ACTIVITY 2.1

D.T2.1.4

COMMITMENT REPORT FOR RIS3 INNOVATION SYSTEM IMPROVEMENT DEVELOPED AT A REGIONAL LEVEL

Commitment report

DEX Innovation Centre – PP5 – Czech Republic

Project Number	CE1492
Project Name	Towards the application of Industry 4.0 in SMEs
Project Acronym	4STEPS
Work package	WPT2-From catalogue to action: local implementation of and intervention plan
Activity	Activity 2.1.Transnational action Plan
Deliverable	**Deliverable D.T2.1.4** – Commitment Report for RIS3 innovation system improvement developed at a regional level
WP responsible partner	DEX Innovation Centre
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1. Introduction of the 4STEPS project

4STEPS project is addressing the main challenge of Industry 4.0 (I4.0) as a tool towards a new, digital industrial revolution holding the promise of increased flexibility in manufacturing, mass customisation, increased speed, better quality and improved productivity and its development is supporting the RIS3 in the target regions in the different sectors. SMEs in the target regions are lagging behind in the adoption of innovative tools and solutions proposed by I4.0 revolution and need to increase transnational collaboration in facing this challenge.

The main project objective is to support the successful RIS3 implementation applying the I4.0 to all the industrial sectors identified by each region. The innovative elements of 4STEPS will be the methodology applied based on the involvement of all the actors of the quadruple helix, thanks to a bottom up approach.

2. Commitment Report

All partners of the 4STEPs project will have to communicate targets and impact of the project. This report explains how the 4STEPs project faces strategic documents on Innovation policy (mainly RIS3) and how do all territorial Digital Innovation Hubs under this project (DIHs) plan to help the public sector to fulfil the European targets on digital economy. The territorial DIHs must response to the priorities of the RIS3 strategy and act also as active partners in the Innovation policy in the long term period.

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3. CZECH REPUBLIC – Liberec region – DEX Innovation Centre

3.1 Starting cooperation with public authorities responsible for RIS3 strategies on national / regional level

Authority on national level responsible for RIS3 strategy	Ministry of Industry and Trade of Czech Republic
Link to the document of national RIS3 strategy	https://www.mpo.cz/assets/cz/podnikani/ris3-strategie/dokumenty/2021/1/A_RIS3-Strategie.pdf (Czech version approved 25.1.2021 for 2021-2027)
Authority on regional level responsible for RIS3 strategy	Liberec region
Link to the document of regional RIS3 strategy	https://regionalni-rozvoj.kraj-lbc.cz/page1874/regionalni-inovacni-strategie-libereckeho-kraje/ris3-strategie-libereckeho-kraje-aktualizace-2020 (Czech version attachment to national RIS3 strategy for 2021-2027, only in Czech version)
Sectors of the economy affected by the Industry 4.0 in description of national RIS3 strategy	- engineering and mechatronics, energy, metallurgy, industrial chemistry: advanced materials, technologies and systems - engineering and mechatronics, energy, metallurgy, industrial chemistry: digitalization and automatization of production technologies - electronics and electrical engineering, digital economy: electronics and digital technologies - automotive, aviation, cosmonautics, rail and tram vehicles: ecological transportation - automotive, aviation, cosmonautics, rail and tram vehicles: technologically advanced and secure transportation - pharmaceuticals, biotechnologies: advanced medicine and pharmaceuticals - traditional sectors, new sectors: cultural and creative industries as tools for acceleration of socioeconomic development of the Czech Republic - management of natural resources, agriculture and forestry, food production, natural environment and biodiversity, construction and human residences: green technologies, bioeconomics and sustainable food sources - management of natural resources, agriculture and forestry, food production, natural environment and biodiversity, construction and human residences: intelligent residences
Sectors of the economy affected by the Industry 4.0 in description of	- Advanced engineering - Advanced transport equipment, means of transport and their components

regional RIS3 strategy	- Electronics, electrical engineering and ICT - Optics, decorative and utility glass - Nanomaterials and technologies of their production - Advanced materials based on textile structures and technologies for new multidisciplinary applications - Sustainable management of energy, water and other natural resources - Advanced metal, composite, plastic materials and technologies of their processing
Planned actions for digitalization and Industry 4.0 in the national RIS3 strategy	Research, development and innovation for business A. Increasing the innovative performance of companies A.1 Strengthening the innovative performance of existing companies and responding to industrial transformation, technological and societal change A.2 Establishment and growth of new companies and use of new opportunities A.3 Improving the functioning of innovative ecosystems at the national and regional levels People and smart skills C. Increasing the availability of qualified people for C.1 Improving the ability of the education system to prepare people for research, development and innovation C.2 Skills development for smart specialization, industrial transformation and entrepreneurship C.3 Increasing the potential and motivation of staff in research organizations Digital agenda D. Increasing the use of new technologies and digitization D.1 Support for digitization and use of new technologies in business D.2 Support for digitization and use of new technologies in public
Planned actions for digitalization and Industry 4.0 in the regional RIS3 strategy	Key Area of Change A: Competitive and Innovative Enterprises A.1 Increase the intensity of establishing new and developing existing companies with the potential for rapid growth and international competitiveness A.2 Develop digital transformation in the region in the corporate and public sector Key area of change B: Quality research and development and its contribution to the development of the region B.1 Strengthen the quality, intensity and international comparability of research carried out in the region B.2 Increase the benefits of research and development activities for the corporate sector and areas of public interest in the region Key Area of Change C: People for Research and Innovation C.1 Improve the quality of human resources for research, development and innovation in formal and non-formal education

	C.2 Improve the availability and quality of human resources for internationally comparable research C.3 To improve the capabilities and competencies of human resources in the region in the field of digitization and industrial transformation

3.2 Territorial DIH assets to the RIS3 strategy and the territorial innovation environment

Selected goals/actions of RIS3 strategies	How can territorial DIH create, improve or rework the current situation?
REGIONAL: Key Area of Change A: Competitive and Innovative Enterprises A.1 Increase the intensity of establishing new and developing existing companies with the potential for rapid growth and international competitiveness A.2 Develop digital transformation in the region in the corporate and public sector	Support for young and beginning individuals and teams thanks to innovative laboratories, educational workshops and other educational activities focused on the development of digital and business skills that will motivate young talents to develop their own technology startups.
REGIONAL: Key area of change B: Quality research and development and its contribution to the development of the region B.1 Strengthen the quality, intensity and international comparability of research carried out in the region B.2 Increase the benefits of research and development activities for the corporate sector and areas of public interest in the region	Creating a network of Digital Innovation Hubs to facilitate access and transfer of knowledge and technology. Facilitate cooperation, support for international partnerships and networking of international and regional partners through DIH. Support and development of cooperation between private and public entities through research and innovation projects focused on digital innovation.
REGIONAL: Key Area of Change C: People for Research and	Support for talent search, connection of talents and small and medium-sized enterprises, search for interesting startups, connection of individual actors. Activities implemented within the framework of educational events, matchmaking, thematic events,

