

## D2.3 EUROPEAN INNOVATION HUB OPERATIONAL REPORTS – 3<sup>RD</sup> ANNUAL REPORT

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*Technological University of the Shannon: Midlands Midwest, Ireland and  
NHL Stenden University of Applied Sciences, 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
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
NDA	Non-disclosure Agreement
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
RUN-EU PLUS	Regional University Network – European University: Professional Research Programmes for Business and Society
SAP	Short Advanced Programme
SWAFS	Science with and for Society
SZE	University of Győr – Széchenyi István University, Hungary
T	Task
TT	Technology Transfer
TTO	Technology Transfer Office
TUS	Technological University of the Shannon: Midlands Midwest, Ireland
WP	Work Package

## Executive Summary

RUN-EU WP2 involves the creation and growth of sustainable cutting-edge knowledge networks which bring together challenge-based international research teams which will utilize shared infrastructure and mobile team members (presented in **D2.4 Establishment of EIHs including team membership and infrastructure**). These hubs foster partnerships between universities, industry, communities, and policy makers. Engaging with them offers access to cutting edge technologies, fostering innovation and market effectiveness. Embracing the themes of the hubs empowers stakeholders to shape a sustainable and innovative future for Europe, driving positive change and influencing policy for the greater benefit of Europe.

This is the final operational report of the EIHs which will continue to work with the RUN-EU thematic research clusters to continue collaborative research work with regional partners and deliver the knowledge transfer objectives of the RUN-EU Research & Innovation Ecosystem developed in collaboration with the Horizon Europe RUN-EU PLUS project.

## 1.0 Introduction

Three sustainable cutting-edge knowledge networks which bring together challenge-based international research teams which will utilize shared infrastructure and mobile team members have been created by the RUN European University (presented in **D2.4 Establishment of EIHs including team membership and infrastructure**). RUN-EU's European Innovation Hubs (EIH) focus on Future and Sustainable Industries, Bioeconomy and Social Innovation, providing diverse opportunities for the network partners of each hub. Network partners of the Future and Sustainable Industries EIH are provided access to advanced technologies, have an opportunity for market expansion and industry collaboration opportunities. Bio-economy hub partners are included in Circular Economy initiatives, Biotechnology advancements and Sustainable Agriculture projects. The Social Innovation EIH collaborates with NGOs and other partners on research and initiatives which address societal challenges and have a positive social impact.

At an operational level, there are two aspects to hub activity which are balanced in the delivery of the hub strategic plan (described in detail in deliverables **D2.6**, **D2.7** and **D2.2**). Each EIH engages outwardly with their external partners, nurturing network development and identifying partner needs with respect to the thematic focus of the hub. The hubs also look inwardly to the RUN European University. They integrate their activities into the other RUN-EU work packages and by doing so they represent the needs of their member partners in all aspects of RUN-EU. **Figure 1** below shows the workplan of the RUN European University and its individual work packages.

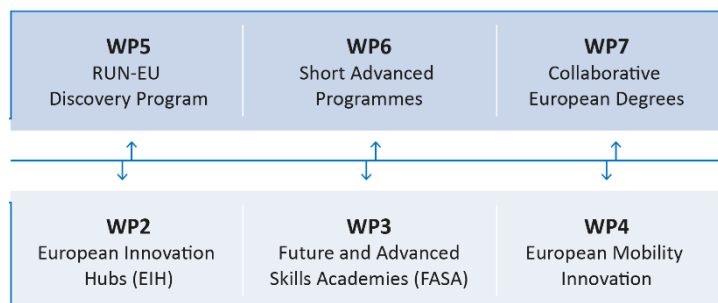


Figure 1 – RUN-EU workplan

The 3 EIHs are also integrated into the RUN-EU PLUS Swafs project (Horizon 2020 Grant Agreement 101035816), the workplan of which is presented in **Figure 2**. Throughout this report, reference will be made to the above work packages as appropriate.

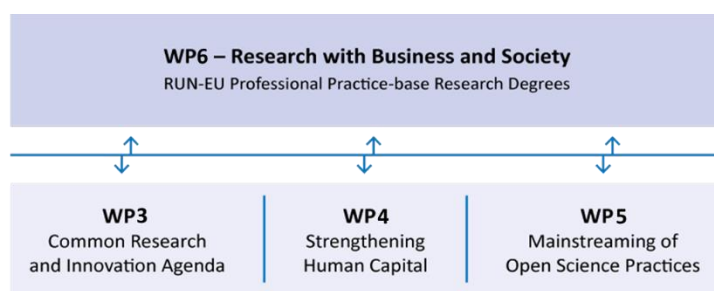


Figure 2 – RUN-EU PLUS workplan

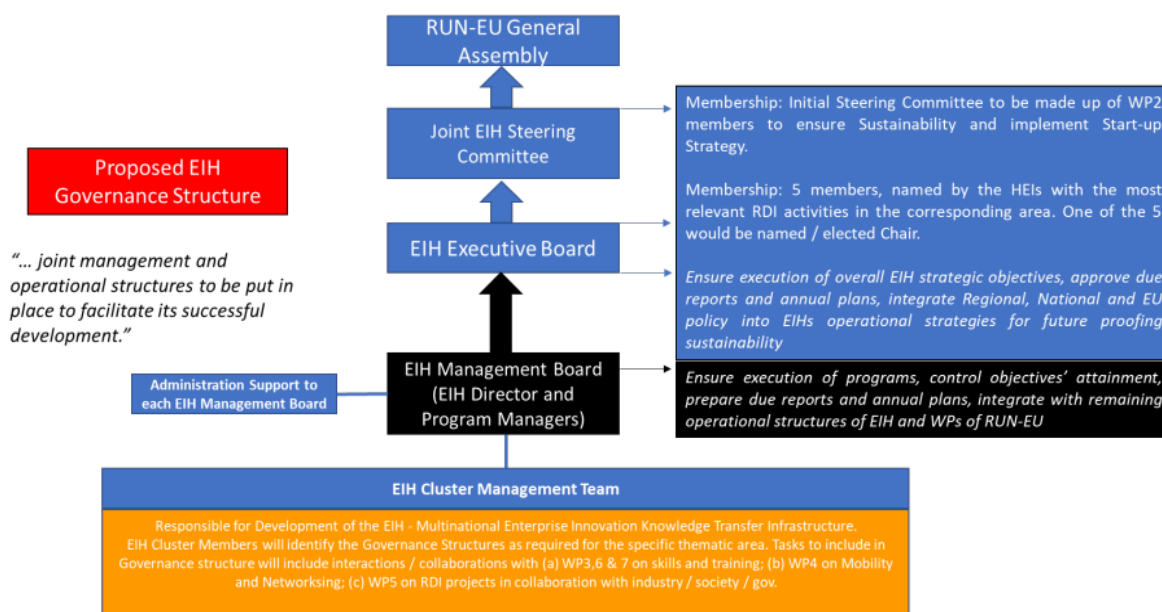
This is the final operational report of the EIHs which will continue to work with the RUN-EU thematic research clusters to continue collaborative research work with regional partners and deliver the knowledge transfer objectives of the RUN-EU Research & Innovation Ecosystem developed in collaboration with the Horizon Europe RUN-EU PLUS project. The next phase of the RUN-EU EIHs is presented in **Section 8.0** of this document, which describes how the EIHs will be integrated with the RUN Discovery Research Programme, along with a newly established Immersive Research Institute to deliver on the RUN-ERA objectives.

