SABC), Applied Polymer Technologies (APT) and Connected Media Application Design and Delivery (COMAND). TUS is a partner in the SFI (Science Foundation Ireland) funded CONFIRM, ADAPT, AMBER, SSPC, CÚRAM and Lero Research Centres, in the EI/IDA funded PMTC and MTI (Meat Technology Ireland) Technology Centres, and collaborates closely with the SFI-funded BiOrbic Research Centre, the Irish Bioeconomy Foundation, IERC Tyndall and Irish Manufacturing Research. TUS hosts two Enterprise Ireland funded regional clusters: the Irish Digital Engineering & Advanced Manufacturing Cluster (IDEAM) which helps manufacturing SMEs in all aspects of smart manufacturing and digital engineering; the Advanced Technologies in Manufacturing Cluster (ATIM) which aims to enable manufacturing SMEs to take advantage of the opportunities presented by Industry 4.0. As the focus of the centres is collaboration with business/enterprise, this function at TUS is well established and experienced in all aspects of TT.

The 4 research units of **HAMK** (Bio, Edu, Tech and SMART) integrate technology transfer services into collaborative research projects.

The organizational structure at **IPCA** which supports technology transfer is G3E (Office for Employment, Entrepreneurship and Business Liaison). The 2023 planned Valorisation and Innovation Center (VIC-IPCA) will focus on scouting, scanning, and screening activities to detect and support new innovations, to ensure technology disclosures and to assess their technical and market potential, protecting intellectual property rights, when applicable and valuable, and on marketing technology value-propositions to disseminate knowledge and to transfer innovative applications and technology.

NHL Stenden manages its technology transfer operations through the Centres of Expertise in which NHL Stenden participates namely Water Technology, Green PAC, Smart Sustainable Manufacturing, Leisure, Tourism & Hospitality (CELTH) and KennisDC Logistiek.

The business developers of **SZE**'s Uni-Inno Ltd. prepare business plans and suggest business development supports. They collaborate with industrial partners to exploit IP and identify joint business development opportunities through licensing agreements.

FHV's Department of Law supports the technology transfer process, e.g., when it comes to patent application. The Head of Research is also a first contact point when it comes to innovations arising from research that creates new IP, patents or similar.

Each partner offers TT support in some fashion to its researchers. While most support is provided by a somewhat centralised function, TT at FHV is different to the rest with TT expertise being provided by the Department of Law (in collaboration with the Head of Research).

3.3.1(iv) Supporting Policies

Effective technology transfer requires a proactive approach that engages researchers, protects foreground IP, and encourages potential industrial partners to licence the new technology. Technology transfer policies standardise registration and commercialisation of IP and ensure that the IP interests and rights of the RUN-EU partner university are protected. These policies and the signed agreements enable the licensing university to retain the IP rights to the technology. The university may grant a nonexclusive, partially exclusive, or exclusive license for the conditional use of the technology under predefined conditions. Multiple nonexclusive licenses may be granted to several companies to expand the use of an innovation (product or process) across different fields. Royalty payments arising from a licensing agreement are normally distributed to the inventors and shared within the institution to reinvest in research and innovation activities. Often the licensing agreement retains the university's right to continue to use the IP for educational purposes and publication under restricted conditions.

Innovation and technology transfer is clearly emphasised in **IPL's** strategic plan to 2030 through its mission, vision, values, strategic objectives (SO. 3) and operational objectives. Ambitious goals have been committed in key performance indicators (KPIs) related to innovation/technology transfer to 2030 which include having 150 R&D projects running in collaboration with national and international entities per year, 60 spin-off companies established, and 10 IP rights transferred to economic agents by 2030. To facilitate achievement of these goals, several regulations are enforced, some of them recently created. The most relevant on this topic are:

- Regulation of IP in Polytechnic of Leiria (published in 2012: https://www.ipleiria.pt/wp-content/uploads/2015/01/17311_Reg._propriedade_intelectual_IPL.pdf)
- Regulation of Spin-off creation in Polytechnic of Leiria (published in 2019: https://cpvc.ipleiria.pt/files/2020/08/Regulamento-para-a-cria%C3%A7%C3%A3o-de-spin-off-do-IPL.pdf).

An Intellectual Property Policy and a Conflict-of-Interest Policy are in place at **TUS,** which are both focused on the capture, protection and development of innovation and support both the TUS research community in commercial exploitation of their own research and knowledge transfer from TUS to business in collaborative research projects funded under national funding programmes.

The policy at **HAMK** is to sign contracts for research services and co-operation in projects.

IPCA's strategic plan identifies six categories, with the research, development, and innovation (category 4), and the interaction with society (category 5), including a focus on R&D, and detection, development, and transfer of innovation to organizations and society. Within the strategic plan, there are concrete actions, such as monetary awards, training, and specialized mentoring within the scope of "Poliempreende" and financial support (with grants) for eligible students in co-creation projects with companies, under the "Link me up" programme.
An example of institutional policy is IPCA's participation in the EIA – European Innovation Academy. EIA is the largest digital innovation program in Europe, where 450 participants of 70 nationalities, in a total of 90 teams participate, and have training with about 90 speakers and mentors.
IPCA will participate in the 2022 edition with 8 students with an investment per student of €1500 registration fee + accommodation for 3 weeks in Porto, plus stipend to cover part of travel and food expenses. It is an institutional investment ensured by IPCA and Santander that demonstrates the IPCA policy in training students for innovation and entrepreneurship.
IPCA is also investing in the creation, in 2023, of the Valorisation and Innovation Center (VIC-IPCA), which will bring together researchers, firms, and technology transfer professionals to convey results stemming from scientific and technological research to the marketplace and to wider society, along with associated skills and procedures that can create utility for the ones who benefit from the use of R&D and Innovation outcomes.

At **NHL Stenden,** valorisation takes place in education and in, for and with the companies and institutions in which the research was conducted. Innovations are not actively shared with other companies and institutions, other than through publications, as the primary focus is finding solutions for the companies and institutions in which/with whom we conduct research. There is no policy in place, except for the research (and education) policy in which the contribution of research (and design-based education) to develop solutions for social issues and innovation of professional practice and society is advocated.

IP regulations (in Hungarian) and the Business Development Committee operating rules (in Hungarian) are the policies which guide/regulate innovation and technology transfer at **SZE**.

At **FHV,** the topic of IP is covered in grant agreements of respective research proposals. Apart from this, no specific FHV internal policy is in place.

The inclusion of technology transfer targets in strategic plans of the majority of RUN-EU partners along with policies to enable implementation points to the strategic importance of this activity to each partner. Partners who do not have well established TT track records do not have this activity included in the organisational strategic plan or policies in place.

3.3.2 Intellectual Property (IP) Management

Research, Development and Innovation (RDI) are central to the RUN-EU Discovery programme. Knowledge transfer, including commercialisation resulting from RUN-EU research activity, is an important element of the RUN-EU discovery program. Our research is strategically orientated and impact focused. Through innovative partnerships between RUN-EU researchers and industry partners and other stakeholders, our aim is to remove existing obstacles to innovation and revolutionize the way the public and private sector work together to bring research developments and advancements to the marketplace for societal benefit.

