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Transnational pilot – Work plan / Roadmap. Advanced manufacturing

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1 INTRODUCTION

Transnational pilot on advanced manufacturing integrates two work plans elaborated by responsible duo partners, namely Pannon Business Network Association and Regional Development Agency of the Pilsen Region. This synthesis composed of two work plans constitutes one of the pilot activities that will be implemented within CHAIN REACTIONS.

The main aim of this pilot work plan is to define collective actions to implement the potentials for value chain innovation processes identified during the value chain analysis of advanced manufacturing carried out within the project. The actions proposed within this transnational pilot shall durably increase the maturity level of each relevant regional support ecosystem and its capacity to generate value chain innovation processes by using the toolbox developed within CHAIN REACTIONS.

Pilots will enable the project partners and their key regional stakeholders to deepen their knowledge of value chain innovation processes in general and a deep understanding on how they apply specifically in regional businesses and value chains. By using the models and instruments developed they will reach autonomy in the use of models and instruments for supporting and monitoring innovation in their home region and will be able to contribute to transnational innovation processes.

The pilot implementation of value chain innovation tools and models builds on the following project activities:

- Definition of a value chain innovation model and an innovation toolbox.
- Implementation of regional stakeholder groups – Innovation and Growth Alliances (IGAs) in the regions of Pannon (Hungary) and Pilsen (Czech Republic) – willing to test the models and instruments developed in CHAIN REACTIONS.
- Value chain analysis of advanced manufacturing with a specific focus on sensor technology and intelligent manufacturing systems.

The elaboration of particular work plans was preceded by the organization of pilot definition workshops, where individual project partners in cooperation with WP leader and BWCON defined and prioritized relevant collective actions within selected sectors and discussed potential ideas to be implemented within their pilot work plans.

Each of the two work plans within this transnational pilot on advanced manufacturing will be implemented separately by responsible duo partner. However, cross-cutting synergies will be achieved through the mutual involvement of duo partners in selected activities, as well as in the evaluation process. In this way, transnational character of the pilot will be ensured as well. It will be strengthened also through the involvement of other project partners in particular activities within each work plan. A dedicated section was developed in the pilot template to define the specific role of other partners in the implementation of each work plan. In addition to this, BWCON will be involved in all pilots to provide innovation tools support. On the consortium level, all project partners will be involved in exchanging on the pilots.

The results of the pilots will be monitored and evaluated with respect to both the value chain innovation approach as a triple-helix process for improving regional innovation ecosystems and the models and instruments. Feedback shall be used to improve the models and instruments integrated within WP T1.

2 TRANSNATIONAL PILOT WORK PLAN – PANNON BUSINESS NETWORK ASSOCIATION

2.1 Scope

The economy of Szombathely is dominantly automotive industry, and within that multinationals are decisive. Local industry has limited added value. Digitalization is transforming the international value chain, and with the novelty in the powertrain these tendencies have significant impact on the production arena.

Therefore, there is a firm commitment from the municipality, with the support of the digital innovation hub am-LAB, to accelerate economic transition towards diversification. The goal is to have healthcare industry present. To enable the process, new knowledge and skills have to be created and augmented. The physical infrastructure will be extended and customized with the cooperation of the city and the am-LAB (ViaNova), while the new knowledge will focus on artificial intelligence (AI). In the domain of artificial intelligence external knowledge will be integrated from the University of Bologna and Bi-rex from Emilia Romagna.

Regional Digitalization Program – elaborated by PBN – creates the strategic framework of the implementation. It includes actions related to setting up a new competence center, focusing on AI. Thematic orientation is on one hand manufacturing, but increasingly on healthcare. The long run mission is the establish an institute, which will serve as a knowledge background institution for the new economy.

2.2 Objectives

Key strategic objectives related to the scope and within the limitation of the project is the following:

1. Development/Implementation of the ViaNova digitalization center communication towards the local community.
2. Launch of the AI courses in the field of healthcare and manufacturing, the accelerate economic transition of the Szombathely area.

2.3 Partners involved

The involvement of project partners is listed here, however, agreement from involved partners is needed as only preliminary discussion were made.

- *RDA Pilsen* is the evaluating partner in this pilot and their technical knowledge about AI would be an added-value to the initiative and to the trainings
- *R-Tech* as showing the example how such a center is established in Regensburg can contribute with continuous advises for a fruitful cooperation and also a study visit to Regensburg would be beneficial for the pilot project
- *BEC* could contribute with the experience of cluster management and policy level involvement
- *BWCON* involved to provide innovation tools support.
- On the consortium level, further partners are warmly welcomed after reading the pilot project concept

- *IGA members* are involved in the pilot project as local policy makers like Szombathely City and Vas County are officially part of this initiatives and University level will be also involved in order to transfer knowledge to local citizens, too.
- The involvement of local SMEs is essential as they will be the main beneficiaries of the initiative. Trainings will be free and available online and if possible, during physical sessions, too.