## 2.0 Governance Structure and Hub Management Activities

**D2.4 Establishment of EIHs** also provides information regarding the generic governance structure and composition of the RUN-EU EIHs.

### 2.1 Governance Structure

A generic governance structure has been created (**Figure 3**), however each EIH is encouraged to adapt this structure to meet their own unique governance requirements. These structures are presented in the strategic plans of each of the 3 EIHs.



**Figure 3 – Generic Governance Structure of the EIHs**

### 2.2 Hub Management Activities

The roles and activities of the management teams/groups identified in **Figure 3** are described in this section.

### ***2.2.1 EIH Cluster Management Team***

This team is the ‘implementation team’ and is comprised of a wide group of individuals who play key roles in the development and implementation of the EIH with representatives from each RUN-EU alliance partner as appropriate. It is this team that designs and delivers hub-wide activities and events such as the Science Meets Regions series of events (described later in **Section 7.1.2** of this report).

### ***2.2.2 EIH Management Board***

The EIH Director and EIH managers from each RUN-EU partner organization sit on this board. They suggest and review activities undertaken by the Cluster Management team, interact with remaining RUN-EU work packages and report outcomes to the EIH Executive Board. This board prepares deliverable reports which it provides to the Executive Board for review.

### ***2.2.3 EIH Executive Board***

This board is comprised of five representatives across RUN-EU with one member elected as Chair. The group acts at a strategic level and advises on the implementation of the EIH strategic plan. It reports to the Steering Committee.

### ***2.2.4 Joint EIH Steering Committee***

This is where all three EIHs meet as a collective, represented by their directors, along with other WP2 members. They are responsible for the development of the EIH strategic plan and push for the sustainability and achievement of the long-term goals of the EIH work package. WP2 members include Research Cluster Area leads, Enterprise & Innovation Managers across the RUN-EU alliance, and RUN-EU PLUS project managers. Implementation plans for WP2 deliverables are developed by this committee and these are communicated to the EIH Executive Board for execution.



## 3.0 Research Discovery Collaborations

This task is a nexus activity for interconnectivity of all RUN-EU members and associated partners. Its purpose is to provide a means of generating RDI activity under the directed umbrellas of the three thematic European Innovation Hubs. To bring together clusters, research/innovation/ enterprise hubs, associated business, industry, regional government and community partners to enable a critical mass of expertise, capital infrastructure and regional funding opportunities to be reached. Through this critical mass development, symbiotic relationships across the networks can form to address 'low hanging fruit' projects, skills training and informing development of future programme provision and innovation activities.

Year 2 activity reported previously (**D2.9 EIHs Operational Reports 2<sup>nd</sup> Report**) presented the establishment of the three European Innovation Hubs by March 2022. As a result, the individual EIH committees have identified which research clusters (and/ or) sub-clusters/research groups activities align with the identified EIHs key areas for research development. A number of European and Regional projects are in development or in submission for European and national funding across the network.

The RUN-EU Research Clusters offer a very important expertise platform for companies, and it is important to connect RUN-EU researchers and hub activities (and partners) through collaborative activities. As an example, the RUN-EU research cluster in Food and Biotechnology has already formed a great start for future research activities and relationships between researchers and companies are progressing well. Research clusters are meeting regularly with companies and together as research teams are searching for European level funding opportunities. The following funding applications have been made or are under preparation by the RUN-EU Food and Biotechnology Cluster area (this list is included in the WP5 deliverable **D5.5 Joint Research & Innovation Projects – 2<sup>nd</sup> Report**):

1. INNOVAlgae - INNOVative solutions for future-looking Algae biorefineries, circular economy production and markets (no success)

2.HORIZON-CL6-2022-FARM2FORK-01-01: Risk assessment of new low risk pesticides (no success)

3. Horizon CL6-2024-FarmtoFork-01-10 (dl 22.2.2024) EU-African Union cooperation on agroforestry management for climate change adaptation and mitigation

4. Horizon-CL4-2024-TWIN-TRANSITION-01-01, DL 7.2.24 / 24.9.24

Bio intelligent manufacturing industries

5. HORIZON-CL5-2024-D3-02-03 DL 21/01/2025 Development of smart concepts of integrated energy driven bio-refineries for co-production of advanced biofuels, bio-chemicals, and biomaterials.

## 4.0 FASA Collaborations

A key objective of our RUN European University is the development and delivery of educational programmes which produce graduates skilled in the competencies required by the future labour market. RUN-EU works with its regional partners on delivering this objective through the Future and Advanced Skills Academies (FASA). The EIHS also have an important role to play here. While FASA informs the EIHS regarding these future competencies and educational programmes available across the RUN-EU consortium the EIHS are also the voice of the regional partner and are also in a position to contribute to this conversation.

The RUN-EU WP dedicated to FASA (WP3) has published 6 bulletins presenting the future skills and competencies required by work forces of the future. The findings from an employer's point of view are presented in FASA **D3.3 Publication of Skills #5**. The main aim of Skills Bulletin #5 was to reveal the opinion of RUN-EU associated partners about future competencies, knowledge, skills, values, attitudes. FASA was interested in what companies and organisations of different fields of work expect from their future employees. Additionally, the FASA were curious as to their opinion regarding how institutes of higher education can contribute to the employability of the future employees and to what extent the higher education courses can contribute to the success of their graduate students in the labour market. It is also important to work on

The interaction between FASA and EIH management occurs at work package level with EIH work package members being members of the FASA work package and *vice versa*. While many skills and competencies are common to the three EIHs, there may be others which are specific to a particular thematic area. **Figure 4** shows the competencies required by the future work force for the Biotechnology sector as identified by the RUN-EU Bioeconomy EIH.



**Figure 4 - Competence requirements to succeed in future the Bioeconomy field**

A similar exercise was undertaken by the EIH on Future and Sustainable Industries. The survey was conducted using Mentimeter and participants were mainly from Academia, Industry, Government and Civil Society. Their responses indicated that they work in areas associated with the following pillars of this EIH:

- Robotics and Autonomous Systems
- Optimized and Sustainable M
- Digitization

- d. Computational Science & Engineering
- e. Materials and Circularity
- f. Industrial Design Engineering

When asked to identify the future skills and competencies required for Future and Sustainable Industries, both generic competences and discipline specific skills were listed. Creativity, Design Thinking, collaboration skills, curiosity, cooperation, innovative thinking, and life cycle awareness (sustainability) were some of the generic competences listed. Technical skills identified included Robotics, Materials, Artificial Intelligence, process digitization and automatization.

## 5.0 Collaborative European Educational Programmes

### 5.1 Taught Educational Programmes

EIH work package members (WP2) represent the EIH member partners and guide the development of collaborative RUN-EU undergraduate degree programmes (WP7), taught master's programmes (WP7) and Short-Advanced Programmes (SAPs) (WP6) making sure that the new programmes developed by the RUN-EU project are relevant to the needs of our regions both in terms of the skills possessed by our graduates and the flexible delivery of the programmes to attract a diverse range students from all career stages.