Innovation C.1 Improve the quality of human resources for research, development and innovation in formal and non-formal education C.2 Improve the availability and quality of human resources for internationally comparable research C.3 To improve the capabilities and competencies of human resources in the region in the field of digitization and industrial transformation	or accelerators, trainings/workshops and other educational events and programs. Creation of a digital laboratory for Startups and SMEs with the possibility of prototyping their own innovative solutions and products.
NATIONAL: Research, development and innovation for business A. Increasing the innovative performance of companies A.1 Strengthening the innovative performance of existing companies and responding to industrial transformation, technological and societal change A.2 Establishment and growth of new companies and use of new opportunities A.3 Improving the functioning of innovative ecosystems at the national and regional levels	Support for the development of new as well as existing companies in the sense of increasing their innovative performance through training and educational events aimed at developing the skills needed to implement I4.0. Support training of employees, management, as well as students and start-ups. Providing suitable conditions and equipment for the development of the necessary skills and knowledge through DIH.
NATIONAL: People and smart skills C. Increasing the availability of qualified people for C.1 Improving the ability of the education system to prepare people for research, development and innovation	Training and educational workshops a) focused on business activities - development of managerial and entrepreneurial skills, education in the fields of business, management, etc. b) focused on 3D printing, PCBs, machining, IoT and other activities that will help companies in the region to make better use of I4.0 technologies. Last but not least we can contribute to the fulfilment of the goal through the education of company employees, but also through events that focus on connecting important actors, but also through hackathons.

C.2 Skills development for smart specialization, industrial transformation and entrepreneurship C.3 Increasing the potential and motivation of staff in research organizations	
NATIONAL: Digital agenda D. Increasing the use of new technologies and digitization D.1 Support for digitization and use of new technologies in business D.2 Support for digitization and use of new technologies in public	Support and popularization of technologies and the process of digital transformation to industry 4.0 through public thematic events and other public events. Creation of a Digital Innovation Hub to facilitate access to information, education and technology.

3.3 Being a reliable partner with relevant knowhow in the given digital specialization. Exchanging findings with other partners. Observing the RIS3 environment.

Possible partner in the territory	Topics for cooperation
Technical University of Liberec - Faculty of Mechanical Engineering and Faculty of Informatics, Mechatronics and Interdisciplinary Studies	Involving mentors into DIH events and using FabLab for University education. Connecting students and SMEs through events. Using DIH for the development of startups and new business plans. Opportunity for students and their involvement in hackathons prepared within DIH. Using DIH and its equipment during education courses.
Secondary Industrial School of Mechanical and Electrical Engineering and Higher Vocational School	Involving mentors into DIH events and using FabLab for University education. Connecting students and SMEs through events. Using DIH for the development of startups and new business plans. Opportunity for students and their involvement in hackathons prepared within DIH.

	Using DIH and its equipment during education courses.
Institute for Nanomaterials, Advanced Technologies and Innovations (CXI)	Connecting students and SMEs through events. Using DIH for the development of startups and new business plans. Opportunity for students and their involvement in hackathons prepared within DIH.
Lipo.ink	Cross-connecting small and medium-sized enterprises and young entrepreneurs through thematic events and introductions.. DIH sharing for Lipo.ink customers and development of their technological prototypes.
Liberec region	Development and cooperation of innovative projects/initiatives into Liberec region territory Support in fulfilling the goals within the RIS3 strategy Mutual cooperation within thematic events, actions and objectives in the field of support I4.0

3.4 Influencing the RIS3 strategy

Planned activities
In January 2021, the last update of the Regional Innovation Strategy for the Liberec Region and also for the entire Czech Republic took place and the strategic actions were defined. In the current period, we would like to support the defined strategies and operative actions aimed at fulfilling the objectives of the innovative strategy of the Liberec Region. In the future, we would like to be involved in the creation of a new innovation strategy or in its further updating in order to maximally support the efforts of the regional office to develop innovations and smart technologies across sectors. We want to focus primarily on the direct participants in change, we want to work primarily with the young upcoming generation, whom we would like to involve in various activities within DIH. For students and young start-ups, we want to maximally adapt the environment of our digital laboratory thanks to the equipment that will allow them to develop their innovations, business plans and ideas from the very beginning. Thanks to this, we would like to create and support the development of entrepreneurship and creativity in formal and non-formal education, as well as to positively influence the intensity of establishing new and developing existing companies with the potential for rapid growth and international competitiveness. Of course, we want to educate small and medium-sized enterprises and facilitate their access to technology through our experience and workshops and training, thus helping them to improve the capabilities and competencies of human resources in the region in the field of digitization and industrial transformation. We want to offer them the opportunity to expand the skills and abilities of their employees and show them the possibilities that current technologies

offer.
Last but not least, we want to bring together all the above-mentioned important actors who will play an important role in the future of our region, namely policy makers, entrepreneurs, universities and young talents that are key to the region, and gradually help develop digital transformation in the region, corporate and public sector.

4. HUNGARY – Nyugat-Dunántúl (West Transdanubia) region – Pannon Business Network

4.1. Starting cooperation with public authorities responsible for RIS3 strategies on national / regional level.

Authority on national level responsible for RIS3 strategy	National Research, Development and Innovation Office
Link to the document of national RIS3 strategy	ENG: https://nkfih.gov.hu/english/national-smart-specialisation-strategy/s3-2014-2020 HUN: https://nkfih.gov.hu/hivatalrol/nemzeti-intelligens/nemzeti-intelligens The new national RIS3 strategy is being prepared, feedback is expected from stakeholders, and relevant actors. The exact publication of the updated national RIS3 strategy is unknown, it is expected to be published in the second half of 2021. Please find further information and details regarding the upcoming strategy here: https://nkfih.gov.hu/english/national-smart-specialisation-strategy/s3-2021-2027
Authority on regional level responsible for RIS3 strategy	N/A In Hungary the RIS3 Strategy has been ONLY prepared on national level
Sectors of the economy affected by the Industry 4.0 in description of national RIS3 strategy	In the Hungarian national RIS3 strategy three national smart specialisations are defined, namely (System Science; Smart production; Sustainable Society). Apart from these smart specialisations, 2 horizontal priorities are set, which are ICT & Services and Inclusive and sustainable society, viable environment. The strategy also defines sectoral priorities (6) which are linked to sectors: 1) Healthy society and wellbeing 2) Clean and renewable energies

	3) Advance Technologies in machine industry 4) Sustainable Environment 5) Healthy Local Food 6) Agricultural innovation Society
Sectors of the economy affected by the Industry 4.0 in description of regional RIS3 strategy	N/A
Planned actions for digitalization and Industry 4.0 in the national RIS3 strategy	Infocommunication technologies extensively encompass and support the sectoral priorities, such as bioinformatics or diagnostic imaging in the health industry, or the intelligent transport systems in the vehicle industry, or "smart city" in the energy domain. The following solutions can be such ICT solutions that cannot be linked to sectoral priorities in an unambiguous way or can be linked to more sectors (these are just a few examples, not an exhaustive list): • smart business, company, home • smart city • information security, security technology • gamification, simulation and optimisation technology • e-learning systems • big data • data mining • software development • remote monitoring system • cloud computing • intelligent transport • development of mobile applications, location-based services • 3D GIS • bioinformatics • "Internet of things" • 3D printing • future internet • 5G technologies • remote sensing • computer-based instruments and measurement and process control improvements • numerical modelling and simulation • machine learning • data centres, data transmission networks
Planned actions for digitalization and Industry 4.0 in the regional RIS3 strategy	N/A

4.2 Territorial DIH assets to the RIS3 strategy and the territorial innovation environment

Selected goals/actions of RIS3 strategies	How can territorial DIH create, improve or rework the current situation?

