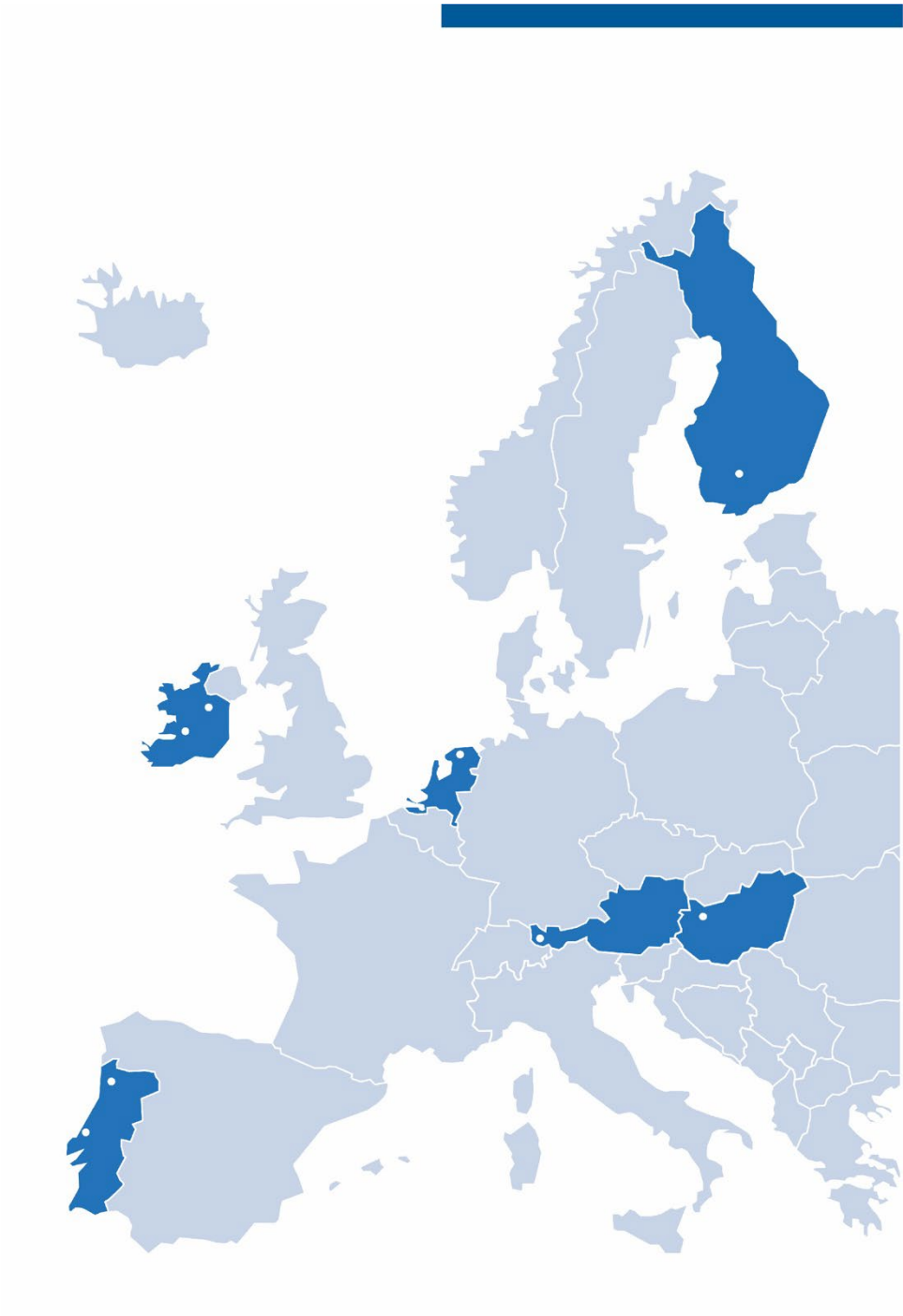
REGIONAL UNIVERSITY NETWORK

EUROPEAN UNIVERSITY



D2.4 ESTABLISHMENT OF EUROPEAN INNOVATION HUBS

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Technological University of the Shannon: Midlands Midwest, Ireland and NHL-Stenden University of Applied Science, The Netherlands