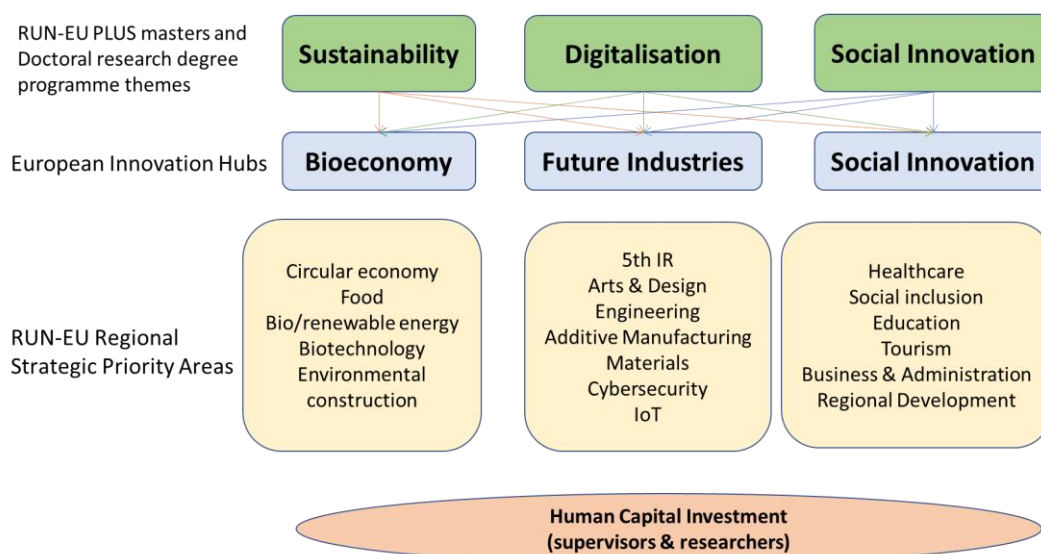
### 5.2 Research master's and Doctoral Programmes

The RUN-EU PLUS project is designing and developing master's and Doctoral programmes which are practice-based research programmes where the research undertaken by these programmes is focused on the development or improvement of a product or process of relevance to the industry partner. Researchers will be based either

in the collaborating organisation itself and/or carried out in RUN-EU research institutes. Strong relationships both across the RUN-EU alliance and with strategic partners in our regions is key to the long-term sustainability of these master's and Doctoral programmes and the RUN-EU PLUS project plans to work closely with the RUN-EU EIHs during the timeframe of the RUN-EU PLUS project to identify particular sectors, businesses and organisations with whom to co-design these programmes.

The RUN-EU PLUS project undertook an audit of regional strategic development plans from them identified Sustainability, Digitalisation and Social Innovation as 3 key thematic areas for these programmes (**D3.1 Strategic Research Priorities Report**).

**Figure 5** shows the alignment of RUN-EU EIHs to RUN-EU PLUS master's and Doctoral Programme thematic areas and regional strategic priority areas of the RUN-EU regions.



**Figure 5 - Alignment of RUN-EU EIHs to RUN-EU PLUS master's and Doctoral Programme thematic areas and regional strategic priority areas of RUN-EU regions**

RUN-EU PLUS **D3.2 Degree Development Roadmap** and **D3.3 Accreditation Action Plan** provide a framework which supports the co-design and approval of these programmes. The ultimate goal is the transfer the knowledge created by these research programmes (by collaborative research teams comprising international supervision teams linked to RUN-EU research cluster institutes, industry experts and research candidates) to the

RUN-EU regions for their economic and social development. A joint PhD programme in Digitalisation Engineering has been developed by IPL, IPCA and TUS (as the awarding bodies). This programme, supported by over 20 companies, has been submitted to the Portuguese Accreditation Agency, A3ES, for approval. The research candidates will be based either in a company or one of RUN-EU's research institutes working on a research challenge faced by the company in the area of digitalization.

The role of the EIHS in the long-term sustainability of these programmes is described in RUN-EU PLUS **D7.5 Sustainability Strategy – 1<sup>st</sup> Version**.

## 5.3 Short-Advanced Programmes

RUN-EU provides its students with the opportunity to take part in Short Advanced Programs (SAPs). Spanning one to eight weeks, SAPs have emerged as a powerful tool to empower students of RUN partner institutions with the skills and knowledge needed to develop innovative solutions to such challenges. These unique programs bring together teams of students from across the RUN-EU alliance and through a combination of on-campus activities with carefully designed online sessions, foster a rich and immersive learning experience that transcends geographical barriers and empowers participants to become agents of change. These SAPs are designed to ignite a student's intellectual curiosity and drive their research endeavours to new heights that push the boundaries of their understanding.

Research Challenge SAPs are specifically targeted to RUN-EU postgraduate students and researchers and are developed and delivered through collaboration between RUN-EU (Erasmus+) WP3 (SAPs), WP5 (Discovery Research Programme) and the RUN-EU PLUS project. Traditional research education, while essential, may not always cater to the urgency of addressing real-time issues. SAP Research Challenges fill this gap by offering specialized and intensive curricula focused on specific research challenges, cutting-edge technologies, or emerging fields. Participants (researchers) are provided with an opportunity to delve deeply into relevant topics and build knowledge that can be directly applied in practical settings. **Figure 6** shows examples of Research Challenge

SAPS developed collaboratively by RUN-EU WP3 (SAPs), WP5 (Discovery Research Programme) and the RUN-EU PLUS project for the research community of the RUN European University.



Figure 6 - Research Challenge SAPs

The EIHs have been active in developing and delivering SAPs for RUN-EU.

## 6.0 Promotion of Open Science and Citizen Science Agendas

The RUN European University is committed to mainstreaming open science practices and skills within its research and innovation platforms through the delivery of new programmes and initiatives aimed at further strengthening our commitment to open science principles. The EIHs benefit from a key objective of the RUN-EU PLUS project, to mainstream open science principles and practices across the RUN-EU alliance. A central work package in the RUN-EU PLUS project is 'Mainstreaming Open Science Practices'. A comprehensive Data Management Plan – RUN-EU PLUS **Deliverable 2.2** (Technological University of the Shannon: Midlands Midwest, 2022) has been developed based on the



principle that good data governance is essential to good research practice, ensuring that RUN-EU PLUS data is 'FAIR' (Findable, Accessible, Interoperable, and Re-usable).

Open Science is defined by the European Commission (n.d.) as “An approach to the scientific process that focuses on spreading knowledge as soon as it is available using digital and collaborative technology. Expert groups, publications, news, and events.” The individual partners of the RUN-EU alliance are all at different points on the pathway to develop their open science practices.

The objectives of RUN-EU PLUS regarding open science include:

- To mainstream Open Science practices and skills within our R&I platforms and delivery of new programmes and initiatives aimed at further strengthening our commitment to open science principles. An Open Science Training Programme for researchers has been developed and implemented. These training workshops educate RUN-EU researchers and associated partners on new practices of Open Science skills.
- To develop resources across the RUN-EU PLUS network to champion the Open Science agenda. A network of Open Science Ambassadors (comprised of 2 ambassadors per partner institution) has been created by the RUN-EU PLUS project.
- To apply the consistent application and internalization of the principles listed in the European Code of Conduct for Research Integrity (ECOC) across the consortium.
- To develop a series of commonly agreed principles and training workshops by which to disseminate how intellectual property and knowledge transfer will be managed within the consortium.

## 7.0 Outreach and Communication Activities

### 7.1 Annual Events

In Year 3 of the RUN-EU project, the focus of activities was to design, plan, and carry out global networking events which served both the purpose of dissemination of the European Innovation Hubs (including their strategy and goals) and widen the network of researchers and staff at the RUN-EU partner institutions actively engaged with EIH



activities. Simultaneously, the events served as an outreach to industrial partners and external stakeholders as well as the public through media outlets.

