D2.9. EIHS OPERATIONAL REPORTS (2ND REPORT)

12th December 2022 (TUS / NHL-Stenden)

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1. Executive Summary

1.1 Overview of Tasks and Year 2 Activities

This report presents the activities of WP2 – European Innovation Hubs, relating to the delivery of Tasks 2.3, 2.4 and 2.5 during year 2 of RUN-EU from the 1st November 2021 to 1st November 2022. Significant change as a result of COVID-19, Climate impacts, Supply Chain Disruption (including food stocks disruption) and human migration as a result of economic, political or environmental instability have informed the focus of the three established European Innovation Hubs (EIHs) of RUN-EU. Other impacts which are of significant concern to associate partners of RUN-EU members include data security and impacts on business sustainability due to changing EU and International trade agreements. All these factors have meant that the established EIHs have had to navigate a widely disparate topography when aligning to business needs, provision of disruptive innovation platforms and identification of key skills needs required by these businesses to remain viable in a volatile global and European landscape. The EIHs secondary ambition are to enable RUN-EU members to remain agile and responsive to their partner's & region's needs.

The relevant tasks to this report are:

- ***Identification of Interregional RDI activities and embedded postgraduate and postdoctoral training programmes (Task 2.3):***

    This task involved (a) identifying and creating inter-institutional RDI teams with relevant RDI activity goals and funding targets and (b) development of externally funded j training opportunities across the RUN-EU network. Taught master programmes were also developed as a means of responding to key threats facing organisations such as the jointly developed Master of Science in Machine Learning for Business (TUS & HAMK).
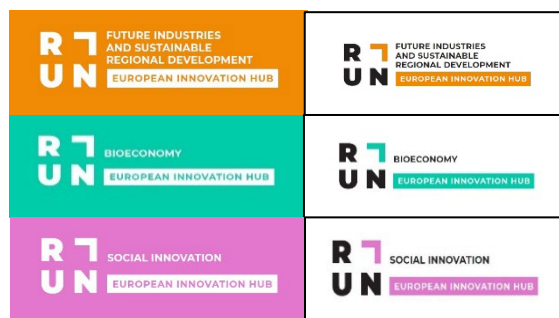
- ***Sustainable, regional and interregional Innovation and Development (Task 2.4):***

    This task involves (a) building an interregional sustainable innovation and development network with all associated partners to stimulate and drive the creation of a future

European Zone for Interregional Development (EZ-ID) and (b) develop co-operation and collaboration opportunities among all partners.

A Virtual Infrastructure platform or Digital Information Hub to host this network will assist in accomplishing this task. Various difficulties are associated with this due to the disparate natures of IT systems within each partner organisation. This in particular has become a significant barrier, however utilisation of Cloud Systems offered through Microsoft and LinkedIn rather than a bespoke platform will enable seamless communications, interactions and repository development within RUN-EU to evolve at a greater pace while allowing connectivity to all external stakeholders of the Quadruple Helix ecosystem.

Branding, dissemination material and information videos have been prepared or are in planning to bring greater awareness of the activities of the EIHs within each region. Figure 1 illustrates the Branding developed for each hub. Each research cluster office and facilities will have the associated EIH logo on their door. A promotional video was also prepared and presented at the Launch in NHL-Stenden in March 2022.

Figure 1 – European Innovation Hubs Branding Styles.

Embedding of EIHs in regional enterprise and community development strategies has also been done to bring greater exposure at regional and national government level of the importance of the EIHs and RUN-EU to the sustainability and development of the associate regions.

Shared research and innovation facilities are a key offering of the EIHs with research cluster facilities and innovation centres and hubs being made available to organisations which do not have access to such state of the art within their own regions. Such sharing of facilities within the network reduces costs and provides greater innovation across research centres and external partners. This in turn leads to agreements for mobility and research funding through KA2 & KA3 Erasmus+ funding and Horizon Europe calls. One such example is from the Bioeconomy EIH where they established a RUN-EU Food & Bioeconomy research cluster to develop research proposals to investigate the following areas:

1. Smart Food Security and Sustainable Food Production
2. Smart Value chain from Waste to Sustainable Products
3. Smart Utilization of Water
4. Smart Built Environment.

These areas highlight the interconnectivity with both the Future and Sustainable Industries EIH and the Social Innovation EIH. It is also important to note that enterprise representatives are also partners of this group.

The EIH executive committee in collaboration with the Westmeath County Council and Limerick County Council in Ireland and the Győr-Moson-Sopron Local Government in Hungary were successful in securing €50,000 through the Joint Research Centre of the European Commission call on *Science Meets Regions* Strand 2 – Networks of regions and cities. The relevant remit of this funding is to host Networking Initiatives for consortia of regions and/or cities on issues of common concern, in order to boost interregional collaboration in the European Commission priority topics of i) The Green and Digital Transitions; and ii) Future Smart Specializations and iii) Recovery from the COVID-19 Pandemic. Emphasis is on territorial development and tackling grand societal challenges.

