



# Case study on the Industry Platform 4 FVG, Italy

Contribution to the OECD TIP Digital and  
Open Innovation project

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Please cite as:

Salvador, S. (2019), "Case study on the Industry Platform 4 FVG, Italy: Contribution to the OECD TIP Digital and Open Innovation project".

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## Executive Summary

Industry Platform 4 FVG (IP4FVG) is an initiative started in 2017 to promote the **digital transformation of industrial companies and the growth of ICT companies** within Friuli Venezia Giulia region (Italy).

The main goal is to promote and support the digitalization of products, services and business models of regional manufacturing companies, on one side, and to support the technological update and market growth of regional ICT developers, on the other.

The platform is coordinated by Area Science Park<sup>1</sup> - a public national research organization that promotes innovation, in particular by boosting science-industry linkages. All activities are developed from direct contacts with the SMEs and through the active involvement of industrial lead users and ICT lead developers.

The operational partnership includes as of now 23 partners, public and private, aggregated in **4 thematic nodes/DIHs specialized on specific Industry 4.0 enabling technologies**: (1) Big Data Integration & Analysis, (2) Internet of Things, (3) Advanced Manufacturing Solutions; (4) Data Optimization & Simulation. Such thematic nodes are connected by a Hub & Spoke governance model under a single Coordination Board.

Each thematic Node relies on a public-private partnership among local operators (districts and clusters, technological parks and centres, technical high schools, employers' association, etc.).

Each node, in accordance with the operational and investment plan validated by the Coordination Board, offers a panel of **services mainly targeted to SMEs and other relevant stakeholders** (e.g. local public administration, students and researchers). The activities included in the operational plan of each node are carried out jointly by the Partners' staff and by the IP4FVG personnel.

The **services** can be grouped into five categories:

1. **Awareness raising**: providing information and knowledge on technology, business models, use cases;
2. **Industrial upgrade**: training and technical upgrade services for the manufacturing sector SMEs and ICT operators (including technical Summer Schools in cooperation with Universities);
3. **Living Labs**: testing and prototyping services and public-private open-access demonstrators;
4. **Technological development services**: research and technology development support (in synergy with Competence Centers);
5. **Digitalization support services**: specialized support and mentoring to digital transformation processes of SMEs.

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<sup>1</sup> [www.areasciencepark.it](http://www.areasciencepark.it)

## 1. The process of creation of the Industry Platform 4 FVG

### 1.1. What are the main factors and background conditions that motivated the creation of the Industry Platform 4 FVG?

Industry Platform 4 FVG (IP4FVG) promotes the digital transformation of industrial companies and the growth of ICT companies within Friuli Venezia Giulia region. Friuli Venezia Giulia is a relatively small region in terms of population. It has a high number of advanced manufacturing companies, mostly of small dimensions, a set of high competence ICT players among a varied landscape of ICT SMEs, and a high number of research centers and universities.

The initiative was from the beginning an element of a wider strategic set of initiatives aimed at implementing a new industrial system based on process and product innovation, able to boost economic productivity and create new jobs through the interaction between research and manufacturing: **ARGO System**<sup>2</sup>. ARGO stems from an agreement between the Friuli Venezia Giulia Regional Authority, the Ministry for Education, University and Research, and the Ministry for Economic Development. The agreement aims at promoting economic development of regional ecosystems by means of a new industrial model. The agreement has national relevance but identifies Friuli Venezia Giulia Region as the first testing ground for all the new initiatives in order to act as a national “Innovation Lab”. Area Science Park has been appointed as coordinator of all ARGO activities<sup>3</sup>.

ARGO is a multi-year Strategic Program comprising of four main projects: **Industrial Innovation Harbour** project (aimed at developing an Industrial Innovation Port in Trieste, in close cooperation with the Port Network Authority of the Eastern Adriatic Sea); **High Impact Net** project (a new incubator model for highly innovative novel enterprises); **Industry Platform 4 FVG**; and **Technology Platforms** project (aimed at reinforcing scientific and technological platforms open to the companies and research centers within an Open access model).

Figure 1 - ARGO System



<sup>2</sup> <http://sistemaargo.it/>

<sup>3</sup> According to the agreement, the 2018-21 period will see allocation of funds amounting to €8.8 million, specifically €4 million already allocated in the regional budgetary law by the Friuli Venezia Giulia Regional Administration, €4 million from the Ministry for Education, whilst Area Science Park earmarked €0.8 million. The Ministry for Economic Development agreed to complement the resources with funds that may be allocated through subsequent agreements or integrations to the memorandum of understanding. Area Science Park is the implementing partner and is going to supervise a strategic committee comprising three members (the Regional Authority and the two Ministries) meeting at least twice a year to make sure the goals set are fully met and to define the required complementary actions and planning.

