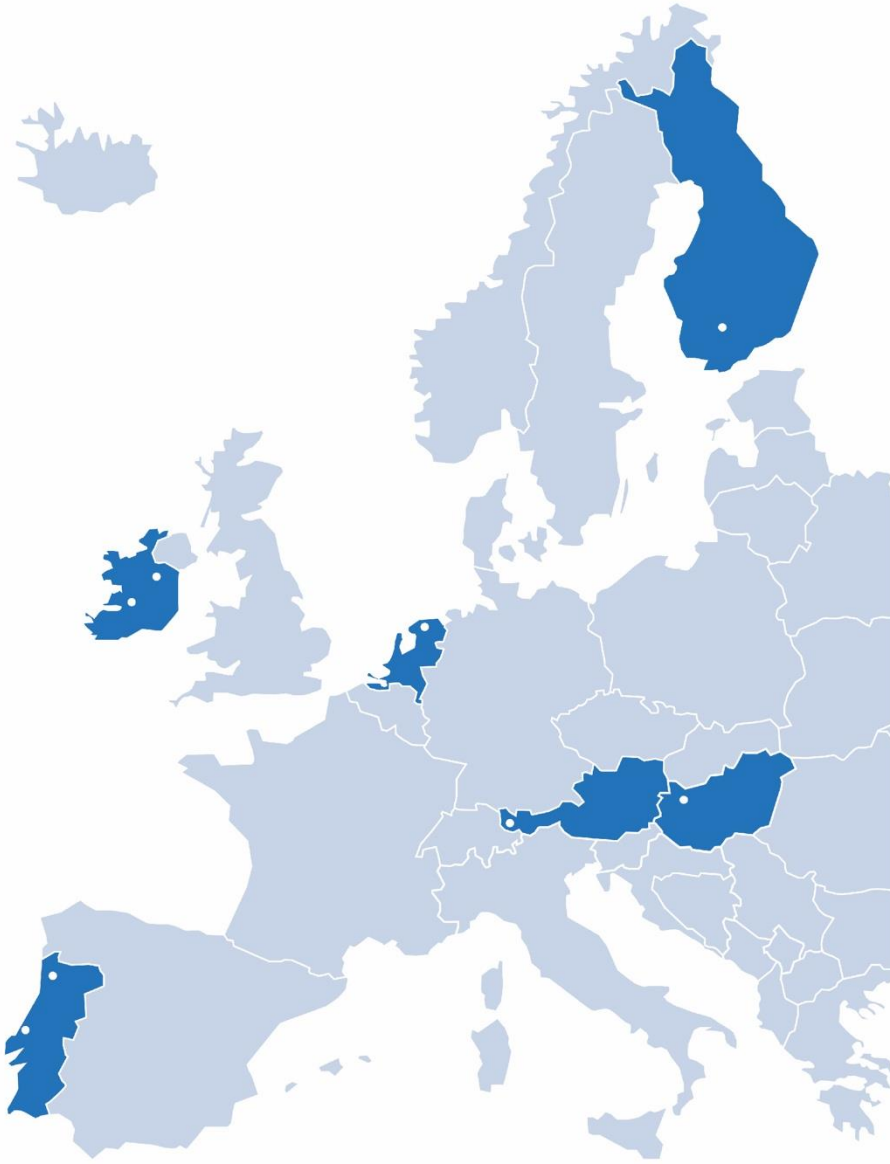
REGIONAL UNIVERSITY NETWORK PLUS

EUROPEAN UNIVERSITY



D3.1. STRATEGIC RESEARCH PRIORITIES REPORT

31st March 2022

Technological University of the Shannon: Midlands Midwest (TUS)

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Table of Contents

Table of Figures

Table of Tables

Executive Summary

This report presents an overview of the regional strategic research priorities of RUN-EU partner organisations. The Regional University Network (RUN) is a European University made up of seven Higher Education Institutions from 6 countries and has 75,000 students and 8,000 staff. RUN-EU provides a structured framework for the enhancement of the research and innovation ecosystem with business and society at a regional and inter-regional level across the university alliance. The RUN-EU PLUS project (Professional Research Programmes for Business and Society) focuses primarily on enhancing the development of research and innovation with and for society through the development and deployment of collaborative professional practice-based research degrees across the RUN-EU alliance.

An analysis of RUN-EU regional priority domains for research and innovation (R&I) with business and society is presented here, 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 Degrees that will attract the support of business and society.

Sustainability, **Digitalisation** and **Social Innovation** were selected as the priority research domains by the RUN-EU PLUS project management committee following a review of this report. These priority domains which are relevant to the RUN European University in terms of research and innovation with business and society will drive the formation of collaborative action teams to lead the development of specialist research degree programs, accredited across the RUN European University and integrated into the RUN research institutions and centres. These specialised research programmes will support the impact of the RUN-EU European Innovation Hubs in Future and Sustainable Industries, Bio-economy and Social Innovation in our regional development.

1.0 Introduction

This strategic research priorities report of RUN-EU PLUS assesses the priority research domains for RUN-EU research and innovation (R&I) with society and presents an overview of the regional research interests and regional priorities of the RUN-EU partners that can be leveraged in the creation of Professional Practice-based Research Degree Programmes which will attract the support of business/society. The priority domains relevant to the RUN European University which are identified in this report will drive the formation of collaborative action teams to support the development of the necessary specialist research degrees.

RUN-EU aligns to the European Universities Initiative[1] envisaging RUN-EU as a pan-European regionally focussed research and innovation hub within the European Higher Education Area (EHEA)[2]. The RUN-EU alliance brings together a creative community whereby 'learning, studying and doing research' enables our staff and students to cooperate across borders, languages, and disciplines, and thus develop a strong European identity. RUN-EU PLUS will deliver on the core objectives of the European Research Area by "fostering the free movement of researchers, scientific knowledge and innovation." Our shared, integrated, and long-term joint strategy includes enhanced mobility opportunities and recognition of qualifications across the consortium, inclusion of all in educational opportunities and the promotion of a strong sense of European identity, culture, and citizenship. A central strategy for RUN-EU is in underpinning our regional's Skills and Human Capital development, enabling Europe's research and innovation Economy, and fuelling balanced regional development. We see the vital importance of using strategically focussed industry informed research and innovation expertise to co-create and deliver solutions for the challenges of the future as critical to build societally impactful innovative capacity and growth. Our plan aims to ensure a high level of enhanced, sustainable research cooperation across all levels of the RUN European University and across different areas of research activity that will build on their complementary strengths and where research students and staff are empowered to implement our vision and exceed our goals. This ambition is mirrored in our consortium long-term strategy, by virtue of its immersive inter-regional approach, which utilises a 'quintuple helix' innovation model. This involves interactions among five key elements of society: academia, industry, government, culture, and the environment.

Critical to the success of the European University initiative and embedded within our consortium is the development of joint activities, driven by innovative collaborative inter-university and interregional research and innovation activities and regional stakeholder engagement, enabled by physical and virtual mobility activities, which will foster at their core existing European Union principles, values, and objectives. Detailed in WP7 in the RUN-EU Erasmus+ project and supported within WP2 and WP6 of the RUN-EU PLUS project is the intention for the design and delivery of joint collaborative European degrees, which will include regionally relevant double and joint degree programmes. Specifically, building on our common R&I agenda and convergence action plan, in synergy with the consortium's education strategies and regional engagement, RUN-EU PLUS will define the regional priority areas to define the roadmap for the development of Collaborative Professional Practice-based masters and PhD Research Degrees.

Our industry co-designed practice-based research degree programme design will incorporate the structured elements of the practice-based master's qualification and articulation requirements of the Doctoral programme, providing a clear transfer pathway to the higher degree. In certain instances, we envisage that some of the master's level research projects will generate sufficient innovation to allow transfer to the PhD programme register. This will be accomplished using recognition of prior learning practices to allow the transfer of master's students to PhD registers amongst and between consortium partners. The research degrees will address 'change', which may be large, through a focus on changes in structural or cultural factors (such as policy, strategy, systems, organisational structures and/or teams) or through changes to process factors such as technology, software, product design, service delivery, and the knowledge that underpins practice and/or organisations.

There is currently a highly uncertain outlook for the labour market according to the OECD Future of Jobs Report 2020[4] with the estimation that by 2025, 85 million jobs may be displaced by a shift in the division of labour between humans and machines driven by job growth in the 'jobs of tomorrow'— with a surge in demand for workers who can fill green economy jobs, roles at the forefront of the data and AI economy, as well as new roles in engineering, cloud computing, social innovation and product development. The nature of the 'jobs of tomorrow' is also rapidly changing, with rapidly digitalisation of working processes, including a significant expansion of remote working. The OECD 2020 report identifies the top skills needs include critical thinking and analysis as well as problem-solving, and skills in self-management such as active learning, resilience, stress tolerance and flexibility. In addition, the top skills-needs identified in manufacturing are in technology use, monitoring and control - reflecting the growth of digitalisation of manufacturing and the widespread adoption of Industry 4.0 technologies. Thus the 'jobs-of-tomorrow' will need a different type of professional; one who is equipped to work in a very different and collaborative way, to confront complex and interdisciplinary challenges and to find new solutions and ways to implement solutions.

This report presents a summary of Research, Development and Innovation expertise which exists within the RUN European University in addition to an introduction to the RUN-EU European Innovation Hubs (EIHs) which have been established in the areas of (i) Future Industry and Sustainable Regional Development (Future and Sustainable Industries) (ii) Bioeconomy and (iii) Social Innovation. Strategic Development Plans are summarised for each RUN-EU partner region and these plans, along with their identified priority areas for strategic regional growth and action plans, have informed the identification of priority research domains relevant to the RUN European University in terms of R&I with Business and Society.

2.0 RUN-EU Priority Research Domains for Research and Innovation with Society

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.

As lead partner of the RUN European University, Instituto Politecnico de Leiria have, during the project to date, provided clear and effective guidelines and tools for implementation of our project goals and objectives (particularly as they relate to the priority research domains for R&I with society) against our 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 in association with the 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 Discovery Programme (Workpackage 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 more detailed audit and characterization of each member's existing regional innovation cluster activities and capacity with a view to identifying areas for cooperation and collaboration. To date several 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

Characterization 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'.

2.1 RUN-EU and RUN-EU PLUS Strategic Research Objectives and Implementation Plans

Strategic Objective 1 (SO1): Implement shared resources and infrastructures across RUN-EU and involved 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 identification of the strategic research priority areas and associated action plans.
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.

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 will 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 1 RUN-EU Collaborative Degree Group Exploratory Mission schedule 2022

RUN-EU Group Exploratory Missions 2022

	AIT	LIT	HAMK	IPL	SZE	FHV	IPCA	NHLS	Number of Programme directors	Number of Programme directors traveling	Exploratory Mission at	Time period: Please fill in the preferred week!
Art & Design	2	8	1	4		1	3		19	11	TUS Limerick	25.04.2022 - 29.04.2022
Built Environment	1	9	2	1	3				16	7	TUS Limerick	25.04.2022 - 29.04.2022
Tourism and Hospitality	4	2		1	1		2	5	15	10	NHL Stenden	21-03-2022 – 25-03-2022
Business & Management	3	6	3	1	4	3	5	3	28	25	HAMK	04.04.2022 - 08.04.2022
Engineering	2	5	3	4	4	4	3	1	26	22	FHV	07.03.2022 - 11.03.2022
Health & Sport	5	3		2				1	11	6	TUS Athlone	07.06.2022 - 10.06.2022 preliminary date
Information Technology	3	7	2	3	3	2	5		25	20	IPCA	23.05.2022 - 27.05.2022
Life & Physical Science	8	6	1	1					16	8	TUS Athlone	07.06.2022 - 10.06.2022
Social Sciences & Education	2	2	2	10	1	0	1	1	19	10	IPL	09.05.2022 - 13.05.2022 (we prefer to organize it fo representatives of all stud programmes)
Agriculture & Food		1	2	1	2				6	4	SZE	04.04.2022 - 08.04.2022 (bu we prefer to organize it fo representatives of all stud programmes)
	30	49	16	30	18	11	22	11	187	123		

Strategic Objective 4 (SO4): Execution of the dissemination, outreach, and sustainability strategies and results among the stakeholders and key target audiences using or complementing the well-established RUN-EU communication channels. Ensuring the sustainability of the project's outcomes beyond its lifetime as well as enabling exploring joint structures and sharing best practices to ensure system-level impact.

Implementation SO4: The planned activities will benefit from the synergies with the communication and dissemination structure put in place by the RUN-EU Erasmus+ and RUN-EU membership of Forum of European Universities #2 – FOREU2alliance and its specific European University strategic objective working groups.

3.0 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 the pan-European 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.

