







INNO PROVEMENT

Translating Industry 4.0 to improved SME policy instruments targeting innovation

Regional Action Plan

Marche Region, Italy - Project Partner 5

Ancona, September 2021



Contents

1 EXECUTIVE SUMMARY	3
2 GENERAL INFORMATION	4
3 POLICY CONTEXT	7
4 DETAILS OF THE ACTIONS ENVISAGED	9
ACTION 1 – MARCHE OPEN DAYS INDUSTRY 4.0 - 1st edition	
4.1.1 Relevance to the project	9
4.1.2. Nature of the action	10
4.1.3 Stakeholders involved	12
4.1.4 Timeframe	13
4.1.5 Costs	13
4.1.6 Funding sources	
4.2 ACTION 2 – UPGRADE OF NIGHT OF INDUSTRY 4.0	14
4.2.1 Relevance to the project	14
4.2.2. Nature of the action	14
4.3.3 Stakeholders involved	15
4.3.4 Timeframe	16
4.3.5 Costs	16
4.3.6 Funding sources	



1 Executive summary

This document is the Regional Action Plan of the Marche Region, Project Partner 5 in the INNO PROVEMENT Interreg Europe Project. INNO PROVEMENT project aims at disseminating Industry 4.0 solutions in the partner regions.

The Marche Region proposes <u>2 actions</u> in this Action Plan. All of these actions are motivated by the examples that the Marche Region learned from the INNO PROVEMENT partnership. One of these actions, the second one, is planned to be supported through a pilot.

The Action Plan addresses two policy instruments:

1. ROP ERDF 14-20 Action 1.3 Support for the purchase of services for the technological, strategic, organizational and commercial innovation of the companies

This is the policy instrument defined in the application form. This policy instrument includes two calls (now closed) that have been presented also as good practices to INNO PROVEMENT project partners:

- Manufacturing and Work 4.0 call
- Enterprise and Work 4.0 call
- 2. ROP ERDF 21-27 Specific Objective 1.2 Support for projects for digital transformation, organizational innovation and the development of new business models.

This is, at the moment, a draft measure of the new ROP ERDF.

The 2 actions proposed in this Action Plan are:

- 1. MARCHE OPEN DAYS INDUSTRY 4.0 1st edition
- 2. UPGRADE OF NIGHT OF INDUSTRY 4.0



2 General information

Project: Translating Industry 4.0 to improved SME policy instruments targeting innovation

Project acronym: INNO PROVEMENT

Partner organisation: MARCHE REGION

Country: ITALY

NUTS2 region: MARCHE

Contact person: ANNA TORELLI

Email address: anna.torelli@regione.marche.it

Phone number: +39 071 806 3602

Industry 4.0 offers SMEs the opportunity to boost their productivity and competitiveness through implementing highly efficient and automated manufacturing processes allowing for both mass-production and mass-customisation.

As a result, regional policies must aim to reduce obstacles for SMEs to the uptake of industry 4.0 technologies with place-sensitive and SME-specific technological solutions.

In INNO PROVEMENT it will be primarily SMEs that the project intends to assist, so that they can better address the challenges this new paradigm imposes to increase their competitiveness.

Partners' experience suggests that policy instruments targeted to SMEs innovation often struggle to support Industry 4.0 related projects efficiently. With 8 partners from 5 regions, almost all managing authorities directly responsible for their policy instruments, INNO PROVEMENT aims at improving SMEs policy instruments targeting innovation activities and adapting them to requirements set by Industry 4.0:

- Ministry of Finance, Hungary lead partner
- ICT Association of Hungary advisory partner
- Ministry of Industry and Trade (Czech Republic) project partner
- Region of Thessaly (Greece) project partner
- Marche Region (Italy) project partner



- COMPETE 2020 Managing Authority of the Competitiveness and Internationalisation Operational Programme (Portugal) – project partner
- Lodzkie Region (Poland) project partner
- Regional Council of Kainuu (Finland) project partner

This overall objective will increase the share and number of SMEs successfully implementing Industry 4.0 related innovation projects in the partners' regions and countries.

Seven thematic issues have been explored by partners through intense experience exchange:

- · Innovation in software development;
- Effectiveness of public money used to support industrial R&D under Industry 4.0;
- Introducing Industry 4.0 to traditional industries;
- Definition of Industry 4.0 public policy initiatives;
- Adjusting calls to Industry 4.0 requirements;
- · Market price assessment methodologies;
- Definition of an Industry 4.0 maturity evaluation matrix.