Utilising this funding, three International events will be hosted in Ireland (May 2023), Portugal (June 2023) and Hungary (April 2023) focused on Circular Economy and Green / Digital Transitions with all three European Innovation Hubs taking centre stage. These

two-day events will be replicated across all three sites and be open to Enterprise, Community, Government and Academia representatives. These events are just one example of how RUN-EU EIHs are providing our members and partners the opportunities to create strong collaborative regional networks incorporating our existing Regional Innovation Clusters, regional government bodies, chambers of commerce, enterprises, incubation centres, design labs and entrepreneurial stakeholders.

- ***Interregional education and training opportunities and future skills needs (liaising with WP 3, 4, 6 & 7) (Task 2.5):***

This task involves identification through the activities of the newly established European Innovation Hubs of Future Skills needs to address sustainable regional skills development, FASA establishment and operation and provision of SAP opportunities for students, staff and external partners which address immediate needs of enterprise and community groups to reduce the impacts on regions as a result of climate change, global supply chain disruption or refugee migration as a result of persecution and/or war.

A number of SAPs have been created and offered over the last year across RUN-EU which have been informed through the three EIHs activities and management committees. However, to reach sustainable programme development and FASA activities, funding is needed to establish permanent Innovation Management Staff to drive these activities forward on a full-time basis. The weakness of the structures at present within the EIHs is the lack of full-time management, engagement and support staff. Each EIH have applied for funding for such posts and as yet funding has not yet been secured. An overarching plan to secure.

A FASA for the EIHs has been established through Performance Enhancement Funding secured from the Higher Education Authority in Ireland to the value of €167,000. This FASA known as the Interdisciplinary Innovation and Entrepreneurship Academy has a remit of developing a common Innovation and Entrepreneurial training programme for

undergraduate and postgraduate students as part of their studies. Utilising Team Based Learning and direct enterprise / community assistance, real life problems are presented and troubleshooted which particular focus on the interdisciplinary approach. Student teams will consist of representatives from different disciplines to enable a multifaceted approach to the problem solving. Thus, enabling students to understand the viewpoint of their peers from other areas much like what they would experience in a work-based environment. This approach broadens the graduate's awareness of their role within an organisation and provides an understanding of their impact on sustainable business practices in tandem with others within an organisation.

2. Identification of Interregional RDI Activities and Embedded Training Programmes

2.1 Interregional RDI and embedded training activities

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, captial 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 has seen establishment of the three European Innovation Hubs in 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. For example, EIH 1 – Future and Sustainable Industries has identified the key areas illustrated in Figure 2. A number of European and Regional projects are in development or in submission for European and national funding across the network. Year 3 should see the fruits of these efforts with annual workshops and site visits for enterprise, spin out companies from member organisations and competitive large-scale funding for innovation ecosystem activities and sustainability of practice.
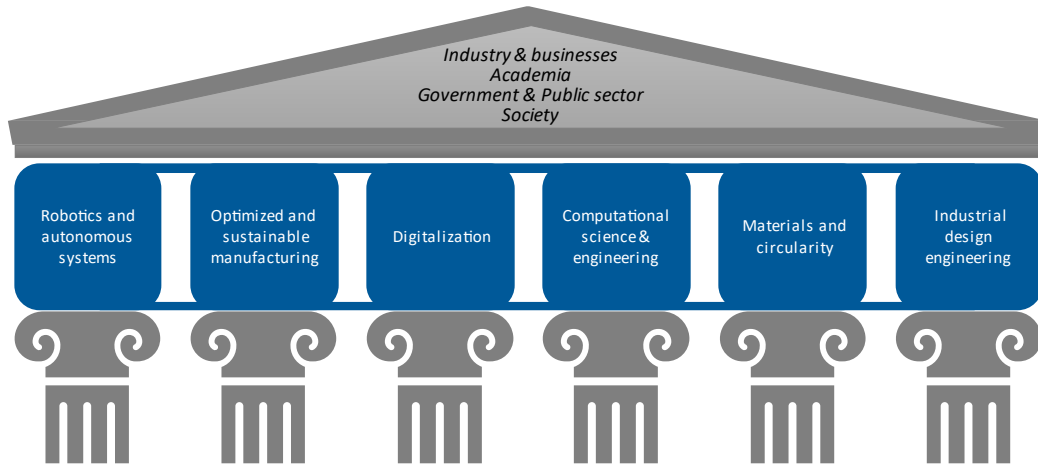
Figure 2 – Key areas for EIH 1 – Future and Sustainable Industries.