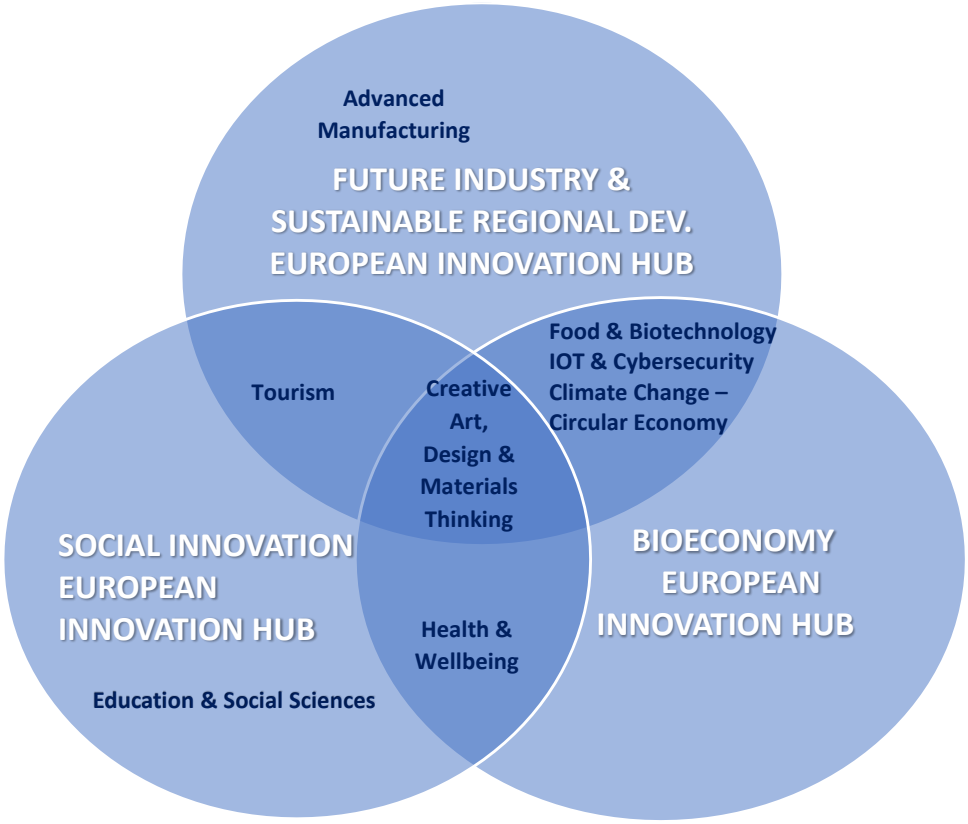

Figure 3 RUN-EU Research Area Clusters and integration in European Innovation Hubs

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.

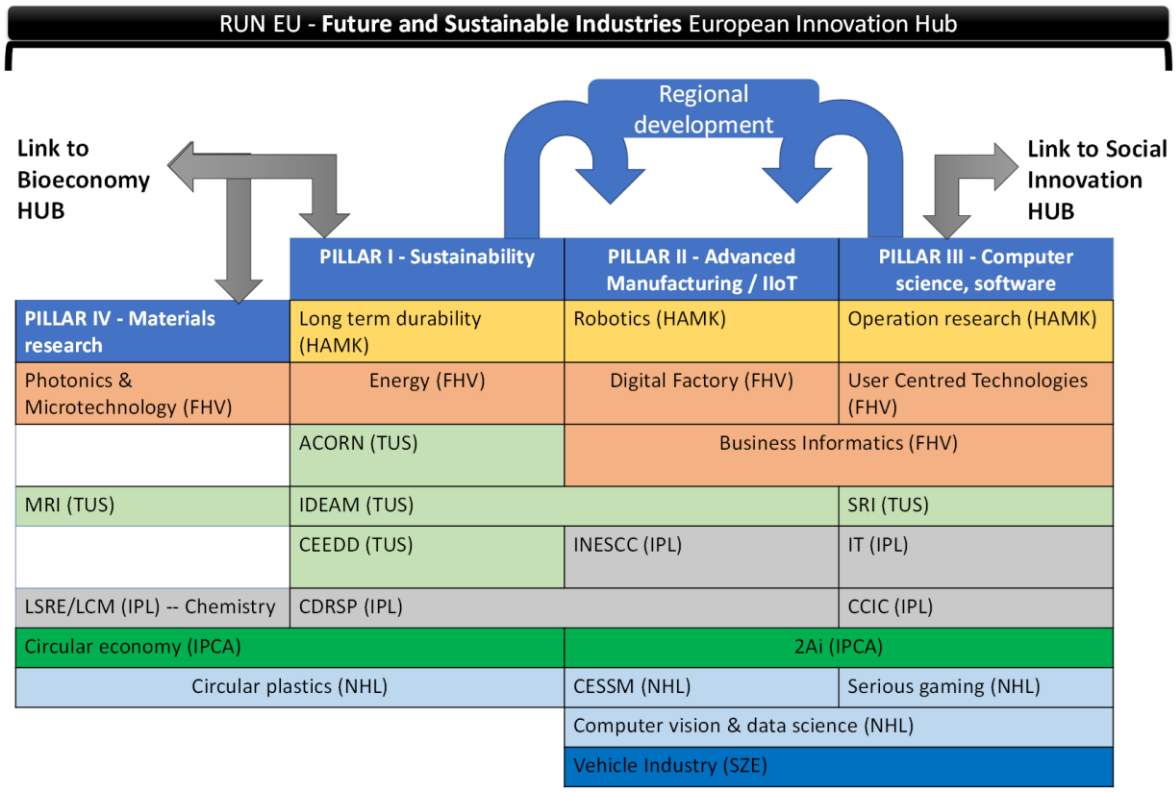

Figure 4 EIH-Future and Sustainable Industries

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. **Figure 4** indicates how RUN-EU research groups integrate into the structure of the EIH in Future and Sustainable Industries.

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 strategic European Innovation Hubs (EIH) in **Future Industry and Sustainable Regional Development (Future and Sustainable Industries)**; **The Bio-economy** and **Social Innovation** driving the 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 2 RUN-EU PLUS Stakeholder initiatives and engagements

Name/type of Industry associate parent/stakeholder initiative	Short 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.
AIT Learning Enhancement Initiatives	AIT 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	AIT 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.

4.0 Overview of RUN-EU Priority Areas for Regional Development

The following section presents an overview of our RUN European University regions, their strategic goals, action plans and alignment with our RUN-EU EIHs. The priority areas identified by each region as per their regional strategic plans will be aligned with our RUN-EU research cluster expertise and our RUN-EU EIHs which ultimately will collectively inform the selection of RUN-EU priority research areas to inform the creation of collaborative Professional Practice-based research degrees.

4.1 RUN-EU Geographical Regions

4.1.1 Midlands-Midwest, Ireland (TUS)

The Technological University of the Shannon: Midlands Midwest (TUS) serves the Midlands and Midwest of Ireland and has campuses in Limerick, Clare, Tipperary and Athlone. The midwest economic region is based primarily around the greater Limerick/Shannon corridor. The Midlands region centrality provides access to a highly engaged workforce within 60-minute drive of the 5 key towns, of Athlone, Longford, Mullingar, Portlaoise and Tullamore.

Table 3 Mid-West and Midlands Regional Statistical Snapshot

TUS	Midwest Region	Midlands Region
Counties	Limerick Clare Tipperary	Laois, Offaly, Longford and Westmeath
Population	473, 269 (10%)	292,301 (6 %)
Area	10,511 km² (15%)	6,500 ((6 %)

Figure 5 Map of Ireland showing Midwest Midlands Regions

4.1.2 Região Centro, Portugal (IP Leiria)

Polytechnic of Leiria is located in the coastal area of *Região Centro*, which consists of one of the 7 NUT II regions in Portugal, located at the central part of the country.

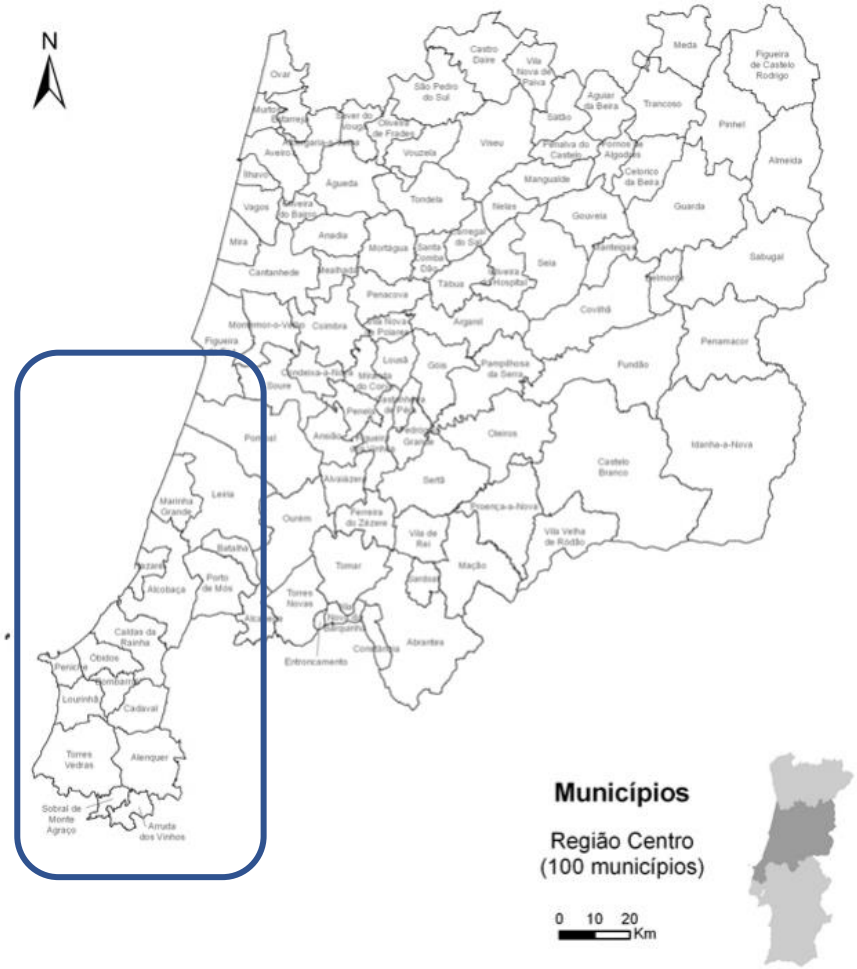

Figure 6 Map of the *Região Centro* region of Portugal

The schools, teaching poles and research infrastructures of Polytechnic of Leiria are located within the blue box drawn in the map, more precisely, distributed between the municipalities of Leiria, Pombal, Marinha Grande, Caldas da Rainha, Peniche and Torres Vedras.

4.1.3 Kanta-Häme, Finland (HAMK)

Kanta-Häme, sometimes referred to as the **Häme** region, is a region of Finland which borders the regions of Southwest Finland, Pirkanmaa, Päijät-Häme, and Uusimaa.

Hämeenlinna is the largest urban area in the region. There are two other municipalities that have township status: Riihimäki and Forssa.

Kanta-Häme area is located in between two large economic regions/cities Uusimaa/Helsinki and Pirkanmaa/Tampere. This 200 km South-North line is often called growth corridor. Large economic regions/cities are located west-east axis as well. Varsinais-Suomi/Turku on West side and Päijät-Häme/Lahti on East side. These areas are naturally competitors in terms of inhabitants and companies. However, the location in the intersection is the value and opportunity for logistically optimal location. Kanta-Häme area has three centers, Riihimäki, Hämeenlinna and Forssa.

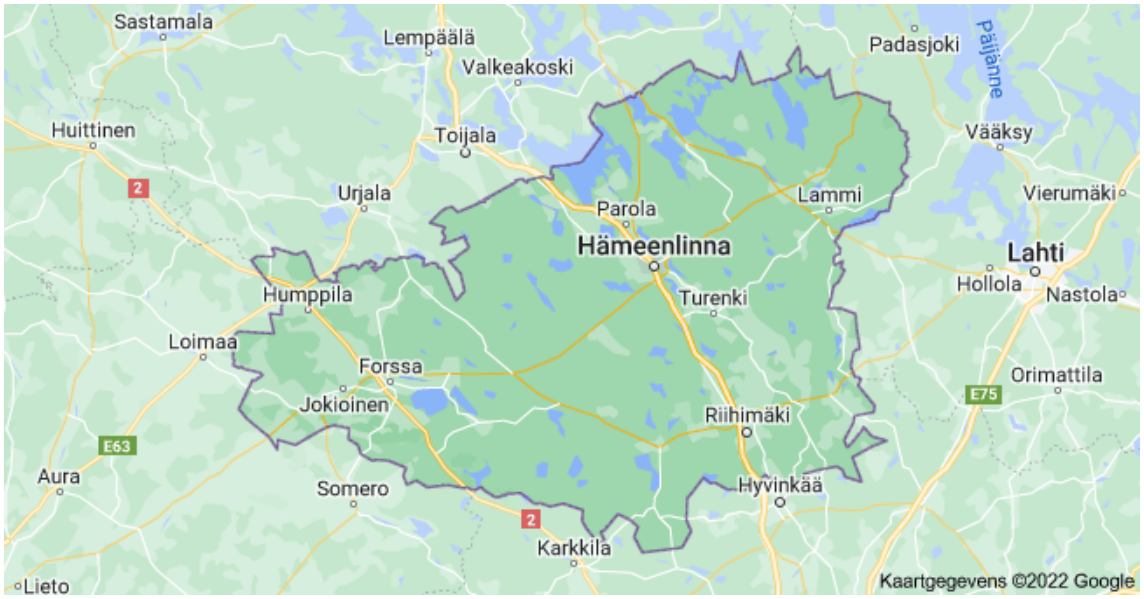

Figure 7 Map of the Kanta-Häme region of Finland

4.1.4 Ave and Cávado, Portugal (IPCA)

IPCA's area of influence covers the NUT III Ave and Cávado, in the district of Braga (North of Portugal), with a population concentration of 828.849 inhabitants (about 8,5% of the country's population and 25% of the north regions, with the latter representing 36% of the country, according to Statistics Portugal, 2021), in which the Ave region has about 416.679 inhabitants and the Cávado region about 412.170 inhabitants, being simultaneously one of the younger regions. The territory has a strong dynamic in the entrepreneurial sector, with most of the working population being in the secondary and tertiary sector. In this territorial space we find the urban quadrangle made up of the four biggest municipalities with a population of 600.552 inhabitants (Barcelos – 116.777; Braga – 193.333; Guimarães – 156.852; Vila Nova de Famalicão – 133.590), with important synergies at several levels and with the effective and competitive communication means with roads, railways, maritime and air axis, in which the time to go from the urban centre of one of the municipalities to the other is under 30 minutes. This Urban Quadrangle, which constitutes one of the consortiums for this application, is in the centre of the Strategic Triangular Axis Porto – Galicia – Verin, designated as "Euro-Region" that represents an especially strategic territory with about 7 million inhabitants. In the context of the North region,

this Quadrangle poses has a dynamic territory in the entrepreneurial context, with an entrepreneurial density bigger than the regional and national average, with the Ave as the second territory where more companies in the manufacturing industry were located, and the Cávado as the fourth territory in the North region. The volume of the industrial employment in the Ave is the highest in the North region and the Cávado comes up in fifth place.