As it has been already described in the previous section in the Hungarian national RIS3 Strategy, 3 national smart specialisations, 2 horizontal priorities and 6 sectoral priorities are defined.
 	
Some ICT solutions are described in the Strategy which can be linked to more sectors. Please note that ICT solutions are just listed as possible solutions and no specific actions in connection with these solutions are described in the Strategy.
 	
As the Strategy mentions: "In addition to infocommunication technologies, services – mostly using ICT tools – without which thegiven complex (sectoral) RDI process could not be implemented constitute the other side of technological horizontal priority. The aim of the horizontal priority (ICT & Services) is to enable the service sector, which is a key sector of the national economy, to facilitate the implementation of complex RDI activities.
	Smart home:
	• Data visualisation
	• Data understanding and utilisation
	• Establishment a Smart Test and Demo Room focusing on elderly people
	• The Smart Senior Room is a complex micro environment, integrating multiple elements of the smart room dedicated to senior people and care organizations. It focuses on both the individual and on the infrastructure, all elements showcased as a single platform. The Room is directly connected with the digitalization centre competencies. It is a:
	   • demonstration environment
	   • training environment for various levels
	   • test facility
	   • research infrastructure
	
	Smart city:
	• Data analysis, application development
	
	E-learning systems:
	• Digitization educational experiences of our DIH can be shared
	
	Big data:
	• Utilisation of data
	• Data processing with different advanced data analyis methods (advanced visualisation of data, correlation, segmentation, natural language processing)
	• Data mining
	
	Development of mobile applications location-based services:
	• Existing demo applications (developed by our DIH) can be shared
	
	3D GIS:
	• Available already implementing pilots can be shared for educational purposes
	
	3D printing:
	• Knowledge and use cases can be shared
	• Demo tools of re-utilisation of filament can be also

	presented Computer based instruments and measurement and process control improvements: • Experience on digital twinning can be shared

4.3 Being a reliable partner with relevant know-how in the given digital specialization. Exchanging findings with other partners. Observing the RIS3 environment.

Possible partner in the territory	Topics for cooperation
Eötvös Loránd University who is initiating an MSC course in Software Enginnering in a dual education format.	PBN and our DIH (am-LAB) is in strong cooperation with ELTE, and we can provide practice opportunities to the students. Besides, we could hold some seminars/lectures in the course, and we can offer our experiences in Data analytics field
FALCO Zrt- Large enterpise in wood industry	FALCO intense to move to complex proposals towards its ecosystem with applications like design academy or green solutions in public areas. Locally- on city level- these efforts are integrated in a ten-year development program- called Szombathely 2030- where FALCO and PBN are also active contributors.
Scientific Association for Mechanical Engineering	They are the founding member of Industry 4.0 National Technology Platform and GTE is a member and representative of several other technical Platforms as well. Their mission is to bring together professionals, companies and organizations working in mechanical engineering industry and related fields, to develop their professional skills and support their activities. PBN has had a strong cooperation with the Scientific Association for years, and our role would be a kind of intermediary between the members of the Association. PBN (am-LAB) can invite some Association members to our DIH to show them our I4.0 (e.g: additive manufacturing, 3D scanning, 3D animation, Robotics, AR applications, Advanced data analysis..)
Ivy Technology AMS Hungary Kft	IVY has expressed its willingness with being involved in regional planning, and through this initiative they will have possibility to provide input for S3 planning procedure. Ivy has worked together with PBN /am-LAB where the main aim was to install a (semi)-autonomous drone in their plant to enhance digital transformation.
Óbuda University	The University is flexible customer-oriented with easy-to access senior management. To reinforce and demonstrate commitment, the management of the University (vice-rector, head of research

	institutes) visited Szombathely and am-LAB several times to articulate the potential cooperation. Cooperation agreement was signed with PBN and Óbuda University. The intentions are to open joint applied research and tech transfer center in Western-Hungary. This initiative is also included in the Szombathely 2030 territorial operative program
Primary and Secondary schools in the region	Our DIH (am-LAB) can invite the students from the local schools to experience our services and good practices. (e.g: additive manufacturing, 3D scanning, 3D animation, Robotics, AR applications, Advanced data analysis..) It might be useful since they can be aware of numerous I4.0 technologies which might influence them in their career orientation.

4.4 Influencing the RIS3 strategy.

Planned activities
We have been continuously discussing the regional priorities in the digitization field with local stakeholders and decision makers. We might have an impact on the local and regional strategies and action plans, since the outcomes of these conversations might be added to regional/local policy instruments, regional/local strategies, action plans, which will determine the priorities, measures in the upcoming years. On the other hand, local and regional policy makers might share the local/regional priorities- (where PBN and our DIH has contributed to establish) with national decision makers who might integrate these inputs to the new RIS 3 strategy being prepared on national level. Furthermore, we are in connection directly with the authority who is responsible for the preparation of the new RIS3 Strategy (namely: National Research, Development and Innovation Office). We can share our experiences and priorities with them directly as well. The overarching goal is to enhance the appearance of digitization and Industry 4.0 elements in a high extent in different strategic documents. Therefore, higher financial and technical support might be given to stakeholders, who would like to develop their digitization skills.