These events were critical not only for disseminating the WP2 agenda and the Innovation Hubs, but to gather information (using real-time questionnaires) from participants on:

- o Future skills and competences needed in the scope of each EIH.
- o Research topics that should be tackled by each EIH.

### **7.1.1 Hackathon**

A “hackathon” (a series of thematic meetings and break-out group sessions), bringing together the entire WP2 team (members from the 3 hubs from all RUN-EU partners), took place on February 1 & 2, 2023, at NHL Stenden, The Netherlands. Over 30 WP2 team members participated in these meetings, from which the EIH consolidated their strategy and work plan, based on feedback from all participants.

### **7.1.2 Science Meets Regions**

A series of 3 intertwined networking events were planned to be hosted with researchers, innovators, business, industry, and community partners from each RUN-EU members in the first semester of 2023 (Year 3). A TUS concept, the strategy and work plan for the events was developed through the entire WP2 team during the hackathon event hosted by NHL Stenden, The Netherlands, on 1<sup>st</sup> and 2<sup>nd</sup> February 2023. The events, co-funded by RUN-EU in partnership with the Westmeath County Council, Ireland, were deployed as planned and were incredibly successful, with more than 600 total participants. **Figure 7** shows some photographs taken during the 3 events). The 3 EIHs were presented at each event, therefore connecting each with our partners at each of the events.

The event will be replicated across three locations in Europe and brings together relevant stakeholders from the quadruple helix of Academia, Enterprise, Community

and Government from the representative regions of RUN-EU. The following events, entitled “Science Meets Regions - Circular Economy Forum Series 2023”, were held:

- Forum 1: 18-19 April 2023 – University of Győr – Széchenyi István University (SZE), Hungary.
- Forum 2: 25-26 May 2023 – Polytechnic of Cávado and Ave (IPCA), Portugal.
- Forum 3: 19-20 June 2023 – Technological University of the Shannon (TUS), Athlone, Ireland.

These events served to disseminate the RUN-EU WP2 agenda and the Innovation Hubs. They also provided the opportunity to gather information from participants on future skills and competences needed in the scope of each EIH. Research topics to be tackled by each EIH were also discussed. **Figure 8** presents the promotion banner created for the event.



**Figure 7 - Science Meets Regions event photos**

The event programme was designed to present, discuss, strategise, and propose action plans which enable regional, national, and European-wide development of circular networks to support regional stakeholders address Digital Transformation needs and Socio-Economic Resilience and Sustainability. The forum aimed to inform EU Policy

makers on the strategies needed to enable regional, national, and European wide, mechanisms to address Digital Transformation and Environmental Sustainability through the establishment of Circular Economic Networks of business and community. By collaborating across the European Regions represented in our RUN-EU alliance, we can enact change on a European scale.

The event was replicated across three locations in Europe and brought together relevant stakeholders from the quadruple helix of Academia, Enterprise, Community and Government from the representative regions of RUN-EU.

Keynote speakers presented on EU SME Alliances, Green & Sustainable Business, Digital Transformation, Community and Social Development, European Funding and Supports and Regional Circular Economy Network Development, while the round table and breakout sessions will provide platforms for targeted discussion of the key topics and EU Policy Development.

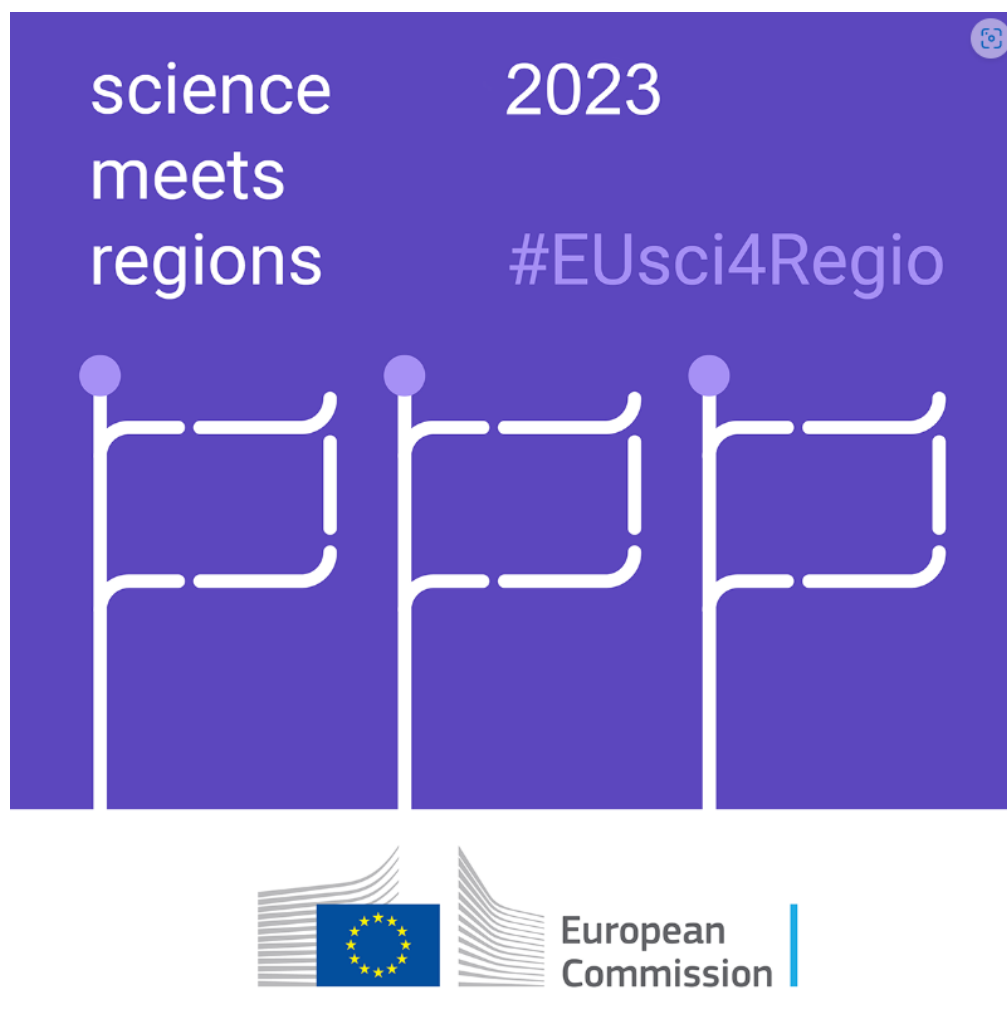


Figure 8 – Science Meets Regions promotional banner

Mentimeter was used as a tool to gather feedback information and interests for further use from each participant. 44% of participants answered were mainly associated with Food and Biotechnology in their work. 20% in Blue Biotechnology, 16% in Sustainable Materials. 12% placed themselves into supporting themes like digitalization, logistics, economics and 8 % work in Smart Agriculture.

Research topics that interested the audience concerned biotechnology including gene technology, innovative solutions based on nature and energy. On the other way changes in infrastructure and biodiversity were mentioned. As most of the participants are involved with applied research based on real market needs and challenges, business skills were important. Also bringing digital tools like modelling and sensor technology

into biology interested participants. Addition to research interests' same issues were listed when needs for future skills and competences were asked.

Since only 8 % of answered participants were from enterprises and 3% from the government the research ideas and other answers were mostly the voice of the academia. However, it is known that most of the RUN-EU researchers are working closely with the enterprise and thus aware of the interests and challenges in the field.