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Abbreviations

D	Deliverable
EIH	European Innovation Hub
ERA	European Research Area
EZ-ID	European Zone for Interregional Development
FHV	Vorarlberg University of Applied Sciences, Austria
HAMK	Häme University of Applied Sciences, Finland
IPCA	Polytechnic of Cávado and Ave, Portugal
IPL	Polytechnic of Leiria, Portugal
KT	Knowledge Transfer
MOU	Memorandum of Understanding
NGO	Non-Governmental Organisation
NHL Stenden	NHL Stenden University of Applied Sciences, The Netherlands
R&I	Research and Innovation
RUN-EU	Regional University Network – European University
SZE	University of Györ – Széchenyi István University, Hungary
T	Task
TUS	Technological University of the Shannon: Midlands Midwest, Ireland
WP	Work Package

EXECUTIVE SUMMARY

This report describes the creation of the three European Innovation Hubs of the Regional University Network European University (RUN-EU) with particular reference to their governance structure and the ecosystem in which they operate. The report also describes the supports which are in place for the effective operation of the hubs including Research Facilities and Business Incubation & Acceleration Facilities.

1.0 Introduction

The RUN European University is focused on supporting its regional partners to achieve sustainable regional and interregional development. Strong working relationships exist between RUN-EU alliance members and their regions and associated partners. The creation of the RUN-EU European Innovation Hubs (EIH) in the thematic areas of Future and Sustainable Factories, Bioeconomy and Social Innovation, will ensure expansion of sustainable regional and interregional innovation and development to all RUN-EU member regions. By increasing the collaborative strength of the European University in this manner, RUN-EU will stimulate and drive the creation of a future European Zone for Interregional Development (EZ-ID). To support achievement of this RUN-EU goal, the EIHs aim to:

a) work with regional industry to drive SME development in all partner regions through innovation-based projects;

b) create a strong collaborative network among existing regional innovation clusters, by establishing cooperation between regional government bodies, chambers of commerce, enterprises, enterprise centres, incubators, design labs and entrepreneurial stakeholders;

c) support enhanced collaboration between member region spinouts and SMEs;

d) increase interregional cooperation between the alliance member regions;

e) embed an entrepreneurial mind-set to positively influence the future strategies of our associate partners and regional stakeholders.

The principal output of these hubs will be the delivery of interregional RDI 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 EIHs will support and influence the member 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.

2.0 Creation of EIH Networks

Operational structures have been defined for each EIH, which, along with their shared teams and infrastructures, support achievement of their overarching goal for the creation and dissemination of cutting-edge knowledge in the identified thematic strategic areas.

2.1 Hub Composition

2.1.1 Governance

The 3 RUN-EU EIHs have a common, joint governance structure (**Figure 1**). Within this generic structure, which will be adapted for each EIH, a Management Board will be created which is comprised of a Hub Director, Programme Managers, and Thematic Area Managers. The program managers are ideally members of external partners (preferably industrial partners, who in this way ensure proper connection between the hub and different professional activities and events), while thematic area managers are from the associated research centers. Through its Director, the Management Board will ensure proper articulation of the Hub activities with other work packages of RUN-EU, namely WP5 research groups, and integrating the goals of the Hub into the activities of the RUN-EU Future Advanced Skills Academies (WP3), European Mobility Innovation Centre (WP4), Short Advanced Programmes (WP6), and Collaborative Degree Programmes (WP7).