Sharing transferable good practices from these seven thematic issues has been central among project activities. Using the outcomes, partners have elaborated action plans to improve their policy instruments.

The project received funding in the 3rd round of calls in the Interreg Europe Programme:

- Phase 1 of the project started on 01/06/2018 and ends officially on 31/05/2021¹
- Phase 2 of the project lasts from 01/06/2021 to 31/05/2023.

The partnership of the project is composed of managing authorities directly responsible for the policy instruments they address and they all target nationally co-financed regional or national ERDF/ESF instruments in the project.

Phase 1 had three major overlapping stages:

	All partners carried out regional assessments about the status of digitalisation and
	Industry 4.0 specifically for their territories. The assessment included overview on
Analysis	relevant statistics, analysis of concerned strategies and programmes and for most
-	partners an online survey conducted among SMEs. From the regional assessments a
	Joint Analysis Report has been produced with joint observations and conclusions
	This is the most important module of the project. The seven thematic issues have been
	elaborated by the partnership following the same procedure: host of each thematic
	issued provided guidelines on their thematic issue. Based on the guidelines, partners
exchange	gathered relevant local experience with the involvement of stakeholders. Each thematic
	issue was then discussed during thematic transnational meetings. Results of the
Experience exchange	Joint Analysis Report has been produced with joint observations and conclusions This is the most important module of the project. The seven thematic issues have be elaborated by the partnership following the same procedure: host of each thema issued provided guidelines on their thematic issue. Based on the guidelines, partn gathered relevant local experience with the involvement of stakeholders. Each thema

¹ The COVID-19 pandemic had a substantial delay on Phase 1 activities therefore the Interreg Europe Joint Secretariat gave consent on finalising Phase 1 activities in the first months of Phase 2.



discussions were taken home and shared with stakeholders. Summary of each thematic issue is presented in thematic papers. During the knowledge exchange good practices have been identified and presented. This structure provided the framework for sharing knowledge and practices among project partners and stakeholders. The thematic transnational meetings have taken place as follows:

Tricinatio local		Place and date of	
			meeting
	ublic money used to support development under 14.0	Ministry of Industry and Trade (Czech Republic)	Prague, 12-14 March 2019
Introducing I4.0 to tradit	ional industries	Regional Council of Kainuu (Finland)	Vuokatti, 17-20 June 2019
Definition of I4.0 public	policy initiatives	COMPETE 2020 Managing Authority of the Competitiveness and Internationalisation Operational Programme (Portugal)	Lisbon, 18-20 November 2019
Definition of an I4.0 mat	urity evaluation matrix	Lodzkie Region (Poland)	Online meeting, 14 May 2020
Market price assessmer	nt	Ministry of Finance, Hungary	Online meeting, 3-4 November 2020
Innovation in software development		Region of Thessaly (Greece)	Online meeting, 11-12 May, 2021
Adjusting calls to Industry 4.0 requirements		Marche Region (Italy)	Online meeting, 30 June – 1 July, 2021
	The good practices and the	e thematic papers provided t	he main inspirations for the
regional actions of project partners. Actions have been elaborated in the Regional			elaborated in the Regional
Action Planning			
programmes, some of the project partners opted for targeting policy instruments fro the 2021-2027 programming period, as the Marche Region did.			

The Marche Region proposes two actions in this action plan. All of these actions are motivated by the examples that the Marche Region learned from the INNO PROVEMENT partnership. One of these actions is planned to be supported through a pilot.



3 Policy context

The Action Plan aims to impact: X Investment for Growth and Jobs programme

European Territorial Cooperation programme

Other regional development policy instrument

The Action Plan addresses two policy instruments: the policy instrument defined in the INNO PROVEMENT application form (No. 1 in the list below), and one new policy instrument (No. 2. In the list below)

Name of the policy instruments addressed:

1. ROP ERDF 14-20 Action 1.3 Support for the purchase of services for the technological, strategic, organizational and commercial innovation of the companies

This is the policy instrument defined in the application form. This policy instrument includes two calls (now closed) that have been presented also as good practices to INNO PROVEMENT project partners:

- Manufacturing and Work 4.0 call
- Enterprise and Work 4.0 call
- 2. ROP ERDF 21-27 Specific Objective 1.2 (draft action) Support for projects for digital transformation, organizational innovation and the development of new business models

This is, at the moment, a draft measure of the new ROP ERDF.