5. SLOVENIA / WEST SLOVENIA / CHAMBER OF COMMERCE AND INDUSTRY OF SLOVENIA

5.1 Starting cooperation with public authorities responsible for RIS3 strategies on national / regional level.

Authority on national level responsible for RIS3 strategy	Government Office for Development and European Cohesion Policy, Republic of Slovenia
Link to the document of national RIS3 strategy	ENG: http://svrk.arhiv-spletisc.gov.si/en/areas_of_work/slovenian_smart_specialisation_strategy_s4/ SLO: https://www.gov.si/assets/vladne-sluzbe/SVRK/S4-Slovenska-strategija-pametne-specializacije/Slovenska-strategija-pametne-specializacije.pdf
Authority on regional level responsible for RIS3 strategy	N/A, only national level, (Government Office for Development and European Cohesion Policy, Republic of Slovenia).
Sectors of the economy affected by the Industry 4.0 in description of national RIS3 strategy	The Slovenian Smart Specialization Strategy (S4) has 3 PILLARS: • Digital • Circular • (S)Industry 4.0 and covers 9 sectors: • Smart cities and communities • Smart buildings and homes, including wood chain • Networks for the transition into circular economy • Sustainable food production • Sustainable tourism • Factories of the Future • Health – medicine • Mobility • Development of materials as products I4.0 and digitalization play a significant role in 8 out of 9 SRIPs (except SustainableTourism).
Sectors of the economy affected by the Industry 4.0 in description of regional RIS3 strategy	N/A, same as above as Slovenia is treated as one region and has just one Smart Specialization Strategy

| Planned actions for digitalization and Industry 4.0 in the national RIS3 strategy | The Slovenian Smart Specialization Strategy (S4) has 3 PILLARS:

• Digital
• Circular
• (S)Industry 4.0

and 9 PRIORITY DOMAINS:

I.DIGITAL: 1 Smart Cities and Communities; I.2 Smart Buildings and Home, including Wood Chain;

II.CIRCULAR: 1 Networks for the Transition to a Circular Economy; II.2 Sustainable Food; II.3 Sustainable Tourism;

III.Industry 4.0: 1 Factories of the Future; III.2 Health-Medicine; III.3 Mobility; III.4 Materials as Products.

Each of the nine areas of application witnessed an establishment of one partnership by the end of 2016 following a spontaneous, not policy-driven bottom-up initiative recognising the need for cooperation and integration. The initiative also included an agreement on coordinators of Strategic Research and Innovation Partnerships - SRIPs (=clusters). More than 500 companies and 100+ knowledge institutions joined the initiative, and as partnerships are open, other actors will undoubtedly join them in the future. This is particularly important for small and medium-sized enterprises (SMEs).

Each of the SRIPs has an elaborate action plan regarding planned actions. 8 out of 9 SRIPS potentially deal with I4.0 and digitalization in some sense.

The most representable SRIP for I4.0 is SRIP Factories of the Future. It has 8 industrial vertikals:

• Robotic systems and components
• Intelligent control systems
• Smart mechatronics tools
• Intelligent laser systems
• Advanced sensors
• Smart plasma systems
• New materials
• Smart Factory

...and deals with 7 Key enabling technologies:

• Robotics
• Control technologies
• Nanotechnologies
• Photonics |

	- Plasma technologies - Modern production technologies for materials - Information and communication technologies The partnership has 4 partners that are responsible for different areas of this structure. Chamber of commerce and Industry of Slovenia is leading the Smart Factory Cluster.
Planned actions for digitalization and Industry 4.0 in the regional RIS3 strategy	N/A, same as above as Slovenia is treated as one region and has just one Smart Specialization Strategy

5.2 Territorial DIH assets to the RIS3 strategy and the territorial innovation environment

Selected goals/actions of RIS3 strategies	How can territorial DIH create, improve or rework the current situation?
1. Series of workshops for manufacturing SMEs on understanding the importance of customer experience 2. Series of Workshops on Best practice exchange between companies and diving deep into key I4.0 concepts 3. Access to finance 4. Analytical assessment and individual coaching of SMEs on the topic of sustainable value chain reporting 5. Pilot platform for the e-life cycle of product	Planned actions and activities: 1. Manufacturing SMEs: DIH plans to organize a Series of workshops for manufacturing SMEs on understanding the importance of customer experience 2. Understanding of key concepts of I4.0: DIH si planning to organize a Series of Workshops on Best practice exchange between companies and diving deep into key I4.0 concepts 3. Access to finance: DIH will raise awareness of SMEs on the topic of get co-financing possibilities for digitalization activities 4. SMEs on non-financial reporting: SMEs have been asked by the larger companies in the value chain to make reports that are of non-financial nature. DIH will provide analytical assessment and individual coaching of SMEs on the topic of sustainable value chain reporting. 5. Pilot platform for the e-life cycle of product - working on digitalization tributes/standards of a product

5.3 Being a reliable partner with relevant know-how in the given digital specialization. Exchanging findings with other partners. Observing the RIS3 environment.

Possible partner in the territory	Topics for cooperation
Other Strategic Research and Innovation Partnerships	SRIP Factories of the future regularly meets with all the other partnerships, working on synergies, co-organizing events, lobbying for strategies (for example: industrialization strategy of Slovenia).
Digital Innovation HUB Slovenia	Finding synergies and collaboration on joint projects, best practice examples and lectures for SMEs on the topic of I4.0 and digitalization, but also developing digital skills in education processes.
Institute Jožef Stefan	Jozef Stefan Institute is the largest research institute in Slovenia - we plan to involve them as project partners and as experts in the matter of Key enabling technologies (nano- technology, plasma-technology, robotics etc.).

5.4. Influencing the RIS3 strategy.

Planned activities
As the representative of the Smart factories Cluster within the SRIP Factories of the Future the Chamber of Commerce and industry of Slovenia is one of the key players of the Slovenian Smart Specialization Strategy. We are in close contact with the Slovenian Government office (that is responsible for RIS) on a Weekly/Monthly basis. Currently, we are in the process of renewing the Smart Specialization Strategy and are active in the EDP - Entrepreneurial Discovery Process. We are actively adjusting our Action Plans based on the needs of the slovenian industrial and educational ecosystem. The Chamber of Commerce and industry of Slovenia is also very active in preparing the industrialization strategy of Slovenia, where we position ourselves as one of the key players. We are in close contact with the policy makers and plan to intensify this in the coming year. Our specific goal for 2021 is to actively contribute to the renewal of the S4 strategy by close collaboration with the Smart Specialization office. The overall goal is to strengthen the transition of slovenian companies (especially SMEs) toward Industry 4.0 elements.

6. ITALY / LAB AND CNA EMILIA ROMAGNA

6.1 Starting cooperation with public authorities responsible for RIS3 strategies on national / regional level.

Authority on national level responsible for RIS3 strategy	MIUR (Ministero dell'Istruzione, dell'Università e della Ricerca): Minister of Education, University and Research
Link to the document of national RIS3 strategy	Italian document: https://s3platform.jrc.ec.europa.eu/documents/20182/223684/IT_RIS3_201604_Final.pdf/085a6bc5-3d13-4bda-8c53-a0beae3da59a
Authority on regional level responsible for RIS3 strategy	Authority for the Emilia Romagna Region: Regione Emilia-Romagna Regional RIS3 strategy: https://s3platform.jrc.ec.europa.eu/documents/20182/225192/IT_Emilia-Romagna_RIS3_Final.pdf/709ccb97-f34a-4cb8-bacf-c9b535b6f356
Sectors of the economy affected by the Industry 4.0 in description of national RIS3 strategy	- Green chemicals - Smart energy/ utilities - Smart factory - Smart mobility - Aerospace
Sectors of the economy affected by the Industry 4.0 in description of regional RIS3 strategy	- Mechatronics and the motor industry - Agrifood - Building and construction - Health and wellbeing - Cultural and creative industries - Innovation in services
Planned actions for digitalization and Industry 4.0 in the national RIS3 strategy	Aerospace and defence includes the following actions: - Reduction of the environmental impact - Advanced aviation (HW module networks and HMI) - Advanced air traffic management systems - UAV (Unmanned aerial vehicle) for civil use - Spatial robotics - Earth observation technologies - Space access through electronic vehicles - Technologies and systems for defence constructions Smart factory includes the following actions: - Highly efficient and innovative production systems for sustainability - Evolutive and adaptive systems for customized production