3.3.2(i) IP Capture

Any discovery or invention made that might be commercially useful, patentable, or otherwise protectable, must be captured, usually though an Invention Disclosure Form. The proper and prompt completion of an Invention Disclosure Form is essential to the effective functioning of the TTO. IP capturing processes of each RUN-EU partner is described here.

IP capture at **IPL** is triggered when a researcher completes an invention disclosure form which is submitted for CPVC review of its commercial potential.

The initial step in IP capture at **TUS** is the completion of an invention disclosure form by a researcher, in accordance with the TUS IP policy. This form must be submitted no later than within 30 days of the discovery or invention to the technology transfer office (TTO). Any IP reported in an Invention Disclosure Form shall be submitted to the IP Committee for assessment under the guidelines of this IP Policy and for recommendations to TUS regarding the patentability and/or potential commercialisation. The IP Committee may recommend that other suitably qualified advisors or external consultants be engaged to advise on the assessment of the IP. As far as practicable, the relevant Originators or researchers should be involved in the evaluation (and where relevant protection) process by the IP Committee.

- The criteria to assess and decide on the commercial value of the IP includes (without limitation):
  - Assessment that the IP does not cater for a once-off need and that it has a potential long-term benefit.
  - Technical and commercial feasibility.
  - Proof of concept (business plan, access to finance etc.).
  - Potential for sale or licensing of technology or consultancy.
  - Demonstrates a competitive advantage based on differentiated or innovative product or service.
  - Development stage of the subject matter.
  - Commercial focus and profit motive.

- Study of comparable existing subject matter, licences, and Commercialisation practices.
- Proximity to market.
- Market valuations.
- Barriers to entry into markets.
- Estimated projected sales based on market research.
- Third party assistance including for example input from industry and state agencies.
- Estimated cost of patent process.

- A decision will be made by the IP Committee within 60 days (or such longer period as may reasonably be required) of receipt of an Invention Disclosure Form and the Originator of the IP will be notified in writing of the decision made.

An invention notification process is available at **HAMK**. If IP is patented in a project, the inventor has sole right to the IP.

At **IPCA,** the research unit director must report the innovation results to the Pro-president for Research and Innovation, to assess and define a strategy of valourisation of R&D outcomes, which may include an application for the protection of intellectual property rights.
A technology disclosure form must be filled in with information describing the advancement and results that have been achieved. IPCA also has an ongoing project, aiming to value and transfer knowledge and technology, ensuring the capture and the protection of intellectual property rights that can generate economic or social benefits. This project, named, "Knowledge circle," code: POCI-01-0246-FEDER-181295, is supported by the European Regional Development Fund (ERDF) and is developed in cooperation with the Polytechnic Institute of Leiria.
Under this project technology scouting activities will be carried out, starting in July 2022, to ensure the disclosure of research results, its assessment and definition of a protection and valourisation strategy.

Compliant with the Netherlands Code of Conduct for Research Integrity (2018), research data and outcomes are shared open access at **NHL Stenden**. This includes innovation because of research. Agreements on IP are to be made in advance with companies and institutions. Except for overall information and support, as well as model agreements, the process for capturing IP is not managed by the university. This also accounts for the management of interactions with companies. A data management policy and accompanying infrastructure is currently under development. In case of those Centres of Expertise that collect and work with sensitive data, the process for IP is regulated and managed by the Centre of Expertise.

There are 2 paths for IP capture at **SZE**. In the first instance, a researcher approaches the MC and Uni-Inno Ltd., and the disclosing process starts. Documenting a description of the IP is time-consuming, and progression through the process is slow.

Secondly, the MC and Uni-Inno Ltd. host awareness raising events for researchers of competence centres and research groups of the university where bilateral meetings identify potential IP and begin the capturing process.
At **FHV,** capture of IP created during a research project is addressed in the project grant agreement. The first contact point is the Head of the Department of Law and the Head of the Research Department.

RUN-EU partner institutions have well defined practices for capturing IP. The compilation of RUN-EU IP to create a technology offering profile for regional business and social partners would be a significant offering of the RUN Innovation Ecosystem to our regional partners.

3.3.2(ii) Innovation and Technology Offerings

Once foreground IP has been captured and protected, the next step in the TT process is the promotion of the IP as an innovation or technology offering. RUN-EU partners differ somewhat in how innovations and IP developed by them are disseminated and promoted to potential licensees.

Collaborative R&D projects developed with companies is one of the main channels used by **IPL** to disseminate such offerings, in addition to an annual Technology Fair, in which relevant potential licensee companies are invited and at which the developed technology is demonstrated. A digital portfolio to include all IPL patented technologies is currently being developed.

At **TUS,** companies are informed about innovation offerings through direct contact with the research and TTO offices, the research section of the TUS website, relevant Research Institute website and via direct contact with research PIs. Nationally, technology offerings are disseminated through Ireland's National IP agency Knowledge Transfer Ireland.

Information about research services is spread through projects and individual contacts at **HAMK**. Strategic marketing has increased in recent times and attention has been paid to dissemination channels such as websites. More strategic discussions with key companies have been launched to increase and maintain long-term co-operation.

Researchers and Professors at **IPCA** play a pivotal role in identifying the companies to be contacted for technology transfer. This technology transfer process is also supported by G3E (Office for Employment, Entrepreneurship and Business Liaison), and through IPCA's cooperation and internationalization unit.
A network of partners has been created via the "Knowledge Circle" project, integrating business support organisations from the areas of influence of IPCA and IPL. Objectives of this network of partners include facilitation of access to and contact with companies to promote

the value-proposition of developed technologies, support the market assessment of technologies with a high technology-readiness-level, support the identification of financial support programmes for new technology development stages, and to support the creation of spin-off companies.
IPCA will host an open day for industry in the fourth quarter of 2022. Attending companies will be informed of R&D projects, research lines and outputs, and will be involved in discussions on potential collaborations. Incentivisation schemes will be implemented for companies that contribute most to the advancement of new projects and technology development.
A joint quarterly newsletter is being prepared by IPCA and IPL, with Information for companies about funding opportunities, collaborative innovation projects, and outcomes of research projects, as well as R&D services that can benefit enterprises.
Multidisciplinary Knowledge Exchange meetings are also being organised to discuss relevant themes for industry. These themes are defined together with the "Knowledge circle network." Under the project "Knowledge circle," experimentation actions and demonstration pilot-projects in companies will be held to support validation and transfer of technical solutions with a high technology-readiness-level.

Compliant with the Netherlands Code of Conduct for Research Integrity (2018) **NHL Stenden** research data and outcomes are shared open access. This includes innovation which arises from research. Agreements on intellectual property (IP) are signed with companies and institutions in advance of research commencement. Except for overall information and support, as well as model agreements, the process for capturing IP is not managed by the university. This also accounts for the management of interactions with companies, although an infrastructure and accompanying policy is being developed for e.g., data management. In case of Centres of Expertise that collect and work with sensitive data, the process for IP is regulated and managed by the Centre of Expertise.

At **SZE,** technology offerings are advertised through personal contacts. Every case needs agile management.