In mid-2017, AREA Science Park started to develop the first regional platform for the digital transformation of SMEs, *Industry Platform 4 FVG – IP4FVG*<sup>4</sup>. It represents the reference framework for an integrated ecosystem of companies (including SMEs and established market players), innovation support structures, universities and public research centers and it acts as a Digital Innovation Hub on a regional level.

Each IP4FVG Node manages a physical facility and technological infrastructures relating to the Node's specialization and is the local contact point and meeting facility for a varied network of public and private operators. The four Nodes together act as a regional-wide Digital Innovation Hub, providing specialized services in accordance to a common activity plan under the governance of IP4FVG coordination board and following a common set of service level rules and procedures.

The platform builds on the analysis of the available policy instruments for supporting the digital transformation of SMEs on a European and international level<sup>5</sup> as well as the ongoing national initiatives for the creation and support of Digital Innovation Hubs and Competence Centers. It also builds on the evaluation of the available regional structures and competences and the needs of local SMEs with regards to an efficient adoption of digital transformation tools.

## 1.2. What stakeholders were involved in its creation and what role did they play?

The initiative started from the direct involvement of different stakeholders, both public and private, including actors capable of ensuring the direct involvement of SMEs and other potential beneficiaries from the private sectors, such as Industrial Associations and Clusters, on one hand, and stakeholders capable of providing technical and scientific expertise such as research centers, Universities and Competence Centers and, crucially, local Lead Players from the ICT sector. It was recognized that to ensure the maximum potential impact for all relevant beneficiaries, the best methodology would be to establish a Hub&Spoke platform model integrating a network of specialized Digital Innovation Hubs.

Hub & Spoke models are a common reference for multi-level and multi-facility service framework (e.g. airport traffic, health services). Within a Hub&Spoke model, local access points provide general services and rely on basic infrastructure, whereas specialized services are provided at a single or multi-Hub level. Within a limited resource context, this enables investment to be targeted to the single specialization network point in order to guarantee efficiency and “critical mass”, as well as to the Spokes connecting such specialized points to the local entry points spread on the territory, thus maximizing impact to the final users/beneficiaries and efficiency of the whole network.

Industry Platform 4 FVG (IP4FVG) is coordinated by Area Science Park<sup>6</sup>—a public national research organization that promotes the development of innovation processes.

Area Science Park is a not-for-profit public body that operates under direct control of the MIUR - Ministry of Education, Research and University, founded in 1978. Within its core activities, Area Science Park manages the first and largest Italian science and technology

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<sup>4</sup> [www.ip4fvg.it](http://www.ip4fvg.it)

<sup>5</sup> E.g. Plan Industrie 4.0; EU Initiatives I4MS, SMAE; Manufacturing USA Program; Dutch FieldLabs Program; Catapult Centres; Manufacturing Innovation Centers (Made in China 2025)

<sup>6</sup> [www.areasciencepark.it](http://www.areasciencepark.it)



park, dealing with qualitative and quantitative development of the park in its three campuses of Padriciano and Basovizza (Trieste) and Gorizia, by attracting new research laboratories and businesses performing knowledge-intensive activities, providing advanced training services and providing services and developing public-private partnerships to enable companies to use technological skills and facilities in the park (scientific laboratories and equipment). Furthermore, it implements national and international projects to promote innovation and high-tech research, by boosting technology transfer and enhancing scientific research results. Its in-house start-up incubator, Innovation Factory, is a certified incubator managing pre-incubation, incubation and acceleration processes for the creation and development of innovative start-ups. Innovation Factory provides a wide range of services to start-ups, such as mentoring, tutoring and technical, commercial, organisational, financial assistance.

### **1.3. Did the creation of the Industry Platform 4 FVG involve co-ordination with other policy areas?**

IP4FVG is directly linked with the national plan “Impresa 4.0”, not just for being supported by its coordinator MISE (Ministry for Economic Development), but also through a direct linkage with the newly established national network of Competence Centers created within Impresa 4.0. The Coordination Board of IP4FVG seats a representative of the CC named SMACT, led by the University of Padua<sup>7</sup>. Further, AREA Science Park participates directly to the CC with its in house company Innovation Factory<sup>8</sup>.

The initiative relies on the experience of each partner and on methodologies developed and tested by AREA Science Park for supporting SME Innovation, Industry-Research co-development activities and start-up mentoring, developed in various previous projects (e.g MIUR-supported Proof of Concept Network (POCN) project or regional-supported Innovation Network and Open Innovation System projects).