Further details on the policy context and the way the action plan should contribute to improve the policy instruments.

(1) Manufacturing and Work 4.0 call and Enterprise and Work 4.0 call

With this calls, the Marche Region intended to promote processes of technological and digital innovation with a view to Industry 4.0 of MSMEs supporting new tangible and intangible investments capable of producing an impact on their value chains.

The process of technological and digital innovation in MSMEs has been closely linked to the enhancement of the companies' personnel expertise and resources. The aim was to put at the centre of the Industry 4.0 strategy not only technologies but, above all, people.



The interventions provided for the granting of capital grants to companies for the implementation of investment programs aimed at the application of new digital technologies; they were closely connected to support measures for employment and training policies.

Unlike the *Manufacturing and Work 4.0 call*, the *Enterprise and Work 4.0 call* provided that the submission of the application should not be subsequent to the activation of at least one internship for insertion or reintegration into work. There was no obligation to start the internship before the grant.

In addition, the companies have been granted a contribution for the staff costs related to the interns hosted equal to 60% of their total cost and an additional grant in the event of transformation of the internship into a subordinate work contract or hiring additional workers. "Additional" means with respect to the staff resulting at the time of the application and with professional profiles consistent with the investment program presented.

(2) ROP ERDF 21-27 Specific Objective 1.2 (draft action) Support for projects for digital transformation, organizational innovation and the development of new business models

Last year the regional government has changed and the new government has confirmed its intention to promote business investments with a view to Industry 4.0 as the 2 calls mentioned above and part of INNO PROVEMENT good practices aimed at.

The new government is now working to lay the foundations for the new 2021-2027 ERDF and ESF plus programming period.

With the (at the moment draft) action Support for projects for digital transformation, organizational innovation and the development of new business models that will be included in the ROP ERDF 21-27, in synergy with national tax incentives also supported by the National Recovery and Resilience Plan, the Marche Region will finance projects where digitization is accompanied by a commitment to corporate reorganization and requalification, possibly accompanied by managerial support, even temporary. The measure is aimed at industrial, craft, tourism, trade, culture and service companies.

§

INNO PROVEMENT represented an important source of ideas for the definition of future actions aiming at supporting digital transformation in the new ROP 2021-2027.

The actions of this Action Plan proposes initiatives that will be fundamental for another objective of the Government: to increase the awareness of companies, especially SMEs, on the importance of undertaking an Industry 4.0 path and therefore participate in the calls that the Region will propose with the new ROP. This objective will find fulfillment through a new measure of the ROP ERDF 21-27 Implementation of awareness raising and coaching actions for companies for the development of innovative technological solutions and new business models (Specific Objective 1.4) that will be carried out with the support of the regional Digital Innovation Hubs.



In fact, a recent research carried out by UCIMU-SISTEMI PER PRODURRE highlights how Industry 4.0 has particularly affected large companies over 200 employees while small ones have remained on the margins.

Moreover, with the "Impresa 4.0 Observatory" (a further good practice provided by the Marche Region in the INNO PROVEMENT project) the Regional Council wanted to equip itself with a tool for the definition of the Industry 4.0 Regional Plan through the elaboration of studies to identify the main obstacles to the diffusion of the new Industry 4.0 model. In 2019 the Observatory provided for a first analysis that highlighted:

- a rather low level of digital maturity on average:
- a percentage of companies adopting one or more of the 4.0 technologies lower than 10%;
- that the percentage of adopters increases with the size of the company;
- that companies tend to adopt a single 4.0 technology and to implement digital innovations in one/few company functions.

One of the priority objectives for the Region is, therefore, to increase the awareness of companies on the opportunities offered by 4.0 technologies: through the actions illustrated below, the Marche Region intends to provide an operational response to this problem.