Figure 3 illustrates the complex interactions and multidisciplinary approach to the alignment of research clusters in EIH 2 – Bioeconomy.
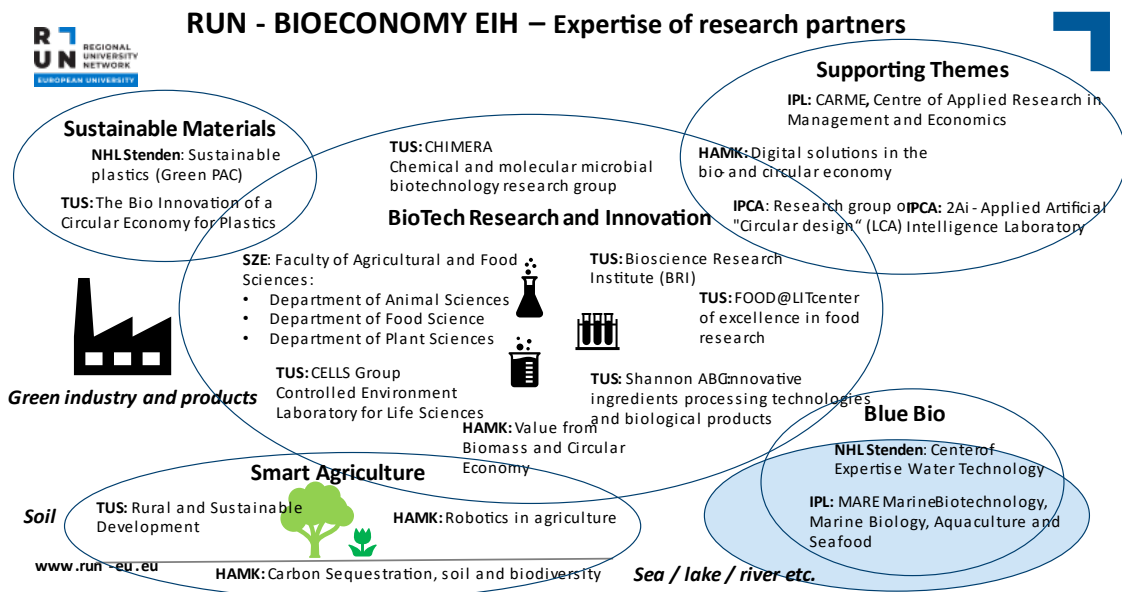

Figure 3 – Key areas for EIH 2 – Bioeconomy.

3. Sustainable, Regional and Interregional Innovation and Development (TASK 2.4)

3.1 Development of a Sustainable Interregional Network

In order to drive the creation of European Zones for Interregional Development (EZ_ID), a virtual network platform is needed to facilitate free communication and access to data from all RDI activities across the European Innovation Ecosystem members. This platform will also provide access to profiles of RDI personnel and partners, ideas and dissemination of outputs, interaction with research centres and innovation hubs for access to expertise and state-of-the-art facilities and equipment.

Currently this infrastructure is still being constructed even though it was expected to be available for open access by June 2022. The group leading out on this task discovered numerous technical and technological barriers as a result of RUN-EU being made up of partners with independent IT Systems and Security protocols. Free access under these circumstances is not possible. This posses a greater issue when trying to include the additional layers of external associated partners who need access to be able to make use of our outputs and services.

The original plan was to develop a bespoke Digital Hub that would enable various levels of interaction and access depending on your organisations standing and your role within it. However, upon investigation, it was deemed not an appropriate pathway to developing this platform due to timeline and costs potentially involved.

It was then decided to engage with LinkedIn who originally indicated we could establish a private portal within their servers that would allow both RUN-EU members and permitted associated external partners access to a private room for information sharing, network development and live chat functions. Again, the more this was investigated to more it was realised that it was not possible to achieve the level of connectivity required. Work is still ongoing to develop the RUN-

EU LinkedIn page to enable greater network development and dissemination activities, the targeted and private nature desired is not achievable.

Parallel to these investigations, contact was made with Microsoft Europe with regard to setting up RUN-EU Microsoft hosted digital ecosystem including all Microsoft business management tools such as SharePoint and Teams. The positive impact on this approach means that all RUN-EU member staff will have a RUN-EU email address and have access to all shared files without the need to switch user accounts. There will also be greater integration of external partners for data sharing and communications using Microsoft Apps such as Yammer and Stream and support postgraduate and student learning through Moodle. This approach will give a significant level of integrated co-operation across the RUN-EU network.