	- Innovative and sustainable materials - Technologies for bio and bio-based materials - Systems and technologies for waste management and waste treatment - Technologies for smart grids
Planned actions for digitalization and Industry 4.0 in the regional RIS3 strategy	Sustainable construction: - New construction materials and building techniques for sustainable construction. - Sustainable buildings, building redevelopment, smart buildings and cities, innovative technologies in building construction and redevelopment Mechatronics and the motor industry: - New technologies and materials for the motor industry and other productions. - Automated systems, smart and sustainable manufacturing, robotics, intelligent transport systems The manufacturing sector has always been one of the driving forces of Emilia Romagna regional economy and employment, with internationally recognized excellence. The Manufacturing 4.0 thematic area starts from this assumption and considers the sector with its recent evolutions in the fields of digital, automation, sustainability and the centrality of the person and the related applications throughout the supply chain and in the sectors dependent on it. The production environment is highly interconnected, with devices capable of communicating with each other (Internet of Things) and with the outside world, acquiring large amounts of data (Big Data) and reprocessing them locally (Edge Computing) or remotely (Fog Computing) to adapt and optimize productivity, efficiency, safety and quality of the finished product, also using advanced simulation tools (Digital Twins). Intelligent manufacturing - the application of Deep Learning, Machine Learning and Artificial Intelligence technologies to all moments of the production cycle - will represent the heart of the Emilia Romagna policy plan for the next 7 years.

6.2. Territorial DIH assets to the RIS3 strategy and the territorial innovation environment

Selected goals/actions of RIS3 strategies	How can territorial DIH create, improve or rework the current situation?
NATIONAL:	By providing an updated system of reliable data concerning SMEs'

• Points at regional level: • ART-ER • Clust-ERs • Regione Emilia Romagna Managing Authority and administrative/ secreteriat services The education and training system should be linked with SMEs right from the beginning. Young people must understand the importance of technical culture in order to properly train and imagine a future in these small but extremely dynamic and stimulating companies.	levels of innovation and digitization CNA will periodically present a set of concrete proposals - both at national and regional level - for industrial policies focused on small and medium sidez firms. CNA and its network of DIHs enter into agreements with schools and technical institutes to standardize paths of connection between the educational world and that of business. Agreements are also made on professional degrees. Young people therefore have internships / training periods preparatory to their subsequent professional life

6.3 Being a reliable partner with relevant know-how in the given digital specialization. Exchanging findings with other partners. Observing the RIS3 environment.

Possible partner in the territory	Topics for cooperation
Regional system of research and innovation Regional University System (7 Universities) • 400 courses (Three-year and magistral degrees) • 153 master • 126 Specialization Courses • 160 k students • Bologna Business School (Master/MBA) • PhD and International Data Science Phd • School of Advanced Studies in Food Safety • MUNER (Motor	CNA Emilia Romagna plans a set of specific actions training initiatives addressed to SMEs in collaboration with the partners indicated. It includes the development, dissemination and implementation of best practices for the introduction and management of innovation. CNA Emilia Romagna together with the innovation actors sets itself the target of qualifying and providing support to competitiveness of production systems, allowing SMEs to create innovation in their managerial methodologies and to increase internal skills. CNA has also a service of temporary managers, through which it promotes innovation also in small companies, putting at their disposal time/project managers/advisors to start innovation and change processes and favouring contacts, technology transfer and relationships with Universities.

vehicle in E-R) • High Education Courses (Climate Change, Homeland Security) • 7 Foundations ITS with 26 courses 4 Large Research Infrastructure: • Big Data Technopole • INAF Radio Telescopes • ENEA Brasimone • CICLOPE National and International Research Centres: • (Cineca, CNR - National Research Council, INFN - National Institute for Nuclear Physics, INAF - National Institute for Astrophysics, ENEA - National Agency for New Technologies, Energy and Sustainable Economic Development, CMCC - Centro Euro-Mediterraneo sui Cambiamenti Climatici, INGV - Istituto Nazionale di Geofisica e Vulcanologia) • International Authorities/Agencies: • European Food Safety Authority, European Centre for Medium-Range Weather Forecasts	

6.4. Influencing the RIS3 strategy.

Planned activities
CNA Emilia Romagna is supporting Emilia-Romagna Region in the definition of policies for research and innovation in S3 domains: proposals for technological priorities, pilot actions, regulation... (Forum S3).   CNA Emilia Romagna is representing each industrial system at regional, national and international level   CNA Emilia Romagna is proposing strategic projects with high potential impact at regional level for development of industrial system: research and innovation projects, infrastructures, demo plants,...

7. AUSTRIA / VORARLBERG UNIVERSITY OF APPLIED SCIENCES (FACHHOCHSCHULE VORARLBERG GmbH)

7.1. Starting cooperation with public authorities responsible for RIS3 strategies on national / regional level.

Authority on national level responsible for RIS3 strategy	Geschäftsstelle der Österreichische Raumordnungskonferenz (ÖROK)
Link to the document of national RIS3 strategy	Not relevant
Authority on regional level responsible for RIS3 strategy	Amt der Vorarlberger Landesregierung Abteilung IIb / VIa (Abteilung Allgemeine Wirtschaftsangelegenheiten) Official presentation of the Digital Agenda Vorarlberg: https://presse.vorarlberg.at/land/dist/vlk-56493.html Digital Agenda Vorarlberg - vorarl\<bytes\>: https://presse.vorarlberg.at/land/servlet/AttachmentServlet?action=show&id=34328 Science- & Research Strategy Vorarlberg 2020+: https://vorarlberg.at/documents/21336/126414/Wissenschafts-+und+Forschungsstrategie+2020+/4e3bf6e6-6329-4a7e-b829-52eed7a1532e
Sectors of the economy affected by the Industry	Strengthening regional competitiveness through research,

