



Sharing Strategies for European Research and Innovation Infrastructure (INNO INFRA SHARE)

ACTION PLAN

EMILIA-ROMAGNA REGION



Bologna, June 2019

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Part I – General information

Project: INNO INFRA SHARE - Sharing strategies for European Research and Innovation Infrastructures

Partner organisation: ASTER

Other partner organisations involved (if relevant): EMILIA-ROMAGNA REGIONAL GOVERNMENT

Country: ITALY

NUTS2 region: EMILIA-ROMAGNA

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Foreword

The INNO INFRA SHARE project has the goal of improving the accessibility and the exploitation of local Research and Innovation Infrastructures (RIIs) by potential users, namely companies and in particular SMEs. The 8 European partner regions have learned from each other through exchange of good practices, study visits, peer learning workshops, seminars, with the involvement of local stakeholders. Project partners have worked together to exchange ideas on how to add a market-driven dimension to the research and technological ones characterising existing and developing RIIs, and on how to promote collaboration opportunities at the regional and international level, addressing national and regional RIIs relevant policy instruments.

The present document outlines the Action Plan which will be implemented in Emilia-Romagna Region during 2019 and 2020 in collaboration with regional stakeholders, to improve the addressed **policy instrument**, that is **the Action 1.5.1 – Support to the research infrastructures crucial for the territory, Specific Objective 1.5 – Strengthening of excellence in R&I, Axis 1 - Research and Innovation of the Emilia-Romagna ERDF Regional Operational Programme 2014-2020**. This policy instrument aims at strengthening the regional research and innovation infrastructures system, by providing funding resources to existing research infrastructures in order to support their integration, create new facilities or upgrade the present ones (with new equipment). The main goal is to scale up existing research capacity on some specific scientific and technological areas, and to reach a critical mass in terms of variety of application and dimension and of dedicated research staff. The **new/upgraded RII** will also develop a clear capacity to work within the regional innovation ecosystem in favour of territorial competitiveness and in line with the S3 specialization areas. With Action 1.5.1 Emilia-Romagna Region will support the acquisition of scientific equipment and the creation of facilities which will contribute to strengthen the innovation capability and the economic exploitation of their potential. The focus areas of the new RII are: Supercomputing; Genomic, regenerative medicine and bio-banks; Advanced materials and advanced manufacturing - all three based on big data storage and management, an area where Emilia-Romagna has been strongly investing for some years.

The present Action Plan was drafted on the basis of the learning from phase 1 of the Inno Infra share project and of the inputs received by the Managing Authority. This amended version was discussed with the Managing Authority that approved its content.

Part II – Policy context

The Action Plan aims to impact:	X	Investment for Growth and Jobs programme
	•	European Territorial Cooperation programme
	•	Other regional development policy instrument

Name of the policy instrument addressed:

ERDF Regional Operational Programme 2014-2020 of Emilia-Romagna, Axis 1 - Research and Innovation, SO 1.5 – Strengthening of excellence in R&I, Action 1.5.1 – Support to the research infrastructures crucial for the territory

Regional context and lessons learnt

1. Emilia-Romagna in short

Emilia-Romagna is located in the North-East of Italy, within the Italian most productive area. With an efficient network of infrastructures and its strategic geographical position, Emilia-Romagna is an important hub well linked nationally and with European capitals: indeed, its geographic position enables it to act as a link between northern and southern Italy, and between the Adriatic and Mediterranean regions and central and northern Europe.

Bologna is the seat of the Regional Government, and of the most important service infrastructure in the region, including University of Bologna, a great concentration of public research institutes (CNR, ENEA, INFN, INGV, etc.), the largest international airport, the most important trade centre with international leading fairs, etc. Bologna is outstanding in the rank of Italian cities as one of the most developed, richest and attractive cities. It ranks first in the Smart City Index 2016 and first in the Global Talent Competitiveness Index (26th at global level).

In Emilia-Romagna operate 370,253 active enterprises in non-primary sector, corresponding to the 8.5% of Italian companies. Almost 95% of active companies are micro enterprises with less than 10 people employed, while SMEs represent the 99.89% of the regional productive structure, employing 76.23% of the total.

