

# ECOS4IN REPORT ANALYSIS OF BEST PRACTICES OUTSIDE PARTNERS REGIONS

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## Objectives

The report summarizes the results of the analysis of the data collected in the analysis of best practices outside of partner to identify best practice that might be adopted or replicated in these. The analysis covered 26 institutions, organizations and initiatives and allowed the team to have a general view over a variety of practices and strategies to favor industry 4.0 adoption. The rough data of the analysis are contained in the annex file (D.T1.2.3\_Analysis of best practice outside partners' regions). The present report contains a synthesis of the general processing of the data and the main indications coming from it.

## 1. Recurrent themes and characteristics

The assessment of the cases allowed the team to appreciate a variety of best practices that address critical points in the policies aimed at the construction of industry 4.0' ecosystems. We will use singles cases in this description of the results to highlight the main lessons to be taken out.

### *1.1 Connection of local environments with global technology and research networks*

Development of industry 4.0 proceeds at an astounding speed all over the world. Centers of excellence are widespread in a variety of countries and research institutions driving efforts of technology transfer are located both in Europe and all over the world. When it comes to local ecosystems such as those represented in the project, being immersed in the global flows of knowledge, exchange and experimentation is critical. From this point of view, a handful of experience might be singled out as points of reference. The case of the Digit Center in Denmark, created by Aarhus university, is such a model. The center, financed by the government and by private funds, promotes joint research projects involving small companies, large multinationals and research centers networked with the university at the global level. The partnership they developed with consortium ESA/Estec and similar international organizations testifies the networking aim and the role of anchor of similar actors in territories characterized by a strong presence of SMEs. Numerous other examples of university/research center led initiatives aimed at federating research professionals and private actors were found.



### 1.2 Vertical focus on specific industries.

Promoting industry 4.0 technologies without considering the specificities of the value chains characterizing a given region might be detrimental to the very objective of fostering their diffusion. Moulding policies and initiatives to match the specific and filieres-dependent needs of SMEs command, thus, the focusing of initiatives to the local industrial fabric. In the analysis a variety of initiatives were identified, such as the Application Center for automation in Healthcare in Germany and the DIH center for robotics in healthcare in Germany. The Application Center is used to conduct research and development for automation in healthcare applications. It is also used by companies to develop and test new automation applications in their own projects or to train medical staff. The Center for Robotics in Healthcare is the central one-stop-shop for enterprises, researchers or clinicians, who would like to engage in the field of healthcare robotics and are looking for support and partners to develop innovative ideas into products. Serving as the main entry gate to the regional Digital Innovation Hub, the CRH connects interested parties with the right institutions within the extensive and deeply rooted technological network in Aachen and the EUREGIO region. In both the cases, the specialization on given industries represents the main driver towards the investment in adequate facilities open to collaborative tests and prototypal efforts by SMEs in the territories they insist on.

Similarly, the agri-food industry is a lively area for the birth and establishment of initiatives that promote a verticalization of policies. Among the different cases we analyzed, some notable cases might be mentioned. The Bulgarian Agro-hub is a no profit a Digital Innovation Hub (DIH) according to the EU Strategy for the Digitization of European Industry. It is as an one-stop shop that will help companies become more competitive in their business / production process, products or services, using digital technologies. The Hub will also support the digital transformation of the public sector. In Lithuania, Lithuania Agro Space DIH is a non-profit regional focus network that brings together Lithuanian research, education, business and governmental institution organisations all aimed at fostering cross-sectoral digital technology innovation.

### 1.3 One stop shops

As some of the aforementioned cases show, the concept of *one stop shop* is often used in many of the experiences that we mapped globally and in Europe. The idea is that of allowing the concentration of information and the guidance of firms by reaching a single point or actor in the system that then directs them towards relevant providers of services, support and competences. In Germany, for instance, the Center Digitisation District Böblingen (ZD.BB) is the central consulting and transfer office for all companies, especially for SMEs with a geographical focus in the district of Böblingen. The ZD.BB does not pursue commercial goals and is a non-profit organization. Together with the variety of digital innovation hubs we mapped, this type of actor and the rationalization of information and initiatives it encourages is a recurrent characteristic in many of the regions. IoT North Poland Hub. This Polish Digital Innovation Hub helps enterprises to improve market competitiveness through the use of innovative solutions in the area of broadly defined digital technologies.

HuB works as a so-called one-stop-shop. It offers comprehensive access to the latest knowledge, experience and technologies that enable testing and implementation of digital innovations relevant to products and processes. It supports entrepreneurs in access to financing projects in the field of digital transformation, and also facilitates contacts between suppliers of innovative solutions and their users in the whole value chain (matchmaking).



#### *1.4 Innovative training and experimental facilities*

Fablabs and spaces dedicated to open innovation represent another recurrent characteristic we found in the analysis. In particular, novel forms of training that allow entrepreneurs and managers to become proficient in the themes related to technologies, tend not only to increase their awareness but also to favor low-cost experimentation that drive them towards a better comprehension and framing of how technologies might be used in their organization. In the Netherlands, the BOOST activities focus on taking manufacturing industry entrepreneurs into the opportunities offered by the digital revolution. BOOST does this by making manufacturing companies aware of the upcoming transition, activating the trend following SME companies and providing direction by offering a broad range of in-depth instruments. BOOST is a network organization in which entrepreneurs, the BOOST partners (Oost NL, branch organizations, business networks), education, research partners and (regional) government participate in order to realize a strong, smart and sustainable industry. Under BOOST collaborations are realized, where the Fieldlabs, innovation projects, masterclasses, workshops, events and professorships are good examples.

#### *1.5 The role of private actors as enablers of policies*

While the public actor is pivotal in policies, the lack of transmission to their desired targets, namely SMEs, might be due to the absence of intermediate links and actors bridging the two worlds. The field of industry 4.0 technologies is one wherein private actors of different sorts (providers of services and consultancy, providers of technology) contribute radically to reduce the disjoint between policy objectives and the culture of manufacturing small and medium enterprises. Some of the cases contained in the annex are worth mentioning. These initiatives are often driven by associations of private IT firms collaborating with public actors and taking part in private-public partnerships.

European Factories of the Future Research Association (EFFRA). Effra is a national Finnish initiative. It is a non-for-profit, industry-driven association promoting the development of new and innovative production technologies. It is the official representative of the private side in the 'Factories of the Future' public-private partnership.

The key objective of EFFRA is to promote pre-competitive research on production technologies within the European Research Area by engaging in a public-private partnership with the European Union called 'Factories of the Future'.

EFFRA was established to shape, promote and support the implementation of the 'Factories of the Future' public-private partnership. Its main areas of specialization are digital manufacturing platforms and IOT.

MSX International. The MSX Digital Innovation Hub is a state-of-the-art research and development facility where automotive experts join forces with business consultants, engineers, software developers, and data scientists with one mission in mind - designing next-generation BPO services and solutions. MSXI is introducing the automotive industry to a portfolio of new digital technologies and related business initiatives, that aim to increase operational performance and profitability and spark innovation across the entire organization. The organization is based in the US but it has branches in UK and Germany and a truly global presence. The case represents a best practice for its ability to involve firms in the automotive industry in networks of exchange of competences and collaborative experimentations, bridging actors in value chains located globally.



## Annex

D.T1.2.3ANNEX\_Analysis of best practice outside partners' regions