4 Details of the actions envisaged

ACTION 1 - MARCHE OPEN DAYS INDUSTRY 4.0 - 1st edition

4.1.1 Relevance to the project

INNO PROVEMENT aims at improving SME policy instruments targeting innovation activities and adapting them to requirements set by Industry 4.0. This overall objective will increase the share and number of SMEs successfully implementing Industry 4.0 related innovation projects in the Marche region. Sharing transferable good practices has been central among project activities. Using the INNO PROVEMENT outcomes, the Marche Region will implement this Action Plan to improve our policy instrument.

The INNO PROVEMENT good practice that has inspired the Marche Action Plan is <u>NIGHT OF INDUSTRY 4.0</u> <u>MODEL FACTORIES promoted by the Hungarian Ministry of Finance and AP2, ICT Association.</u>

The practice aims at the awareness raising of SMEs towards Industry 4.0 through an inclusive, innovative and entertaining approach.

The aim of Hungarian practice is threefold:

- (1) raise the visibility of transforming companies for each other's attention to facilitate future collaboration;
- (2) introduce the practice of digitalisation to the potential employees and also to the local community;



(3) prove that digitalisation improves working environment of industrial business for white- and blue-collar workers, too.

Pre-selected, best performing companies open up their shop floors to SMEs and any other interested participants for one night (4:00 pm – 10:00 pm) all over Hungary. Industry 4.0 solutions in operation are shown and explained in everyday language by experts.

The reasons that led the Marche Region to this practice are substantially 3:

- a) the first is that it is a complementary tool compared to the other initiatives activated by the Marche Region,
- b) the second is that it has not only a communicative value but it also promotes awareness-raising towards SMEs that do not have still approached the Industry 4.0 technologies (the imitation effect is very relevant between companies),
- c) the third is that it is a versatile tool in a pandemic era, which can be activated both in person and through the use of communication technologies.

4.1.2. Nature of the action

The action to be implemented aims to open the doors of those regional companies that represent virtuous models of application of Industry 4.0 technologies to target beneficiaries (SMEs, schools, citizens, etc.).

This is an initiative with a significant communicative and awareness-raising value on the Industry 4.0 issue.

Six excellent Marche companies belonging to different sectors and territories will physically and virtually open their gates to SMEs, students, citizens to show concretely what it means to adopt Industry 4.0 solutions and what advantages can be obtained.

The excellent companies

In the Marche Region there are several cases of companies that have undertaken the path indicated by Industry 4.0 and that have obtained national and international awards for the progress made and the results achieved, also thanks to regional interventions.

In this first edition of MARCHE OPEN DAYS INDUSTRY 4.0 the process of identifying the companies that will open their production departments to the public may follow different paths, namely²:

 at the request of the Marche Region for companies that received an award of excellence (e.g. by the Ministry of Economic Development through the Innovation Agreements, by the European Commission, etc.) or participating in regional collaborative platforms or that have been selected for the Dubai expo;

² Paths indicated here could be adapted according to the experience gained with the pilot action, if approved (see next chapter 4.2 ACTION 2)



- identifying some companies that have obtained contributions under the two above mentioned calls (Manufacturing and Work 4.0 call and Enterprise and Work 4.0 call, two good practices that have implemented the Marche policy instrument so far) and that have distinguished themselves particularly for the intervention carried out; the identification will take place with the support of the commission that evaluated the projects for their selection;
- through an expression of interest published by the Marche Region and addressed to regional companies who will demonstrate to meet certain requirements.

The Region will make a single decree establishing in a transparent way how the choice was made and therefore which companies will open their doors.

The beneficiaries

The most important beneficiaries of the action will be the Marche manufacturing SMEs of all sectors and territories. For the Marche Region it is essential that companies, even of the smaller ones, understand the relevance of this challenge for their competitiveness and therefore approach with conviction the support tools that the Region will make available through the 2021-2027 cohesion funds and with regional funds.

All regional manufacturing SMEs will be invited to participate in the event, with the possibility of choosing the company to visit and how (in person, taking into account the limit of capacity, or online).

Students will also represent an important target for this action; this is testified by one of the Inno Provement's regional good practices on ITS, Higher Technical Institutes, post-diploma courses that offer highly qualified technical training to enter the world of work. ITS courses are carried out in collaboration with companies, universities, research centres and local authorities to develop new skills in technological areas considered strategic for the economic development and competitiveness of the region, including Industry 4.0.