### ***7.1.3 Research Colloquium and Dissemination Event***

A RUN-EU Research Colloquium and Research & Innovation Dissemination Event was hosted by TUS, leaders of RUN-EU WP5 (RUN Discovery Research Programme), from 24th to 27th October 2023 at both its Limerick School of Art & Design Campus, Limerick City Centre and its Athlone Campus. The objective of this event was to showcase research currently undertaken across the RUN-EU consortium, including collaborative projects with business and other external organisations. The colloquium contributed towards fostering intellectual exchange and collaboration within the RUN-EU academic and research community. It served as a forum to showcase the latest research and innovations from our RUN-EU researchers and academics and provided an invaluable opportunity for the dissemination of research findings and achievements to a wider audience.

### ***7.1.4 RUN-EU PLUS Annual ICARUS Conference***

The RUN-EU PLUS project has hosted two online Annual International Conferences on Applied Research with Business and Society (ICARUS) in December 2021 and 2022 with over 400 delegates in attendance over the two conferences. This annual conference engages research students, academic staff, researchers, and business and society stakeholders across the RUN-EU network, including the EIHS, in discussions concerning the development of research collaborations, practice-based research, open science practice and researcher career development. The schedule includes presentations by industry partners as well as RUN-EU researchers with the inclusion of breakout discussions on relevant topics. The 3<sup>rd</sup> ICARUS

conference is scheduled for 14<sup>th</sup> December 2023 as is being hosted by NHL Stenden, The Netherlands. The promotional banner for the conference is shown in **Figure 9**.



Figure 9 – ICARUS 3 Promotional banner

## 7.2 Dissemination Material

### 7.2.1 RUN-EU website

The current version of the RUN-EU website (<https://run-eu.eu/>) is regularly reviewed to reflect the RUN-EU PLUS project implementation and its results, and this is where the European Innovation Hubs are presented ([Innovation Hubs | RUN-EU](#)) (**Figure 10**). The structure of the page is outlined below:

- Landing page: includes the basic information about the RUN-EU project, focusing on the vision, members, indicators, and expected results. This main page includes the links to the project social media channels.

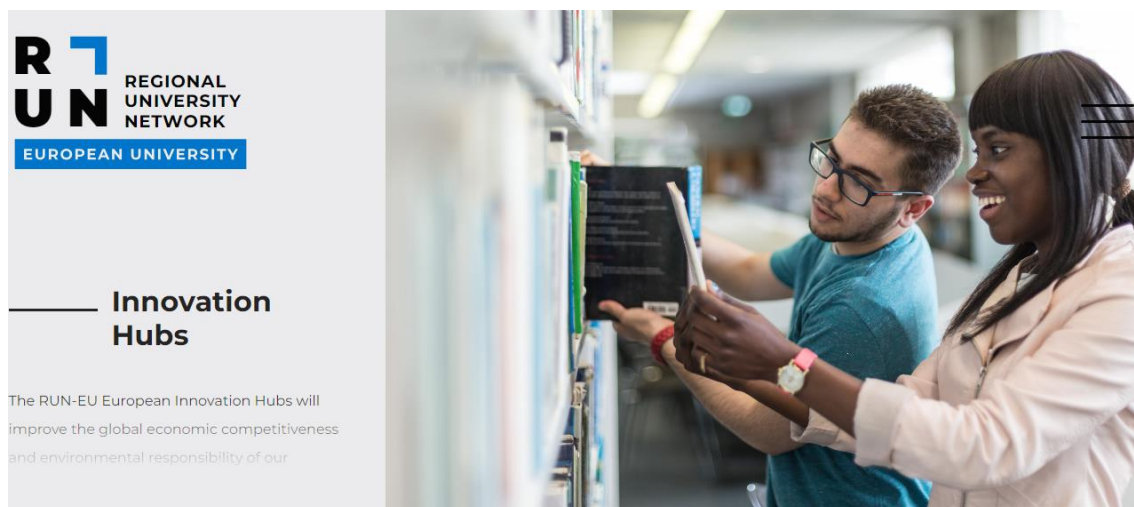


Figure 10 – EIHs featured on RUN-EU website

- News and events section: the project progress and achievements are shared with the stakeholders through the constant publishing of news about the achievement of milestones, delivery of results (higher focus for the new educational offers and institutional structures jointly created), as well as the project events (announcing events and provision of post-event coverage).
- Results area: presents the key results produced over time and of public access, raising awareness of the dimension and potential of the RUN-EU PLUS project outcomes and deliverables.
- Download area: presents the promotional materials developed, such as brochures, leaflets, e-newsletters.
- Contact section: aiming to encourage stakeholders to be in contact with the partnership and to join the project, a contact form is available to register the stakeholders' interest in the RUN-EU PLUS results and activities.

The RUN-EU website will thus host the EIH information and news articles.

### **7.2.2 Promotional leaflet**

A leaflet template has been designed which can be tailored by each EIH to meet its communications requirements. The content of the leaflet (**Figure 11**) can be adapted to include information on hub objectives, offerings, testimonials etc.



## Testimonials

**Name**  
HEI acronym - Country  
Additional info

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**Name**  
HEI acronym - Country  
Additional info

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Co-funded by the  
European Union

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## European Innovation Hubs

INFLUENCE  
RESEARCH  
COLLABORATION  
INNOVATION  
SUPPORT  
SUSTAINABLE  
SOLUTIONS  
TALENT RETENTION  
NETWORKING

OUR STUDENTS WILL INHERIT THE FUTURE

**What is RUN-EU?**

The Regional University Network – European University (RUN-EU) is an alliance of European Universities that aims for excellence in research, teaching, and innovation, promotes joint activities and development of projects that foster European Union values and way of life, including multiculturalism and inclusiveness, as well as the sustainable social and economic development of the regions.

## What are the Opportunities for the stakeholders?

RUN-EU's European Innovation Hubs focus on Future and Sustainable Industries, Bioeconomy, and Social Innovation, providing diverse opportunities:

- 1. Future and Sustainable Industries:**  
Access to Advanced Technologies  
Market Expansion  
Industry Collaboration
- 2. Bioeconomy:**  
Circular Economy Initiatives  
Biotechnology Advancements  
Sustainable Agriculture
- 3. Social Innovation:**  
Addressing Societal Challenges  
Positive Social Impact  
Collaboration with NGOs

In collaboration with [University Name], these hubs foster partnerships between universities, industry, communities, and policy makers. Engaging with them offers access to cutting-edge technologies, fostering innovation and market competitiveness. The bioeconomy promotes resource efficiency, eco-friendly products, and sustainable agriculture.

Social Innovation addresses pressing challenges, fostering positive social impact and corporate responsibility. Embracing these themes empowers stakeholders to shape a sustainable and innovative future for Europe, driving positive change and influencing policy for the greater benefit of society.

**DID YOU KNOW YOU CAN:**

- 1 Innovate sustainably with the Hubs?
- 2 Access cutting-edge tech for collaboration?
- 3 Embrace circular Bioeconomy advancements?
- 4 Address challenges through Social Innovation?

**Discover all RUN-EU has to offer**

Figure 11 – Template promotional leaflet for RUN-EU European Innovation Hubs



### **7.2.3 Promotional Videos**

A promotional video created for the official launch of the hubs is available for promotion of the EIHS.

