Interreg CENTRAL EUROPE
European Union European Regional Development Fund

CHAIN REACTIONS

WPT4
D.T4.2.1

Transnational innovation agenda workshop #1

Version 1
7 2021

Project information	
Project Index Number:	CE1519
Project Acronym:	CHAIN REACTIONS
Project Title:	Driving smart industrial growth through value chain innovation
Website:	https://www.interreg-central.eu/Content.Node/CHAIN-REACTIONS.html
Start Date of the Project:	01.04.2019
Duration:	36 Months
Document Control page	
Deliverable Title (overall):	D.T4.2.1&2 – Transnational innovation agenda workshops
Deliverable Title (target sector):	D.T4.2.1 – Transnational innovation agenda workshop 1
Lead Contractor of the Deliverable:	PP2 – Styrian Technology Park
Responsible PP:	PP2 STP & PP10 R-Tech
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Contractual Delivery Date:	01.01.2021 – 31.03.2022
Actual Delivery Date:	17.03.2022

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Abbreviations

IGA – Innovation and Growth Alliance

PESTEL - Political, Economic, Social, Technological, Environmental and Legal factors

PP – Project Partner

RDI – Research, Development and Innovation

RIS3 – Regional Strategy for Research and Innovation for Smart Specialisation

SME – Small and Medium Entreprise

TEP – Transregional Exploitation Plan

TIIA – Transnational Industrial Innovation Agenda

TIIR – Transnational Industrial Innovation Roadmap

TNIS – Transnational networks of innovations stakeholders

TOSC – Transnational open collaboration space

WPT – Work Package

1 INTRODUCTION

CHAIN REACTIONS project addresses the challenge for industrial regions not benefitting from innovation activities from large leading corporations to increase regional capacity to absorb new knowledge and turn it into competitiveness edge and business value. There is a strong need to help SMEs to overcome capacity shortages for innovation and integration into transnational value chains. The project aims at empowering regional ecosystems with the knowledge and tools to help businesses overcome those barriers and generate sustained growth through value chain innovation.

In order to create transnational open spaces for collaboration (e.g. value chain based) the activities for Building open collaboration spaces for transnational RIS3 implementation (WPT4), will be based on previous project activities, mostly Innovation and Growth Alliances (IGAs) established in each of the target regions (O.T2.1) and Value chain innovation models and instruments implemented in each target region as a driver to S3 (O.T3.2).

More specifically, the activities for preparation of Transnational industrial innovation agendas (A.T4.2) will be based on Thematic industrial innovation roadmaps (O.T4.1), which have been developed in each of the selected industrial sectors by transnational networks of relevant innovations stakeholders will be established and build on identified technological and societal trends of potential innovative developments (technologies, processes, business models and their interactions).
Each industrial roadmap will be further developed into **transnational industrial innovation agendas**, i.e. concrete innovation activities to be performed in the project regions and transnationally in order to realise the necessary development identified in the roadmaps and ensure industrial leadership in the selected industrial sectors.

The agendas will be coherent with S3 in the project regions and will provide the basis for potential future joint activities and transnational investments.

Overall, the thematic innovation agendas are one of the three outputs within the WPT4, linking the identified potential with plans for transnational exploitation:

- O.T4.1 Thematic industrial innovation roadmaps;
- **O.T4.2 Thematic innovation agendas;**
- O.T4.3 Thematic transnational exploitation plans and open collaboration spaces.

2 STRATEGIC AND ORGANISATIONAL CONTEXT

2.1 Framework

Transnational network of innovations stakeholders for the Energy and Environment sector builds its agenda on the thematic industrial innovation roadmap (O.T4.1).

Within the Thematic Industrial Innovation Roadmap for the Energy and Environment Sector each of the partners identified the innovation actions that could will be implemented within the respective regions. There actions are:
- New city regulative, forbidding fossil fuel delivery vehicles in city centre (Styria/Podravje)
- Monitoring energy use in public transport e-vehicles, for the purpose of optimisation (Styria/Podravje)
- Introduction of online self-weighing trash containers, for optimization of their emptying (Styria/Podravje),
- Developing new system components for fuel cells (Regensburg, Landkreis)
- Development and improvement of technologies for the production of fuel cells (Regensburg, Landkreis),
New technologies for the on-site generation of hydrogen (Regensburg, Landkreis).