Figure 8 Map of the Ave and Cávado region of Portugal

4.1.5 Northern Netherlands (NHL Stenden)

The Northern Netherland, the NUTS-1 region comprised of the Provinces **Fryslân, Groningen and Drenthe**, can be considered the 'home region' of NHL Stenden. The region itself has strong cooperation ties and works together on a large number of themes such as a national and international lobby. Around 10% of the national population lives in this region (or 1,7M people).

The region has a number of characteristics that fit a perifiral region. Examples are a lower than average GDP per inhabitant, brain drain of (mainly) young people and relatively few international companies, few headquarters (and/or R&D departments) of large companies and few jobs for higher educated people.

Combined with a demographic shift of an ageing population, the region is therefore more challenged to face global transitions than other regions in the Netherlands.

Source: common.wikimedia.org

Figure 9 Map of the Northern Netherlands

In the region there is one university (University of Groningen, https://www.rug.nl/), and three universities of applied sciences: Hogeschool VanHall Larenstein (https://www.vhluas.com/), Hanzehogeschool (https://www.hanze.nl/eng) and NHL Stenden Hogeschool (https://www.nhlstenden.com/en).

4.1.6 Győr-Moson-Sopron County, Hungary (Széchenyi István University)

Győr-Moson-Sopron is an administrative county in north-western Hungary, on the border with Slovakia and Austria. It shares borders with the Hungarian counties Komárom-Esztergom, Veszprém and Vas. The capital of Győr-Moson-Sopron county is Győr.

Development Concept of the Győr-Moson-Sopron County 2021-2027[1]

SZE	West- tarnsdanubian Region
Counties	Győr-Mosons-Sopron County
Population	449 967 (2011)
Area	4 208 km²

[1] GYMSM_Koncepcio_5.0_20210701_01.pdf (gymsmo.hu)

Figure 10 Győr-Moson-Sopron County Map

4.1.7 Vorarlberg, Austria (FHV)

About 400,000 people shape their lives in Vorarlberg in their own personal way. They make the province with its just 80 km² the second most densely populated in Austria after Vienna. In the last three decades, the population in Vorarlberg has grown at the fastest rate in a comparison of the federal states, at around 22 percent, and has virtually quadrupled within 150 years.
Austria's westernmost and most industrialised province is one of the top 20 locations on the continent. A special feature is the versatility of the economy: the state has developed from a textile location into an economic multi-talent. A wide range of products and industries strengthens the economy and makes the region resistant to crises. From global corporations to domestic family businesses to highly specialised small and medium-sized enterprises, everything is represented here.

Figure 11 Map showing the region of Vorarlberg next to Switzerland, Germany and Liechtenstein at the Lake of Constanze

4.2 Regional Strategic Development Plans

The development plan for each RUN-EU region is presented within the context of the relevant national development plans. Common themes among all regional plans include social inclusion and the commitment to improving the quality of life of its citizens, education, tourism, increasing enterprise development, digitalisation and sustainability.

4.2.1 Midlands-Midwest, Ireland (TUS)

At government level, regional policy in Ireland is set out "Project Ireland 2040", a planning and investment programme for the future growth of Ireland's regions, cities, towns and rural areas, focused on a common set of ten shared development goals. The overall Project Ireland 2040 strategy is based on the enhanced growth of Ireland's regions as accessible centres of scale. Reducing disparities between Irish regions and effecting chage while realising the enterprise and jobs potential in all of the regions is a priority for the Irish government. Additional institutions include the Regional Skills Fora as a function of the National Skills Strategy providing an opportunity for employers and the education and training systems to coalesce and partner to meet the emerging skills needs of their regions. Similarly, the Regional Action Plans for Jobs is an initiative by the
Department of Business, Enterprise and Innovation aimed at raising employment levels
in each region and facilitating them to achieve their economic potential. In consultation with Mid-West stakeholders, the Midwest Regional Enterprise Plan to 2024 has identified a number

of capacity building measures that are seen as crucial to the planned growth and long-term success of the region and these will be presented later.
Identified as key regional strengths to support enterprise development and growth and foster resilience include; a strong advanced manufacturing base with world class R & D facilities at the Technological University of the Shannon accross 7 campus sites, a vibrant food and drink sector, emerging low carbon / green enterprise sector in the region including the Irish Bioeconomy foundation and asignificant tourism offering and quality of life.

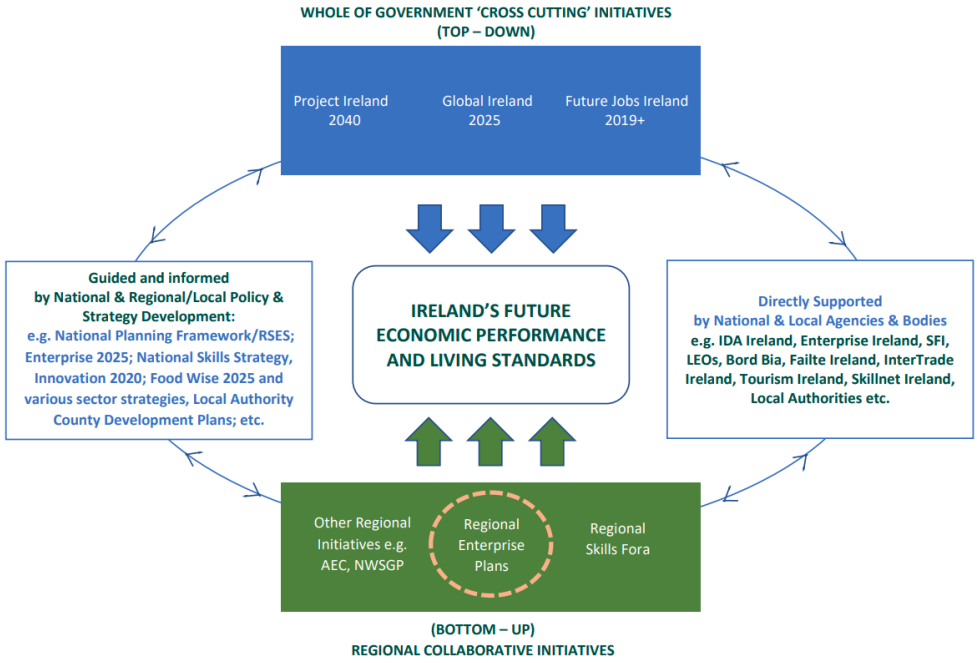

Figure 12 Governmnet regional enterprise plan initiatives (From Midwest RDP).

In consultation with relevant national governmental stakeholders, and with reference to the governmental cross cutting economic performance and living standards initiatives (**Figure 12**) both Midwest and Midlands Regional Enterprise Plans have identified a number of capacity building measures that are crucial to the planned growth and long-term success of the regions.

Growing the Region's Higher Education and R&D capacity through the region's third level institutions which includes Technological University of the Shannon: Midlands Midwest (TUS) to continue to deliver a broad range of education, training, research and innovation programmes throughout the regions.

International Connectivity-Increasing the accessibility of our regions through advancements in infrastructural supports and further internationalisation of our educational and research programme activities.

Placemaking – making the midwest and the midlands regions attractive places to live through County Development Plans, Economic & Spatial masterplans.
Major Infrastructure Projects - major transportation projects which are identified as key enablers for economic growth in the region, many of which are listed in the National

Development Plan 2021- 2030 (NDP) include road improvment schemes and rail and transport networks.

Atlantic Green Digital Basin –significant opportunity for transformation through the delivery of large renewable energy projects and the economic development potential that this presents. The region is fortunate to possess strategic advantages when it comes to renewable energy with world-leading wind conditions, existing grid infrastructures, ideal port conditions, land for development, and an existing workforce and innovation ecosystem. Collectively promoting the renewable energy opportunity, identify direct and indirect job opportunities, and engage with regional, national and international stakeholders to facilitate the twin green-digital transition for the regions.

4.2.2 Região Centro, Portugal (IP Leiria)

The relevant regional strategic plans for the purpose of this document - providing an overview of the regional interests and priorities that can be leveraged in the creation of Professional Practice-based Research Degrees that will attract the support of business/society – rely at the NUT II level and include the following documents:

- Strategic Vision for Região Centro 2030 (available only in Portuguese language at http://ris3.ccdrc.pt/index.php/ris3-documentacao/regional/revisao-da-ris3-do-centro/viewdocument);

- Smart Specialisation Strategy for Região Centro 2021-2027 (available only in Portuguese language at http://www.ccdrc.pt/index.php?option=com_content&view=article&id=3326:visao-estrategica-para-a-regiao-centro-2030&catid=8&Itemid=40).

The first document launches the following main goals in the Strategic Vision for the region:

1) Reinforce national and international competitiveness and consolidate a territorial and socially inclusive innovation model
2) Work and promote capacity building for the resilience of the most vulnerable territories and those in demographic decline
3) Lead the evolution towards a more sustainable society, promoting innovation and transition to the circular economy, integrating the climate emergency and its implications in terms of productive systems and territorial organization
4) Strategically place its urban system at the service of a territorial model that evolves in a virtuous combination between competitive and innovative territories and more depressed territories
5) Organize the offer of qualifications and competences that its structural transformation requires.

The document that establishes the Smart Specialisation Strategy begins by an identification of the major challenges currently faced by the region. The first one relates to translating the good results it has already achieved in terms of scientific and technological development and

innovation into sustainable wealth creation and employment. In fact, *Região Centro* had a very good evolution in the past years in what concerns to its innovative profile, being currently classified as a Strong Innovator according to the Regional Innovation Scoreboard of 2019. However, its performance is still below expectations regarding indicators such as: wealth creation, increased employment and sustainable productivity gains; besides, the region maintains a high degree of asymmetry between the economic and social indicators in the coastal area and in the interior part, which are much lower.
In addition to this major regional challenge, the next decade will require a European approach in response to global challenges that point to a concentration of efforts and resources on agendas capable of promoting their sustainable development. These challenges can be summarized in the triple transition that urgently needs to be promoted with the contribution of this Smart Specialization Regional Strategy: social transition, digital transition and green transition.

4.2.3 Kanta-Häme, Finland (HAMK)

At government level Finland has a Sustainable Growth for Finland – boosting reforms and investments – programme. This program will support growth that is ecologically, socially and economically sustainable. Main aims are to

- reduce greenhouse gas emissions
- increase productivity
- raise the employment rate
- ensure quicker access to care
- promote regional, social and gender equality.

The Sustainable Growth Programme will focus on four key elements:

1. A green transition will support structural adjustment of the economy and underpin a carbon-neutral welfare society
2. Digitalisation and a digital economy will strengthen productivity and make services available to all
3. Raising the employment rate and skill levels will accelerate sustainable growth
4. Access to health and social services will be improved and their cost-effectiveness enhanced.

Forest and agricultural land are the main view in the region and therefore important primary producer in the food chain. Metal and construction industry has strong footprint in Kanta-Häme. However, food industry, companies working with circular economy and biofuels are strongly present in the region. Other larger industrial operators to mention are paper and drug companies. The region has several natural parks and historical sites and therefore the area invests on development of tourism and nature sports. ICT business has not yet found Kanta-Häme area however the location supports e.g., side offices

Kanta-Häme has just finished strategy work and launched the Sustainable Growth Häme regional program which has own characteristics but strongly bases on a national level programme. Smart Häme program supports the regional programme.

Sustainable Growth for Häme is a new way of doing things, and way of thinking. It is based on our region's key players' common will of developing the Häme region.
Our goal is to systematically strengthen the RDI activities and know-how in Häme region, and to develop the infrastructure to support it. In this we rely on our strong leading companies, and we do close cooperation with the corporate interface.

The Regional Development Programme is part of this whole. It includes the development goals that are based on the region's potential and needs, culture and other specificities.

The Regional Development Programme is also the Smart Specialization Strategy for the Häme region. It is a process of economic changes, where we make tough choices based on the region's strengths. Scarce resources are concentrated on fewer and more impacting projects.