4.0 in description of national RIS3 strategy	technological development and innovation, incl.
	Research and technology infrastructure
	Inter-company R&D projects, collaborative projects and transfer competencies
	Company R&D projects and technology transfer projects
	Innovation consulting and promotion
	R&D and technology-oriented investments more
	Clusters / networks, location management
	Strengthening the regional competitiveness of small and medium-sized enterprises, incl.
	Support measures for start-ups
	Support for knowledge-intensive start-ups
	Support for business growth
	Consulting services for SMEs
	Promoting the reduction of CO_2 emissions in all sectors of the economy (minor importance for the intended Digital Innovation Hub, entitled Business Intelligence & Innovation), incl.
	Operational investments in renewable energies and energy efficiency
	Consultancy for companies in the field of renewable energies / energy efficiency
	Local and regional strategies for energy efficiency and sustainable mobility
	Smart City Styria: Investments in renewable energies and energy efficiency
	R&D&I projects in CO_2-relevant fields
	Sustainable Urban Development (not relevant for FHV's Digital Innovation entitled Business Intelligence & Innovation)
	Urban-rural development and CLLD (not relevant for FHV's entitled Business Intelligence & Innovation)

Sectors of the economy affected by the Industry 4.0 in description of regional RIS3 strategy	The RIS3 strategy of the Federal State of Vorarlberg is expressed in the Vorarl\<bytes\> report. This Digital Agenda is based on a model in which the factors of people and qualifications, cooperation and business, and infrastructure and administration are equally and jointly responsible for the digital development of Vorarlberg as a location. Vorarlberg's workforce plays a central role because its excellent education, performance and knowledge of production processes are essential for the development and implementation of new technologies in companies. A dynamic, local innovation and startup milieu and its connection to supra-regional knowledge centers and initiatives pave the way for technological progress and its economic application.

The Digital Agenda Vorarl\<bytes\> identifies three work areas of major interest, incl. eight fields of action.

People and skills, incl.

- Development of human capital for the digital future
- Shaping the digital world of work

Cooperation and enterprise

- Creation and networking of the digital milieu
- Forcing the digital innovation dynamic
- Supporting the digital transformation of companies
- Development of the digital startup scene

Infrastructure and management

- Provision of adequate network and IT infrastructure
- Digital management

The Digital Agenda Vorarl\<bytes\> is inclusive and does not favor or prioritise a specific branch and/or industry. |
| **Planned actions for digitalization and Industry 4.0 in the national RIS3 strategy** | Artificial Intelligence, incl. modelling, simulation, optimization, evolutionary algorithms, etc.

System collaboration, incl. the collaboration of service systems, ecosystems, human-machine systems, etc.

Resilience engineering, incl. the design, development and (re-) engineering of organizational resources and capabilities

Innovation research, incl. dynamic entrepreneurs, creative deconstruction, at process, product, sales markets, re-organization & re-structuring, monopoly position, etc.

Co-creators, incl. the interconnection of local stakeholders with |

	international organizations and co-creators; internationalization
	Methods & tools, incl. Provision of knowledge and expertise to organize and conduct organizational workshops on innovation
Planned actions for digitalization and Industry 4.0 in the regional RIS3 strategy	Artificial Intelligence, incl. modelling, simulation, optimization, evolutionary algorithms, etc.
	System collaboration, incl. the collaboration of service systems, ecosystems, human-machine systems, etc.
	Resilience engineering, incl. The design, development and (re-) engineering of organizational resources and capabilities
	Innovation research, incl. Dynamic entrepreneurs, creative deconstruction, at process, product, sales markets, re-organization & re-structuring, monopoly position, etc.
	Co-creators, incl. The interconnection of local stakeholders with international organizations and co-creators; internationalization
	Methods & tools, incl. Provision of knowledge and expertise to organize and conduct organizational workshops on innovation

7.2. Territorial DIH assets to the RIS3 strategy and the territorial innovation environment

Selected goals/actions of RIS3 strategies	How can territorial DIH create, improve or rework the current situation?
Development of an international network of be-friended digital innovation hubs, projects, networks, etc. to co-create business innovation Development of a network for information and knowledge exchange Development of an inclusive network of RIS3 stakeholders, including Quadruple Helix stakeholders	FHV's Digital Innovation Hub entitled Business Intelligence & Innovation is active in the performance and conduction of (ICT) technology-based innovation projects with local businesses and industries. This not only involve the conduction of innovation research projects but also its dissemination of gained knowledge and expertise into the region of Vorarlberg (and beyond). In doing so, FHV's Digital Innovation Hub will inform the interested community about upcoming calls (e.g. Horizon Europe, Digital Europe, Cascade Funding opportunities, etc.) and build up of (regional, national and international) network to contibuteto the Vorarlberg's RIS3 strategy "Intelligent Production". Addtionally the Hub is tailored and supports local buinesses and industries to build-up of knowledge and expertise about emergent challenges, trends and technologies and for increased industrial specialization.
Using outputs from article a) make short list of sectors involved in I.4.0	FHV's Digital Innovation Hub entitled Business Intelligence & Innovation will be implemented as an interface between the quadruple helix stakeholders of industry, government, academia

and planed actions.
 	
Service-interaction and co-creation of innovation with business and industry
 	
Implementation of the test-before-invest principle
 	
Offering of co-creation workspaces
 	
Technological exchange with RIS3 stakeholders - technology impact assessment
	(eduction & research) and social organizations and citizens within the region of Vorarlberg (and its neighbouring regions). Involved sectors are diverse and captures, for example:
	
	Academia:
	• FHV internal entities:
	   o Blickpunkt Wirtschaft
	   o Business Summit
	   o Startup-Stube
	   o Digital Factory
	   o Talk am Campus
	   o Digital Innovation
	   o Etc.
	• FHV internal-external entities:
	   o Students
	      ▪ Full-time students (the managers and organzational decision makers of the future)
	      ▪ Part-time students (managers and decision makers of the present)
	   o Schloss Hofen and relevant study programs
	
	Government & governmental organizations
	• Land Vorarlberg - Dptm. Science & Education
	• Associations
	   o Wirtschaftsstandort Vorarlberg GmbH
	   o Export Club
	• Industriellenvereinigung & Junge Industrie
	• Chamber of Commerce & Junge Wirtschaft
	
	International cooperation
	• 4Steps consortium: from the side of FHV, it is planned to keep the close cooperation and colloboration with the 4Steps consortium ongoing - also after the 4Steps project
	• DIHNET.eu - presentation and publication of the DIH Business Intelligence & Innovation within the network of DIHNET.eu
	• Further cooperation with befriended projects, such as:
	   o Internal: A-Ring, CityCircle, Resindustries, etc.
	   o External: ECOS4IN, Chain Reactions, etc.
	