Companies undertaking collaborative research projects with **FHV** are made aware of technology offerings during the discussion of the grant agreement.

The RUN-EU Innovation Ecosystem should act as a vehicle for the dissemination and promotion of innovation and technology offerings of RUN-EU partners. Promotion of offerings through the hosting of industry open days, dissemination flyers and incentivisation schemes to entice industry involvement will be explored.

3.3.2(iii) Management of Company Interactions

A key objective of the RUN-EU PLUS project is the strengthening of business-academia interactions through research collaborations. Every RUN-EU partner institution is well established in working in collaborative research projects (and otherwise) with its regional partners. The RUN-EU Innovation Ecosystem will build structures and practices which will broaden these traditionally regional relationships/collaborations and create new pan-European opportunities for collaborations between RUN-EU research clusters and RUN-EU regional business/social organisations. RUN-EU's European Innovation Hubs will play a key role in introducing new partners to each other. Effective collaboration agreements, documentation and monitoring of these collaborations will allow scale-up of the number of collaborations and the inclusion of pan-European collaborations. A review of current partner institution practices shows the following:

IPL supports each collaborative R&D project through a consortium contract, in which all interactions are declared, including in relation to IP issues and technology transfer at the end of the project. A complete database of funded projects is maintained, with information included on all research teams and external partners. Indicators based on this database are provided to all colleagues with management responsibilities (e.g., Research Unit coordinators) using the data visualisation tool Microsoft Power BI.
Initial company discussions are supported by a non-disclosure agreement (NDA) as required. All researchers have access to English and Portuguese versions of NDA minutes as reference. Licensing agreements are developed in a case-by-case approach.

At **TUS,** company interactions are managed on a case-by-case basis using a memorandum of understanding (MOU), contract research agreement, consultancy agreement, or contract for services agreement, as appropriate.

A CRM-database, research contracts for long-term and short-term research services and strategic co-operation agreement with 2-3 companies are all used at **HAMK** to support collaborations with external partners. HAMK is a partner in the company-led national ecosystems named Industrial Biotechnology Cluster, ExpandFibre Ecosystem Finland, and a Steal Excellence Centre.

For projects developed between **IPCA** and external organisations, formal agreements are established either in the form of an MOU, cooperation R&D agreements, Material Transfer Agreements, NDA, Licensing agreement or other, depending on the requirements of the project and collaborations. These agreements are managed by IPCA central services to assure legal compliance. Research units also maintain cooperation records of projects in which they have participated.

In compliance with the Netherlands Code of Conduct for Research Integrity (2018), at **NHL Stenden,** research data and outcomes are shared open access. This includes innovation because of the research. Agreements on intellectual property (IP) are to be made in advance

with companies and institutions. Except for overall information and support, as well as model agreements, the process for capturing IP is not managed by the university. This also accounts for the management of interactions with companies, although an infrastructure and accompanying policy is being developed for e.g., data management. In case of Centres of Expertise that collect and work with sensitive data, the process for IP is regulated and managed by the Centres of Expertise.

SZE monitors its interactions with companies through research contracts, licensing agreements with Uni-Inno Ltd., and participation in spin offs with minority shares.

At **FHV,** collaborations with external organisations are monitored through research contracts including partial non-disclosure agreements. FHV maintains a common database on content management systems. New companies are introduced to FHV through a Start-up Pitch Contest in addition to activities which involve individual matchmaking of Start-ups and companies.

In summary, all RUN-EU partners formalise collaboration agreements with external partners through the signing of research contracts which are usually administered, monitored, and stored by a central function of the institution using a customer management system.

3.3.3 Business Incubation

Entrepreneurship is recognised internationally as a key contributor to economic performance. Correlation exists between economic performance and entrepreneurship in terms of economic growth, innovation, employment, technological change, and exports. Entrepreneurship stimulates sustainable economic growth and job creation (Evaluation of Supports for Research Development and Innovation, Forfás).
Business incubation which is carried out at universities accelerate the commercialisation of research outcomes by combining the entrepreneurial drive of business and social enterprise start-ups with the knowledge, research, resources, and today's innovation-driven centres. RUN-EU alliance partners provided an account of their business incubation activities which are presented in this section.

3.3.3(i) Business Incubation Centres

Business incubators accelerate successful development of entrepreneurial companies through an array of business support resources and services, developed and managed by incubator management and offered through a network of experienced contacts (The role of business incubators in supporting the SME start-up).

IPL are associated to 4 regional business incubation centres:

- StartUp Leiria https://startupleiria.com/en/home-en/ – IPL assumes a majority position and assume the presidency of the incubation centre

- OPEN https://open.pt/
- OBITEC https://obidosparque.com/pt/a-obitec
- Smart Ocean https://smartoceanpeniche.com/

TUS plays a central role in the regional enterprise support system and owns four campus incubators located in Athlone, Clonmel, Limerick and Thurles. Start-up companies are supported by two Enterprise Ireland New Frontiers programmes.

HAMK is currently not involved in formal business incubation activities, however it does provide support to companies through its Design Factory and some modules on entrepreneurship for students.

IPCA does not have a formal business incubation center rather it partners with business innovation centers that allow physical incubation of companies created by IPCA's academic community. Within the Knowledge Circle Network, VilaWork (Barcelos Business Center and Science Park) is a partner that provides incubation services, and delivers a programme called VilaIdea which supports incubation and entrepreneurship. The network also includes a science park (Avepark) and an Industrial Park (Parque industrial Barbosa de Oliveira). With our internal services and with our partners, the IPCA academic community has the support for their spin-off and start-up companies.

NHL Stenden works closely with organisations that offer direct innovation assistance and support for start-up companies (YnBusiness in Fryslân, GroBusiness in Groningen and IBDO in Drenthe). To support student entrepreneurial development and help ensure they can work in their own (start-up) company while studying, NHL Stenden has a Centre for Entrepreneurship. Currently, the latter does not have a connection with research.

A small business incubation facility currently exists at **SZE.** Uni-Inno Ltd. and the SZE management committee manage it. In 2023, one floor of a new science park building will be dedicated to business incubation and coworking places will attract external partners.

At **FHV** the Startup Center, Startupstube and the Business Intelligence & Innovation Hub all support business incubation.

All RUN-EU partner institutions indicate business incubation activity. TUS runs 4 of its own incubator buildings while IPL and IPCA have incubation partnerships with local business incubation centres.

3.3.3(ii) Start-up Support

Supports required by business start-ups include business planning, access to funding and access to company resources including financial, human, material, and intellectual property. As

can be seen from the summaries below, in addition to business supports, some RUN-EU partners offer incentives to encourage companies to co-develop and licence foreground IP using their facilities and expertise in key areas.

IPL policies establish the benefits that it offers to spin off companies which include:

- Authorizing the use of facilities and laboratories of IPL, through a fee negotiated with the company, under preferential conditions compared to conditions negotiated with companies in general in the market.
- Establishing licensing agreements for patents, utility models, designs or models or other industrial property titles, of which IPL is the holder, through remuneration to be negotiated with the company, under preferential conditions in view of the conditions negotiated with companies in general in the market.
- Attributing to the spin-off companies the IPL licensing option rights on new developments in inventions relating to the rights listed in the previous points during the first 2 years of the company's existence.
- Authorizing use free of charge of the registered spin-off brand of IPL, in accordance with the graphic standards to be established for that brand.
- Providing free mentoring programmes during the first year of existence of the company, ensured by IPL mentors and with the support of one of the partner incubators of IPL.