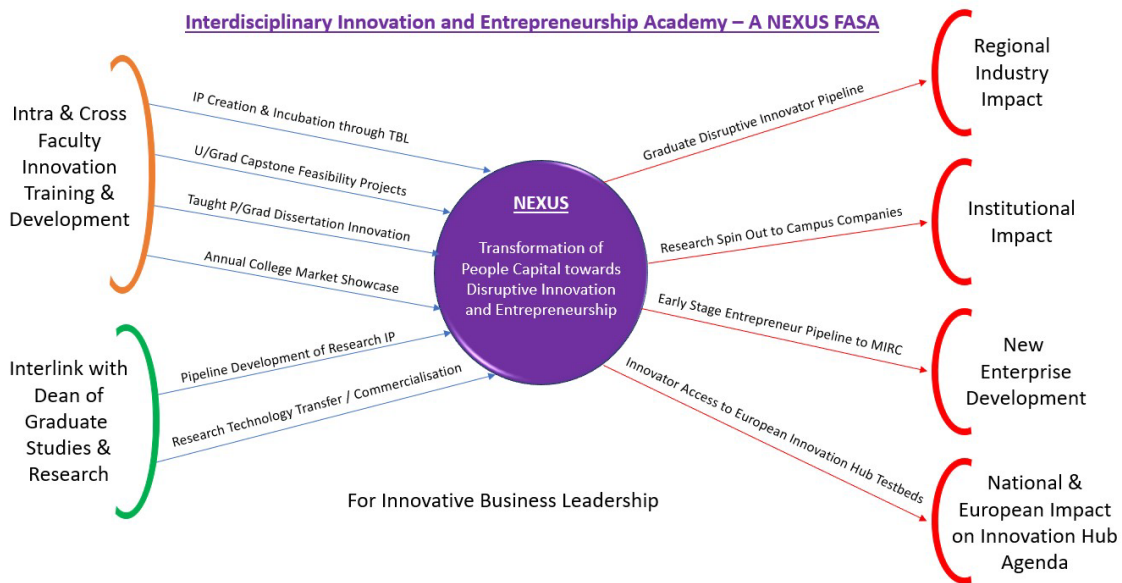## 3.2 Stimulate the Creation of a Future European Zone for Interregional Development

Parallel to the construction of this virtual network, regional partners and stakeholders are compiled and the database reviewed quarterly. A number of EZ-ID partner agreement have been signed in regions across RUN-EU. These partners will be invited to the Science Meets Regions Events discussion forum on establishing Circular Economic Regional Facilitation Networks for SMEs, the forum will be Chaired by Mr Petri Salminen, President of SMEUnited, an EU Commission associated body representing SMEs and Crafts organisations in Europe.

4. Interregional Education & Training Opportunities and Future Skills Needs through WP3 to 7

4.1 Interregional Education and Training Strategy & Informing Future Skills Needs

This task involved the establishment of a working group within each EIH, to identify Future Skills needs and develop a strategy for sustainable regional skills development, continuous professional development opportunities and mobility programmes from research students and staff.

Regional Skills and Enterprise Managers are utilised to identify current skills requirements and jobs of the future for disruptive skills development. Access to infrastructure and graduate attributes are also targeted feedback. An action plan for Year 3 will be presented at a WP2 researcher/innovation manager Hackathon event in NHL-Stenden in February 2023. In Q1 of 2022, TUS secured €1M funding under the HEA (Ireland) performance enhancement fund for RUN-EU related activities. WP2 secured €167,000 of this funding to establish the Interdisciplinary Innovation and Entrepreneurship Academy (I^2). This FASA as described above was established to be the nexus learning ecosystem for innovation focused education and translational entrepreneurial activities of student's outputs. This includes connectivity to Research Clusters and Innovation/Incubation Hubs for spin-outs and SME start-up promotion. Figure 4 illustrates this ecosystem flow. Programmes of learning in innovation are currently being designed which will align to design factory / makerspace activities across the RUN-EU network with accredited SAP, BIB and graduate degree linked certification attached. These are under the umbrella name of RUN-IN MAKERSPACE.

Figure 4 – The Interdisciplinary Innovation and Entrepreneurship Academy.

Two other innovative education training programmes which is being adopted are known as RUN-IN BUSINESS and RUN-IN FAST (Festivals of Living Labs) originally developed and run by NHL-Stenden. These initiatives are designed to support students in non-traditional learning environments such as music / summer festivals, where crafts, design technologies and techniques are learned in a fun environment and products can be crafted on sold. Figures 5 & 6 illustrate the project flow for both of these initiatives.

Figure 5 – RUN-IN BUSINESS

Figure 6 – RUN-IN FAST

This report has been prepared by work package 2 leads Michelle McKeon-Bennett (Lead- TUS) and Peter Mulder (Lead - NHLStenden) with input from the WP2 European Innovation Hub Executive Committee including Annukka Pakarinen (HAMK); Ricardo Simoes (IPCA) and Pedro Morouço (IPL).