



Thematic Industrial Innovation Roadmap for Advanced manufacturing sector

This Thematic Industrial Innovation Roadmap for Advanced manufacturing sector was prepared by the Chain Reaction partnership as Output O.T4.1: **Thematic industrial innovation roadmaps**, in order to define the potential innovations activities for the transnational stakeholder network.

Region	Suggested innovation action	Description	Timeframe	
			From	To
CZ	Extension of Virtual democentre	As part of the pilot activity of the Chain Reactions project, the so-called Virtual Demonstration Center was established, which is represented by a web platform associating examples of good practice and successful implementation of projects from the field of industry 4.0. The aim of this center is to inspire the leading management of companies to implement business and process innovations and thus to increase the competitiveness of companies. The pilot activity received a good response among the professional public and for this reason it was decided to continue the activity even after the end of the project. During the solution, a number of project partners took part in the pilot activity, who provided relevant examples from their regions. The virtual demo center will continue to be filled with the aforementioned demonstration projects so as to cover as many examples as possible and to demonstrate possible solutions to the greatest possible degree of business problems.	01/2022	12/2022
CZ	Establishment and development of DIH services	To maintain the competitiveness of Czech companies, it is necessary to monitor the ever-increasing share of digitization of business processes. However, small and medium-sized enterprises in particular do not have sufficient capacity (especially in the area of human resources) to successfully implement the company through digital transformation. From the current meetings not only within the Chain Reactions project workshop but also	01/2022	12/2022



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		within the discussion and industry platforms, it proves to be desirable to provide companies with support services in this area. With regard to this need, the services of the DIH HIVE are being modified and will be extended, for example, by digital maturity assessment services.		
CZ	Development of infrastructure for demonstrations and testing in digitisation	Providing expert services to support digitization is one of the key activities for the development of regional businesses. However, for many specific applications in the field of applied research, it is necessary to have a sufficient infrastructure for testing and verifying the proposed solutions. The disadvantage currently characterized by rapid development is the rapid obsolescence of production and laboratory technologies. Acquisition of these technologies is also to some extent quite expensive. An effective way is to share this experimental infrastructure in specific testbeds. This proposed innovation activity aims not only to retrofit this technical infrastructure, but also to create communication and other channels for the use of remote testing, remote access.	01/2022	12/2023
CZ	Support in establishment of new companies and acceleration of the promising ones	Incubation and acceleration of companies is the priority either on national or in regional level. This innovation activity is incorporated in RIS3 strategy of the Pilsen Region and it is in the status of piloting support schemes for both target groups. The incubation will contain piloting new grant scheme in regional level, the acceleration of existing companies will be supported by expert services in frame of the network Ynovate. The tools developed in Chain Reactions project – innovation toolbox, digital maturity – will be used for both programs.	01/2022	12/2022
CZ	New university study program for intelligent manufacturing	In response to the rapid development of technology, Industry 4.0. and the demand for highly qualified professions, the University of West Bohemia has started to prepare a new study program that will reflect these trends and needs. Currently, a study program called "Intelligent Manufacturing Systems" is in an advanced stage of preparation. As the ambition of the program is to make available to students knowledge not only from companies in the Czech Republic but also abroad, it is necessary to establish long-term co-workers with various entities from research organizations to companies. Collaborating institutions will participate not only in teaching, but also in excursions, for example.	01/2022	8/2022
CZ	TRANS-FORMER project	Initial project idea has been developed by RTech and is primarily focused on changes foreseen for automotive industry especially within its shift towards electromobility. The sector of advanced manufacturing is very much interconnected with automotive sector,	1/2022	12/2025



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		<p>Czech Republic and Pilsen Region are confronted with new requirements regarding environmental issues (Green Deal), which means radical changes in production chains in this sector. The following thematic areas are particularly affected:</p> <ul style="list-style-type: none"> - Electric and Autonomous driving - Mobility services - Digitization of the vehicles - Evolution of cars into a driving IoT device "always on" - Multiple sales channels - Use of digitization for process automation - Cross-cutting value chains: intermodal transport - electricity supplier - service provider service provider - Change in customer demand from vehicle ownership to on-demand mobility 		
HU	AR/VR utilization in healthcare	<p>Partners could collaborate in the sector AR/VR in medical industry. PBN (connected with am-LAB and at.home) are connected to both sector (health and AR/VR), while RDA Pilsen (connected with DIH HIVE and VR medical) are connected to VR solutions, and GAPR and Professor Zbigniew Religa Foundation of Cardiac Surgery Development are related to the health sector. Each partner would be able to provide relevant expert for the topics. Transnational workshops or trainings (face-to-face or online) would be useful for the interest groups.</p> <p>Special trainings (both for general public and health sector) in smart senior room (PBN) about available technologies.</p>	1/2022	Planned activity
HU	Promotional campaign for elderly generation, social care workers and the community	<p>Promotion campaign for awareness raising among local citizens: Trainings for the elderly generation and for the social care workers about the available technologies in health care and digitalization</p>	2022	2022
HU	Artificial Intelligence in healthcare training	<p>Physical and online trainings focused on Artificial Intelligence in healthcare. Training material was composed with national and international knowledge. The execution on the prepared material will be at am-LAB.</p>	2022	2022
HU	I4.0 assembly line	<p>In the case of the production line, the goal is to continuously develop, adapt and transform possibly into a new research Centre</p>	2022	



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HU	Szombathely2030	Strategic planning for the next 10 years of the city of Szombathely, including digitalization, education and health related topics.	2022	
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