4.2.4 Ave and Cávado, Portugal (IPCA)

In IPCA's area of influence the small and medium enterprises (SME) are predominant, with some medium companies with more than 1.000 employees (for example: Continental Mabor; Coindu, Bosch; Primavera BBS, Gabor) and others that are considered anchor companies because of the significant strategic sector in which they act (Leica, Louropele, Vishay, TMG, Lameirinho, Fortunato Frederico, Pizarro, DST, Casais, Torrestir, Bysteel, Celoplas, Impetus, Valerius, Kristaltek, and Solidal). It is possible to see a significant rise in the sector of medium technological intensity, showing some activities of bigger technological intensity as well, especial in the equipment and/or automobile components, the metal mechanics and the precision equipment industry level. It is also visible an increase in the services sector, especially in the innovative technologies areas and, also, in tourism, which has shown an increasing dynamism. It is a region with a great potential for growth, for economic valourisation of the endogenous resources and job creation. The companies situated in NUTS III of Cávado and Ave have a very strong exporting vocation and intensity, with emphasis in the cloth and textile, machines and equipment (especially the electric and electronics sector), motorcar, footwear, common metals, plastics and rubber. Moreover, it is also visible, a significant evolution in the innovation indicators, with a high investment in the R&D companies, above national average. The lack of advanced skills and re-skilling programmes is one of the main problems identified by partners for to recovery and develop the region.
It is in this context that IPCA take son a strategic role in the transformation and development of its action region, in the sense that it has developed a strong connection with the business productive sector by training specialised technicians that are quickly integrated in the production and increase significantly the responsiveness to the current level of challenge faced by the companies, as well as in the transmission of knowledge and applied research for the companies and institutions. This strong link with the production sector has been implemented with partnerships with the Municipalities, as territorial entities with special responsibilities in the populations' quality of life. Worth noting that where IPCA has facilities the Municipalities have been strategic partners in the setting of the conditions for the increase of the qualifications

of the population and for the response to the societal challenges. As an example of this partnership stand out the strong investments made by the Municipality of Barcelos with the acquisition of more than 33.000 m2 of land to expand the campus (2 million euros); the Municipality of Guimarães, with the launching of the construction of the Hotel School (estimated investment of 11 million euros); the Municipality of Braga, with the requalification of the surrounding areas of the ETESP headquarters (400 thousand euros); the Municipality of Vila Nova de Famalicão, with the acquisition of the facilities for an IPCA building (1 million euros); also worth mentioning the strategic support of the Municipality of Esposende, with the launching of the construction of the Food Sustainability and Innovation Laboratory where IPCA will have educational offer (estimated value of the investment 3,5 million euros).

4.2.5 Northern Netherlands (NHL Stenden)

There are a number of notable initiatives to increase the competitiveness of the region for the larger term. There are inititiaves to attract and keep talent in the region, to boost innovation of companies and cooperate in the triple helix of government, companies and education & research.

On the abstraction level of the RIS3 (**Research and Innovation Strategy for Smart Specialisation 2021-2027**), there are a number of transitions defined that the region must face in order to improve '*wider welfare*'.

- From a linear to a circular economy
- From fossil to renewable energy
- From care to (positive) health
- From analogue to digital

Tackling these transitions, the region has to use its strong suits such as agrifood, chemistry, water technology and health care. Cross-cutting theme of the RIS3 is the human capital agenda with a strong role in the innovation ecosystem for higher education institutes when it comes to lifelong learning.

4.2.6 Győr-Moson-Sopron County, Hungary (Széchenyi István University)

The planning and investment programme for the future growth of Hungary's regions, cities, towns and rural areas, based on the **EU Development Plan of Hungary for 2021-2027.**

The focus areas of the development plan are the so called Operational Programmes:

- Area and Settlement Development Operational Program Plus (TOP Plus)
- Digital Renewal Operational Program Plus (DIMOP Plus)
- Human Resource Development Operational Program Plus (EFOP Plus)
- Hungarian Fisheries Operational Program Plus (MAHOP Plus)
- Integrated Transport Development Operational Program Plus (IKOP Plus)
- Economic Development and Innovation Operational Program Plus (GINOP Plus)
- Implementation Operational Program Plus (VOP Plus)
- Environmental and Energy Efficiency Operational Program Plus (KEHOP Plus)

Main priorities of the TOP+[2]

- Competitive county
- Climate-friendly County
- Territorial human development
- Human and infrastructure developments in Budapest

4.2.7 Vorarlberg, Austria (FHV)

At government level, Austria implemented the strategy for Research, Technology and Innovation "FTI-Strategie 2030" in 2020. The strategy is based on the "OECD Reviews of Innovation Policy: Austria 2018" and it is in accordance with the concept of "Smart Specialisations" of the European Commission. Furthermore, the strategy is based on cross-cutting issues (Sustainable Development Goals, Digitalisation, Resposible Science, Open Science and Open Innovation).
The RTI Strategy 2030 sets out the main goals and fields of action of RTI policy for the coming decade. Central cornerstones define the further development of Austria into a leading research, technology and innovation country. The RTI strategy ensures a stable and long-term framework for this.
The RTI strategy sets out the strategic direction for the next ten years in the form of overarching goals in order to (1) catch up with international leaders and strengthen Austria as an RTI location, (2) focus on effectiveness and excellence, and (3) focus on knowledge, talents and skills.
On the regional level of Vorarlberg, this strategy is seen as the framework for regional activities but it was also influenced by former activities of Vorarlberg.
To hold its strong position in Austria but also in Europe, Vorarlberg focuses on a clear research, technology and innovation agenda. A highly levant plan is the science and research strategy Vorarlberg 2020+ (Wissenschafts- und Forschungsstrategie Vorarlberg 2020+) in which it is clearly stated that Science and research have played a major role in Vorarlberg's development into a top economic region. Strengthening Vorarlberg as a successful (business) location in the future through appropriate funding and thus securing its prosperity in the long term is therefore a top priority.
In spring 2018, a 30-member group of experts and visionaries developed a common goal: "In 2035, Vorarlberg is the most promising living space for children". The population was also involved in the development of this goal.
All concepts, projects etc. are evaluated in the future based on this overaching goal. First projects have already been started and first strategic plans (e.g. in the framework of Energy the "Energy Autonomy+ 2030") have already been put into action.

4.3 Priority Areas for Strategic Regional Growth

The priority areas identified by each regional management for its strategic growth reflects the common themes listed previously in Section 4.2. Sustainability, digitalization, enterprise support, tourism, quality of life, education and social inclusion are all regional priority areas common across all RUN-EU regions.

[2] TOP_PLUSZ (1).PDF

4.3.1 Midlands-Midwest Ireland (TUS)

STRATEGIC OBJECTIVE 1: Digitalisation and Innovation
This objective includes actions across themes such as advanced manufacturing, future mobility, film, sports tech, and healthcare.

STRATEGIC OBJECTIVE 2: Sustainability and Climate Action.
Transition to a zero -carbon economy. This objective includes actions across themes such as Bioeconomy, renewable energy and sustainability in the built environment.

STRATEGIC OBJECTIVE 3: Enable Enterprise growth in regional towns and rural areas.
This objective includes actions such as the development of a network of high quality eHubs, development of food hubs, a skills heat mapping exercise, and digitalisation of the tourism sector.

STRATEGIC OBJECTIVE 4: Supporting SME, start-ups and microbusiness.
This objective contains actions such as industry cluster development, promotion of apprenticeships and traineeships, management and financial training, efforts to develop/accelerate HPSUs.

STRATEGIC OBJECTIVE 5: Develop Social Enterprises and Job Creation Initiatives for areas of high unemployment.
This objective includes actions such as the growth of social enterprise to achieve sustainable progress towards employment equality.

STRATEGIC OBJECTIVE 6: Placemaking – Position the Midlands Midwest as a community of choice in which to live, create, study, work, visit, and invest.

STRATEGIC OBJECTIVE 7: Build on achievements to date in sectors in which the region has a competitive advantage through Smart Specialisation and wider adoption of digitalisation within business, leveraging the new Technological University of the Shannon.

4.3.2 Região Centro, Portugal (IP Leiria)

The following picture summarizes the rational supporting *Região Centro* Smart Specialization Strategy, including a clear identification of the priority areas for strategic regional growth.

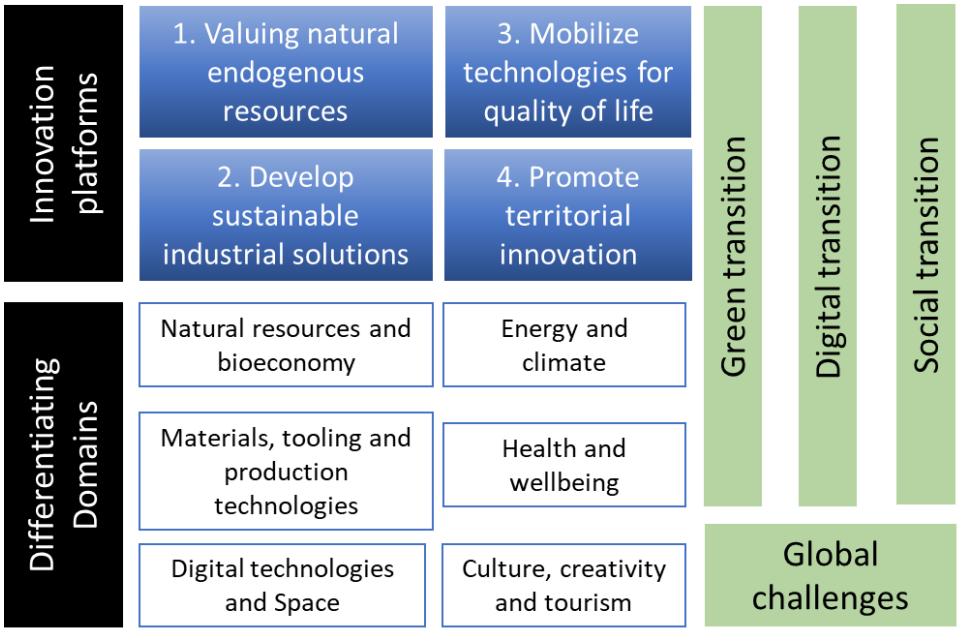

Figure 13 Smart Specialization Strategy for *Região Centro* 2021-2027 (translated)

This framework combines the identification of which should be the priority domains to invest in the following years (called "Differentiating Domains"), with the "how question" (lines of action, called "Innovation platforms") and the ultimate global goals, which are totally aligned with the national and European strategy for 2030.

4.3.3 Kanta-Häme, Finland (HAMK)

1. **Sustainable Growth TKI – Häme has strong links to global networks and value chains.**

a. Circular Natural Resources and Material Cycles:

Natural resources, consumption and the material cycle are at the heart of the circular economy. Kanta-Häme has a strong know-how and a successful business in the sustainable use of natural resources and in the bio and circular economy. The region has a strong business base in the circular economy and the highest employment rate in Finland. The most important industries in the circular economy are the bioeconomy, manufacturing, construction and waste management.

A prerequisite for the success of the circular economy is the traditional cross-border cooperation between different actors, sectors and companies in a large innovation ecosystem. Companies add value to each other in industrial symbiosis by efficiently recycling raw materials, technology, know-how, services and energy. This enhances the use of material and energy flows between different actors and aims to keep materials and their value moving. Waste prevention is also part of the circular economy and the sustainable use of natural resources. One solution for the sustainable use of natural resources is to reduce consumption.

In the future, we will be able to move from a business based on the use of raw materials to a service business in accordance with the principles of the circular economy.

b. Sustainable Food Systems:

As a pioneer area for a **sustainable food system** Kanta-Häme creates new business opportunities in a value network of responsible food production and consumption. New research innovations and technologies, as well as a growing awareness of a sustainable food system, will add value as industry and production move into a green digital economy. A sustainable food system is a part of the province's circular economy roadmap and a means of reducing greenhouse gas emissions in Kanta-Häme. Climate goals are best achieved through increased dialogue within the food system. Agricultural soil can also act as a carbon sink.

c. Smart Services and Processes:

Smart services are needed in our cities and countryside, in public and private services. New technologies will be introduced to end users and developed with different stakeholders.

d. Smart and Sustainable Design:

Sustainability needs to be recognized in design as well. Digitalization will create opportunities for local production and services. Nature tourism will be stronger in Häme area in the near future

2. Sustainable growth know-how - employment and participation

a. Future working life and employment is diverse and enabling
b. Future skills and lifelong learning
c. Need for international experts in order to manage in the global competition

We make our province an internationally interesting and attractive place to work and live. Comprehensive services are expected to support labor migration. Working abroad is possible with the help of digital solutions. Opportunities for integration and employment will be enhanced through fast and easily accessible service models and a procedure for the recognition and recognition of foreign degrees. Companies are encouraged to provide internships for international students and support the recruitment capacity of employers.

3. Sustainable growth infrastructure

a. Goal is to enable smooth everyday life and easy opportunities for transportation
b. New ways of housing, living and working.

4.3.4 Ave and Cávado, Portugal (IPCA)

The priory areas for strategic regional growth are described in the norte region smart specialisation strategy program (RIS3 - Norte).

Eight priority domains for the RIS3 were identified and categorised as “Nuclear”, “Emerging” and “Wild Card”. “Nuclear domains” are those with a strong business and research/technology presence, as well as advanced users in the region; “Emerging domains” are present but with a smaller critical mass; while “Wild Card” domains are good opportunities in the future with assets identified, but so far with limited activity deployed in the region (**Figure 12**).

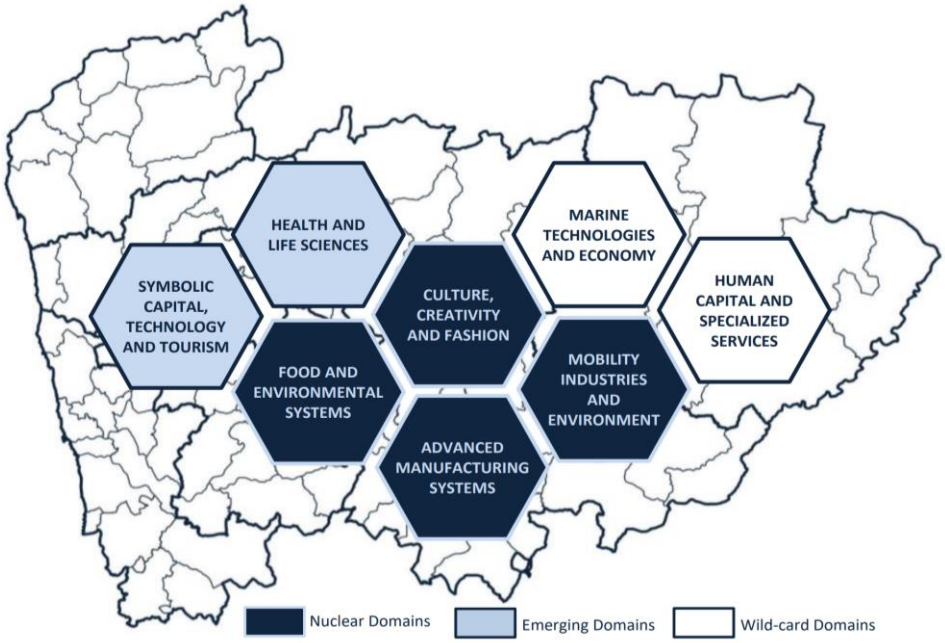

Figure 14 Norte RIS3 priority domains (Source: NORTE REGION SMART SPECIALISATION STRATEGY (NORTE RIS3) - A monitoring system methodological approach for monitoris3 project)

The eight priority domains include 1) Mobility industries and environment, 2) Culture, creativity and fashion, 3) Advanced manufacturing systems, 4) Food and environmental systems, 5) Symbolic capital, technology and tourism, 6) Health and life sciences, 7) Marine technologies and economy, 8) Human capital and specialised services.