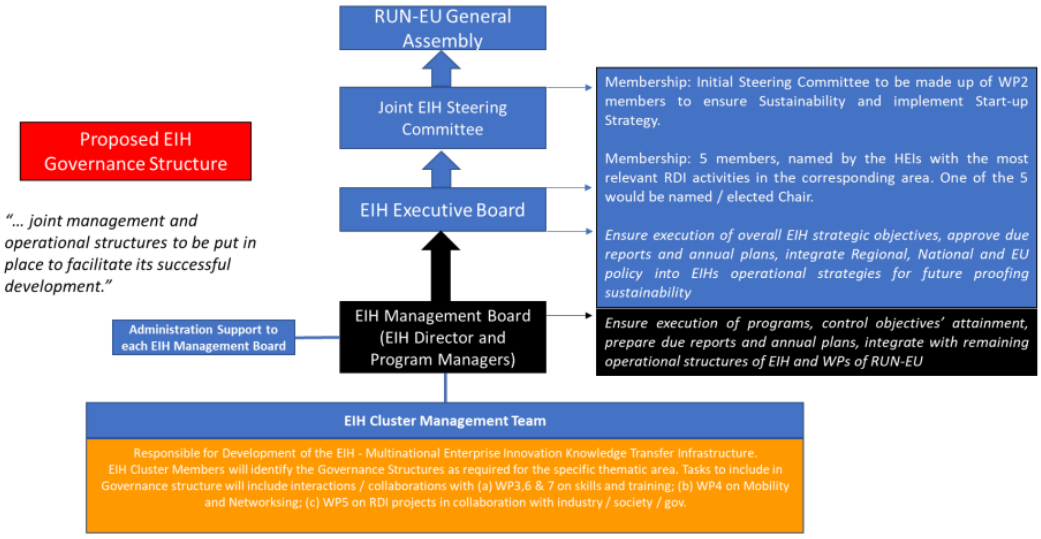

Figure 1 - Governance Structure of the RUN-EU European Innovation Hubs

2.2 Research Clusters

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 2**):

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: NHL Stenden)

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

Research Area 6: Climate Change – Circular Economy & Decarbonisation (Cluster lead: SZE/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 2 - RUN-EU 8 future-looking joint RUN-EU RDI teams indicative research areas

The 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 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 3**).

Figure 3 - 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 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*'.

2.3 EIH Hub Associated Partners

Associated partners of the RUN-EU EIHs include Regional Government Bodies, Chambers of Commerce, Enterprises, NGOs, Enterprise Centres, Business incubators, design labs and entrepreneurial stakeholders. A list of Associated Partners was included with the original application for the RUN-EU project to the Erasmus+ Funding Programme call. The hub networks have increased substantially since the establishment of the EIHs. Network partners of the Future and Sustainable Industries EIH is referred to in **Appendix 1**, for Bioeconomy EIH in **Appendix 2** and for Social Innovation EIH in **Appendix 3**.

3.0 EIH Support Infrastructure

3.1 Research Facilities

An audit and review of research facilities and expertise was undertaken at the commencement of the RUN-EU project. The results of this exercise are presented in **D5.1 RUN-EU Research Skills and Technology Audit**, which was an audit of expertise and infrastructures which informed the development of the 8 Research Cluster Areas (a detailed description of which is presented in **D5.2 Research and Innovation Teams**). D5.1 and D5.2 enabled the connection of research expertise and infrastructure available across the RUN-EU consortium into one document. RUN-EU partner Universities can provide an exceptional set of different laboratories, piloting, and analytical facilities in different fields of research.

3.2 Business Incubation & Acceleration Facilities

All partners have facilities available to support business incubation & acceleration. IPL incubation centre associations include StartUp Leiria, OPEN, OBITEC and Smart Ocean. TUS runs campus incubators in 4 regions with start-up companies supported by two Enterprise Ireland New Frontiers programmes. HAMK provides support to companies through its Design Factory, IPCA is involved in a Knowledge Circle Network along with VilaWork (Barcelos Business Center and Science Park) who 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). NHL Stenden has a Centre for Entrepreneurship and works closely with YnBusiness in Fryslân, GroBusiness in Groningen and IBDO in Drenthe who offer direct innovation assistance and support for start-up companies. SZE runs a small business incubation facility which it manages with Uni-Inno Ltd. A new Science Park with dedicated incubation space is under development. At FHV the Startup Center, Startupstube and the Business Intelligence & Innovation Hub all support business incubation.

4.0 Summary

This deliverable report summarises the governance structure of the RUN-EU EIHs as well as the infrastructure and expertise available within RUN-EU to support their long-term effectiveness and sustainability. Each hub presents its individual composition, associated RUN-EU research cluster areas and provides an overview of partners associated with it.