	Business & Industry cooperation
	• Manufacturing industry
	• ICT and technology
	
	Citizens, interested in
	• Technology impact assessment
	• Digitization and Digital Transformation
	• Innovation research

Intelligent Production	Due to the fact, that the region of Vorarlberg maintains a strong economic position within Europe, FHV's Digital Innovation Hub

	shall help the regional economy, industries and businesses to maintain and to improve this position. The Hub, composed of heterogenous researchers, scholars and stakeholders, provides knowledge and expertise about the digital transformation and industry 4.0/advanced manufacturing for the quadruple helix stakeholders and general publich within the region. In doing so, the Hub supports to launch behavioral changes and increased awareness about the ongoing digitization in business, industry and society. The Hub supports to improve the general understanding about the smart factory of the future – a digital organization that put premium on Industry 4.0 technologies, continous innovation and technologies that allows and contributes to Intelligent Production.
Service Innovation towards Intelligent Production	FHV's Digital Innovation Hub supports to think in systems and services. This thinking is accompanied with the knowledge dissemination to launch the shift from the goods-dominated logic to the service-dominated logic. Service-dominated thinking is accompanied with the teaching and education of the stakeholders about dynamically, usually intangible resources, resourcing, service experience, value propositions, value co-creation, interaction and exchange.

7.3 Being a reliable partner with relevant know-how in the given digital specialization. Exchanging findings with other partners. Observing the RIS3 environment.

Possible partner in the territory	Topics for cooperation
FHV Internal partners: • Blickpunkt Wirtschaft • Business Summit • Talk am Campus • Startup Stube • Digital Factory • Digital Innovation	FHV's Digital Innovation Hub makes use of several internal organizations. These are, for example, Blickpunkt Wirtschaft, Business Summit, Talk am Campus, Startup Stube, Digital Factory, Digital Innovation, etc. In collaboration with these organizations, the Hub will organize tailored events for the quadruple helix stakeholders within the region Vorarlberg and its neighboring regions
FHV external-internal partners: • Schloss Hofen	The Hub will in continuous collaboration with Schloss Hofen - a subsidiary of FHV that offers advanced study programmes for managers and business professionals. On demand, Schloss Hofen can rely on the knowledge and expertise of the researchers and scholars out of the Hub and tailor its study programs towards topics out of the digital transformation and industry4.0/advanced manufacturing.
Befriended programmes and projects	The Hub will connect itself with programmes and projects from all levels, which include: projects on national level (FFG, AWS), Interreg (Alpine Space, Central Europe, Mediterean, Europe, Bay-Aut, IBH & ABH), Europe (Horizon 2020, Horizon Europe,

	Digital Europe, European Digital Innovation Hub. Examples are: Internal: A-Ring, CityCircle, Resindustries, etc. External: ECOS4IN, Chain Reactions, etc. Cooperation with the projects already proofed a win-win situation for the cooperating parties and FHV's Hub was able to disseminate and gain important knowledge and expertise.
Digital Innovation Hub	The Hub intends to keep the good relationship and cooperation with the 4Steps partners and its Digital Innovation Hub pilots. Since this is a heterogeneous network of Hubs, the researchers and scholars within FHV's Digital Innovation Hub can share and gain important information about emergent technologies, IT-technologies, new processes and business models, etc. Also it is intended to collaborate with the s3 platform and the DIHNET.eu community of the European Union.
Digital Innovation Hub West	Based on design and development of a national Digital Innovation Hub network (Austrian Promotion Agency FFG), the Hub Business Intelligence & Innovation intends to cooperate and collaborate with the Digital Innovation Hub West. This Hub is in coordination of the University of Innsbruck and coordinates several competence centers, departments and laboratories under this roof. Of course, all other Austrian Innovation Hubs are of interest to us (e.g. Digital Innovation Hub South, Digital Innovation Hub East, etc.)

7.4. Influencing the RIS3 strategy.

Planned activities
FHV is very well connect to regional-, national- and international stakeholders (RIS3, Quadruple Helix). Based on the overall strategy of the government of Vorarlberg, the Business Intelligence & Innovation Hub interacts as interface between academia and industry - research and practices. The Hub allows stakeholders to get in contact among each other and to freely and innovatively exchange, share and co-create ideas about upcoming scenarios: technology, processes, products, services, infrastructures, etc. In doing so, we are in close contact to government and policy makers of the region of Vorarlberg to pro-actively contribute and develop the new research- and science strategy in Vorarlberg. The Hub will be a lighthouse project in Vorarlberg. The goal and the result will be the contribution to the smart specialization strategy "Intelligent Production" within the region of Vorarlberg: inclusion of research results, challenges, emergent trends, scenarios, etc. for all: academia, business, industry, government and society.

8. GERMANY / Virtual Dimension Center Fellbach Kompetenzzentrum für virtuelle Realität und Kooperatives Engineering w.V.

8.1. Starting cooperation with public authorities responsible for RIS3 strategies on national / regional level.

Authority on national level responsible for RIS3 strategy	Bundesministerium für Bildung und Forschung Referat Grundsatzfragen von Innovation und Transfer; Koordinierung
Link to the document of national RIS3 strategy	National: https://www.hightech-strategie.de/de/hightech-strategie-2025-1726.html Regional: https://www.baden-wuerttemberg.de/fileadmin/redaktion/dateien/PDF/200204_Innovationsstrategie_BW_Fortschreibung_2020.pdf
Authority on regional level responsible for RIS3 strategy	Ministerium für Wirtschaft, Arbeit und Wohnungsbau Baden-Württemberg
Sectors of the economy affected by the Industry 4.0 in description of national RIS3 strategy	- Healthcare - Sustainability, climate protection and energy - Mobility - Urban and rural areas - Safety and security - Economy and work 4.0
Sectors of the economy affected by the Industry 4.0 in description of regional RIS3 strategy	- sustainable mobility - environmental technologies, renewable energy, Resource Efficiency and sustainable bioeconomy - healthcare - ICT, Green IT, intelligent Products and AI
Planned actions for digitalization and Industry 4.0 in the national RIS3 strategy	promoting the development of skills in machine learning promoting the development of new methods for processing and analysing large amounts of big data providing modern research infrastructures, for example for high-performance computing.
Planned actions for digitalization and Industry 4.0 in the regional RIS3 strategy	Interdisciplinary and intersectional connection regarding Digitalisation of production, development of digital business

	models, Big Data and AI Further actions planned on: Blockchain, quantum computing, Re-Economy

8.2. Territorial DIH assets to the RIS3 strategy and the territorial innovation environment

Selected goals/actions of RIS3 strategies	How can territorial DIH create, improve or rework the current situation?
The goal of the regional strategy of Baden-Württemberg is the interdisciplinary and intersectional connection of the targeted technologies under a	1. Matchmaking of technology providers with end-users, startups with investors, research organisations with industry 2. Research of best practice digital business models for V/AR and organization of workshops for creating business model 3. Working groups on potential synergies of the usage of V/AR, AI, Blockchain and other technologies 4. Technology transfer through conferences, exhibitions and information products

8.3 Being a reliable partner with relevant know-how in the given digital specialization. Exchanging findings with other partners. Observing the RIS3 environment.