The Transnational Innovation Agenda will be prepared upon the activities of the roadmap, where both regions can find combined points.

Management and coordination of Energy and Environment sector will be provided by project partner duo PP2 – Styrian Technology Park and PP10 – R-Tech, that will coordinate the two workshops Transnational innovation agenda workshop 1 & 2 (D.T4.2.1-2), where the innovation roadmaps will be turned into innovation agendas.

2.2 Transnational innovation agenda workshop 1

STP:
STP has animated the SMEs within its network of IGA members and beyond through the individual approach, by individually presenting the SMEs the Industrial Innovation Roadmap for the region of Podravje (Styria), finding points where the expertise for the SMEs could contribute.
As the fields of activities of SMEs in the region is very heterogenous, it was impossible to point out a specific area of activities, where the SMEs could be the drivers of change, however, due to their diversity they could individually easily contribute to implementation of carious activities, especially connected to the transformation of the innovative actions in the region of Podravje (Styria). The SMEs were already recipients of national awards in the field of digitalization and recognized as innovative, however, due to their heterogeneity the focus is disbursed.

The companies that found themselves most closely linked to the innovative actions were:

SME name	Core business
Spark Inovacije	Digitalization and advanced solutions in transport & logistics.
BASS	Communal economy
FTA	Manufacturing electronic components
Genis	IT sollutions for e-business
SRC	Digitalization and automatization of business processes
Comtrade	System integration and software solution provider
IGEA	Digitalization of spatial management
Žejn Group	Optimization of back office procedures
Globtel Holding	Development of fixed wireless equipment
MSG life	Software solutions for insurance companies

Based on the individual discussion and animation for participation at the second workshop is was agreed that STP as the network coordinator should represent them and keep them informed about the further development.
The area they were most interested in cooperation was the monitoring energy use in public transport e-vehicles.

In addition, Regional Development Agency for Podravje – Maribor, as the main subject of regional development (established by the city of Maribor) and main stakeholder that is in charge of preparation of the strategic document Strategy for Smart City Maribor has also identified potential for international cooperation among activities identified in the Industrial Innovation Agenda.

R-Tech:
The industrial innovation roadmap has been presented at several occasions and the results of the discussions strongly suggest that Regensburg is well positioned to achieve a high significance in the field of hydrogen and fuel cell technology. This topic is highly relevant for all regions and the perspectives have not yet drifted as far in different directions as with battery electric mobility in the conventional sense. Thanks to the excellent networking of business, administration and science, the first projects in

the field of hydrogen have already been implemented. A particular success was achieved through the establishment of the largest **hydrogen network** in Bavaria, **Hy2.ZERO**. The R&D network **Hy2.ZERO** aims to support the industrialization of hydrogen and fuel cell technologies through new innovative solutions and thus to support the market ramp-up.
The monitoring of technologies that aid implementing transnational collaborations were supplemented by specific observations, which are based on a continuous exchange of network management with economic and academic actors. In addition, regional advantages, challenges, competitive advantages and innovation potential were highlighted quickly during specific workshops. Especially small and medium-sized enterprises (SMEs) provide technologies to further promote transnational collaborations.
The main challenge was to find a common denominator for the project partners involved and for the workshop participants. This becomes evident from our transition promoting the hydrogen technologies toward focussing on topics in logistics, which proved quite successful within the framework of the **Cluster Mobility & Logistics**. Even if intended to some degree from the beginning, the transnational innovation agenda developed its own dynamic because of the teamwork of all participants. The logistics industry supplies key technologies for future collaborative projects as a key factors for the implementation of cross-technology innovation concepts.

Cluster Mobility & Logistics: cluster merger strengthens competitiveness and promotes synergies
In July, 2021, the Regensburg e-mobility cluster and the IT logistics cluster merged to form the new Mobility & Logistics cluster. The bundling of competencies and synergies creates an even stronger network that ensures the solid competitiveness of companies and research institutions in the region. In addition, the effectiveness and influence of each individual member increases as a result of the merger. Both the e-mobility cluster Regensburg and the IT logistics cluster were founded in 2011 and are an integral part of the economic development and innovation strategy of the business location Regensburg.

