

Smart Specialisation Platform for Industrial Modernisation

Thematic Partnership

ARTIFICIAL INTELLIGENCE & HUMAN-MACHINE INTERFACE

Start Date June 2018

MONITORING PROGRESS REPORT

Reporting Period: from 7 May 2018 to June 2018

This Report is presented to the relevant Working/Steering Committee.
It contains three parts:

- I. Management Report prepared by the Lead Region(s)***
- II. Progress Report prepared by the Lead Region(s)***
- III. Previous versions of the Progress Report; i.e., part II of past reporting periods***

The report is a “cumulative” report, i.e. it is updated annually and covers the entire period of the Partnership.

Confidentiality: the documents will be made available to the public via the Partnership's web page except for chapter *II.E. Self evaluation*.

Based on the monitoring results, the European Commission will decide on the following year's support.

Executive summary (max. 250 words):

The partnership has started working after the approval of the Theme on May 7th. After communicating the result to the partners, the lead partner has prepared the content of the AI&HMI web page and has carried out first activities, namely:

- *Organisation of a kick off meeting at lead region level*
- *Set up of Emilia-Romagna AI&HMI Working Group*
- *Organisation of the first Emilia-Romagna AI&HMI Working Group meeting*
- *Invitation of interested regions to join the partnership*
- *Preparation of the AI&HMI Partnership kick off meeting scheduled for 12th July, including planning of activities until end of 2018*
- *Dissemination activity through the participation to an International event (The 25th International Conference on Transdisciplinary Engineering (TE2018) - <http://te2018.com/>).*

I. Management Report prepared by the Thematic Platform/Lead Region(s)

I.A. Partnership Action Fact Sheet

• **Partnership** *Artificial Intelligence & Human-Machine Interface*

• **Partnership's web-page:** <http://s3platform.jrc.ec.europa.eu/artificial-intelligence>

• **S3 Thematic Platform** *Industrial Modernisation*

• **Objectives:** *The partnership intends to support the adoption of Artificial Intelligence enhanced cyber-physical system, and more specifically AI driven HMI, exploiting the knowledge, competencies and capacities of the stakeholders of participating regions so to accelerate the innovation processes of companies, including SMEs. More precisely, interregional collaboration among regional stakeholders will be addressed to:*

1. ENHANCE AND ACCELERATE THE LEVEL OF AUTOMATION SYSTEMS PRODUCTION AND USE

- *defending today's competitive advantage within automation and robotics Value Chains;*
- *making the European value chains robust and integrated as an evolution of today's supply chain;*
- *fostering new joint projects pipelines in several deployment areas l.*

2. INTRODUCE THE AI CONCEPT, DESIGN AND INDUSTRIALIZATION METHODOLOGIES

- *promoting cross fertilization with other sectors with similarity in terms of I4.0 KETs;*
- *creating enlarged and multicultural design teams (technical and human-centric disciplines);*
- *creating new companies or new networks of companies, mainly SMEs organized into open design communities.*

3. INCREASE THE LEVEL OF EDUCATIONAL SYSTEMS OF BOTH PRODUCERS AND USERS

- *working on education districts and industrial district integration;*
- *involvement education and industry foundations/organisations.*

• **Lead Region(s):** *list of regions/countries*

<i>EMILIA-ROMAGNA</i>

• **Other partner regions:** *list of regions/countries*

<i>North Brabant</i>	<i>Please enter here...</i>	<i>Please enter here...</i>
<i>Navarra</i>	<i>Please enter here...</i>	<i>Please enter here...</i>
<i>Trento Province</i>	<i>Please enter here...</i>	<i>Please enter here...</i>
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<i>Any other comments</i>		

• **Intentions to join:** *list of regions/countries*

(Please list here all other regions that have expressed their interest to join the partnership)

Rhone Alpes
Baden Wurttemberg
Slovenia

- **Other participants (other than regions):** (*Institution Name, Country, Town*)
 (*Please list here all other (non-region) participants (clusters, etc.)*)

<p>Representative of Lead Region 1: <i>(name, institution, address, phone, e-mail)</i> ASTER S. Cons. p. A. Francesco Paolo Ausiello via Gobetti 101, 40129 Bologna, Italy +39 051 6398099 francescopaolo.ausiello@aster.it</p>	<p>Representative of Lead Region 2 <i>(if applicable): (name, institution, address, phone, e-mail)</i> to be defined</p>
<p>European Commission Coordinator: <i>(name, e-mail)</i> Please enter here...</p>	<p><i>Any other relevant information:</i> It is the intention of the leading region to identify a co-leading region</p>

I.B. Thematic Working Areas

- **Thematic Working Areas** (*if any, please list of WAs, region(s) in charge of it, names and affiliations of involved regional/national authorities, and other actors*)

Working Area	Region in Charge	Involved regions	Other actors
<p>1)HMI evolution including new interface local and remote devices and technologies</p>	<p>Emilia-Romagna</p>	<p>to be defined</p>	<p>to be defined</p>
<p>2)USER experience data analytics: physiological and biomechanical data analysis to improve the workers experience and performance</p>	<p>Emilia-Romagna</p>	<p>to be defined</p>	<p>to be defined</p>
<p>3)USER centered Design: Machine / System user-centered design to leverage the operators' skills that includes</p>	<p>Emilia-Romagna</p>	<p>to be defined</p>	<p>to be defined</p>
<p>4)AI enhanced Cyber-Physical Automation</p>	<p>Emilia-Romagna</p>	<p>to be defined</p>	<p>to be defined</p>
<p><i>It is the intention of the lead region to consider to identify leading regions/partners for each working area.</i></p>			