Appendix 1: Future and Sustainable Industries EIH Network

1. Hub Composition

The Future and Sustainable Industries EIH is expected to be overseen by a Management Board that will include a Hub Director, Program Managers, and Thematic Area Managers. The program managers will ideally be members of external partners (preferably industrial partners, who will in this way ensure proper connection between the hub and different professional activities and events), while thematic area managers will ideally be from the associated research centers. Through its Director, the Management Board will ensure proper articulation of the Hub activities with other workpackages of RUN-EU, namely WP5 research groups, and integrating the Hub's goals into the activities of WP3, WP4, WP6, and WP7 (see Figure below).

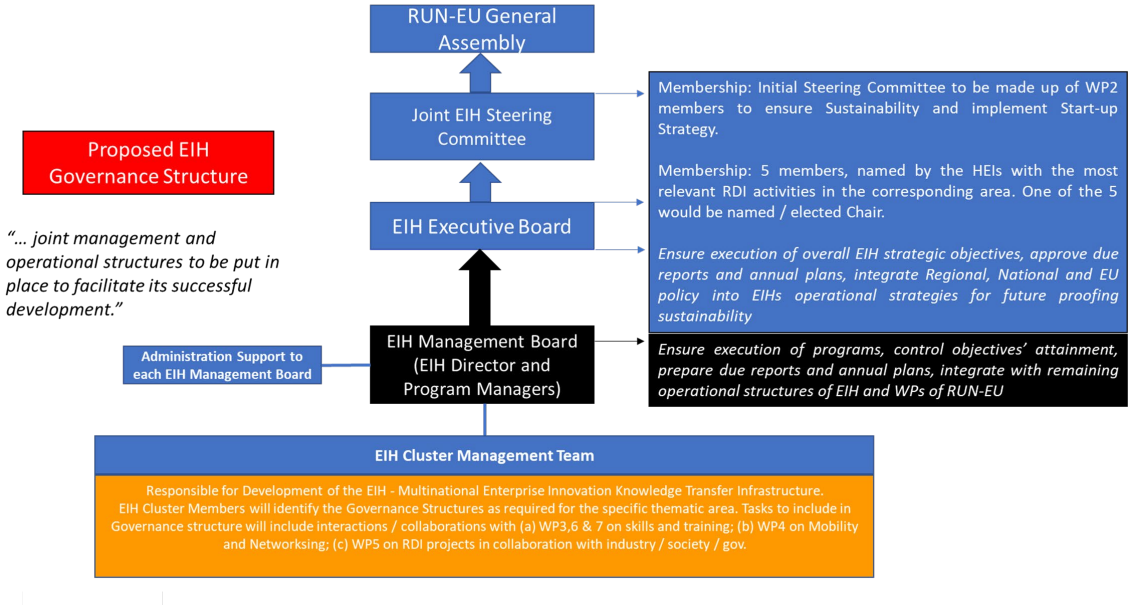

Figure: Governance of the Future and Sustainable Industries EIH

2. Research Clusters

This EIH is focused on industrial sustainable productivity and competitiveness, through the use of technology and design that can foster progress, promoting and then applying innovative research in the areas of Robotics & Autonomous Systems, Optimized & Sustainable Manufacturing, Digitization, Computer Science, Materials & Circularity, and Industrial Design & Product Engineering. The Hub will exist as a virtual overarching interregional network, bridging

RDI with knowledge transfer and training, with the target of creating significant regional impact on the RUN partner regions.

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	Digital Factory	●	●	●			
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	PRISM		●	●	●	●	
TUS	ACORN	●	●	●	●		
TUS	CEEDD		●			●	
TUS	SRI	●		●			
TUS	IDEAM	●	●	●	●	●	
TUS	ATIM Cluster		●		●	●	

Table: Alignment of RUN-EU Partner Research groups with EIH thematic areas.

3. Associated Partners

Associated partners of RUN-EU that support entrepreneurship, enterprises involved in funding applications and / or activities concerning professional practice-based research programmes in topics of practical industrial interest, within a broad sphere of technical areas (from automation and digitalization, through AI and production optimization, and up to sustainable design and materials), external research partners in challenging industrial fields and participants of Science Meets Regions events are potential partners of RUN-EU Future and Sustainable Industries EIH.

Appendix 2: Bioeconomy EIH Network

1. Hub Composition

RUN-EU Bioeconomy EIH consists of research activities of RUN-EU partner universities, regional developers, and enterprises from the bioeconomy value chain.