The region is characterised by a high entrepreneurial propensity (number of companies per inhabitant), with 83 enterprises every thousands inhabitants (national average is 72). The primary sector (agriculture and fishery) contributes to gross value added for 2.8%, above the EU average (1.7%); 24.4% comes from manufacturing industry (higher than the EU 19.2%) and 4.9% from construction. Services accounts for two third of GVA. Therefore, the regional productive system is diversified but with a strong manufacturing core, both compared to Italian and European average, and a clear tourist vocation in the coastal area.

The most important industries with a long lasting tradition are: *agriculture & food, motor industry, industrial mechanics, building & construction, fashion (clothing, shoes and leather) and furniture*, while *health industry, biotechnologies, genomics, ICT and nanotechnologies* are emerging sectors growing rapidly.

2. Research and Innovation Infrastructures in Emilia-Romagna

Over the past 15 years, one of the key objectives of Emilia-Romagna regional policy has been to increase competitiveness and stable income and employment levels investing on the 'knowledge economy' and on stronger connections between research and business systems. It has developed a **network of industrial research and technology-transfer laboratories and innovation centres** aimed at establishing a large and widespread infrastructure, enabling scientific and technological know-how circulation to foster innovation. Ever since Regional Law No. 7 on Innovation was approved in 2002 (the first in Italy), the basis of regional policy have been to **exploit the potential of technological innovation** that can be transferred from local scientific and technological know-how centres (especially universities and research establishments) to the economic system, which has proved to be extremely dynamic and innovation-driven despite the fact that it consists mainly of small and medium-sized businesses.

Since then, the Regional Authority in partnership with universities and research bodies, has created and developed the Regional High Technology Network, currently including 96 facilities, comprising **82 industrial research laboratories** and **14 innovation centres**. The industrial research laboratories are either public and/or private mainly engaged in industrial research as well as in the disclosure and transfer of the results of such research for business use .

Moreover, the Region has invested in the **Technopoles**, which are home to the Laboratories and Centres of the Emilia-Romagna High Technology Network, equipped with state-of-the-art research tools and staff dedicated to activities and services designed to meet companies' needs, favouring also their national and international outreach. They include service facilities for dissemination, demonstration and information activities, as well as premises and facilities to host private research laboratories, innovative companies and spin-offs.

In recent years the Region has also developed a cluster policy, promoting the set up of 7 **Clust-ERs**, created as communities of public and private bodies aiming at promoting innovation and contributing to increase the regional competitiveness according to the regional S3. Research laboratories and innovation centres belonging to the High Technology Network team up with the businesses and the higher education system to make up the inter-disciplinary critical mass necessary to multiply opportunities and develop strategic projects with a high regional impact.

The High Technology Network is not covering the overall **scientific and technological equipment** present in the region: in fact, according to an *ad hoc* survey, there are 116 RIIs active in Emilia-Romagna, in large part located within universities and research centres. RIIs have been set up and function thanks to private and public resources, counting on regional, national and EU funds. As for the regional sources, they are connected mainly to the ERDF Operational Programmes on different objectives and actions that encompasses the specific ones dedicated to RIIs.

A further element that characterizes Emilia-Romagna is the presence in the region of infrastructures and skills for the collection, processing and management of huge amounts of **data** for scientific research and for their industrial and social application. Data that can become the raw material for a new economy able to face the great global challenges, from climate change to the digital transformation of industry. The value that can be obtained from the management of large amounts of data is destined to grow and Emilia-Romagna is taking the challenge, counting on important network infrastructures and on a "Big Data Community" which concentrates 70% of the computing capacity of the entire country, with over 1,800 researchers, of which 200 from international universities, making **Bologna the Italian capital of high performance computing** in everything related to this domain. The Region is undertaking a number of policy actions towards the development of a 'data economy' and a 'data-based ecosystem' including the investment based on the ERDF Actions 1.5.1 (the policy instrument chosen in the INNO INFRA SHARE project for Emilia-Romagna), together with the project for the relocation in Bologna of the European Centre for Medium-range Weather Forecasts (ECMWF), the National Meteorology Agency 'Italia Meteo', the Competence Centre BI-REX for I4.0, support to research-industry collaborative projects and measures for human capital enhancement. Within this framework, the present Action Plan aims at contributing to strengthen the overall regional action.