TUS provides support to innovation and enterprise in the region using a wide variety of tools. Together, these mechanisms form the TUS Enterprise Ladder. The Enterprise Ladder is a unique approach to the provision of support to enterprise, through which the resources of the Institute – academic, research, business mentoring, facilities, and finance – are combined in an integrated way to make the right type of support available to an enterprise in the right way at the right time.

HAMK, has plans to expand on the support it provides to new businesses which only extends to students (start-up business school). HAMK is active in the Frush-event (in Forssa) which hosts a pitching competition for start-ups.

At **IPCA,** this support is identified according to the entrepreneur's needs. IPCA support is expressed in areas such as business plan definition and company creation, IPR protection, accounting and tax services, technical consultancy services specialized in the creation of digital games, among others. It is important to point out that students, graduates, and researchers with a potential business idea are invited to participate in the Poliempreende contest to benefit from training and from mentoring support.
IPCA also has partnerships with business innovation centers that allow physical incubation of companies created by its academic community.
In the coming year, 2023, when the infrastructure for the Valorization and Innovation Center (VIC-IPCA) is created, a business support office and pre-incubation space will be available,

providing a new business with a space for a limited period, not exceeding 24 months, to prove the business concept.
A voucher's concept is currently being developed to support researchers to validate pre-commercial ideas, further develop prototypes, and to support the creation of start-up and spin-off companies to add value to completed or nearing completed R&D results.

NHL Stenden works closely with YnBusiness in Fryslân, GroBusiness in Groningen and IBDO in Drenthe. These organisations offer direct innovation assistance and support to start-up companies. NHL's Centre for Entrepreneurship helps students balance the development of a start-up company with their studies**.** The Centre for Entrepreneurship currently does not have a connection with research.

The Management Committee of **SZE** organises events, competitions, clubs, and collaborations with external venture entities.

FHV supports start-ups in their business model development through coaching, mentoring, workshops, co-working spaces. It also offers matchmaking with Funding Institutions, Business Angels, Venture Capitalists, Corporates, etc.

Across the consortium, partners offer academic, research, business mentoring, facilities and finance supports to start-up companies. These offerings will be reviewed in detail and where appropriate, adapted to support delivery across the RUN-EU innovation ecosystem.

3.3.4 Training

The RUN-EU PLUS project supports the RUN European University in driving regional development and change by enhancement and expansion of the R&I capacity of the business stakeholders in alliance regions. Key objectives of RUN-EU PLUS are to strengthen the capacity of the human capital engaged in R&I activities, to foster joint R&I activities across the RUN-EU alliance and to reinforce cooperation in R&I activities between the alliance and business stakeholders.
Training provision for start-up companies is a key element of business incubation and in the RUN-EU PLUS project focus is placed on providing training support for both spin-in and spin-out business start-ups. Review of the training opportunities provided by alliance partners related to business incubation as well as innovation/technology development is presented in the following sections.

3.3.4(i) Business Incubation Training

Formal workshops and mentoring programmes are important elements to business incubation programmes for new start-ups. Start-ups may be classified as either spin-in or spin-out companies.

Spin-in company start-ups originate from outside the university and join an incubation centre to access inventions, research, technologies, and research facilities to develop a commercial opportunity through collaboration with the university. Alignment with key company research objectives and collaborative research opportunities which allow integration into the expertise and resources of the university are key. Companies may also spin-in to a university due to an attraction to new technologies, products, processes, or services developed by the university.

A spin-out company is a company which originates inside a university, and which is created to bring university research to market. Technology should be mature enough (with a high TRL) and route to commercialisation must be established. IP must be licensed from the university. Spin-out companies require a supportive environment for the initial years of the company's existence.

At **IPL** regular training workshops are provided in several subjects related to Entrepreneurship, IP subjects, Business, and financial plans.

TUS delivers the New Frontiers Entrepreneur Development programme, a national training and mentoring programme for start-up leaders. New Frontiers is here to help early-stage entrepreneurs to take the leap, offering a supportive yet challenging environment to help develop a business idea. Delivered on behalf of Enterprise Ireland by the Technological Universities, New Frontiers offers a combination of practical and interactive workshops, personalised mentorship, co-working space, and funding. The programme is designed to help reduce risk and dramatically increase a start-up's chances of success. Over three phases, the entrepreneur will gain the confidence and skills to develop a business idea within a supportive and encouraging environment.

Phase 1: Test your business idea-6 weeks
Held part-time over an 8–10-week period, Phase 1 will help research and test the market potential of the business idea. These weekend and evening workshops will provide information and general start-up training, allowing evaluation as to whether an idea can be turned into a viable proposition.

Key Benefits:

- Part-time across weekends or evenings
- Continuation in employment possible
- Prepares for accessing Phase 2
- Helps the entrepreneur to arrive at a go/no-go decision regarding the business.

Phase 2: Develop the Business

Phase 2 is a full-time six-month intensive engagement and places are offered following a competitive selection process. With a €15k stipend, the focus is on developing and validating the business proposition. This is undertaken with the support of workshops, mentoring, regular milestone reviews, free co-working space and the expertise and guidance from the programme team within the Institute/University.

Key Benefits:

- Support package valued at €30,000 including a €15,000 tax-free stipend – subject to satisfactory performance – with no equity taken in the business
- Practitioner-led workshops covering all aspects of building a successful start-up
- 5 x one-to-one mentoring sessions with seasoned mentors from the Enterprise Ireland mentor panel
- Free co-working space
- Access to expertise within the Technological University, i.e., research centres, graduates, etc.
- Support & Guidance in developing a strong business plan
- Web hosting and support from Amazon worth $15,000.

Phase 3: Implementing the Business Plan

Having successfully completed Phase 2, participants can apply to participate in Phase 3 of the programme. During this phase, participants work with a mentor to develop your business idea and will focus on implementing their business plan by bringing their product/service to market and preparing to acquire further funding.

Key Benefits:

- Further support package valued at €10,000+
- Co-working space for further 3 months
- Introduction to government and private investment support opportunities
- Additional 3 x one-to-one mentoring sessions.

HAMK currently does not provide training on business start-up for companies or researchers. There is however a Start-up-Business School delivered as a module to students.

As **IPCA** does not have a business incubation center, it therefore does not run its own business incubation programme. It supports incubation of start-ups created by the academic community through partnerships with business innovation centers.

NHL Stenden does not deliver a business incubation programme for companies, instead it partners with external support initiatives including YnBusiness in Fryslân, GroBusiness in Groningen and IBDO in Drenthe. NHL's Centre for Entrepreneurship provides training to students who have set-up their own business while studying.

SZE Presently we do not have training for business incubations centres.

FHV delivers training via the Scaleup initiative.

A RUN-EU business incubation training programme delivered across the alliance to support pan-European business start-ups would greatly benefit those alliance partners who currently do not have this facility available to their regional start-ups.