According to the above defined areas, a set of priority axis were defined in Norte 2020 strategic plan (Source: Norte2020 – Synthesis of Programme), each with its own distinctive goals:

1 - Research, Technological Development and Innovation
2 - Competitiveness of Small and Medium Sized Enterprises
3 - Low Carbon Economy
4 - Environment Quality
5 - Urban System
6 - Employment and Job Mobility
7- Social Inclusion and Poverty
8- Education and Learning Throughout Life
9 - Institutional Capacity Building and ICT
10 - Technical Assistance.

4.3.5 Northern Netherlands (NHL Stenden)

The priority areas include the areas that are considered strengths and include the areas mentioned in the plans of the University of the North namely energy, green chemistry, high tech

systems and materials, circular economy, sustainable agriculture, healthy ageing, maritime, tourism & purpose economy, digitalisation, water & water technology and circular plastics.

4.3.6 Győr-Moson-Sopron County, Hungary (Széchenyi István University)

Development Strategy and Programme of the Győr-Moson-Sopron County 2021-2027[3]

PRIORITY 1: Innovative, Flexible, Competitive Economy
PRIORITY 2: Competitive workforce (knowledge, training, education)
PRIORITY 3: Greener, Carbon-free county
PRIORITY 4: A better connecting Europe: with strategic transport and digital networks
PRIORITY 5: A healthy, active and supporting society
PRIORITY 6: Reducing territorial inequalities, strengthening cohesion and co-operation.

Thematic objectives
Economy

- Development of business infrastructure, technology and services
- SME development
- Complex tourism developments
- Development of food economy
- Innovation ecosystem

Environmental thematic development objectives

- Renewable energy sources
- Energy efficiency
- Climate adaptation
- Circular economy
- Sustainable agriculture

Thematic development objectives for territorial and municipal infrastructure

- Development of environmental infrastructure and municipal water management
- Development of territorial water management
- Development of road and bicycle infrastructure and services
- Development of fixed track transport and intermodal junctions
- Development of water transport infrastructure
- Development of settlement centres and sub-centres, dilapidated settlements

Societal Thematic Development Goals

- Health improvements
- Education
- Social developments
- Social inclusion

[3] GYMS_StrategiaiProgram_3.0_20210907_01.pdf (gymsmo.hu)

— Community, culture, leisure and sports

4.3.7 Vorarlberg, Austria (FHV)

The Austrian RTI strategy 2030 defines three main areas for the ongoing decade.

1) Catching up with the international leaders and strengthening Austria as an RTI location
2) Focus on effectiveness and excellence
3) Focus on knowledge, talents and skills

In the research strategy Vorarlberg 2020+ the following five strategic regional growth areas are defined:

1) Smart Textiles
2) Energy and Energy Efficiency
3) Human and Technology
4) Education and Health
5) Intelligent Production

The vision "Vorarlberg – Chancenreich" sets the framework for Vorarlberg to be the most promising living space for children until 2035. The strategy is based on four principles.

1) CONTRAST PRINCIPLE
   We promote the productive use of contrasts. In doing so, we protect and expand our diversity, which provides a wide range of opportunities.
2) OPPORTUNITIES PRINCIPLE
   In Vorarlberg, we enable children to develop their individual potential and talents. This is done in a playful, encouraging and challenging way. We create space, time, awareness and inspiration for this. This is a task for all age groups - through communication at eye level and joint lifelong learning and teaching.
3) FAIRNESS AND TOLERANCE PRINCIPLE
   We meet people in all their diversity with fairness and tolerance. The lively dialogue between young and old breaks down barriers and supports the development of potential. Our society is characterised by a high degree of social permeability and strong cohesion.
4) CHILDREN PRINCIPLE
   The future of the country lies in a shared responsibility for present and future generations. We are united by childlike values such as curiosity, creativity, courage, openness and helpfulness.

Different pillars are defined as a framework for these principles and two of them deal with the mission of RUN-EU PLUS, namely the pillar "Foundation Education" in which all parts of education for children up to higher education is subsumed and the pillar "Prospects at the location" in which emphasize is put on the development of industry.

4.4 Regional Action Plans

The detailed action plans which have been developed for implementation by the RUN-EU regional partners are presented in the appendices to this D3.1 Strategic Research Priorities report. Through collaborative R&I projects and the design and delivery of collaborative practice-

based research masters and doctoral programmes, RUN-EU PLUS will support our regions in the delivery of these action plans through the development of innovative products and processes and the transfer of knowledge into our regional partners.

4.4.1 Midlands-Midwest Ireland (TUS)

STRATEGIC OBJECTIVE 1: Enable innovation to make the Mid-West a leading digital region.
Action 1.1 Strengthen the position of the regions as a national centre for advanced manufacturing.
Action 1.2 Development and expansion of advanced mobility technology capabilities at Future Mobility Campus Ireland.
Action 1.3 Create a sustainable Regional Film Industry in the region.
Action 1.4 Collaborations to solve healthcare problems and challenges using digital solutions.
Action 1.5 Establish the region as a national leader in the sports-tech and eSports sectors.
Action 1.6 Progress regional data centre projects with an emphasis on innovation and sustainability.
Action 1.7 Innovation in education – inclusive, immersive, enterprise focused education programs.

STRATEGIC OBJECTIVE 2: Make the Midlands-MidWest Ireland's leading sustainability / low carbon region.
Action 2.1 The Atlantic Green Digital Basin – decarbonising industry by developing the Shannon Estuary as a renewable energy hub.
Action 2.2 Build regional research, education and training capacity for emerging renewable energy opportunities.
Action 2.3 Grow circular bioeconomy capacity, leveraging the National Bioeconomy Campus.
Action 2.4 Develop a centre of excellence for sustainable energy.
Action 2.5 Deliver initiatives and projects to promote sustainability in the built environment.
Action 2.6 Upskilling of small businesses for the transition to a low carbon, sustainable economy.
Action 2.7 Support the activities of the Midlands Regional Transition Team to develop transformative projects with the support of Project Ireland 2040 funding streams and the European Just Transition Fund.
Action 2.8 Develop a framework for Local Authorities to Realise Economic Opportunities from the low carbon transition.
Action 2.9 Regional Education & Training Boards (ETBs) will develop a National Pilot on Sustainability and a Rural Centre of Excellence within the Midland Region.

STRATEGIC OBJECTIVE 3: Enable Enterprise growth in regional towns and rural areas.
Action 3.1 Create an efficient and sustainable regional network of enterprise centres and remote working eHubs.
Action 3.2 Undertake a skills mapping exercise to identify employment trends and needs across the region.
Action 3.3 Support the regional agri-food sector through the development of food hubs.
Action 3.4 Increase through digitalisation the visibility of the region's tourism offerings. Action 3.5 Build on the region's equine heritage to develop equine tourism and enterprise products.

STRATEGIC OBJECTIVE 4: Initiatives to support SME, Start-ups and Microbusiness.

Action 4.1 Develop existing and new industry clusters in strategic sectors.
Action 4.2 Increase the numbers of apprenticeships and traineeships.
Action 4.3 Expand the EXPLORE Engineering Alliance.
Action 4.4 Deliver management and financial training and upskilling initiatives.
Action 4.5 Build an ecosystem for start-ups and entrepreneurs.
Action 4.6 Deliver R&D, competitiveness and internationalisation initiatives to support export sales growth in SMEs.

STRATEGIC OBJECTIVE 5: Develop Social Enterprises and Job Creation Initiatives for areas of high unemployment.
Action 5.1 Develop, support and scale social enterprise.
Action 5.2 A connected jobs strategy for Limerick's unemployment blackspots.
Action 5.3 Community Based Organisations – creating employment pathways for the economically marginalised and socially excluded.
Action 5.4 Establish a multi-functional Creative and Innovative Industries Centre of scale at LEDP.
Action 5.5 Establish a world class Marine, Renewable, Science and Climate Change Centre in Kilrush.
Action 5.6 Task force-lead regeneration of regional towns – Pilot Scheme at Tipperary Town.

STRATEGIC OBJECTIVE 6: Placemaking – Position the Midlands-Midwest as a community of choice in which to live, create, study, work, visit, and invest.
Action 3.1 Utilising Midlands Ireland and failte Ireland .i.e., promote and position the region as community of choice.
Action 3.2 Expand the Network of Co-Working Facilities (MNCF) in partnership with existing network members, Chambers of Commerce and Local Authorities.
Action 3.3 Progress and support tourism development, visitor experience development plans and experience economy across the region.
Action 3.4 Deliver the Regional Food & Drink Strategy to 2024.

STRATEGIC OBJECTIVE 7: Smart Specialisation and digitalisation within business.
Action 7.1 Work with the Technological University of the Shannon – Midlands Midwest to capitalise and realise business, industry, and skills opportunities presented by TU status to further support the development of the region, including the growth and expansion of Empower Eco, and the development of the Midlands Technology Campus.
Action 7.2 Leverage Advanced Manufacturing Action Plan, to position the regions as an advanced manufacturing centre of excellence through defined actions across enabling themes of Education, Training & Skills; Research & Innovation; Support Infrastructure & networks; and strengthening the manufacturing base.
Action 7.3 Develop a Smart Connected Technologies Cluster.

4.4.2 Região Centro, Portugal (IP Leiria)

For each of the Innovation Platforms previously referred to in Section 3.3.2, some lines of action are already defined, described below, although at the current moment they are not totally specified yet, namely in terms of responsible entities, specific timelines, budget, outputs and outcomes.

1. **Valuing natural endogenous resources.**
    a. Innovation in knowledge, mapping and monitoring of natural endogenous resources.
    b. Innovation in the conservation, protection and recovery of endogenous natural resources.
    c. Innovation in the valorization and circular and sustainable use of natural endogenous resources.
2. **Develop sustainable industrial solutions.**
    a. Development of sustainable processes, materials and systems with greater value added for Região Centro.
    b. Efficient use of resources and reduction of environmental impact in production processes and throughout the life cycle of products and systems.
    c. Industrial modernization through Circular Economy and Decarbonization.
    d. Industrial modernization through digitalization and the incorporation of advanced technologies.
    e. Industrial modernization through "Human-centered production."
3. **Mobilize technologies for quality of life.**
    a. Development of innovative actions and systems for the promotion and prevention of health and well-being.
    b. Development of innovative actions and systems that facilitate early diagnosis in Health.
    c. Development of new treatments and therapies (e.g., cellular, genetic, biological, pharmacological, regenerative, psychological intervention, among others).
    d. Adoption of platforms to promote interoperability between systems, enhancing citizen-centered solutions.
    e. Development of innovative actions and systems that promote health throughout life, inducing an autonomous life (independent living), which cross different care networks (health care, social and community support).
4. **Promote territorial innovation.**
    a. Development of innovation projects anchored in the territory.
    b. Promotion and promotion of innovation projects aimed at the green and/or digital transition of territories.
    c. Promotion of social innovation initiatives.
    d. Development of innovative proposals for valuing environmental and cultural resources and the creative potential of the territory.

4.4.3 Kanta-Häme, Finland (HAMK)

Road Map for Circular Economy in Kanta-Häme has been launched in winter 2022. Points listed will guide operators in the area to start implementation actions

https://www.hameenliitto.fi/wp-content/uploads/2022/02/Road-Map-for-Circular-Economy-in-Kanta-Hame.pdf

4.4.4 Ave and Cávado, Portugal (IPCA)

Priority Axis 1 - Research, Technological Development and Innovation:

- Clustering and collaborative networks.
- Incentives for innovation for non-SMEs.

Priority Axis 2 - Competitiveness of Small and Medium Sized Enterprises

- Qualified and creative entrepreneurship.
- Simplified entrepreneurship project.
- Business incubation and acceleration.
- Support for business internationalization.
- Simplified internationalisation project.
- Support for collective actions.
- Direct support for qualification and innovation in SMEs.
- Simplified innovation project.
- Support for collective actions.
- Business hosting.

Priority Axis 3 - Low Carbon Economy

- Conducting of energy audits and support for the development of Energy Consumption Rationalisation Plans.
- Support for integrated investment in energy efficiency in public infrastructures and in the social housing sector.
- Support shall be given to actions resulting from Mobility and Transport Plans.

Priority Axis 4 - Environment Quality

- Appreciation and promotion of historical and cultural public assets and culture-oriented equipment with high tourist value.
- Comprehensive refurbishment of buildings.

Priority Axis 5 - Urban System

- Increasing soft modes of transport and developing transport systems.
- Comprehensive refurbishment of buildings, recovery, expansion and enhancement of urban ecological systems and structures and green infrastructures.
- Urban rehabilitation and qualification.