3. Lessons learnt from partners' experiences

Thanks to the activities carried on during Phase 1 of the project we had the opportunity to get information on and get inspiration from a number of good practices carried out by the partners. The partners meetings, the study visits, the peer learning meetings as well as the learning workshops allowed to exchange and reflect on several aspects useful for the design of the Action Plan to be implemented in Emilia-Romagna. Most relevant partners' experiences taken into account are:

1. The policy instrument 'StrategieWerkstatt' - Strategy Workshop: Industry of the Future of Saxony - FutureSax, led by the Saxon State Ministry of Economic Affairs, Labour and Transport. It consists of a platform for the improvement of the regional industrial policy through an open, continuous, interactive communication and strategy building process. The platform gathers stakeholders and actors from the triple helix which analyse and discuss the current state of play of the industry development and of the related policy, future trends and regional foresight scenarios for the industry and the challenges which are to be tackled by industry and research and related policy measures. The instrument aims at defining policy guidelines for a sustainable industrial development and the identification of projects for its successful implementation. This instrument has been identified as a reference for the improvement of the governance needed to implement the Emilia-Romagna actions related to its policy instrument.
2. The outstanding experience of Skane Region, deepened thanks to the good practices which have been analysed and the Study visit carried out in May 2018, related to their world class research infrastructures and the surrounding (integrated) ecosystem. In particular:
 - a. Max IV and ESS infrastructures, integrated to the local innovation ecosystem and with national relevance as well as international outreach
 - b. NanoLund (at Lund University) with its connections with ProNano (pilot production facility) and the big research infrastructures of the area (Max IV and ESS)
 - c. Medicon Village, showing how to exploit research infrastructures connecting them to the education and business systems and exploiting them for socio-economic development, business growth and new entrepreneurship (with Health2B accelerator and SMILE incubator).
 - d. CanFaster, integrating the skills components and in particular the PhDs contribution to build strategic alliances internationally
 - e. Material Business Centre and Open Lab Skane, both based on partnerships among different actors and aimed at exploiting the research infrastructures of the areas according to a clear strategy and thematic focus.
3. The good practices of North Brabant, in particular:
 - a. the High Tech Campus Eindhoven, where research infrastructures are integrated in an efficient 'campus-based' ecosystem which facilitate R&D by providing innovation services and animating an innovation community; basic principles are diversity of actors involved, including 'connectors', maintenance of a high (international) reputation (branding), responsiveness to needs, inclusive governance and 'adaptive' strategic approach
 - b. PhotonDelta, the alliance of stakeholders of the Brainport region to achieve the growth of a new ecosystem in integrated photonics to serve the business sector (including SMEs)
 - c. SOLLIANCE, the international partnership dedicated to the solar industry and involving public and private actors (and funds) which share a governance model based in regular meetings and reports on project implementation
 - d. The Automotive Campus, as an example of integration of research (including world-class test facilities), education, industry and the Government, acting as a national/international hub, location and networking place for the automotive sector, dedicated also to talent attraction, internship, education/industry interaction.

Part III – Details of the actions envisaged

Summary of the actions

Three main actions shape the Action plan:

- Action 1 - GOVERNANCE: for the integration of the new/upgraded RII into the regional R&I ecosystem
- Action 2 - PROMOTION AND COMMUNICATION: to promote the knowledge on the new/upgraded RII at regional, national international level and foster its exploitation and collaboration opportunities
- Action 3 - SKILLS: to improve skills of RII users to exploit its potential

Actions with details

ACTION 1: GOVERNANCE: Development of new RIIs and their integration in the existing ecosystem

- **The background**

Governance issues have been highlighted as very relevant for the development of operations and their effectiveness, particularly in regions with a rich and complex ecosystem. The knowledge acquired thanks to study visits (in Eindhoven, Flanders and Skane) and the peer learning meetings have provided concrete examples and suggestions useful to shape the Governance Action.

As outlined in the previous Chapter 3. “Lessons learnt from partners’ experiences” the policy instrument ‘StrategieWerkstatt’ - Strategy Workshop: Industry of the Future of Saxony - FutureSax, led by the Saxon State Ministry of Economic Affairs, Labour and Transport represents a reference for the improvement of the governance of the ecosystem to integrate the new investment. FutureSax consists of a platform for the improvement of the regional industrial policy through an open, continuous, interactive communication and strategy building process. The platform gathers stakeholders and actors from the triple helix which analyse and discuss the current state of play of the industry development and of the related policy, future trends and regional foresight scenarios for the industry and the challenges which are to be tackled by industry and research and related policy measures.