3.3.4(ii) Researcher Innovation/IP management/Entrepreneurship Training

For the development of a sustainable RUN-EU Innovation Ecosystem, a steady supply of innovation entrepreneurs must be created and supported in transferring their new knowledge to business and society. Training must be provided to RUN-EU researchers in all aspects of innovation design, development, protection, and commercialisation. Researchers require training and support in both licensing and entrepreneurship as commercialisation routes to market for their inventions.

IPL provides regular training workshops in several subjects related to entrepreneurship, IP management, business, and financial planning.

TUS provides a training course on introduction to IP to its research community and one-to-one direct training as appropriate for researchers with a view to developing IP and its management.

HAMK does not currently provide training on these topics to its researchers.

Seven training sessions are currently being delivered at **IPCA**, within the scope of Poliempreende, these include 1) Generation of ideas and value proposition, 2) Business models, 3) Business plan, 4) Intellectual property rights, 5) Economic and financial analysis, 6) Communication and marketing, 7) Build my pitch. In addition to these training sessions, the participants have approximately 75 hours of specialized mentoring.
Under the Knowledge Circle project, six workshops are planned which include 1) Patent searching, 2) Licensing and intellectual property rights, 3) How to write a business plan, 4) Creating successful companies through technological marketing, 5) Search for investors and structuring an investment proposal, 6) Building the management capacity.
Open lectures and seminars are also held, specially organized by IPCA's Management School and by G3E (Office for Employment, Entrepreneurship and Business Liaison).

As **NHL Stenden** does not have its own business incubation centres, no training supports are offered as such. Also, no innovation/IP management/entrepreneurship training is currently provided for our researcher community. Except for an incidental masterclass on for example entrepreneurship on the initiative of a professor. Whether there is a gap in training is difficult to assess as no additional training has been requested to date. Research conducted by NHL Stenden staff and students is always initiated by companies and institutions.

Currently, hands on and *ad-hoc* support is provided upon request at **SZE** with an accelerator programme in the planning phase.

At **FHV,** workshops on IPR are delivered. Female Entrepreneurial Empowerment Trainings and a Mentoring Programme are provided.

A structured and targeted innovation training programme will be offered to all RUN-EU researchers as part of the Researcher Career Development Training Development Programme (RUN-EU PLUS D4.2). This programme will provide training workshops on generic skills as well as research and innovation skills including patent writing, technology transfer and entrepreneurship.

3.3.5 Funding support for Innovation

3.3.5(i) External Funding support

Funding for R&I collaborations is fundamental to the sustainability and impact of the RUN-EU Innovation Ecosystem. The RUN-EU PLUS project will support its collaborative business and societal partner organisations to avail of regional, national, and European funding support opportunities to build its collaborative research and innovation projects. The current funding opportunities available in the RUN-EU regions to support innovation activities with external industry/organisations is presented in this section.

The National Innovation Agency in Portugal, under PT2020 and previous programmes, co-funded by European Structural Funds, runs a Co-Promotion Research and Technological Development (R&TD) programme. In the last programming period (PT2020), **IPL** has been involved in 56 Co-Promotion R&TD projects, which represented more than 56M€ for the consortia.
The Incentive System for Collective Actions (SIAC) launch regular competitive calls to support collective projects that are directed to entrepreneurship promotion and technology transfer programs. Supported by COMPETE, this programme also falls under PT2020 and previous programmes and is co-funded by European Structural Funds. IPL is currently involved in 4 SIAC

programs: “INOVC+” (regional funding); “LinkMeUp” (national funding); “Knowledge Transfer” (national funding); “PREMIER” (regional funding).

In Ireland, **TUS** builds research and innovation partnerships with external entities by availing of research funding which is provided by Enterprise Ireland through the Innovation Voucher, Innovation Partnership, and Feasibility Study funding schemes. Their Commercialisation Fund provides researchers with the opportunity to validate technology which they have developed with a view to commercialising the outcomes of the research via a spin-out company or licensing agreement to an external entity. Science Foundation Ireland’s Research Centres fund industry/academia research partnerships through co-funding agreements. Knowledge Transfer Ireland provide support for legal and patent costs as appropriate.

In addition to contract research projects where a company pays for the research without the support of government funds, **HAMK** researchers also avail of European Regional Development Funds which are administered by the regional agency. These include:

i. Recovery and Resilience Facility fundings by ministries and Business Finland for innovation / research projects and infrastructure.
ii. Business Finland (innovation voucher, innovation project funding parallel with companies own projects)
iii. Finish Ministry of Education and Culture funds strategic research of UAS (Universities of Applied Sciences). Other ministries also fund research in their fields of expertise (carbon farming, environmental issues etc).
iv. Tandem Industry Academy funding by the Finnish Research Impact Foundation. Two-year funding is provided for post-doctoral fellows working one year at the university and another one in a collaborating company. Traditionally, the Universities of Applied Sciences have not participated often in this scheme.

At **IPCA,** in addition to contract research funding, funding which supports innovation activities between IPCA and external industry/organisations, comes from:

i. The Portuguese Foundation for Science and Technology.
ii. The H2020 programme.
iii. European Regional Development Fund granted by Norte 2020 and by COMPETE 2020.

IPCA also benefits from private funds coming from the development of projects with industrial companies aiming at developing solutions to target specific needs and trends, some examples include:

i. RoboPlast: Framework for robotic computer vision-based identification, collection, and automatic storage of injected polymeric parts (2018-2021).
ii. Development of medical devices based on robotics and artificial intelligence (2021-2025).

Projects developed in co-promotion, supported with public financial sources, include the following:

i. INJECTID4.0: Automatic Insertion of RFID Systems in the plastic injection process (POCI-01-0247-FEDER-047195, 2021-2023.
ii. SAFHE - Safe Health Elderly Monitoring (NORTE-01-0247-FEDER-070200).
iii. HowMI (How am I?) – Home Wearables and Monitors Integrated (POCI-01-02B7-FEDER-053284, 2021-2022).
iv. IMPACTV - Emotional Impact and TV Movie Audience Prediction Operation No. 68574 (Call 17/SI/2019).
v. Raid-Piracy (2021-2023, Operation No. 446964 (Call 17/SI/2019)).
vi. Sono Ao Volante 4.0 (2019-2022, NORTE-01-0247-FEDER-039720).

The Concern staff **NHL Stenden** have two advisors who researchers can contact for support on:

- Finding a suitable grant scheme (e.g., regional, national, and European funding calls).
- Reading/advice on grant applications.
- Providing input for the non-substantive side of a grant application.
- Advising on the funding strategy of academies/research groups and/or professorships; and
- Explaining the internal procedure within NHL Stenden.

The Management Committee of **SZE** provides proof of concept funding from a national fund. A University innovation fund is in a planning phase.