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<sup>7</sup> [www.unipd.it/smact-competence-center](http://www.unipd.it/smact-competence-center)

<sup>8</sup> [www.if.areasciencepark.it](http://www.if.areasciencepark.it)

## 2. Main features of the Industry Platform 4 FVG

### 2.1. What are the mandate and the specific objectives of the Industry Platform 4 FVG?

The main objectives of the Platform are:

1. To promote the innovation of products and processes of SMEs and industrial companies through application of digital technologies and support the technological upgrade and growth of the SMEs of the regional ICT operators;
2. To enhance the offer of training and specialized support services for beneficiary companies and ease the access to testing equipment, technological infrastructures and demonstration labs;
3. To interconnect existing territorial excellence nodes, boosting a critical mass of competences and professional expertise;
4. To proactively involve industrial users and technological reference players;
5. To validate first on a regional level a platform model to be then further connected to other nodes and initiatives, nationally and internationally.

The main guidelines for development of the new initiative were outlined early on as:

- Improving the impact of assets and investments already available on the territory aimed at improving the adoption of enabling digital technologies for SMEs;
- Enhancing the specialization of relevant actors and key stakeholders in order to achieve a “critical mass” in key technological fields;
- Maximizing the value of existing public and private competences on digital technology and innovation management by means of an integrated planning of activities and resources;
- Creating an inclusive, open-access shared platform based on contribution from each of the partners involved;
- Accelerating the impacts of existing activities by means of additional external resources (new young human resources and additional financing), to be governed through an integrated infrastructure.

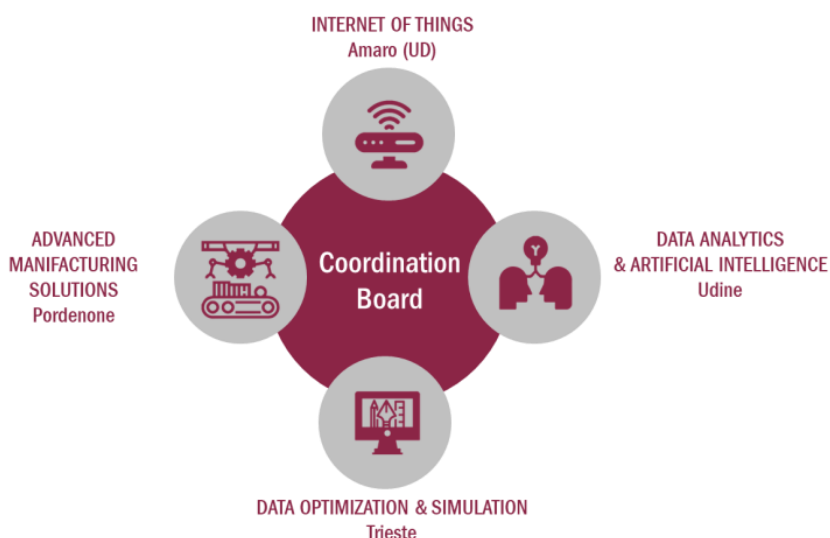
### 2.2. What are the Industry Platform 4 FVG’s main areas of action? Do the activities of the platform focus on specific sectors or technologies?

The operational partnership includes as of now 23 Partners, public and private, aggregated in **4 thematic nodes** specialized on specific Industry 4.0 enabling technologies:

- Data analytics & Artificial Intelligence
- Internet of Things
- Advanced Manufacturing Solutions
- Data Optimization & Simulation



**Figure 2 IP4FVG Thematic Nodes**



Such thematic nodes are connected by a Hub & Spoke governance model under a single Coordination Board. Each Node includes in its membership different actors capable of providing specialized support services to companies and research centers and provides infrastructures open to ICT and industrial companies for demonstration, test and technological R&D activities.

Each Node will provide specialized assets and competences related to its specific thematic area, while the Coordination Board will ensure the interaction and synergy between the Nodes' activities by means of a centrally coordinated operational plan to which all IP4FVG funding and investments will be linked. In addition to human resources provided by each Partner, new personnel will be provided to each Node thanks to IP4FVG funding. The new personnel will be coordinated directly by IP4FVG central Program Management Office (answering to the Coordination Board) and will include specialized personnel and interdisciplinary, cross-specialized competences. Furthermore, interdisciplinary activities are planned by means of joint activities by different Nodes on specific vertical application fields identified from direct contact with SMEs and industrial clusters and by means of joint R&D&I projects appointed by the Coordination Board to cross-Node operational teams to be developed also in cooperation with Competence Centers.