Moreover, the following practices have been recognised as references for the governance issue, considering also the physical location in one specific area, and the connections among different organisations:

- High Tech Campus Eindhoven (North Brabant), where research infrastructures are integrated in an efficient ‘campus-based’ ecosystem which facilitate R&D by providing innovation services and animating an innovation community. Relevant basic principles are the diversity of actors involved, including ‘connectors’, responsiveness to needs, inclusive governance and ‘adaptive’ strategic approach
- the Automotive Campus (North Brabant), as an example of integration of research (including world-class test facilities), education, industry
- Solliance (North Brabant), the international partnership dedicated to the solar industry and involving public and private actors (and funds) which share a governance model based in regular meetings and reports on project implementation

- NanoLund (Skane), with its connections with ProNano (pilot production facility) and the big research infrastructures of the area (Max IV and ESS)
- Medicon Village (Skane), showing how to exploit research infrastructures connecting them to the education and business systems and exploiting them for socio-economic development, business growth and new entrepreneurship (with Health2B accelerator and SMILE incubator).

- **Action and objective**

The action is dedicated to the governance and the integration of the new/upgraded RII in the regional research and innovation ecosystem. The general objective is to support the implementation of the investment co-funded by ROP Action 1.5.1. to secure a strong connection of the infrastructure to the innovation ecosystem so as to fully exploit its potential in the long term. The RII project funded by the Emilia-Romagna ROP will involve relevant stakeholders but requires a strong integration within the regional ecosystem, and the Governance action complements the investment foreseen on the hardware and software infrastructure and the development of use cases.

In particular, actions will be implemented to integrate the new/upgraded research and innovation infrastructures with existing ones and their related key actors, namely those participating to the Big Data Association (¹), the [Clust-ERs](#), the newly born [Competence Centre BI-REX](#), the S3 Forum (dedicated to the revision and update of the regional S3), as well as the [Big Data Technopole](#) currently being developed.

Moreover, it will be carried out a mapping of past and running activities related to the 'data economy' and of potential users and additional actors - mainly companies - in order to widen the number and typology of actors which may be involved in the new RII and benefit from it. On the basis of that, a 'big data enlarged community' will be created.

A Regional Strategic Programme for 'data economy' will be created, including a focus on governance, with the objective of adopting a strategic approach to RII exploitation for territorial development.

In summary, specific foreseen actions are:

- Design of the Regional Strategic Programme for 'Data Economy' (2019)
- Mapping of actors of the data economy and creation of a Data Economy Community (2019)
- Organisation of meetings for the presentation of the results of the call for expression of interest for the new/upgraded RII to the members of the Big Data Association, regular updates on the implementation of the project(s) and discussion on connections and future collaborations with the Big Data Association members (2019-2020)
- Organisation of meetings for the presentation of the results of the call for expression of interest and for regular updates with the Clust-ER managers and Board of Directors, as well as with the Steering Committee of the Competence centre BI-REX, in order to discuss the possible exploitation of the RII by Clust-ER and BI-REX members (2019-2020)
- Support to the participation of the new/upgraded RII to the S3 Forum to integrate it into the system (2020)
- Start of an international Foundation with the aim to consolidate, promote and exploit scientific and technological assets related to big data at the regional, national and international level, to improve their economic and social impact.

¹ The "Big Data Association" gathers research centres, universities and ASTER with the mission of: facilitating sharing and joint exploitation of existing results, knowledge, capacities and frameworks in the area of Big Data; boosting cooperation between local public and private actors and maximizing the leverage effects of mixed investments; planning and implementing joint R&I and policy actions at national, European and international level; promoting researcher careers, training and mobility in the big data domain.

- **Target groups of the action**

- Big Data Association
- Clust-ERs
- Competence Centre BI-REX
- Innovation ecosystem stakeholders (universities, research centres, industries, ...)