## **8.0 Next Phase of the European Innovation Hubs**

The first RUN-EU project ends on 31<sup>st</sup> December 2023 and its achievements will be carried over to the RUN-EU 2.0 project which begins 1<sup>st</sup> January 2024.

RUN-EU will continue to deliver on the core objectives of the European Research Area by fostering the free movement of researchers, scientific knowledge, and innovation, and encouraging a more competitive European industry. The RUN-EU alliance will continue to support the creation of a single market for research, fostering open access approaches and flexible interaction of researchers, scientific knowledge, and innovation, to encourage a more competitive European industry through our RUN-EU European Research Area (RUN-ERA), the structure of which is shown in **Figure 12**. The RUN-EU ERA stimulates and creates joint interregional research, innovation, and regional stakeholder engagement activities across the alliance, which will be underpinned by the expansion of the activities of our existing European Innovation Hubs (EIHS) and RUN-Discovery Programme and the creation of the RUN-EU Immersive Research Institute. The current work of the SwafS RUN-EU PLUS project will be advanced in the adoption of a 'RUN-ERA pact' which will drive forward the ambition of our RUN European University and its commitment to the mobilisation of our research and innovation vision along with concrete regional actions, working towards the development of solutions to the challenges of today. RUN-EU has and will continue to target Horizon Europe, Digital Europe and other EU and national instruments, to support the ambitions of our university in further development of a shared long-term structural, sustainable, and systemic cooperation on education, research, and innovation, creating a RUN-EU inter-university campus where students, staff and researchers from all parts of Europe can enjoy seamless mobility and create new knowledge together, across countries and disciplines.

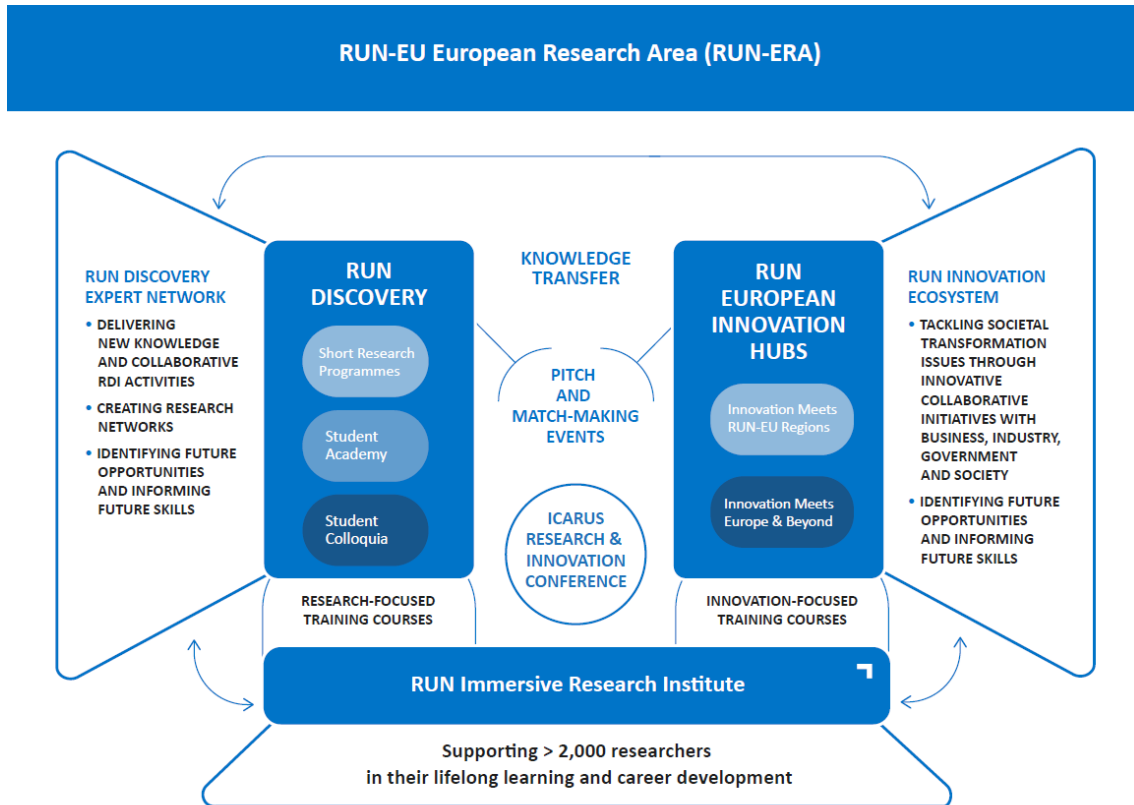


Figure 12 – RUN-EU European Research Area (ERA) consolidating the achievements of EIHs

## Appendix 1: Future and Sustainable Industries EIH 3<sup>rd</sup> Operational Report



Year 1 focussed mainly on the establishedment of the hub, and in Year 2, the Future and Sustainable Industries EIH has identified the following key areas of focus as illustrated in Figure 1 below:

- Robotics and Autonomous Systems
- Optimised and Sustainable Manufacturing
- Digitalisation
- Computational Science and Engineering
- Materials and Circularity
- Industrial Design Engineering

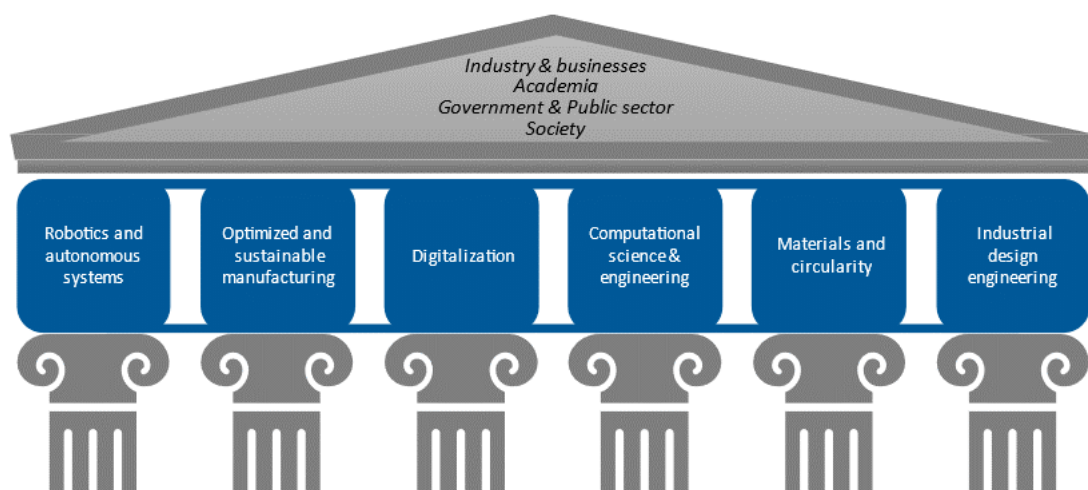


Figure 1: Specialisation areas of the RUN-EU Future and Sustainable Industries EIH

Year 2 also saw the development of a strategic plan for the EIH (**D2.7**). In Year 3, there has been a **strong engagement with industry** partners, most notably at the Science Meets Region events. On top of this there have been bilateral talks with (clusters of) companies to discuss in more detail their needs for joint research projects, exchanges and educational development (Short Advanced Programmes). This hub took the opportunity of the Science Meets Regions events to identify the future skills requirements of the labour force. They conducted a survey using Mentimeter and participants were mainly from Academia, Industry, Government and Civil Society. Their responses indicated that they work in areas associated with the following pillars of this EIH:

- a. Robotics and Autonomous Systems
- b. Optimized and Sustainable M
- c. Digitization
- d. Computational Science & Engineering
- e. Materials and Circularity
- f. Industrial Design Engineering

When asked to identify the future skills and competencies required for Future and Sustainable Industries, both generic competences and discipline specific skills were listed. Creativity, Design Thinking, collaboration skills, curiosity, cooperation, innovative thinking, and life cycle awareness (sustainability) were some of the generic competences listed. Technical skills identified included Robotics, Materials, Artificial Intelligence, process digitization and automatization.