FHV engages with funding programmes of the Austrian Research Promotion Agency (FFG) which is the national funding agency for industrial research and development in Austria. The agency provides several programmes to support innovation: https://www.ffg.at/en.
The startupstube is funded by the AplusB Scaleup Programme which is run, and administered by, the Austrian Wirtschafts Service (AWS) and supported by the Federal Ministry for Transport, Innovation and Technology.
The Business Intelligence & Innovation Hub is an innovation and support organization of the Vorarlberg University of Applied Sciences. The Hub is elaborated within the Interreg Central Europe Project “4Steps – Towards the application of Industry 4.0 in SMEs (CE1492).” It is a tool to support the region of the Federal State of Vorarlberg in the further development of the Smart Specialization Strategy “Intelligent Production”.

It is evident that a variety of regional funding opportunities exist for research and innovation collaborations and researchers will be trained in availing of such funding as part of the RUN-EU PLUS Innovation Capacity Programme presented in Section 3.4 of this deliverable document.

3.3.5(ii) European Funding Support

In addition to the Horizon Europe funding programme presented previously in **Section 2.1** (**Figure 2**), RUN-EU will support its regional partners to engage with SME supports for innovation including the following programmes:

European Innovation Council Accelerator (SME Instrument) Programme
The EIC Accelerator (SME Instrument) is part of the European Innovation Council (EIC) pilot and supports market-creating innovation in small companies with significant growth potential and global ambitions.
European Innovation Council Fast Track to Innovation (FTI)
FTI is part of the European Innovation Council pilot which helps close-to-market innovations jointly developed by small companies and their industrial partners.https://wayback.archive-it.org/12090/20210412123959/https:/ec.europa.eu/easme/en/cosme-0
Enterprise Europe Network
This network helps small and medium-sized enterprises make the most of business opportunities in Europe and beyond.
European IPR Helpdesk
The European IPR Helpdesk offers support on IP matters to participants of EU-funded research projects and EU small to medium enterprises involved in transnational partnership agreements.
https://wayback.archive-it.org/12090/20210412123959/https:/ec.europa.eu/easme/en/section/eic-fast-track-innovation-fti

3.3.5(iii) Organisational Funding Support

Alliance partners were asked to provide an account of funding resources made available by their organisation to support innovation activities with external organisations. IPCA and SZE are currently the only RUN-EU partner institutions who provide internal organisational funds to financially support research and innovation activities with external organisations.

At **IPCA,** internal funding is made available to support innovation activities with external organizations under the strategic goals of “research, development, and innovation,” and “interaction with society.” Part of this funding is made available by submission of a request for funding, which is reviewed by financial services and submitted to the President of IPCA for approval.
Under IPCA’s Digital Hub ATTRACT there are funds available to support the experimentation, testing, development, and adoption of solutions using Artificial Intelligence (AI) and HPC (High Performance Computing), to boost innovation and cooperation with external organisations in these domains.
G3E (Office for Employment, Entrepreneurship and Business Liaison) also has several initiatives underway to foster business liaison.

Under the “Knowledge Circle” project, there are funds for support services to develop experimental actions and pilot-projects with industry.

SZE’s Vehicle Development and Digital Development Competence Centres manage internal research and innovation funding programmes.

3.3.5(iv) Financial Support for Innovation

IPCA is the only RUN-EU partner which directly funds innovation and innovation training. Within the IPCA strategic plan are concrete actions, such as monetary awards, training, and specialized mentoring within the scope of “Poliempreende” and financial support (with grants) for eligible students in co-creation projects with companies, under the “Link me up” programme.
“Link me up” consists of multidisciplinary teams of students from different study fields that work together with a company to address a challenge that is valuable for the company and for the students' creativity and application of knowledge to develop new ideas and concepts oriented to the company’s future innovation.
Another example is the IPCA financial support to students for their participation in the European Innovation Academy (EIA), the largest digital innovation program in Europe, where 450 participants of 70 nationalities, in a total of 90 teams participate, and have training with about 90 speakers and mentors.

TUS directly funds innovation development through its TUS President’s Research Degree Scholarship Programme.

Indirect financial support for innovation development and training is provided by **IPL**. Besides the generic support provided by CPVC structure and transversal support made by technical staff, there are no specific direct internally funded programmes made available. However, almost all externally funded projects ate funded at a below 100% rate, meaning that our internal revenue is directed to indirectly support the non-funded part of the expenses (between 15% and 25%).

TUS and **SZE** both deliver nationally funded programmes. TUS delivers Enterprise Ireland’s national New Frontiers business incubation programme detailed previously in **Section 3.3.4**. SZE provides supports for student innovation from the national grant called “University Innovation Ecosystem.” This is a Hungarian programme and has the focus solely on student innovation. For instance: design thinking bootcamp, training for student start-ups.

FHV European Institute of Innovation and Technology KICs: https://eit.europa.eu/tags/kics

3.4 Innovation Capacity Programme

RUN-EU PLUS has developed an Innovation Capacity Programme which is the corner stone of the RUN-EU PLUS Innovation Eco-system being developed across the partner organisations of RUN-EU. This Innovation Capacity Programme is designed to promote the effective creation and protection of new knowledge, the identification of skills needs and the valorisation of an entrepreneurial mindset within the RUN-EU research community and its partner institutions. It will help to lead research and innovation (R&I) development across the consortium, supported by an innovation detection scheme to identify new innovations and innovators. The programme will share best practices and integrate technology transfer functions across RUN-EU, including innovation support staff and business incubators. It will develop common RUN-EU processes for design, development, identification, capture, protection, licensing, and promotion of technology offerings to external stakeholders.

The Innovation Capacity Programme has been designed to enhance the regional R&I eco-system within RUN-EU members, which will be applied to strengthen the collaborative research capacity between business and academia, to support innovation development and to develop & mainstream entrepreneurship and transversal skills.

The programme will be implemented across the RUN-EU alliance with specific objectives to:

- Enhance the R&I eco-system within the RUN-EU alliance.
- Strengthen the research capacity in business-academia.
- Support innovation development.
- Develop & mainstream entrepreneurship and transversal skills.

A key element of this Innovation Capacity Programme is to strengthen the commercialisation culture embedded across the RUN European University. Ongoing internal marketing to continually raise awareness and understanding of research commercialisation is essential.

3.4.1 Technology Transfer (TT) Support

The aim is to identify best practice in TT across the consortium and to share experiences and expertise to build TT expertise within the RUN-EU research community. The RUN-EU Template Knowledge Transfer Agreements (RUN-EU D5.3), presented previously in **Section 2.3**, will be implemented across the alliance. Innovation development will be incentivised through attractive royalty rates for inventors and support services for spin-out formations.

Support, mentoring and training will be provided for researchers in:

- Innovation development - researchers will be supported in building the commercialisation imperative into their research and in developing their technology to a TRL (Technology Readiness Levels) where it can be protected and demonstrated.

- IP management and commercialisation
- RUN-EU Knowledge Transfer forms
- Commercialisation
- Entrepreneurship
- Funding applications

3.4.2 Innovation Detection Scheme

An effective innovation detection scheme must focus on scouting, scanning, and screening actions. *Scouting* includes review of current projects and results to identify relevant inventive concepts and insights, assessing commercialisation readiness-level or technology-readiness-level, and verifying available resources and valuable partnerships to support development of a meaningful project development roadmap.
Scanning implies retaining the most promising concepts with foreseen market and scientific potential, ensuring that invention-disclosure or technology-disclosure forms are filled in.
Screening refers to the analysis of the portfolio of inventions and technologies to make decisions
regarding the protection of intellectual property rights and defining a valorization strategy.
The RUN-EU PLUS Research & Innovation ambassadors will play a key role in innovation detection in their organisations.