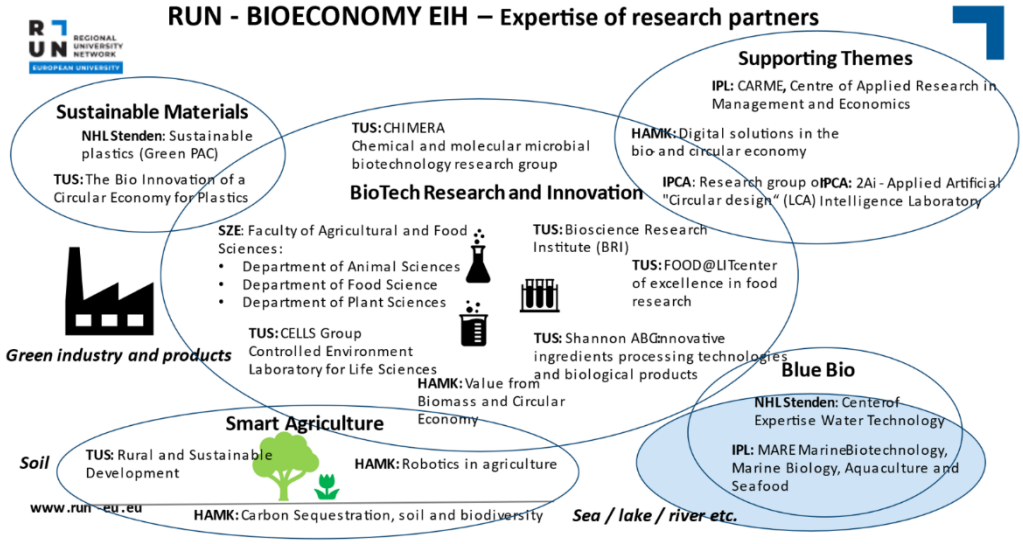

Figure: Research units/centers/areas/clusters involved in RUN Bioeconomy EIH

2. Research Clusters

Bioeconomy EIH has chosen four thematic areas to focus on Smart Food Security and Sustainable Food Production, Smart Value chain from Waste to Sustainable Products, Smart Utilization of Water and Smart Built Environment. Therefore, Bioeconomy EIH is supported by all RUN-EU research clusters that develop new technologies (Research Areas 4 and 5: IOT & Cybersecurity and Smart, Sustainable and Advanced Manufacturing). However, bioeconomy is somewhat involved also in Research Areas 1, 3, 7 and 8: Creative Art, Design and Materials Thinking, Tourism, Education & Social Sciences, Health & Wellbeing. The most relevant research and co-operation-based research are Research Area 2: Food & Biotechnology and Research Area 6: Climate Change – Circular Economy & Decarbonisation. Work and networks with people working in Food and Biotechnology research area are mainly the same working in Bioeconomy EIH.

3. Associated Partners

Associated partners of RUN-EU that support entrepreneurship, enterprises involved in funding applications and / or activities concerning professional practice-based research programmes in bioeconomy, external research partners in the bioeconomy field and participants of Science Meets Regions events are potential partners of RUN-EU bioeconomy EIH.

Appendix 3: Social Innovation EIH Network

1. Hub Composition

The Social Innovation Hub of RUN-EU is a network of RUN-EU partners together with partners in society. By combining education and research we work on making social impact on the issues we all recognize from the regions where we work. We are a network of people who have the skills to create social innovation with and for people in society, together with regional developers, regional public organisations, regional (social) enterprises and above all the people in our regions.