Priority Axis 6 - Employment and Job Mobility

- Business initiatives to support enterprise growth and employment.
- Support for integrated actions and self-employment.
- Traineeships in Local Administration.
- Training for business innovation.

Priority Axis 7- Social Inclusion and Poverty

- Health equipment:
- Social facilities:
- Integrated innovation, social experimentation and territorial animation programmes.

Priority Axis 8- Education and Learning Throughout Life

- (i) interventions in schools of the second and third cycles of basic education and secondary education.
- Actions that favour the improvement of educational success.
- (i) mobility grants for displaced students.
- Funding shall be provided for Technological Specialisation Courses (CET).

Priority Axis 9 - Institutional Capacity Building and ICT

- Regional and local electronic public services.
- Creation of spaces or adoption of mobility solutions through which users can access electronic public services in a mediated way.
- Solutions that enable the creation of open, flexible and interoperable digital public services.
- Solutions that promote greater internal efficiency in public services.
- Training actions associated with administrative modernisation projects.

Priority 10 - Technical Assistance

- Activities related to the management, preparation, promotion, follow-up, control and assessment of the Programme.

4.4.5 Northern Netherlands (NHL Stenden)

There are a number of notable initiatives to increase the competitiveness of the region for the larger term. There are inititiaves to attract and keep talent in the region, to boost innovation of companies and cooperate in the triple helix of government, companies and education & research.

On the abstraction level of the RIS3 (**Research and Innovation Strategy for Smart Specialisation 2021-2027**), there are a number of transitions defined that the region must face in order to improve '*wider welfare*'.

- From a linear to a circular economy
- From fossil to renewable energy
- From care to (positive) health
- From analogue to digital

Tackling these transitions, the region has to use its strong suits such as agrifood, chemistry, water technology and health care. Cross-cutting theme of the RIS3 is the human capital agenda with a strong role in the innovation ecosystem for higher education institutes when it comes to lifelong learning.

Cooperation in the field of education and research

The institutes for higher education in the Northern Netherlands (one university, academic hospital and three universities of applied sciences) have combined their forces in the initiative called **University of the North**. Focus areas as described in the framework plan are:

- energy,
- green chemistry,
- high tech systems and materials,
- circular economy,
- sustainable agriculture,
- healthy ageing,
- maritime,
- tourism & purpose economy,
- digitalisation,
- water & water technology and
- circular plastics.

This has resulted in a **knowledge agenda** 2021-2024 with concrete actions such as the creation of joint educational programme's and research groups.

On top of this there is also a number of other development plans that focus on specific sectors or parts of the region.

Examples are the so-called '*Regional Deals*' such as the:

- **Regio Deal South and East Drenthe** with focus on employment, housing and welfare
- **Regio Deal Northeast Fryslân** with focus on the construction sector (building campus), sustainable agriculture, entrepreneurship, agile craftmanship

Thematic/ regional developments include:

- policy document **Hospitality Fryslân 2028** focusing on a sustainable growth for the hospitality sector
- **educational agreement Fryslân** in which vocational and higher education (university and universities of applied sciences) in Fryslân agree on cooperation on specific themes and continued learning within the region
- **RegioCampus Emmen** which focuses on cooperation in the Emmen region between vocational and higher education (university and university of applied sciences)

4.4.6 Győr-Moson-Sopron County, Hungary (Széchenyi István University)

The **Integrated Settlement Development Strategy and Action Plan of Győr for 2020-2024** was published in 2019 and was last modified in 2021.[4]
The new, so-called **Sustainable City Development Plan 2021-2027** is under the public procurement process.

"Action plans for the Széchenyi István University"

[4] Győr Megyei Jogú Város Integrált Településfejlesztési Stratégiája - Győr Megyei Jogú Város Honlapja (gyor.hu)

The new **Science and Innovation Park of the SZE University**[5] will be built in the place of the former biscuit factory of the city.

Main facts:

- Size of development area: 3.6 hectares
- Site owned by the University.
- Investment has been divided into 3 (4) phases
- 1st - to fill the Cube with innovation and education functions
- Target groups of development: enterprises, research organizations, research groups, start-ups, spinoffs

Figure 15 Science and Innovation Park at Szechenyi István University & operational focuses

The **Széchenyi István University will establish a health technology campus** and **competence center** by renovating the former hospital complex on Zrínyi Street in Győr, where education, research and development and services will be located in one place. The institution cooperates with such recognized partners as the Semmelweis University of Budapest and the Petz Aladár University Teaching Hospital in Győr.

[5] Science Park (sze.hu)

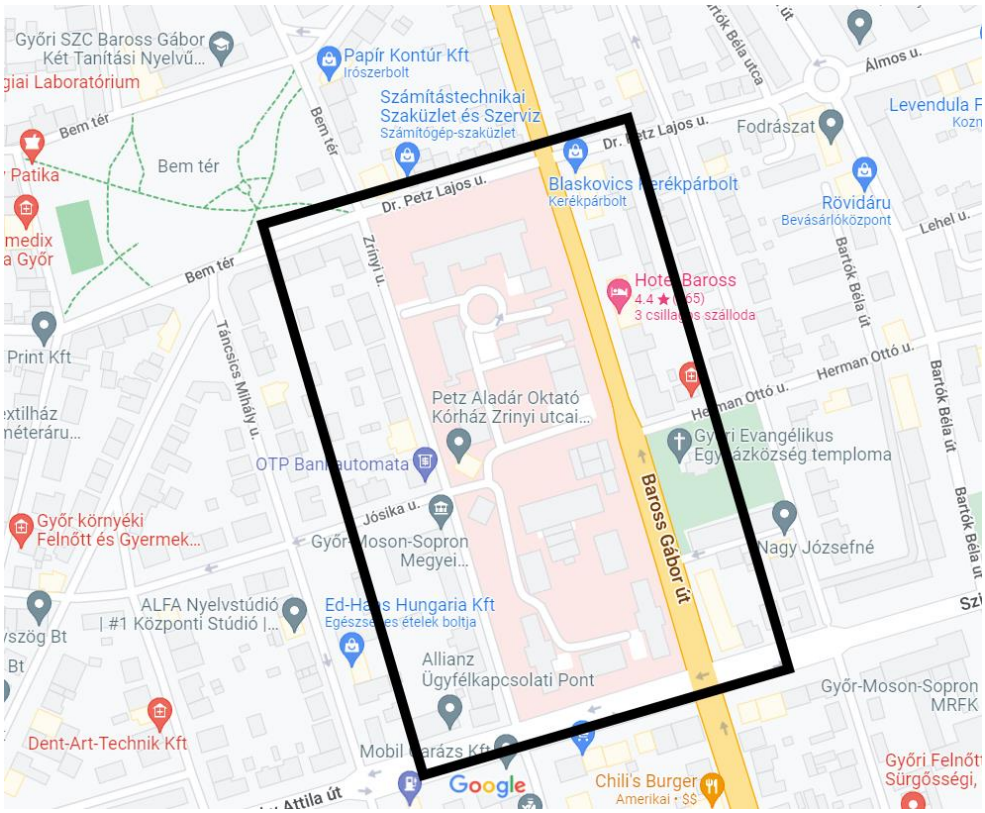

Figure 16 The development area of the health technology campus and competence center of SZE

4.4.7 Vorarlberg, Austria (FHV)

The action plan for the Austrian RTI strategy is based on actions for each of the three areas defined previously in **Section 4.3.7**.
The central fields of action for Goal 1 ("Catch up with the international leaders and strengthen Austria as an RTI location") are:

Expand research and technology infrastructure (FTIS) and ensure accessibility

- Integrate national FTIS into European and international large-scale research infrastructure projects
- Evidence-based planning and long-term competitive funding models for participation in European and international research infrastructures
- Creating flexible access to FTIS for science and industry
- Developing data infrastructures and data management while respecting the commercial confidentiality of companies.

Increase participation in EU missions, EU partnerships and IPCEIs.

- Targeted activation of stakeholders and promotion and support of Austrian participation in EU missions and partnerships

- Clearly define national areas of strength and future topics (e.g., digitalisation, tech for green, production, energy, health and mobility) and strengthen them at European level
- Establishment of evidence-based monitoring and a flexible mechanism for readjusting the content of participations
- Consolidation of Austria's position in strategically important value chains through participation in IPCEIs.

Promote and strategically align internationalisation

- Selection of international priority countries and expansion of targeted bilateral and multilateral research cooperation
- Increase the visibility of Austria as a location for research and innovation and position its external image accordingly
- Expansion and settlement of internationally active technology companies with the support of appropriate instruments.

The central fields of action for Area 2 ("Focus on effectiveness and excellence") are:

Promote excellent basic research

- Establish an excellence initiative to strengthen top-level research and cooperation across disciplines, institutions and countries
- Expanding promising fields of research and promoting freedom in research
- Advance profiling and priority setting and strengthen knowledge transfer
- Establishment of 3 world-class research clusters together with an accompanying process for defining such clusters
- Strengthen the universities as central institutions for basic research and expand the Institute of Science and Technology Austria and the Austrian Academy of Sciences
- Increasing the share of competitively awarded funds for research promotion.

Support applied research and its impact on the economy and society.

- Establish a technology offensive that includes research, innovation and digitisation projects as well as business start-ups and relocations to strengthen the RTI foundation of innovative companies and expand Austria as a production location (focus on crisis resilience, system-relevant production and technological competence leadership, digital transformation of the economy, position Austria as a digitisation and "Tech for Green" champion and life science centre)
- Increase long-term planning and funding security for applied research, as well as optimisation of the framework conditions (simplification of the funding system, advice for small and medium-sized enterprises (SMEs) and involvement of key players, creation of larger programme lines, strengthening of risk financing, promotion of public procurement that promotes innovation)

- Strengthening business research that is open in terms of content and technology-neutral; cooperation between science and business as well as knowledge and technology transfer (incl. further development of exploitation management)
- Improving the innovative capacity and output of small and medium-sized enterprises
- Raise awareness of the value of research and innovation in the public interest
- Strengthen R&D of (key) technologies in the digitalisation area, to contribute to the development of new digital products and services and to support the digital transformation of the economy.

RTI to achieve the climate goals

- Strengthen content-open and technology-neutral research in the areas of drivers, impacts and mitigation of the climate crisis as well as in the areas of climate change adaptation and resource efficiency (including by stimulating private funding and participation in EU programmes)
- Develop key technologies to improve climate protection, promote cross-sectoral cooperation and implement holistic solutions (e.g., construction and energy sectors, mobility, etc.) while maintaining technological neutrality
- Development of model regions and large-scale experimental spaces
- Expansion of relevant data collection and use of digitalisation as well as networking of actors.

The central fields of action for Goal 3 ("Build on knowledge, talents and skills") are:

Develop and promote human resources

- Incorporate creativity, a critical spirit of research and environmental awareness at all levels of education
- Strengthen education and training - especially in STEM fields
- Ensure permeability between educational institutions as well as towards enterprises
- Strengthening gender equality and diversity in R & D as well as making research careers more attractive and promoting them, especially for women, by intensifying gender equality programmes and measures in personnel and career planning.
-

Support international perspectives of researchers and students

- Active participation in international mobility programmes (especially ERASMUS)
- "Internationalisation at Home" at all levels of the education system
- Participation in European research programmes (Horizon Europe) and increased participation of universities in international study programmes (Joint Study Programmes, European Universities, Fulbright)
- Expand the visibility of the research location and create attractive framework conditions to attract international talent.

4.5 Links to RUN-EU Innovation Hubs

As described previously in Section 3.0 of this document, the RUN-EU European Innovation Hubs (HIBs) play a pivotal role in RUN-EU's engagement with regional industry/business and societal organisations and within this structure, RUN-EU PLUS is instrumental in supporting businesses and other key regional stakeholders in delivering their strategic plans. Through the collaborative design and delivery of innovative research projects and masters/doctoral programmes, RUN-EU PLUS will support our RUN-EU regions in delivering their action plans in their identified priority areas necessary for strategic regional growth.
A mapping has been undertaken of RUN-EU partner regional development plans and the specialisations of the 3 RUN-EU EIHs namely the **EIH in Future Industry and Sustainable Regional Development**, **EIH in Bioeconomy** and **EIH in Social Innovation**. Below is a sample list of regional action plans which each RUN-EU EIH can support in delivering.

EIH in Future and Sustainable Industries

- Midlands-Midwest Ireland (TUS)

Action 1.1 Strengthen the position of the Mid-West as a national centre for advanced manufacturing.
Action 1.4 Collaborations to solve healthcare problems and challenges using digital solutions.
Action 1.6 Progress regional data centre projects with an emphasis on innovation and sustainability.
Action 2.1 The Atlantic Green Digital Basin – decarbonising industry by developing the Shannon Estuary as a renewable energy hub.
Action 3.1 Create an efficient and sustainable regional network of enterprise centres and remote working eHubs.
Action 4.1 Develop existing and new industry clusters in strategic sectors.
Action 4.3 Expand the EXPLORE Engineering Alliance.
Action 4.5 Build an ecosystem for start-ups and entrepreneurs.
Action 2.2 Leverage the Midlands Advanced Manufacturing Action Plan, to position the region as an advanced manufacturing centre of excellence through defined actions across enabling themes of Education, Training & Skills; Research & Innovation; Support Infrastructure & networks; and strengthening the manufacturing base.
Action 2.3 Develop a Smart Connected Technologies Cluster.