To counter the gender gap that occurs in this sector not only in the Marche region but throughout Italy, a contest on "Industry 4.0 is female" dedicated to female students (18-24 years old) will be organized ³ in parallel with the event and the best dissertations made on the basis of participation in the MARCHE OPEN DAYS INDUSTRY 4.0 will be awarded by the Marche Region. The best female students will be interviewed and the interviews (on their interest in Industry 4.0, course of study, work expectations...) will be posted on the regional sites.

The participation of citizens interested in their innovative entrepreneurial assets will also be stimulated: online participation in the event will be open to all people wishing to understand what Industry 4.0 means and how the Marche Region intervenes to stimulate its application.

³ For the organization of the competition it will be necessary to obtain the approval of the Regional Minister for Productive Activities, which will be requested when the pilot action is in progress



The implementation aspects

The initiative will be coordinated by the Marche Region Department of Innovation, Research and Internationalization of Productive Sectors (P.F. Innovazione Ricerca e Internazionalizzazione).

Its implementation will rely on the (at the moment draft) measure of the ROP ERDF 21-27 *Implementation of awareness raising and coaching actions for companies for the development of innovative technological solutions and new business models* (Specific Objective 1.4) to be carried out with the support of the regional Digital Innovation Hubs.

In each of the 6 companies that will open their doors in MARCHE OPEN DAYS INDUSTRY 4.0, a moderator appointed by the Digital Innovation Hubs will support the company's staff in illustrating the business case.

The technical staff for the realization of the live broadcast will also be provided by the Digital Innovation Hubs.

Particular attention will be given to the indicators that will guide the choice of the 6 companies because, in addition to those related to Industry 4.0, options regarding the logistics and feasibility of the visit in person will be evaluated (visitor safety, industrial confidentiality, ..).

Furthermore, the Digital Innovation Hubs will deal with the authorization and responsibility aspects.

4.1.3 Stakeholders involved

Beside the Digital Innovation Hubs, an important role in the implementation of the action will be played by the stakeholders of INNO PROVEMENT and, in particular:

- the companies belonging to the stakeholders group will be invited to join the pool of the companies that will open their doors during the event;
- the trade associations will support the Region both in selecting the other companies that will make up the group of 6 companies and in promoting the event to SMEs in the Marche region;
- the universities and the representative of the ITS will assist the Region in the realization of the contest "Industry 4.0 is female".



4.1.4 Timeframe

The time needed to implement the action is one year starting in October 2021 and ending in September 2022. The planned schedule is the following:

No.	Activity	Deadline
1	Preparation	October 2021- June 2022
2	Implementation	June 2022
3	Follow up	June 2022 – September 2022

4.1.5 Costs

Costs related to the preparation, implementation and follow up of the action are estimated in the table below.

No.	Type of cost	Volume
1	Staff costs	EUR 10,800
	Number of staff included from implementing bodies with time charged on action:	
	 Marche Region – 3 people (0.10 average of their time dedicated to the action). An average 1 FTE/ month is calculated at EUR 3,000. 	
	Duration of the action implementation is 1 year.	
2	Technical assistance (Digital Innovation Hubs)	EUR 27,000
	Total	EUR 37,800



4.1.6 Funding sources

The funding source will be the new measure of the ROP ERDF 21-27 *Implementation of awareness raising and coaching actions for companies for the development of innovative technological solutions and new business models* (Specific Objective 1.4).

4.2 ACTION 2 - UPGRADE OF NIGHT OF INDUSTRY 4.0

4.2.1 Relevance to the project

One of the main messages of the joint analysis report of the INNO PROVEMENT partnership is that business opportunities provided by Industry 4.0 concepts and solutions are not yet broadly known among SMEs in project partners' regions as such awareness raising is still an important task. The relevance of targeted awareness raising was reconfirmed in the conclusions of the Policy Learning Platform Peer Review "Shaping the Hessen Digital Transformation Support Landscape". The good practices of *Night of Industry 4.0 model factories* and *Night of Industry 4.0 model factories goes online* have been considered by the Marche Region and by other project partners as very inspiring.

Based on the high interest from project partners, partners started considering to form a pilot proposal on the good practice because project partners wished to test the approach first on a small-scale event before generalising the good practice in their policy instruments.

For the Marche Region this pilot action will contribute to improving the policy instruments addressed in the Marche Region since it promotes awareness-raising towards SMEs that do not have still approached the Industry 4.0 technologies. It is widely recognized that the imitation effects offered in the underlying good practice are very relevant among companies.