Each Node, in accordance with the operational and investment plan validated by the Coordination Board, offers a panel of **services mainly targeted to SMEs and other relevant stakeholders** (e.g. local Public Administration, students and researchers). The activities included in the operational plan of each Node are carried out jointly by the Partners' staff and by the IP4FVG personnel. The operational team includes 12 new personnel full time dedicated to IP4FVG (8 junior profiles –researchers– and 4 senior –project managers–), as well as around 15 part-time resources provided by the Partners, mainly technical staff, innovation management experts, project managers and communication experts.

The services can be grouped into five categories:

1. **Awareness raising:** providing information and knowledge on technology, business models, use cases;
2. **Industrial upgrade:** training and technical upgrade services for the manufacturing sector SMEs and ICT operators (including technical Summer Schools in cooperation with Universities);
3. **Living Labs:** testing and prototyping services and public-private open-access demonstrators;
4. **Technological development services:** research and technology development support (in synergy with Competence Centers);
5. **Digitalization support services:** specialized support and mentoring to digital transformation processes of SMEs.

### 2.3. What is the annual budget allocated to the Industry Platform 4 FVG? What are the sources of funding?

The budget allocated to IP4FVG within ARGO is of EUR 4 million for the period 2018-2020. These resources are appointed exclusively to the IP4FVG integrated operational plan validated by the Coordination Board. Additional budget and contributions (infrastructure, premises and human resources) are provided by the Partners of each Node. Revenues from the services are disciplined by the rules set by the Coordination Board and all income from IP4FVG supported activities are directly re-invested in the shared IP4FVG platform's assets.

## 3. The Industry Platform 4 FVG in practice

### 3.1. What type of organisational structure does the Industry Platform 4 FVG have?

Each of the thematic Nodes partnerships' are formally defined as an association (Associazione Temporanea di Scopo – ATS) with an appointed lead partner. The partnerships include 23 Partners, grouped as follows:

- **Data Simulation and Optimization Node - DiH** (based in Trieste)  
*Lead Partner:* Area Science Park (research institution); *Partners:* DITEDI (regional ICT Cluster); Esteco (company); Fondazione ITS A. Volta (education institution); Modefinance (company); Teorema Engineering (company)
- **Data analytics and AI Node – DiH** (based in Udine)  
*Lead Partner:* Confindustria Udine (industrial association); *Partners:* Area Science Park (research institution); COSEF (industrial park); DITEDI (regional ICT Cluster); Fondazione ITS Malignani (education institution); Friuli Innovazione (science & technology park)

- **IoT Node – DiH** (based in Amaro)

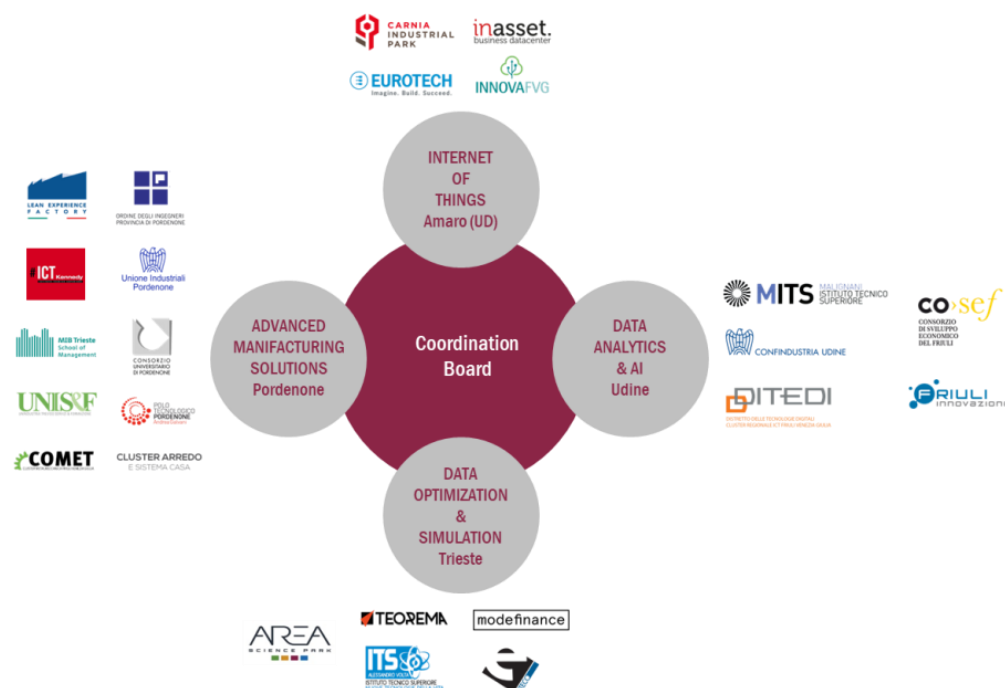
*Lead Partner:* Carnia Industrial Park; *Partners:* Area Science Park (research institution); DITEDI (regional ICT Cluster); Eurotech (company); InAsset (company); Innova FVG (science & technology park)