- Região Centro, Portugal (IP Leiria)
  - Valuing natural, endogenous resources
  - Development of sustainable industrial solutions
  - Mobilisation technologies for quality of life
  - Promotion of territorial innovation
  - Materials, tooling and production technologies
  - Digital technologies and space
  - Energy and climate

- Kanta-Häme, Finland (HAMK)
  - Smart and Sustainable Design – circularity and new services in the future industry
  - Circular Natural Resources and Material Cycles
  - Sustainable Food Systems

- Ave and Cávado, Portugal (IPCA)
  - Clustering and collaborative networks
  - Incentives for innovation for non-SMEs
  - Qualified and creative entrepreneurship
  - Direct support for qualification and innovation in SMEs
  - Simplified innovation project

- Northern Netherlands (NHL Stenden)

Regional ambitions in the field of high-tech systems and materials.

- Győr-Moson-Sopron County, Hungary (Széchenyi István University)

- Vorarlberg, Austria (FHV)

Being the most promising living space for children until 2035 (environmental sustainability, sustainable employment and future-orientated jobs).

EIH in Bioeconomy

- Midlands-Midwest Ireland (TUS)

Action 2.3 Grow circular bioeconomy capacity, leveraging the National Bioeconomy Campus.
Action 3.3 Support the regional agri-food sector through the development of food hubs.
Action 3.4 Deliver the Midlands Regional Food & Drink Strategy to 2024.

- Região Centro, Portugal (IP Leiria)
  - Valuing natural, endogenous resources
  - Development of sustainable industrial solutions
  - Promotion of territorial innovation
  - Natural resources and bioeconomy
  - Energy and climate

- Kanta-Häme, Finland (HAMK)
  - Circular Natural Resources and Material Cycles

- Sustainable Food Systems

- Ave and Cávado, Portugal (IPCA)
  - Conducting of energy audits and support for the development of Energy Consumption Rationalisation Plans, provided the implementation of the investments in energy efficiency resulting from those plans is verified.
  - Support for integrated investment in energy efficiency in public infrastructures and in the social housing sector.

- Northern Netherlands (NHL Stenden)

Water technology and green chemistry.

- Győr-Moson-Sopron County, Hungary (Széchenyi István University)
- Vorarlberg, Austria (FHV)

Being the most promising living space for children until 2035 (environmental sustainability and health).

EIH in Social Innovation

- Midlands-Midwest Ireland (TUS)

Action 1.7 Innovation in education – inclusive, immersive, enterprise focused education programs.
Action 3.2 Expand the Midlands Network of Co-Working Facilities (MNCF) in partnership with existing network members, Chambers of Commerce and Local Authorities.
Action 5.1 Develop, support and scale social enterprise.
Action 5.3 Community Based Organisations – creating employment pathways for the economically marginalised and socially excluded.

- Região Centro, Portugal (IP Leiria)

Mobilisation technologies for quality of life
Promotion of territorial innovation
Health and wellbeing
Culture, creativity and tourism

- Kanta-Häme, Finland (HAMK)
  - Future working life and employment is diverse and enabling

- Future skills and lifelong learning
- Need for international experts to manage in the global competition

- Ave and Cávado, Portugal (IPCA)
  - Health equipment: construction, requalification and equipping of units providing primary health care
  - projects aimed at qualifying and promoting innovation in product development in the primary sector
  - social innovation projects with a strong focus on inclusiveness and solidarity
  - initiatives aimed at stimulating innovation in terms of new social answers for social challenges identified
  - actions aimed at qualifying people, including supporting technically qualified young people in the implementation of social innovation projects in critical urban areas or rural and low-density coastal areas.

- Northern Netherlands (NHL Stenden)

Healthy ageing and tourism and the purpose economy.

- Győr-Moson-Sopron County, Hungary (Széchenyi István University)

- Vorarlberg, Austria (FHV)

Being the most promising living space for children until 2035 (social sciences)

4.6 Relevant regional stakeholders

This section provides a list of regional bodies who RUN-EU partners consider to be key in the delivery of regional strategy and therefore key to their regional development. The RUN-EU PLUS project seeks to engage with these stakeholders in the development of R&I collaborative projects in addition to the design and delivery of professional practice-based research masters and doctoral programmes.

4.6.1 Midlands-Midwest Ireland (TUS)

Irish Development Agency Ireland	Semi-State Body	Ireland	Ireland's inward investment promotion agency is a non-commercial, semi-state body promoting Foreign Direct Investment into Ireland through a wide range of services. They partner with potential and existing foreign investors to help them establish or expand their operations in Ireland. The purpose of which is direct regional employment

			sustainability and socio-economic growth.
Irish Bioeconomy Foundation	National Government Organisation	Ireland	The Irish Bioeconomy Foundation is Ireland's national bioeconomy association and innovation cluster. IBF mission is to promote the conversion of Ireland's natural land and sea resources to high-value products for the development of a sustainable bioeconomy that is globally competitive and creates local development.
Fáilte Ireland	National Government Organisation	Ireland	Fáilte Ireland is the Irish National Tourism Development Authority. Their role is to support the tourism industry and work to sustain Ireland as a high-quality and competitive tourism destination. They provide a range of practical business supports to help tourism businesses better manage and market their products and services.
County Councils: Limerick City and County Clare Tipperary Westmeath	Public Body	Ireland	County Councils play a key role in the ongoingeconomic evolution and success of the regions which they serve and for community development.
Chambers of Commerce: Limerick Thurles Tipperary (Clonmel) Shannon Ennis Athlone/Westmeath	Public Body	Ireland	Chambers of Commerce provide progressive business representation for the SME, Retail and Hospitality and Corporate sectors in Ireland.
Explore Engineering (formerly Limerick for Engineering)	National Government Organisation	Ireland	Explore Engineering aims to develop engineering talent in the mid-west region. The Limerick for Engineering group is an industry-led initiative which has the support of the education and training providers in the region.
CONFIRM	Research Centre –Enterprise	Ireland	CONFIRM is a world-leading Science Foundation Ireland (SFI) research centre in Smart Manufacturing hosted by the University of Limerick. Their mission is to transform the industry to become leaders in Smart Manufacturing.
Midlands Regional Skills Forum	Enterprise – Upskilling Training	Ireland	The Midlands Regional Skills Forum is a Department of Education and Skills initiative to focus on fostering stronger links between enterprise and education and training providers.

AIT-Enterprise Forum	Enterprise-Higher Education	Ireland	Direct continuous consultation between AIT and Regional Industry and Employment for the purpose of programme portfolio review and identification of Continuous Professional Development training opportunities. Identification of opportunities for joint application to National Development funds such as the Human Capital Initiative programme to leverage funding for Regional Upskilling and Socio-Economic Enhancement through higher-level employment.
Enterprise Ireland (EI)	National Government Organisation	Ireland	Enterprise Ireland is the government organisation responsible for the development and growth of Irish enterprises in world markets. EI works in partnership with Irish enterprises to help them start, grow, innovate and win export sales in global markets. In this way, sustainable economic growth, regional development is supported and employment is secured.
Limerick City Build	Social Enteprise/Social Innovation	Ireland	Limerick City Build (LCB) Training Academy was established to create employment pathways for economically marginalised and socially excluded people in Limerick City. The epidemic of unemployment in Limerick, is well documented and is now in its third generation, marking it as having some of the highest unemployment black-spots in Europe.
Irish Precision Turned Parts Manufacturers Association of Ireland (PTMA)	Trade Organisation	Ireland	The P.T.M.A's mission is to further the growth and development of the Precision Turned & Machined Parts industry in Ireland. It is an active association which runs quarterly meetings addressing various aspects of the members business such as – Quality Standards, Safety, Marketing, Technical R & D and Training & Development of staff and it provides a vital networking opportunity for its membership.

Limerick for IT	National Government Organisation	Ireland	Formed in 2014, Limerick for IT is a unique skills partnership between major industry, including General Motors, Johnson & Johnson and Kerry Group, Dell and Limerick Chamber; together with education providers at UL and LIT; Limerick City & County Council and IDA Ireland
LINC Engineering Network	National Government Organisation	Ireland	LINC Network is a member-led Engineering cluster of over 50 SMEs located in North Cork and East West Limerick. The LINC cluster acts as an exchange forum where members can build links, share experiences and undertake joint commercial activity. The mission of the LINC Engineering Network is to bring companies together to increase the competitiveness of the region.
Atlantic Economic Corridor (AEC)	National Government Initiative	Ireland	The AEC is the term applied to a non-administrative or "linear" region along Ireland's Western seaboard, stretching from Kerry to Donegal. The aim is to build and increase collaboration within the AEC that maximises its assets, attracts investment and creates jobs and prosperity in the region. The Department of Rural and Community Development is the department that is helping to progress the project and develop a clearly articulated road-map for delivery of the AEC objectives.
Limerick Civic Trust		Ireland	Limerick Civic Trust is a self-funding charity, which initiates and undertakes a programme of projects for the general improvements of Limerick's environment in conjunction with local authorities, state agencies and all the sectors of Limerick's commercial, professional, industrial and community life, all of whom share a common vision of the betterment of Limerick.
Industry Research and Development Group (IRDG)	National Government Organisation	Ireland	Ireland's Business-led Innovation Network dedicated to promoting excellence in research,

			development & innovation in member companies
IBEC	National Government Organisation	Ireland	IBEC is Ireland's largest lobby and business representative group whose purpose is to help build a better, sustainable future by influencing, supporting and delivering for business success. IBEC provides a wide range of professional services and management training to members on all aspects of human resource management, occupational health and safety, employee relations and employment law.

4.6.2 Região Centro, Portugal (IP Leiria)

A list is provided below, organized according to the link of each entity with RUN-EU European Innovation Hubs.

EIH in Future Industries and Sustainable Development

IAPMEI (https://www.iapmei.pt/)
National governmental institute with the following mission: Promote competitiveness and business growth, ensure support for the design, execution and evaluation of policies aimed at industrial activity, with a view to strengthening innovation, entrepreneurship and business investment in companies that operate in the areas under the responsibility of the Ministry of Economy.

CCDRC (https://www.ccdrc.pt/)
Regional Coordination and Development Commission - Região Centro

NERLEI (https://www.nerlei.pt/en/nerlei)
NERLEI - Business Association of the Leiria Region was founded on 25 June 1985 and in 1992 acquired the status of Public Utility Institution.
NERLEI's main MISSION is to provide useful services that positively affect the results achieved by its members and, at the same time, is firmly committed to help strengthening their business performance and to promote the economic growth and the social development of Leiria region.
NERLEI is a cross-sectorial association, that is, it brings together companies from all sectors of activity in this region of Portugal, and represents the business sector of the Leiria Region, located in the centre of Portugal.
Currently, NERLEI has approximately 1200 members, 38 percent of which in the industrial sector, 32 percent in the services sector, 23 percent in the trade sector and the remaining members are distributed between construction and tourism sectors.
Additionally, among our members, several secondary and higher education institutions stand out, as well as several cluster associations, linked to the moulding making industry, plastics industry, construction industry, and local business associations.

CENTIMFE – Centro Tecnológico da Indústria de Moldes, Ferramentas Especiais e Plásticos (https://www.centimfe.com/about-us.html)
It is a portuguese non-profit Public Utility institution, created in 1991, with over 230 Associates, integrating Companies, the sector associations CEFAMOL (Portuguese Association of the Moulds Industry) and APIP (Portuguese Association of the Plastics Industry), the public partners, IAPMEI and IPQ and, the Municipalities of Marinha Grande, Leiria, Batalha, and Oliveira de Azeméis. By promoting and developing activities like technical assistance, R&D, Technological transfer and Specialized training, CENTIMFE reinforces Industrial competitiveness.

OBITEC – Parque Tecnológico de Óbidos (https://obidosparque.com/)
It was created in 2008 as part of a local strategy for development of a creative economy. With a total construction area of over 4,000 square meters and 29 plots with an already established infrastructure (first stage), Óbidos Parque has all the necessary conditions for companies to establish and operate. From dedicated fiber optic network to proximity to an exceptional road network that allows direct access not only to Lisbon and Oporto, but also to the countryside and Spain, technological and market connectivity is guaranteed. The park is not a traditional business location area. It is a space that privileges architecture and green spaces. Óbidos Parque is looking for projects that may change the territory and help create an innovative hub for companies.

StartUpLeiria (https://startupleiria.com/en/home-en/)
It is a non-profit association established in July 2004 at the initiative of the Polytechnic of Leiria, the Business Association of the Leiria Region (NERLEI) and the City Council of Leiria. Today it has 34 members, mostly companies. Its mission is to promote and support companies and entrepreneurs in creating value and growth, in an agile and sustainable way.

OPEN – Oportunidades Específicas de Negócio (http://www.open.pt/open/en/)
It is a non-profit private institution, created in November 2002 for the promotion of innovation and employment through several different actions:
- Flourishing entrepreneurship in the Region, supporting the start-up of innovative enterprises
- Create the suitable conditions to attract new enterprises, services and industrial processes
- Stimulate business cooperation
- Support the development of professional skills
- Stimulate partnerships between the industry and the institutions in possession of funds for business modernization.

BUILT COLAB – Laboratório Colaborativo para o Ambiente Construído do Futuro (https://builtcolab.pt/en/)
The Collaborative Laboratory for the Built Environment of the Future.
It promotes the digital and environmental transition of buildings and infrastructures, making them adaptable, intelligent, resilient and sustainable.

SmartFarm - Laboratório Colaborativo para a Inovação Digital na Agricultura (https://www.sfcolab.org/)
It creates solutions to the challenges of climate change, digitisation of the agriculture and the development of circular economy adapted to medium-and small-scale farms.

EIH in Bioeconomy

SMART OCEAN – Parque de Ciência e Tecnologia do Mar
(https://smartoceanpeniche.com/en/)
Smart Ocean is a Marine Science and Technology Park. It emerges to fulfil the need to work collaboratively towards a future where we can benefit from the ocean at the same time we contribute to its sustainability.