Researchers from the RUN-EU partners participating in EIH Future and Sustainable Industries are involved in their national **Digital Innovation Hubs** and have been successful in obtaining EU funding through the Digital Europe programme for European Digital Innovation Hubs.

Joint funding applications were discussed, considered, and submitted, most notably EIT HEI Initiative and Erasmus+ Alliance for Innovation. An application for a joint RUN-EU PhD programme with IPL, IPCA and TUS as awarding institutions has been developed by the RUN European University in collaboration with the RUN-EU PLUS project. This application has been submitted to the Portuguese national accreditation agency, A3ES, for approval. The proposed PhD programme is linked to over 20 companies in the RUN-EU regions and partners of this hub

will be invited to participate in the co-design of research projects for the programme. The research undertaken, co-designed with the industry partner, will address a research challenge faced by the company in the digitalisation area.

**Future plans** include the continued engagement with industry to jointly and continuously: 1) develop educational programmes tailored to the industry's needs and 2) keep a keen eye on business opportunities and funding applications. All is in order to advance the sustainable development of the (mostly SME) companies in the region and to continue the offering of a relevant educational and research programme in addition to attracting and keeping talent in the regional innovation ecosystem.

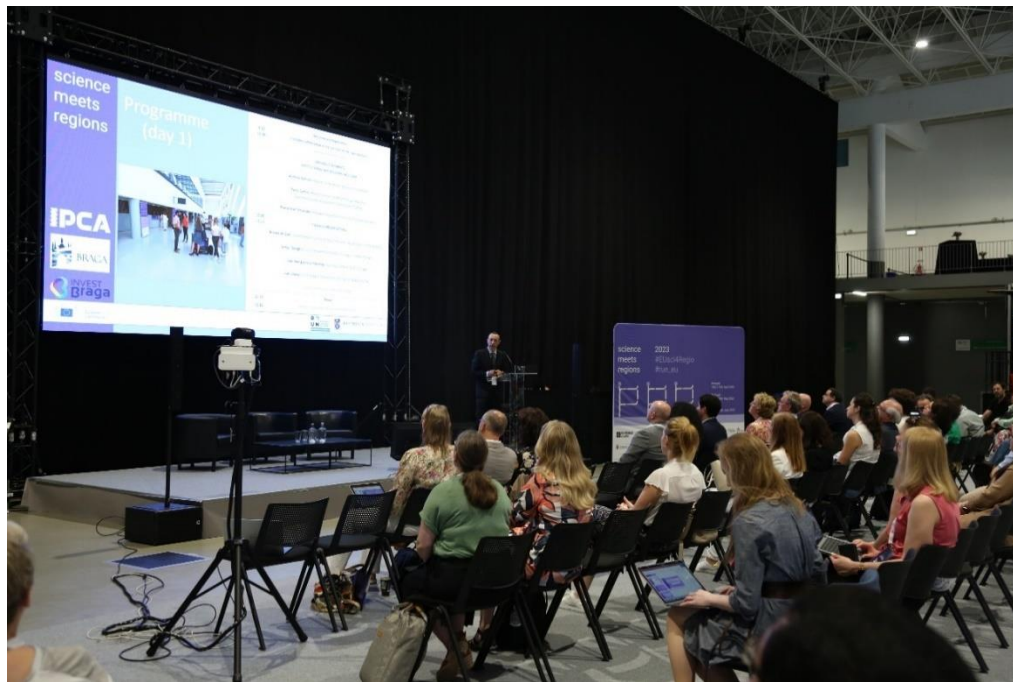


Figure 2: Science Meets Regions event, IPCA, Portugal, 25-26 May 2023.

## Appendix 2: Bioeconomy EIH 3<sup>rd</sup> Operational Report



Activities undertaken by the Bioeconomy EIH in its 3<sup>rd</sup> operational year include:

1. Introducing EIH to different stakeholders
2. Integrating research partners and activities into EIH.

Survey among RUN-EU partners shows that three most important issues activities for bioeconomy EIH partners to be:

1. active European wide research community
2. opportunity to participate in joint funding applications
3. increase innovation capacity.

This is in line with the present and plans in both research and future skills. Besides joint funding applications research services for the needs of enterprises are recognized important and valuable as well. Research and testing in bioeconomy sector requires special expertise and expensive equipment or testing environments. Research groups/centres/units which include great amount of expertise shown in Figure 1. Future plans are to collect and advertise practises, services and expertises to enterprises and other stakeholders that bioeconomy EIH can offer.

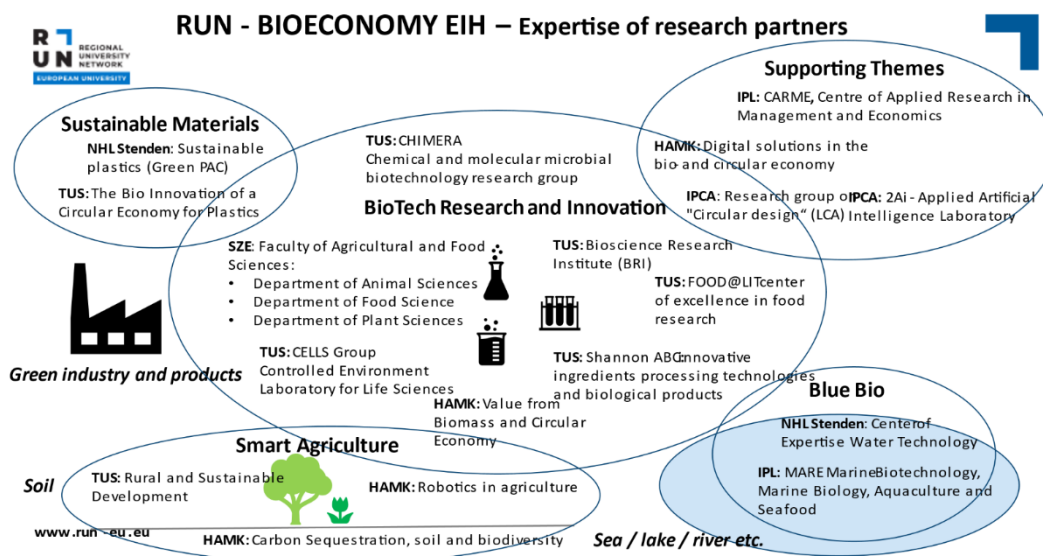


Figure 1: Research units/centers/areas/clusters involved in RUN Bioeconomy EIH

This EIH is associated with the RUN-EU Research Cluster in Food and Biotechnology which has already formed a great start for future research activities and relationships between researchers and companies. Research clusters are meeting regularly with companies and together as research teams are searching for European level funding opportunities. The following funding applications have been made or are under preparation by the RUN-EU Food and Biotechnology Cluster area (this list is included in the WP5 deliverable **D5.5 Joint Research & Innovation Projects – 2<sup>nd</sup> Report**):

1. INNOVAlgae - INNOVative solutions for future-looking Algae biorefineries, circular economy production and markets (no success)
2. HORIZON-CL6-2022-FARM2FORK-01-01: Risk assessment of new low risk pesticides (no success)
3. Horizon CL6-2024-FarmtoFork-01-10 (dl 22.2.2024) EU-African Union cooperation on agroforestry management for climate change adaptation and mitigation
4. Horizon-CL4-2024-TWIN-TRANSITION-01-01, DL 7.2.24 / 24.9.24  
Bio intelligent manufacturing industries
5. HORIZON-CL5-2024-D3-02-03 DL 21/01/2025 Development of smart concepts of integrated energy driven bio-refineries for co-production of advanced biofuels, bio-chemicals, and biomaterials.