5 partners decided to apply for a pilot proposal as follows:

- Project Partner 1 Ministry of Finance (HU)
- Project Partner 5 Marche Region (IT)
- Project Partner 6 COMPETE 2020 Managing Authority of the Competitiveness and Internationalisation
 Operational Programme (PT)
- Project Partner 7 Lodzkie Region (PL)
- Project Partner 8 Regional Council of Kainuu (FI)

4.2.2. Nature of the action

This pilot action represents an online and – if possible – in presence test (i.e. hybrid modality) on a single case. It will involve one excellent regional company belonging to the stakeholder group that have benefited from public



support to invest in I4.0 digital transformation. The selection of the company will be carried out basically according to the availability of the company and plant logistic.

In particular, the pilot action will be used to test the structure of these events (program, duration, method of conveying the action, method of selecting participants, description of the problem, advantages and disadvantages of 4.0 solutions, costs and benefits of Q&A) that will be part of a new measure in the 2021-2027 ROP.

Activities of the action in line with the pilot proposal are:

- (1) Detailed event structure and content design: building on the agendas of the previous Hungarian Night of Industry 4.0 events the Marche Region will develop its regional agenda and will discuss it within the partnership;
- (2) involvement of and arrangements with model factories (legal, financial, GDPR, IPR, security);
- (3) securing IT background;
- (4) promotion strategy, in particular at transnational level;
- (5) event implementation;
- (6) evaluation and follow-up;
- (7) generalisation of pilot in addressed policy instruments.

For the Marche Region this pilot action represents an online test on a single case for the subsequent wider implementation of the initiative (action 1). In case of success, the initiative will be extended and upscaled in terms of both number of regional companies that will open their doors and approach (physical and online).

The initiative will be coordinated by the "PF Innovazione" (Innovation Department) of the Marche Region. The Region will be supported by the Giacomo Brodolini Foundation⁴, appointed by the Marche Region to provide technical and scientific assistance to the activities of the Impresa 4.0 Observatory until 2022.

4.3.3 Stakeholders involved

An important role will be played by the stakeholders of INNO PROVEMENT and, in particular:

- a company belonging to the stakeholders group will be invited to open its doors for the event;
- the other companies, the trade associations and the universities will support the Region the preparation phase and in promoting the event to SMEs in the Marche region.

⁴ http://www.fondazionebrodolini.it. The Marche Region has an open contract with the Foundation and will use part of the contract for the implementation of the action.



4.3.4 Timeframe

The time needed to implement the action is 6 months starting in September 2021 and ending in February 2022. The planned schedule is included in the following table:

No.	Activity	Deadline
1	Detailed event structure and content design	September 2021 - October
		2021
2	Involvement of and arrangements with model	September 2021 - October
	factories	2021
3	Securing IT background	September 2021 - October
		2021
4	Promotion	October 2021
5	Joint methodology for evaluation	October 2021
6	Event implementation	November 2021
7	Evaluation	December 2021
8	Follow-up	December 2021 – February
		2022
9	Generalisation of pilot in addressed policy	December 2021 – February
	instruments	2022

4.3.5 Costs

Costs related to the implementation of the action are estimated in the table below.

No.	Type of cost	Volume
1	Staff costs	EUR 10,080
	Staff of 2 with 0.28 of their time on the project for 6 months at monthly	
	wage cost of EUR 3,000	
2	Office and administration	EUR 1,512
2	External expertise	EUR 15,700
	Total	EUR 27,292

4.3.6 Funding sources

The two calls that implemented the Marche Region policy instrument were financed by the ROP ERDF 2014-2020; this ROP are now closed and the Region is currently designing the new programme and measures for the next programming period 2021-2027 that will presumably start in 2022. The timing for finding regional or national additional funds for the implementation of this pilot action would be incompatible with the goal of making this



action fully operational starting from end 2021. Therefore, the costs for the Marche Region are requested from the Interreg Europe Programme in the form of a pilot action.

Date: OB NOV.

Signature:

Il Dirigente della P.F.

novazione, Ricerca e Internazionalizzazione

Stamp of the organisation (if available): Dott.ssa Stefania Bussoletti

日間のpageの日 マイル Microsoft ファイン これの Microsoft Action Action Action Transport