2.4 Activities, milestones, timeline and responsibilities

The pilot project is composed like this:

- We have to take into consideration that the official launch of the cooperation, which is the basis of the physical establishment of the center is delayed due to the COVID-19 situation and planned right after the "special situation" is over. This can cause minor deviation from the below mentioned time-plan.
- Study visit to Regensburg would be beneficial if we can organize it by 10.2020 if possible, if not, online meeting can be organized and face to face study visit can be held on Q1 2021.
- Physical establishment of the center is in progress and planned to be finished by 10.2020.
- Development/implementation of the ViaNova digitalization center communication towards the local community. Marketing activities like promotion set up pilot project homepage, personal Info days will be organized from 10.2020 and by this time promotion materials have to be done, too.
- Launch of the AI courses in the field of healthcare and manufacturing, the accelerated economic transition of the Szombathely area. Training material developed together with IGA members and University of Bologna and also built in contribution from project partners has to be ready by 01.2021.
- Organization of virtual or physical trainings are planned for Q3 2021.
- Dissemination of results to IGA members, local citizens and also on national and transnational level, as this pilot project could be promoted as a flagship project for CE area – Q4 2021 - Q1 2022.

2.5 Indicators

- Set up a digitalization center called ViaNova in Szombathely City – 1
- Promotion campaign for awareness raising among local citizens – 1
- Study visit to partners where this kind of initiative is already working – 1
- Artificial Intelligence training material composed by national and international knowledge – 1
- Physical and online trainings execution at ViaNova based on the prepared material – 2
- Transnational promotion campaign to promote the results and the cooperation – 1

2.6 Risk assessment

- COVID-19 crisis can cause a delay in the activities, especially if it will hit again in the second part of the year. However, we believe that even with delay caused by COVID-19, execution of tasks by the end of the project is possible and essential.

- As local political actors are involved, change of priorities from their side can affect the implementation of the pilot project
- Delay in the construction of the physical location is always a risk, however most of the activities can be implemented at am-LAB, too, which is a suitable back-up plan for this scenario
- Physical meetings and trainings can be postponed or changed to online meetings due to a second wave of COVID-19

3 TRANSNATIONAL PILOT WORK PLAN – REGIONAL DEVELOPMENT AGENCY OF THE PILSEN REGION

3.1 Scope

The scope of the RDA pilot action will be the development of Virtual demonstration centre for flexible manufacturing processes; thus, the priority sector is naturally the advanced manufacturing. Virtual demonstration centre will be represented by web platform focused on selected technologies - 3D printing, collaborative robotics and automation, virtual reality, 3D scanning and data capturing and evaluation. Each technology will be presented by demonstrative videos, animations, or even live broadcasts from machine cameras.

Selected project partners will aid with the knowledge and relevant use cases thus the international platform of interesting examples will be created. The partners will also aid with the development of knowledge portfolio which will result in educational section of the virtual democenter platform. Each technology field will be introduced with compact, friendly and in interactive learning material.

The PR and promotion of the outputs will be disseminated by means of several workshops or seminars towards local SMEs and Midcaps. After the virtual democenter will be developed the promotional campaign on social networks will be also lunched.

3.2 Objectives

The main objectives of the pilot action are as follows:

- To ensure access for small and medium-sized enterprises to information regarding new technologies.
- To assist companies in dealing with the coronavirus crisis with the aid of new technologies.
- To fulfil the planned activities of the regional RIS3 strategy.

3.3 Partners involved

The PBN partner will be involved as an evaluating partner. Bellow mentioned partners will be involved in pilot realisation, upon their confirmation. The proposal of eventual partners is as follows:

- *PBN* – is the evaluation partner, but beside this, their knowledge in progressive technologies and use cases would be suitable as nice examples for virtual democenter.
- *R-Tech* – information about the IT-Logistics Cluster and Tech Base operations and structure would be beneficial for the development of virtual democenter.
- *WTP* – Polish technology park could support the project with interesting use cases and educational materials for the educational section.
- *KEITVA* - Kosice IT Valley could also support the project with interesting use cases and educational materials for the educational section.
- The technology infrastructure by all the aforementioned partners will be also explored in order to propose the future cooperating projects.

- The *IGA partners* will be also involved in the proposed pilot - especially the University of West Bohemia.

3.4 Activities, milestones, timeline and responsibilities

The proposed pilot action is composed of these activities:

- Creation of detailed concept of Virtual demonstration centre for flexible manufacturing processes – 7 - 9/2020
- Business trips to partner organisations involving technology scouting and elaboration of 1. possible demonstrational use cases and 2. learning materials for educational section of virtual democenter (in case of COVID restrictions online meetings will be performed) – 9/2020 - 12/2020
- Preparation and consolidation of educational materials from cooperating partners that will be utilised in virtual demo centre – 1/2021 - 3/2021
- Realisation of cross boarder virtual demo centre platform including also educational section (materials) – 3/2021 - 8/2021
- Realisation of technology promotion actions (workshop, webinar) – 1/2021 - 12/2021

3.5 Indicators

The following targets and indicators have been established in order to map the fulfilment of pilot action.

- Business trips (or online meetings) to partner organisations – 4x (12/2020)
- Educational materials for 3D printing – 1x (8/2021)
- Educational materials for collaborative robotics and automation – 1x (8/2021)
- Educational materials for virtual reality – 1x (8/2021)
- Educational materials for 3D scanning – 1x (8/2021)
- Cross boarders virtual demo centre with educational activity (the complex one including web platform creation) – 1x (8/2021)
- Technology promotion actions (workshop, webinar) – 2x (12/2021)

3.6 Risk assessment

There are several risks identified which can have a negative impact on goals achievement:

- The COVID-19 crisis is almost over however the prolongation of restrictive measures and boarder closing could affect the transnational business trips. Also, if a second wave of the disease should appear and the isolation of EU countries and economics would be prolonged, this will also affect the pilot action in negative way.
- Low interest of project partners or local industrial companies could have a negative effect on realisation of international educational action or evaluation of digital maturity assessment.