Fórum Oceano - Associação da Economia do Mar (https://forumoceano.pt/)
It is the entity that manages the Portuguese Sea Cluster.
Its Mission is to mobilize companies, start-ups, research centres, universities, public administration and finance to generate new business models towards an economy of the sea ESG: achieving financial profitability generating environmental and social impact positive, through technological and business innovation based on decarbonization, digitalization, and the circularity of processes

InovCluster – Associação do Cluster Agroindustrial do Centro (https://www.inovcluster.pt/)
It is the Agroindustrial Cluster of the Centre and it aims to contribute to increasing the competitiveness of local and regional production systems and to the affirmation of the Central Region of Portugal at national and international level.

BlueBioAlliance (https://www.bluebioalliance.pt/about-us/)
The **BLUEBIO ALLIANCE (BBA)** is a national network that includes all subsectors of the marine bioresources value chain in Portugal. It ranges from raw material producers, R&D units, to biotech SMEs, transforming centres and manufacturers, public sector entities and support companies, up to the final consumer product developers. BBA aims at collectively organizing this value chain, to foster its relations and dynamics, leveraging its SMEs growth and accelerating their internationalization by increasing their outreach and exportations, leading to more jobs and value creation for Portugal.

Colab +Atlantic (https://colabatlantic.com/)
+ATLANTIC aims at advancing knowledge on the interactions between the Ocean, Atmosphere, Climate and Energy in the Atlantic, through an integrated and holistic approach from deep sea to space. By developing a better understanding of the Atlantic system, we prepare for the sustainable use of its resources and create a framework to unleash its potential for Society, promoting blue growth and highly qualified employment.

S2 AQUA - LABORATÓRIO COLABORATIVO, ASSOCIAÇÃO PARA UMA AQUACULTURA SUSTENTÁVEL E INTELIGENTE
Association for a sustainable and intelligent aquaculture.

Centro Ciência Viva do Alviela – Carsoscópio (https://alviela.cienciaviva.pt/)
The Alviela Ciência Viva Center is a space for scientific and technological education, part of the National Network of Ciência Viva Centres.
The Alviela Ciência Viva Center has the goal to value the immense natural heritage of the Alviela River spring and its surrounding area, working simultaneously as a strategic resource for scientific dissemination and environmental education. In 2011, The Alviela Ciência Viva Center was established as a non-profit scientific and technical association, with the following founding

members: Ciência Viva - National Agency for Scientific and Technological Culture, Alcanena Municipality, Polytechnic of Leiria and the Institute for Nature Conservation and Forests. Bats, water and karst are the themes explored in this Ciência Viva Centre through interactive exhibitions and various activities for different audiences, including the Bat Night, the Science Cafés, the occupation programmes during school holidays and the scientific outings.

EIH in Social Innovation

Leiria Social Innovation Hub (https://startupleiria.com/en/home-en/)
Leiria Social Innovation Hub is an initiative of Start-up Leiria, together with Polytechnic of Leiria, funded by Portugal Social Innovation (a government initiative aimed at promoting social innovation and stimulating the social investment market in Portugal). It intends to develop conditions for access to knowledge, partnership networks and social investors, to enhance the creation and replication of new solutions to the social and environmental challenges that the country faces. The objective will be to make the Leiria region a reference geography, in national terms, for the creation of new innovation and social entrepreneurship initiatives.

SPEAK (https://www.speak.social/en/)
SPEAK promotes the integration of migrant and refugee people in their new cities through a language / cultural exchange program and social events.
SPEAK provides an exchange of languages and cultures in language groups and events, with the aim of facilitating the integration of migrants in their new communities. The program generates social impact by breaking the language barrier, bringing people of different backgrounds together and promoting the appreciation of difference and cultural diversity.

4.6.3 Kanta-Häme, Finland (HAMK)

Steel Construction Excellence Centre - SCEC			https://www.hamk.fi/scec-in-english/?lang=en
RiiCycle - Recycle Cluster in Riihimäki Area			RiiCycle supports local companies in Riihimäki Area to enhance recycling. RiiCycle cluster consists of different companies
Industrial Biotechnology Cluster, IBC,			Cluster of companies, universities and research centers. Companies (St1 Biofuels, Kemira, Roal, Kiilto, Orion), Universities (AaltoUni, UEF ÅboAcademy) and Research Centers (VTT, Luke)
Häme Regional Federation of Finnish			Union represents entrepreneurs in Häme region. They influence and interact with Finnish decision-

Enterprises Association			makers at all levels: locally, nationally and in the European
ICP Materials			. http://www.corr-institute.se/icp-materials/web/page.aspx?sid=3293
ProAgria			Rural Information Center (Häme Region)
MTK			The Central Union of Agricultural producers, Forest Owners and Rural Entrepreneurs in Finland (Häme region)
Biogas companies in Finland			
Food companies in the area			Ecosystem to be built

4.6.4 Ave and Cávado, Portugal (IPCA)

ATTRACT Digital Innovation Hub	Public	Portugal	The ATTRACT consortium intends to establish itself as a collaborative network, benefiting from the strong skills, complementary infrastructures and capabilities and experience of developing innovative solutions of its members, in the digital area, namely in cooperation with companies and sectors. 2Ai/IPCA is a member since 2021.
Associated Laboratory of Intelligent Systems	Public	Portugal	This Associate Laboratory will strongly endeavour to promote scientific advances in the areas of Health and Society 5.0, Industry 5.0, Smart Cities, Infrastructures and Highly Connected Societies, Public Administration.
CIM Cavado	Public	Portugal	CIM do Cávado aims to combine, promote and articulate common interests to the associated municipalities, around collective proximity services, and municipal investments

Knowledge Circle	Public	Portugal	Aims to transfer results stemming from scientific and technological research to organizations and the wider society, along with associated skills and procedures to create utility for the ones who benefit from the use of the project outcomes
AEMinho	Public	Portugal	AEMinho arises, on the one hand, from the need to represent the business fabric of Minho before decision-makers, and on the other hand, from the need for an entity that acts as an agent of regional development, capable of promoting, in a sustainable way, a favorable environment competitiveness and the economic, social and cultural development of the region.
InvestBraga	Public	Portugal	Economic Stimulation and Attraction of National and International Investment to the region, through the Agency for Economic Stimulation of Braga.
MadeInFamalicao	Public	Portugal	Valuing and promoting entrepreneurial genetics, attracting new investments and helping entrepreneurs and entrepreneurs in the development of business projects.
AvePark	Public	Portugal	As a central object of AVEPARK, the development and promotion of a science and technology park is identified, which includes the educational, scientific, technological and business aspects, promoting a favorable climate for technology-based innovation, taking advantage of the synergies and complementarities between the scientific-technological and business communities.
CEVAL	Public	Portugal	CEVAL – Alto Minho Business Confederation is a Private Non-Profit Association, founded on June 5, 1998. CEVAL has established itself as a facilitating and participatory agent in the region's sustainable development

			process, incorporating objectives, innovative interventions and a vocation of proximity to the Business and Institutional Fabric.
CCDRN	Public	Portugal	The Commission for Coordination and Regional Development of the North (CCDR-N) is a service of the direct administration of the State, endowed with administrative and financial autonomy, whose direction is exercised by the Minister of Territorial Cohesion, in coordination with the Minister of Modernization of the State and Public Administration, in matters relating to local authorities, and with the Minister of the Environment and Climate Action, in matters of the environment and territorial planning. This public institution aims at the integrated and sustainable development of the North of Portugal, contributing to the competitiveness and cohesion of the national territory.
Barbosa De Oliveira Industrial Park	Private	Portugal	A new generation industrial park, built in a structured, facilitating, integrative logic, which encourages flows of knowledge and public-private synergies and which contributes to economic growth and development in the municipality of Barcelos.

4.6.5 Northern Netherlands (NHL Stenden)

In the Northern Netherlands there is a number of strong, thematic clusters such as in the fields of smart manufacturing (Innovation Cluster Drachten, Dutch Tech Zone), water technology (Water Campus Leeuwarden), bio-economy (ChemPort) and health technology (Health Hub Roden).

For the regional SMEs there are three organisations that offer direct innovation assistance (YnBusiness in Fryslân, GroBusiness in Groningen and IBDO in Drenthe). Their consultants offer advice on a wide number of themes such as financing and connecting companies where relevant.

The Northern Netherlands Alliance fulfils several functions. They are an administrative organisation through which the three provinces and the four large cities in the region coordinate their spatial planning and economic strategy. They are a Management Authority for the European Regional Development Fund (ERDF), a united voice from the Northern Netherlands,

representing the region in The Hague and Brussels. On top of this they are a network organisation that enables businesses, knowledge institutes, regional authorities and civil society organisations to meet and combine their strengths to foster innovation – both in the Netherlands as well as in Europe. To boost project development, there are monthly 'Matrix'-meetings in which a group of experts actively try to further project ideas that are deemed valuable for the region.

4.6.6 Győr-Moson-Sopron County, Hungary (Széchenyi István University)

Széchenyi István University Regional Innovation Platform	HUB	Hungary	The Mananagement Campus Competence Centre of SZE supports the international competitiveness and development of the innovation capabilities of local companies, especially small and medium-sized enterprises within the HUB.
Győr-Moson-Sopron-County Chamber of Commerce and Industry[6]	National Government Organisation	Hungary	Mission is to support regional ad local enterprises with administrative and legal services and education.

4.6.7 Vorarlberg, Austria (FHV)

V-RESEARCH and Digital Factory Vorarlberg

https://www.v-research.eu/

V-Research and the newly founded Digital Factory Vorarlberg are two daughter companies of Vorarlberg University of Applied Sciences when it comes to applied research and development mostly with industrial partners.

Austrian Blockchain Centre

https://www.abc-research.at/

The Centre's mission is to be the one-stop-shop Austrian Research Centre for Blockchain (and related) technologies to be applied in industrial applications like industry 4.0 / IoT as well as

[6] GYMSMKIK

financial, energy, logistics, government and administrative applications. Those new applications and business models resulting from collaborations between established players, innovative start-ups and top R&D institutes will be the key for the creation of new jobs and establishing Austria among the top ten innovative countries in Europe. FHV is due to its research centre Business Informatics part of this project.

Digital Innovation Hub West

https://dih-west.at/

DIH West is a hub for digital innovation in the western part of Austria (Vorarlberg, Tyrol, Salzburg).

CDP - Austrian Centre for Digital Production

https://acdp.at/de/en/

The Austrian Centre for Digital Production supports companies in the digitalization and automation of discrete manufacturing and production processes. Special focus is on the needs of SMEs and the tasks arising from the production of small batch sizes. The portfolio of expertise ranges from the virtual representation of products and production systems to the automation of design tasks, machine-to-machine communication, including sensor integration, integration with and into IT systems, data science and the consideration of socio-economic aspects. FHV is due to its research centre Business Informatics part of this project.

Start-up Centre 'startupstube'

http://www.startupstube.at/

The startupstube brings students from different disciplines together and supports them during the startup process. It offers start-ups and innovators entrepreneurial development space and inspiration, creates proximity to the regional and international innovation ecosystem and promotes exchange with like-minded people.

Plattform-V

https://www.plattform-v.io/

Plattform-V is an agile, registered non-profit association. Representatives of the member companies are to motivate them to become active and promote the networking of member companies through digital business models to strengthen Vorarlberg and the region. Members of the association are Vorarlberg companies of all sizes from different sectors, with a current focus on manufacturing companies. The organisational management and strategic orientation of the platform is in the hands of the "Platform V Core Team". This is made up of representatives of several member companies - large and small - and care is taken to ensure that new members are appointed on a regular basis.

Wirtschafts-Standort Vorarlberg GmbH - WISTO

https://www.wisto.at/en/home/

WISTO supports local companies in research, development and innovation, assists start-ups and coordinates the digitization agendas in Vorarlberg. As a direct interface to companies and institutions, we implement lead projects. In addition, we are responsible for location marketing and promotion and the development and implementation of the Marke Vorarlberg.

Industriellenvereinigung Vorarlberg

https://vorarlberg.iv.at/

As a voluntary, non-partisan interest group representing industry and its closely related sectors, the IV-Vorarlberg works to improve the competitiveness of our location. This is intended to secure necessary growth, necessary jobs and social prosperity in Vorarlberg.

4.7 References

4.7.1 Midlands-Midwest Ireland (TUS)

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- Midwest Regional Skills Forum
- Limerick 2030 Economic and Spatial Plan
- Enterprise Ireland Strategy 2022-2024
- IDA Driving Recovery and Sustainable Growth 2021-2024
- National Skills Strategy to 2025
- Project Ireland 2040
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- Project Ireland 2040
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4.7.2 Região Centro, Portugal (IP Leiria)

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4.7.3 Kanta-Häme, Finland (HAMK)

In Finnish: https://hameenliitto.verkkoesitykset.fi/maakuntaohjelma/#/14/5

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4.7.5 Northern Netherlands (NHL Stenden)

- RIS3 Northern Netherlands: https://www.snn.nl/europa/strategie-voor-het-noorden
- University of the North Knowledge Agenda: https://universiteitvanhetnoorden.nl/app/uploads/2021/11/Kennisagenda-Unversiteit-van-het-Noorden.pdf

4.7.6 Győr-Moson-Sopron County, Hungary (Széchenyi István University)

- National Development Strategy 2030
- Győr-Moson-Sopron County Development Concept 2021-2027
- Győr-Moson-Sopron County Development Strategy and Operational Program 2021-2027

4.7.7 Vorarlberg, Austria (FHV)

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5.0 RUN-EU PLUS Priority Research Domains for R&I with Business and Society

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.

Sustainability, **Digitalisation** and **Social Innovation** were selected as the priority research domains by the RUN-EU PLUS project management committee at their meeting at NHL-Stenden in March 2022 following a review of this analysis 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.

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