A researcher who identifies a discovery or invention with commercial potential and is patentable, or otherwise protectable will complete an Invention Disclosure Form and submit it to their TTO or RUN-EU R&I ambassador as appropriate. This form will be presented to the RUN-EU Research & Innovation Committee (**Section 4**) for inclusion in the RUN-EU portfolio of Innovation & Technology Offerings.

- The proper and prompt completion of an Invention Disclosure Form is essential to the functioning of the RUN-EU Research & Innovation Committee.
- This form should be promptly submitted (and in any event no later than within 30 days of the discovery or invention or other IP in question) to the TTO/ RUN-EU R&I ambassador.
- Any IP reported in an Invention Disclosure Form shall be assessed by the RUN-EU Research & Innovation Committee regarding the patentability and/or potential Commercialisation.
- The RUN-EU Research & Innovation Committee may recommend that other suitably qualified advisors or external consultants be engaged to advise on the assessment of the IP.
- As far as practicable, the relevant Originators or researchers should be involved in the evaluation (and where relevant protection) process by the Committee.

- The criteria to assess and decide on the commercial value of the IP should include (without limitation):
    - Assessment that the IP does not cater for a once-off need and that it has a potential long-term benefit.
    - Technical and commercial feasibility.
    - Proof of concept (business plan, access to finance etc.).
    - Potential for sale or licensing of technology or consultancy.
    - Demonstrates a competitive advantage based on differentiated or innovative product or service.
    - Development stage of the subject matter.
    - Commercial focus and profit motive.
    - Study of comparable existing subject matter, licences, and commercialisation practices.
    - Proximity to market.
    - Market valuations.
    - Barriers to entry into markets.
    - Estimated projected sales based on market research.
    - Third party assistance including for example input from industry and state agencies.
    - Estimated cost of patent process.
- A decision will be made by the Committee within 60 days (or such longer period as may reasonably by required) of receipt of an Invention Disclosure Form and the Originator of the IP will be notified in writing of the decision made.

3.4.3 Commercialisation & Promotion of Innovation & Technology Offerings

- Profiling of RUN-EU Innovation & Technology Offerings for potential commercialisation and licensing.
- Spin-outs: Regional networking hybrid (analogue and digital) platform to bring innovations (and innovators) together with investors. Innovation matching events to take place 3-4 times a year, where innovations can be presented in pitches and feedback provided. For companies, the economy and other employers, this event can also be a way to find and promote talent.
- Licensing agreements: Promotion of offerings within RUN-EU ecosystem (amongst partners and external stakeholders) through RUN-EU website, R&I ambassadors, innovation pitch days/ industry open days, promotional material and a licensing incentive scheme.

3.4.4 Entrepreneurship training

- Provide workshops and educational programmes on entrepreneurship.

- Support spin-out formations through incentivisation schemes.
- Promote entrepreneurship as an attractive researcher career opportunity.
- Host a RUN-EU Innovation Academy where researchers can pitch their technology offerings to business and investors.

3.4.5 Financial support services for R&I collaborations

Provide training and support services (including mentoring) for principal investigators in writing funding proposals to secure:

- Regional funding opportunities.
- National funding opportunities.
- European funding opportunities.
- Contract research.

Support will also be provided on the types of contract agreements concerning these collaborations.

3.4.6 EIT Knowledge and Innovation Communities

Research clusters (and individual centres and groups) will be encouraged to become partners of the appropriate Knowledge and Innovation Community of the European Institute of Innovation and Technology (EIT). There are currently nine Innovation Communities and the focus of each is on a different societal challenge:

- EIT Climate-KIC: Working to accelerate the transition to a zero-carbon economy
- EIT Digital: Driving Europe's digital transformation
- EIT Food: Leading a global revolution in food innovation and production
- EIT Health: Giving EU citizens greater opportunities to enjoy a healthy life
- EIT InnoEnergy: Achieving a sustainable energy future for Europe
- EIT Manufacturing: Strengthening and increasing the competitiveness of Europe's manufacturing industry
- EIT Raw Materials: Developing raw materials into a major strength for Europe
- EIT Urban Mobility: Smart, green, and integrated transport
- EIT Culture & Creativity: Transforming Europe's Cultural & Creative Sectors and Industries.

3.5 Governance - RUN-EU Research & Innovation Committee

The RUN-EU Research & Innovation Committee will effectively act as the RUN-EU Technology Transfer Office, providing services for technical and market assessment and supporting the identification of R&D investment programmes for further developments. The committee will promote an intellectual property and entrepreneurial culture among researchers and pull investment and push R&D and technology towards industry. The committee will support RUN-EU alliance partners in their invention disclosures and strategic protection of intellectual property rights, marketing of technology-value proposals, negotiations with organizations to either license, sell, establish a joint venture, create a spin-off company, or to establish research and cooperation agreements.
The committee will support in the establishment of industrial and strategic partnerships to leverage resources and seek technology adoption, and to develop tailor-made projects, or projects to create a new product or a new integration of a product into a system, or to update, replace or diversify a product or product range and specifications, or to solve a particular problem or to pursue a desired knowledge or technological advancement.

3.5.1 Structure

The RUN-EU Innovation Ecosystem will be managed by its Research & Innovation Committee, a central oversight committee which will strategically lead both knowledge creation and future skills training across the RUN-EU alliance in accordance with the needs of RUN-EU regional business and societal partners. The committee is comprised of key roles in the ecosystem including the directors of the RUN-EU European Innovation Hubs, Research Cluster leads, RUN-EU PLUS R&I ambassadors, TT Case Managers and the RUN-EU co-ordinators. Between them there is extensive expertise in TT, research, innovation development and commercialisation.

The knowledge transfer model of the RUN-EU Innovation Ecosystem is presented in **Figure 9**. Regional business and societal organisations inform RUN of their future innovation and skills needs through consultation with their RUN-EU Innovation Hub and RUN-EU PLUS FASA. The Research & Innovation Committee supports the development of new RUN skills training programmes (from researcher training workshops to doctoral programmes and entrepreneurship training) in addition to collaborative research projects with industry. The new knowledge created by researchers within their research group will be protected in accordance with best practice, promoted as new technology offerings to RUN-EU regional partners and which will be commercialised through licensing agreements with them or through the creation of RUN-EU spin-out companies.