## Appendix 3: Social Innovation EIH 3<sup>rd</sup> Operational Report



The Social Innovation Hub is increasingly becoming a community of people of the partners of RUN-EU who now frequently meet, in person and online. We share a commitment to the social issues in the regions where we work, and we acknowledge the purpose of this hub as a place where we can share and work together. 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 research areas some topics will be privileged, such as:

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

In the past months we have made progress in what we want to achieve. Our main goal is to have a positive impact on people and communities in our regions, as we all recognize that if we want to make this happens, we need to involve people from the start. The Social Innovation Hub can be the central point where we design and implement new solutions, but also develop concepts and processes to be more effective. We call it the transformative change because it is more about 'how' than 'what'. We know that we have to make new answers to the issues of today so we can stop giving the old answers, but we all are looking for what we have to do different. The action words of the Social Innovation Hub include facilitation, making connections, dissemination and transferability.



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 an urgent approach, we should prevent losing time on inventing tools which already are provided. 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). Maybe the biggest innovation is to connect and share what we also know and practice. A lot of what we need is already there, but we can learn so much more from each other and make more connections through our students, lecturers, and researchers. In order to share it with the stakeholders in our regions and also connecting the dots between them. So as much people as possible can benefit from it.

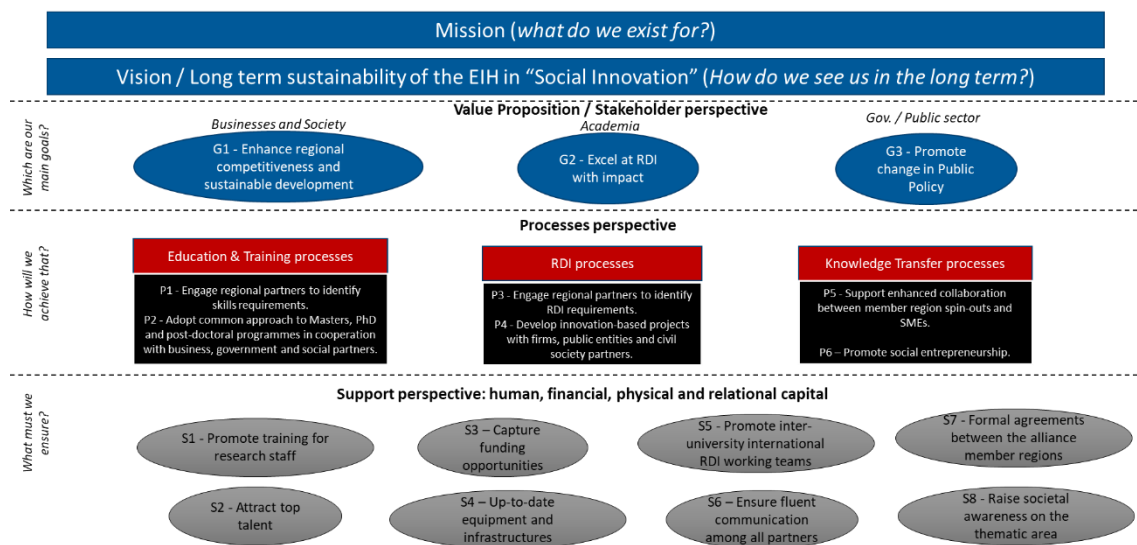


Figure 1: Overarching Strategy Map for the EIHs illustrating KPIs and objectives as presented in D2.6 Establishment of EIH Strategic Plan 2021-2024.

Members of the Social Innovation Hub met each other live at the three Science Meets Region-forums and used these gatherings to discuss topics related to our hub. We also met stakeholders in the regions of TUS, IPL, and SZE to pinpoint what social innovation should be to in order to be more effective. Social innovation is about the process as well as the outcome. It should also lead to a systemic change to be effective. To know what to do, it is important to involve all kind of

groups in society, as a partner in learning and research. We all agree that we must invest in improving the network and enable networks to be more effective. Inspiring people is a key factor in achieving results from a learning process. We have discussed examples of good practices of social innovation and all of them are effective if people are inspired by the meaning. This makes peoples get on board and work together to make things work, even if we all do not know yet what the outcome will be. For a learning by doing approach, you need to create an environment where groups, students can engage in experiential learning. Creating a good environment enables this process of innovating. In our virtual community of practice, we try to learn by doing and find out what future skills and competences are needed to really achieve social innovation to lead to a systemic change.

Social skills are under threat because we are in a spiral of online and automated processes, where the human side becomes irrelevant in many cases. Our students are struggling with making basic contact with people as the backlash of the COVID-period. In society we also seem to struggle in making contact and larger groups of people are getting behind because of poverty, limited capabilities, digitalization, limited access to education, health care and work. Social innovation is also about how to make contact in person, how to maintain a good relationship with your contacts, how to be polite and empathetic when your opinion differs, to think outside of the box. All these skills can be learned by doing. One of the best ways is bringing students and lecturers together in our programs and especially the Short-Advanced Programmes (SAP). In the past years the following SAPs have worked on social innovation:

[SAP 'Diversity, Equity and Inclusion in an Educational Environment' | RUN-EU](#)

[SAP 'The Power of the Dutch Social and Health System' | RUN-EU](#)

[SAP 'Preventing the Social Exclusion of Young People' | RUN-EU](#)

[SAP 'Aspects of Wellbeing – Personal Challenge' | RUN-EU](#)

[SAP 'Aspects of Wellbeing – Societal Challenge' | RUN-EU](#)

[SAP 'Social and Community Engagement in the Irish Health and Social Sector' | RUN-EU](#)

[SAP 'RUN-EU Sustainable Development – Social Enterprise Challenge' | RUN-EU](#)

[SAP 'Person-Centred Social and Health Services in Finland' | RUN-EU](#)

[SAP 'Delivering on the Socio-Economic Transition within the EU' – Research Challenge | RUN-EU](#)

[SAP 'RUN-EU Sustainable Development – Social Enterprise Challenge' | RUN-EU](#)

The Social Innovation Hub is work in progress and in the process of becoming more and more a community the lines are short. The hub also makes connections between the Work Packages of RUN-EU. For the upcoming period we will keep on building our hub and include the new partners in the RUN-EU family. We will also involve representatives of advocacy groups, leaders, and spokes(wo)men, business and policy makers, active community members and, of course, our students. We want to bring the outside in, achieve the quadruple helix and give a voice to society. By enabling communities of practice, we can move from problem-solving to innovation, to solution making. All this, we can integrate in our education. Therefore, we want to primarily be a network of people and not of projects, just to be of service to society.



Figure 2: SAP Preventing the Social Exclusion of Young People – Inclusive Community Lab NHL Stenden