I.C. Overview of past activities (past six months, the 1st half of 2018)**Past Meetings**

<i>Title</i>	<i>Date</i>	<i>Place</i>
<i>Kick off meeting between Emilia-Romagna Region General Director for Knowledge economy, labour and enterprise economy and ASTER, the innovation agency in charge of implementation</i>	<i>6 June 2018</i>	<i>Bologna</i>
<i>First Emilia-Romagna Regional Working Group Meeting</i>	<i>25 June 2018</i>	<i>Bologna</i>
<i>Any other comments</i>		

Past Workshops

<i>Title</i>	<i>Date</i>	<i>Place</i>
<i>Please enter title here...</i>	<i>Please enter date here...</i>	<i>Please enter place here...</i>
<i>Please enter title here...</i>	<i>Please enter date here...</i>	<i>Please enter place here...</i>
<i>Any other comments</i>		

Past Dissemination Activities

<i>Title</i>	<i>Date</i>	<i>Place</i>
		<i>Please enter place here...</i>
<i>Please enter title here...</i>	<i>Please enter date here...</i>	<i>Please enter place here...</i>
<i>Any other comments</i>		

I.C. Overview of future activities (the next 6 months – the 2nd half of 2018)**Future Meetings**

<i>Title</i>	<i>Date</i>	<i>Place</i>
<i>1st AI&HMI partnership conference cal meetingl</i>	<i>12 July 2018</i>	<i>conf call (coordinated from Bologna ASTER offices)</i>
<i>2nd Regional Working Group Meeting</i>	<i>September</i>	<i>Bologna ASTER offices)</i>
<i>AI&HMI partnership meeting</i>	<i>October</i>	<i>Bologna</i>
<i>All partner will involve regional stakeholders and organise local working groups and meetings, place and dated to be defined.</i>		

Future Workshops

<i>Title</i>	<i>Date</i>	<i>Place</i>
<i>To be defined</i>	<i>To be defined</i>	<i>To be defined</i>
<i>Any other comments</i>		

Future Dissemination Activities

<i>Title</i>	<i>Date</i>	<i>Place</i>
<i>The 25th International Conference on Transdisciplinary Engineering (TE2018) - http://te2018.com/</i>	<i>3 July 2018</i>	<i>Modena (Emilia-Romagna)</i>
<i>Any other comments</i>		

II. Progress Report prepared by the Lead Region(s) of the partnership, describing **results achieved during this period**, in no more than 3 pages (the report is “cumulative”).
All items listed in Sections A, B, and C, below, must be addressed.

Additional documentation such as extended technical reports and/or proceedings of workshops may be provided separately as an annex to this report (and should be referenced in the report).

II.A. Innovative results

- Innovative results and achievements that could be attributed to the Partnership.
(Specific examples of Results vs. Objectives)
Still not applicable
- Tangible short- and medium-term socio-economic impacts achieved or expected.
(Specific examples)
Creation of the community of research and business actors, including in particular companies willing to engage and collaborate for the definition of innovative projects and demo projects.

II.B. Inter-regional and inter-partnership collaborative results

- Additional results obtained from working with other partnerships under the thematic S3 Platforms. (Specific examples)
Still not applicable
- Evaluation of the involvement of relevant business sector (clusters, SMEs, business associations, chambers of commerce, etcetera) in the Partnership activities. (Specific examples)
Two Emilia-Romagna Clust-ERs have been involved in the setting up of the regional Working Grup: the Clust-ER MECH and Clust-ER INNOVATE. They have indicated experts from the research sectors and companies to be invited to take part in the group. At the moment the group is composed by 10 representatives of universities and 2 representatives of companies (one big company and one SME).
- Evaluation of whether **the level of inter-regional cooperation is sufficient** to potentially provide practical and relevant socio-economic impacts. (Specific examples)
Still not applicable as the partnership still has to start working together on concrete cases. However, it is the intention of the current partnership to enlarge the group and involve new regions and stakeholders.

II.C. New activities

- Involvement of regions from EU13 Member States in the Partnership, in particular with respect to scoping, mapping and/or matchmaking. *In addition, justification should be provided if no EU13 regions are involved.*
Activities have just started and no EU13 Member States representatives are involved at the moment, however Slovenia has expressed interest and exchanges have started with the Jozef Stefan Institute of Ljubljana. Additional recruitment will be carried out.
- Involvement of regions/countries from outside of EU28 Countries. (Number of participants from non-EU countries. Specify their contribution)
None
- Advancement and promotion of the Partnership through publications and other communication/outreach activities. (Number of outreach activities that resulted from the Partnership. A complete list with references and web-links should be given in an annex)

Still not applicable.

- Activities and projects with partnerships working under other S3 Thematic Platforms (*Agriculture, Energy and Industrial Modernisation*).
Still not applicable