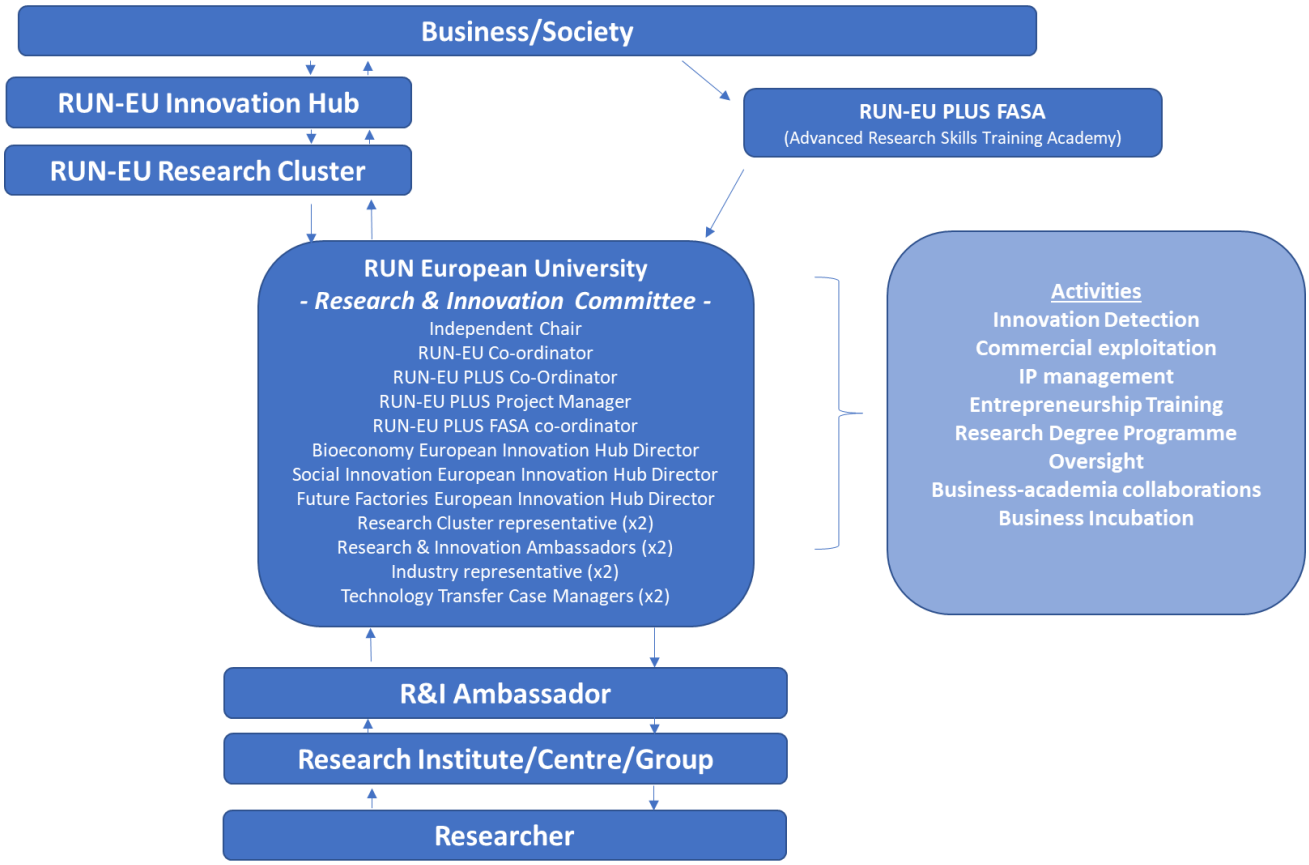


Figure 9 Knowledge Transfer model of the RUN-EU Innovation Ecosystem

3.5.2 RUN-EU Research & Innovation Committee activities

A general overview of the functions of the committee and the flow of knowledge through it at provided in **Section 3.5**. The activities of the committee are presented in the following sections.

3.5.2(i) Implementation of the RUN-EU PLUS Innovation Capacity Programme

The RUN-EU PLUS Innovation Capacity Programme has previously been presented in **Section 3.4**, and the RUN-EU Research & Innovation Committee plays a key role in its implementation. The programme will share best practices and integrate technology transfer functions across RUN-EU, including innovation support staff and business incubators. It will develop common RUN-EU processes for design, development, identification, capture, protection, licensing, and promotion of technology offerings to external stakeholders.

3.5.2(ii) Centralised TTO function

The committee will identify and share best TT practices across the consortium. It will support, mentor, train and provide expertise/advice on all aspects of TT practices. Case managers will maximise the identification and exploitation of commercialisation opportunities across RUN-EU.
A centralised R&D repository will identify RUN-EU research projects, their external partners, their predicted outputs, and current stage of development.
Intermediate and final research project reports will be a valuable source of potential IP. R&I ambassadors will meet with their research units regularly to keep informed about what is currently being developed.

3.5.2(iii) Promotion of TT offerings

Development of a RUN-EU TT offering portfolio and engage with business, regional networks/associations & national/EU initiatives to promote innovation offerings through hosting of industry open days, circulating promotional material and implementing an incentive scheme for companies to license RUN-EU IP.

3.5.2(iv) Creation of a pan-European ecosystem for new business/academia collaborations

Through its EIH and Research Cluster members, the committee will identify and support inter-alliance research collaborations between regional business and an international RUN-EU partner institution thereby expanding research opportunities for regional business.

3.5.2(v) Facilitate regional stakeholder skills needs analysis

The committee will work with the RUN-EU PLUS FASA and the EIHs to identify business/industry needs for specialist knowledge, skills, and talent in specific domain areas and will collaborate with RUN-EU academic partners to create training workshops and practice-based master's and doctoral programmes to meet these skills needs.

3.5.2(vi) Provide pan-European Business incubation services

To support RUN-EU partner institutions in providing business incubation services to start-up companies (spin-ins and spinouts) including mobility opportunities (incubation with another EU partner), IP offerings, research collaborations through a RUN-EU innovation voucher scheme, business mentoring and training courses.

3.5.2(vii) Leverage of funding opportunities

The committee will support the development of the RUN-EU Innovation Ecosystem in leveraging funding support through regional, national, and European funds for research collaboration, innovation development and entrepreneurship.

4. Summary

This RUN-EU PLUS Deliverable 6.1 presents the vision for the RUN European University Innovation Ecosystem and a model for its development and sustainability. The proposed governance structure of a RUN-EU Research & Innovation Committee integrates key players in the ecosystem namely the research communities of each RUN partner institution, the RUN-EU Research Cluster areas (**Section 2.1**), European Innovation Hubs (**Section 2.2**), RUN-EU coordinators and the proposed RUN-EU PLUS Advanced Research Skills Training Academy (Section 2.3). Information on innovation and skills needs originating from regional stakeholders will flow through this committee and across the RUN-EU research community. The committee will support the RUN-EU research community on the development and delivery of collaborative research projects and skills training programmes up to doctoral level.

This deliverable outlines an Innovation Capacity Programme (**Section 3.4**), RUN-EU PLUS Milestone 11), designed to educate and train RUN-EU researchers in best practice for effective knowledge creation, protection, and nurture of an entrepreneurial mindset within the RUN-EU research community and its partner institutions. It will help to lead research and innovation (R&I) development across the consortium, supported by an innovation detection scheme to identify new innovations and innovators. The programme will share best practices and integrate technology transfer functions across RUN-EU, including innovation support staff and business incubators. It will develop common RUN-EU processes for design, development, identification, capture, protection, licensing, and promotion of technology offerings to external stakeholders.

Horizon 2020
European Union Funding
for Research & Innovation

The content of this publication represents the views of the author only and is his/her sole responsibility. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.
Grant Agreement Number: 101035816.