Digital networking opens up a wide range of innovation potential in the areas of mobility and logistics. As a technology cluster with experience and expertise in these core sectors, the cluster Mobility & Logistics supports business and science in finding answers for the mobility of people and goods of tomorrow.

The cluster network includes entrepreneurs, scientists, specialists and sponsors, who are supported in networking and developing cooperation projects at regional, national and international level. Critical infrastructures such as mobility and logistics are subject to constant change. Technologies disappear and new ones emerge, socio-economic contexts adapt. This increases the pressure and the need for action on companies, public institutions and the competitiveness of entire regions.

A special feature of the cluster is the interdisciplinary structure of its partners and members from the mobility and logistics sectors. Science and research are an essential part of this. The primary goal of the technology cluster is the development of projects that are promoted and advanced through networking our partners.

The Mobility & Logistics cluster deals with the following subject areas:

Vehicles and infrastructure

The integration of additional information from the infrastructure, such as from other vehicles and road users as well as from service and service providers (OEMs and third parties) via vehicle-to-vehicle communication and the Internet of Things is driving the development of networking of vehicles and infrastructure. Important topics include the charging and refueling infrastructure for electromobility, Power-to-X (hydrogen and e-fuels) and LNG in the application areas of passenger cars and commercial vehicles, as well as sector coupling with the linking of transport and energy networks.

Autonomous mobility

Autonomous mobility is an important component of a multimodal, intelligent and sustainable transport system. Intelligent traffic systems include all applications that make traffic safer and more efficient by using the latest IT technology. These are e.g. driver assistance systems, car-to-car communication, information and payment systems on smartphones for public transport, etc. The use of this technology is changing mobility and is essential for dealing with the growing challenges of urbanization, globalization and demographic change.

Networking of mobility data

An indispensable prerequisite for implementation is also an ecosystem of mobility data that makes the various offers and associated data silos available for more efficient traffic and route planning. This also includes the development of digital business ideas based on mobility, geo and weather data. These include, for example, new navigation services, innovative sharing platforms, intelligent travel planners and high-precision weather apps. The necessary technological basis is formed by transmission technologies for a comprehensive, reliable broadband supply for mobile users, intelligent antennas and broadband on-board networks, as well as the protection of this data and services by suitable IT security solutions.

Digitization in production

Both the logistics and the production industry are subject to a constant process of change. The subject of Industry 4.0 and the associated interlinking with the digitization of production to the smart factory, energy-efficient production processes and changing task distribution in supply chain management require a comprehensive understanding of production management processes and the integration of a wide variety of knowledge areas such as logistics, IT, business administration and mechanical engineering into a holistic one understanding of logistics.

Intralogistics 4.0

Intralogistics includes the organisation, implementation and optimization of internal material flows in companies in industry, trade and public institutions using technical systems and services, including the associated flow of information as well as the use of personnel and energy.In intralogistics, goods are constantly in motion. Countless processes accompany the goods from goods receipt to goods issue; Information must be in the right place at the right time for intralogistics processes to run smoothly.

The possibility of networking and processing vast amounts of information allows processes and storage systems to be linked and optimized.

Transport logistics

Transport logistics is the backbone of the German economy and is of great importance for industry, trade and suppliers. Numerous actors are involved in ensuring that goods in Germany are in the right place at the right time. The demands on transport logistics, in particular their planning, their control and their procedural implementation are increasing due to the megatrends in our society. Increasing digitization in particular has an impact on classic value-added systems with their processes and roles. So it is attributed a lot of potential to improve the flexibility, agility, effectiveness and efficiency of these value-added systems.

Through the cooperation of the cooperation partners in the cluster, all partners can benefit from the excellent structures of the location and the technology transfer. New Working Groups have been established based on experience of the partners according to the development lines.

3 ANNEX

Workshop outcome table

Participant	Transnational innovation action	Profile of transnational partner	Name of possible transnational partner
Spark Inovacije	monitoring energy use in public transport e-vehicles	Digitalization and advanced solutions in transport & logistics	People Mover Emilia Innovationsbus Emil
Globtel Holding	monitoring energy use in public transport e-vehicles	Development of fixed wireless equipment	People Mover Emilia Innovationsbus Emil