Possible partner in the territory	Topics for cooperation
Several universities in the region • (Duale Hochschule BW - Mosbach, • Duale Hochschule BW - Stuttgart, • Hochschule Reutlingen, • Hochschule Esslingen) • Local Schools • (Gustav-Stresemann-Gymnasium, Friedrich Schiller-Gymnasiums)	Common projects, working groups on educational matters Offer tours for groups of pupils. Offer a practical course for pupils to learn technological basics (e.g. Code Week that took place in October 2020)

8.4. Influencing the RIS3 strategy.

Planned activities
We are in contact with local and regional stakeholders regarding digitalization issues. We furthermore participate regularly in regional conferences and workshops organized by policy makers, where we can give feedback on the regional innovation strategy. We will use these opportunities to influence the regional RIS3 strategy. We want to build a platform to connect all relevant stakeholders and are currently establishing contacts with new stakeholders, like regional startup initiatives.

9. POLAND / Agencja Rozwoju Regionalnego SA w Bielsku-BiałeJ

9.1. Starting cooperation with public authorities responsible for RIS3 strategies on national / regional level.

Authority on national level responsible for RIS3 strategy	Ministry of Development, Labour and Technology
Link to the document of national RIS3 strategy	https://www.gov.pl/web/rozwoj-praca-technologia/krajowe-inteligentne-specjalizacje (PL) Only polish version available
Authority on regional level responsible for RIS3 strategy	Marshal Office of SIlesian Voivodeship https://ris.slaskie.pl/dokument/regionalna_strategia_innowacji_wojewodztwa_slaskiego_na_lata_20132020
Sectors of the economy affected by the Industry 4.0 in description of national RIS3 strategy	Innovative technology and industrial processes: • MULTIFUNCTIONAL MATERIALS AND COMPOSITES WITH ADVANCED PROPERTIES, INCLUDING NANO PROCESSES AND NANOPRODUCTS • SMART ICT AND GEOINFORMATION NETWORKS AND TECHNOLOGIES • AUTOMATION AND ROBOTIZATION OF TECHNOLOGICAL PROCESSES • SMART CREATIVE TECHNOLOGIES • INNOVATIVE MARITIME TECHNOLOGIES IN THE FIELD OF SPECIALISED VESSELS, MARINE AND COASTAL STRUCTURES AND LOGISTICS BASED ON SEA AND INLAND WATERWAY TRANSPORT

Sectors of the economy affected by the Industry 4.0 in description of regional RIS3 strategy	1. ICT 2. POWER INDUSTRY 3. MEDICINE 4. EMERGING INDUSTRIES 5. GREEN ECONOMY
Planned actions for digitalization and Industry 4.0 in the national RIS3 strategy	N/A
Planned actions for digitalization and Industry 4.0 in the regional RIS3 strategy	Priority 1. Increase and internal integration of the region's innovative potential • Strategic objective 1.1. Supporting change in innovative communities strongly • Cooperating with knowledge and information production centres on a global scale • Strategic objective 1.2. Reaching perfection in the field of medical services, realized in a partnership of clinical centres, high-technology, research and innovation units of businesses, including medical and biotechnological engineering • Strategic objective 1.3. Network coo-creation and co-usage of research infrastructure by academic entities, universities, businesses and public utility institutions • Strategic objective 1.4. Internationalization of SME sector via specialization of innovativeness support institutions' services • Strategic objective 1.5. Multiplication of knowledge, skills and competence of entities creating the innovation ecosystem Priority 2. Creating smart markets for future technologies • Strategic objective 2.1. Co-creation of competence centre network for the development of smart markets • Strategic objective 2.2. Raising the quality of public service network, using digitalization, especially in the medical public administration and education • Strategic objective 2.3. Construction of a new infrastructure of smart growth, based of low-emission technologies and energy efficiency • Strategic objective 2.4. High level of participation of SME sector businesses in regional and meta-regional cooperation networks, increasing its participation in smart markets • Strategic objective 2.5. Strengthening the activity of prosumer groups

9.2. Territorial DIH assets to the RIS3 strategy and the territorial innovation environment

Selected goals/actions of RIS3 strategies	How can territorial DIH create, improve or rework the current situation?
REGIONAL: • creation of competence centers • networks of relevant stakeholders and internationalization of the SMEs. • Technology and knowledge transfer and improvement of the education system and creation of an ecosystem of innovation	1. Creation of network of regional stakeholders, covering quadruple helix - through the focus group meetings we gather together representatives of business sector, academia, local authorities and community. We also plan to organise events for the suppliers and end-users to matchmake technological problems with innovative solutions. 2. Technology and knowledge transfer - with cutting-edge equipment that we have in our DIH - eg. in terms of 3D printing, 3D scanning, spatial modelling and robotics - and with the support of our partners, who covers most of the topics related to Industry 4.0 - we plan to organise study tours to show the possibilities of those technologies and make them more user friendly 3. Innovative education - we already have educational programs related to 3D printing and spatial modelling that we implement in schools and among students. We are creating a course of robotics and automation of production processes. With those DIH services we can bring the technological knowledge to schools, which often aren't able to do this within official curricula 4. Creation of competence center - our DIH is the example of one-stop-shop for innovation, were SMEs, local community and academia can use the knolwedge and equipment to improve their skills and businesses. 5. Internationalization - participation in many technology-related international projects and networks gives the possibility to create international value chains and assure knowledge transfer for regionak SMEs

9.3 Being a reliable partner with relevant know-how in the given digital specialization. Exchanging findings with other partners. Observing the RIS3 environment.

Possible partner in the territory	Topics for cooperation
University of Bielsko-Biała	Common projects, educational activities, organisation of technological events
RESET - technology related students association	Cooperation on in-formal level, possibility of development of students' innovative ideas in DIH, organisation of events

Companies in the region operating in the field of Industry 4.0	Cooperation in terms of organisation of common events (eg. Industrial Hackathon), showcase of the practical I 4.0 solutions, matchmaking
Schools	Bringing innovative education to schools outside the curricula with DIHs training schemes (eg. 3D printing and spatial modelling)
Local and regional authorities	Consultation of strategic documents - emphasising the relevance of DIHs and Industry 4.0 technologies in the regional competitiveness and creation of the ecosystem of innovation;

9.4. Influencing the RIS3 strategy.

Planned activities
We are in contact with local and regional authorities responsible for the creation of strategic documents. In terms of RIS3 in specific - we are in constant contact with the proper Department in Marshal Office of Silesia Voivodeship with which we are exchanging information in terms of the relevance of DIHs as future competence centers. We also had already introduced the 4STEPS project to them. We are also taking part in the consultation of Territorial Just Transformation Plan for Silesia where we are emphasizing the importance of Industry 4.0 in this process. On the city level - we have experience in creation of strategic documents - within InFocus (Urbact) project we created a smart specialisation strategy on the city level, based on the inputs from local focus groups. Now, we are participating in the consultation of Youth Strategy at the city level. Except the strategic level, we are also trying to provide activities related to raising awareness of the digitalisation and Industry 4.0 among community, education and business sectors - to bring the technological and strategic knowledge on the operational level.