- **AMS -Advanced Manufacturing Solutions Node- DiH** (based in Pordenone)

*Lead Partner:* LEF Lean Experience Factory (consortium company); *Partners:* Cluster Arredo e Sistema casa (regional furniture Cluster); COMET (regional mechanical Cluster); Consorzio Universitario di Pordenone (university consortium); DITEDI (regional ICT Cluster); Fondazione ITS Kennedy (education institution); Fondazione ITS Malignani (education institution); MIB Trieste School of Management (business school); Ordine degli Ingegneri di Pordenone (professional association); Friuli Innovazione (science & technology park); Polo Tecnologico di Pordenone (science & technology park); Unindustria Servizi e Formazione Treviso Pordenone (industrial association's service company); Unindustria Pordenone (industrial association).

The Coordination Board comprises 11 members, 2 representative for each Node, 2 institutional representatives of the funding Public Bodies (Regione Autonoma Friuli Venezia Giulia and MIUR/ARGO) and 1 representative of the regional Universities and of the SMACT Competence Center (which includes 8 Universities and 2 Research Centers of the Northeast Italian area). The Coordination Board appoints a Program Management Office to coordinate the activities.

**Figure 3 IP4FVG Partnership**



### 3.2. What are the mechanisms in place to ensure that the activities of the Industry Platform 4 FVG are in line with its general objectives?

Each Node operates according to an operational plan, whose activities involve SMEs and territorial stakeholders in order to offer them access to tools, services and infrastructures for supporting digital transformation processes (demo “living labs”, prototyping tools and support services).

Each operational plan is developed in accordance to the rules set by the Coordination Board and includes activities supported directly by the Node as a whole or by single Partners as well as activities directly supported by IP4FVG funding. All activities supported directly by IP4FVG funding are validated by the Coordination Board and coordinated by the IP4FVG Program Management Office. Each node therefore provides the Coordination Board with a proposal of 3 years’ operational plan and an annual budget and investment plan. The Coordination Board validates activities, which have a platform-wide value and integrates all activities.

## 4. International dimension of the platform

### 4.1. Does the platform have an international dimension?

IP4FVG Nodes as well as the platform as a whole are part of other networks, both on a national and international level. Two of the Nodes (AMS and DA&AI) are recognized as DIHs within the national DIH of Confindustria (Italian Industrial Association)<sup>9</sup> and the AMS and DOS Nodes are recognized by the European Commission as fully operational DIHs on the Digital Innovation Hubs EU Catalogue within the framework of the Digitising Europe Industrial Strategy<sup>10</sup>.

Area Science Park as coordinator of IP4FVG has furthermore established active contacts with I4MS – ICT Innovation for Manufacturing SMEs, a European initiative supporting manufacturing SMEs and mid-caps in the widespread use of information and communication technologies (ICT) in their business<sup>11</sup>.

International cooperation support for the development of R&D projects and cross-country shared activities by beneficiaries companies is included among the set of services of IP4FVG through the partnership competencies and international networks (e.g. Area Science Park is a node of Enterprise Europe Network<sup>12</sup>).

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<sup>9</sup> <http://preparatialfuturo.confindustria.it/mappa-eventi/>

<sup>10</sup> <http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>

<sup>11</sup> <https://i4ms.eu/about>

<sup>12</sup> <https://een.ec.europa.eu/>

## 5. Impact of the platform

### 5.1. Has the platform's impact already been evaluated? If so, what have been the outcomes? If not, how and when the impacts planned to be evaluated?

The initiative has recently entered the operational phase and the details of the impact evaluation methodology are currently being revised and validated. As a basis for planning and developing of the operational plan, preliminary expected impact measures for the period 2018-2020 as of now have been identified in:

- 700 industrial and ICT SMEs to be involved in awareness and training activities;
- 20 ICT companies of national relevance to be involved in Living Lab activities and public-private co-development projects;
- 100 companies directly supported in the implementation of digital transformation projects.

IP4FVG operational phase recently started so the cornerstone project for 2018 and the first months of 2019 revolves around the creation of the demonstrators and the set up of the Living Lab activities for each specialization.

Awareness and Industrial upgrade activities as well as Support Services to SMEs will be operational from October 2018. The first projects in cooperation with SMEs are foreseen to start in the first months of 2019.