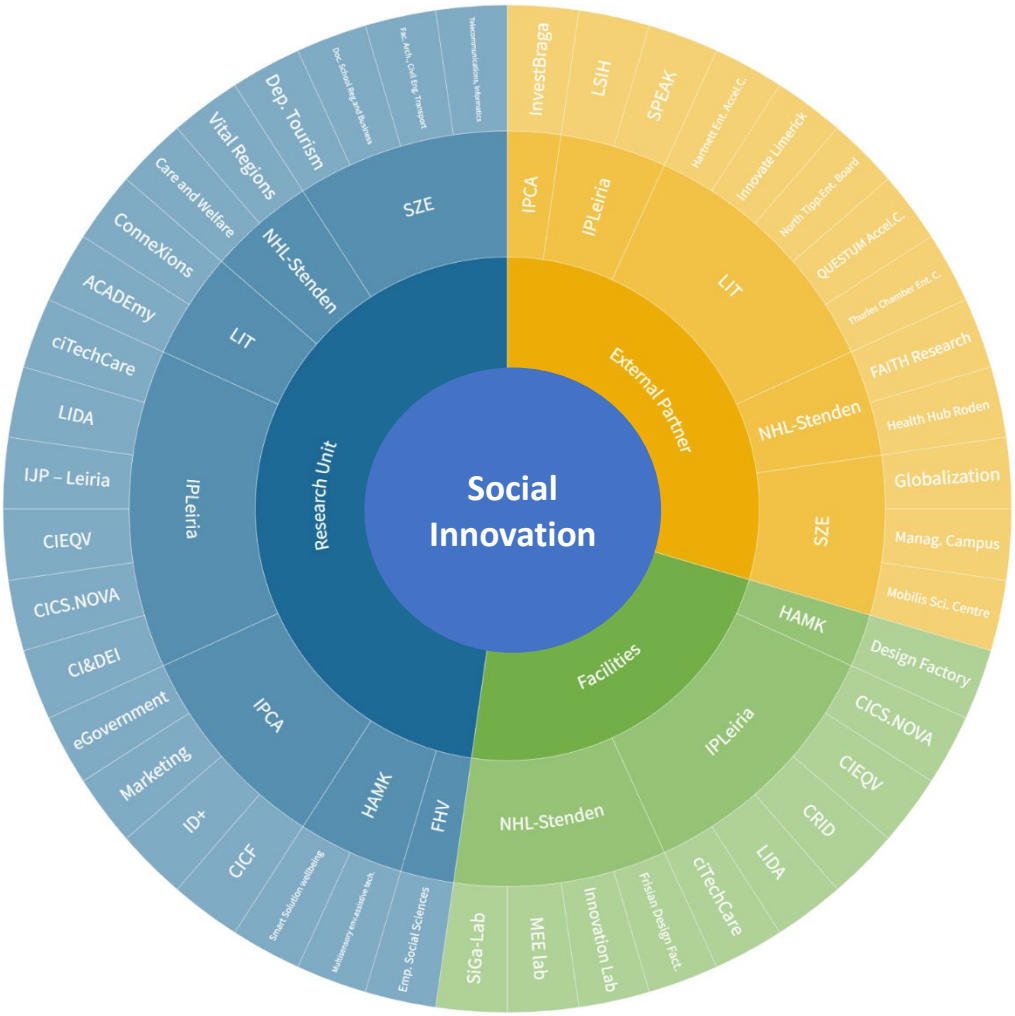

Figure – Research Cluster, Hub, External Partner Audit output for EIH 3: Social Innovation

2. Research Clusters

Social Innovation is a broad theme, there is no rigid definition of which sub-themes are susceptible to be considered. However, linked to the WP5 scientific areas, some topics will be privileged, such as:

- Health and wellbeing
- Culture and Creative Industries
- Tourism
- Social Science and Social Transformations
- Education

For the Social Innovation Hub we have made a more specific focus on topics which enables us to find a new repertoire to make learning-communities close to our students and partners in our regions. As the social problems in our regions need a urgent approach, we should prevent losing time on inventing tools which already are provided. Maybe the biggest innovation is to connect and share what we also know and practice. The specific topics of the Social Innovation Hub are inclusion and advocacy, social entrepreneurship, social imagination, digitalisation, working multidisciplinary in making policies (public & business administration).

3. Associated Partners

Associated partners of RUN-EU that have commitment to and are already involved in, support entrepreneurship, enterprises involved in funding applications and / or activities concerning professional practice-based research programmes in social innovation, external research partners involved in programs on social innovation (public and private partners) and participants of Science Meets Regions events are potential partners of RUN-EU Social Innovation Hub. Also members of the public, the experience experts, are welcome in our hub.

The Inclusive Community Lab of NHL Stenden is already a learning community where we combine research and education to make impact through social innovation. The regional partners of this lab want to stay and be more in connection with the RUN-EU partners and their stakeholders.

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