- **Governance structure of the Action and players involved**

- Emilia-Romagna Region, as policy instrument owner, main governance actor coordinating the 'Committee for Growth' (*Tavolo per la Crescita*, including regional stakeholders) and the regional universities 'Rectors Conference' (*Conferenza dei Rettori*)
- ASTER, in charge of supporting the implementation of the Action and the connection among different actors and initiatives
- new RII managing organisations, involved in the actions for the integration with the ecosystem
- Bologna Metropolitan Area, the public authority involved in the attraction of investments contributing to the visibility of the infrastructure
- other organisations of the ecosystem, contributing to the definition of relations and future actions enabling the full exploitation of the new RII potential

- **Timeframe:** 2019-2020

- **Costs:** 150.000 Euro (staff costs, excluding direct costs of meetings covered by other resources)

- **Funding sources:** Regional funding (*ASTER Annual Plans and Technical Assistance*)

- **Indicators to measure results and potential impact of the action**

- *Outputs*

1. 1 Regional Strategic Programme
2. 1 report on "data economy" actors/actions mapping
3. Definition of the governance model of the new RII infrastructure including connections with relevant stakeholders groups (Big Data Association, Clust-ERs, BI-REX): at least 6 meetings are foreseen
4. Participation of the new RII to S3 Forum
5. 1 International Foundation and related governance system (including the new RII)

- *Result indicators*

- a) (Wide) number of actors involved in the development of the data economy
- b) (New) relations and collaboration between RII and stakeholders
- c) (New) initiatives on data economy started and developed

- **Risks related to the Action and their mitigation**

- The complexity of the innovation ecosystem, with many different actors, requires a strong commitment by the Regional Government (and ASTER) to secure coherence of actions and strong connections among all players involved.
- As the project funded by the ERDF ROP is starting in 2019, preliminary actions will be carried out in the first year of Action plan implementation, and further actions will be discussed with new RII managing organisations as soon as the implementation of the project is at a sufficient stage of development

ACTION 2: PROMOTION AND COMMUNICATION: promote visibility and collaboration at regional, national international level

- **The background**

The capacity to be visible and to reach their targets is a key issue for RIIs, which need specific promotion and communication actions aiming at informing potential users and attract clients and partners. RIIs have several targets: both local and international, from researchers to business and social actors, as well as public and private funding bodies, etc. From the perspective of the public authority, funding the set up and running of a research and innovation infrastructure and its impact at the local level is of primary importance. In particular, the benefits for the business sector including SMEs is always a priority, even when SMEs are not the primary 'clients'.

These principles were highlighted by all partners, recognising the need to count on a clear communication and promotion strategy and plan, encompassing several measures to reach different targets, from physical or virtual communication tools (leaflet, website and platforms, etc.), to the organisation of meetings, events and other actions giving visibility to the research and innovation infrastructures and attracting interest from different communities of actors.

Communication objectives are strictly linked to the integration of RII in the regional ecosystem, but they have to be also forward looking, both in terms of geographic target with and international outreach, and in terms of time, looking ahead, and being able to anticipate future needs.

Skane, Flanders and North Brabant practices have been inspirational to define a set of actions which could be developed while the infrastructural project (the new RII) is implemented.

As outlined in the previous Chapter 3. "Lessons learnt from partners' experiences", several practices have inspired the Promotion and communication actions, mainly:

- Max IV and ESS infrastructures (Skane), with their (visual) communication tools and promotional events organised both in the region and in Brussels, for example, as well as the international collaborations and agreements they have been managing from the very start of their creation. Main elements which inspired the content of the Action are: web sites, videos, events.
- Medicon Village (Skane), with its clear brand and its effective outreach at local and international level. Main elements which inspired the content of the Action are: the 'ecosystem approach', the web site, integrated presentation (including the different facilities and related services of the area where the Village is located)
- the High Tech Campus Eindhoven (North Brabant), a well recognised resource for the territory (research and business community) with an extraordinary international outreach and strong reputation. Main elements which inspired the content of the Action are: the brand, the system approach (open innovation, integration, ecc.), the international profile.

- **Action and objective**

The objective of the action is to create a strong identity and knowledge about the new RII integrated into the regional ecosystem, through a clear and effective message shaping the distinctive profile of the infrastructures and making them attractive for the local and international potential users.

The RII project, funded by the Emilia-Romagna ROP, includes investments for strengthening the physical infrastructure (the scientific and technological equipment, hardware and software) and the development of access (and use) services, plus the development of some use cases (on vertical domains). The Promotion and Communication Action adds value contributing to increase the visibility of the investment at regional, national and international level, including the development of strategic projects with international partners.

The following actions are foreseen:

- Creation of the identity and the messages to be communicated, defining the name, logo and visual identity and elaboration of a communication strategy to reach the targets through specific instruments (2019)
- Production of communication/promotional (Italian/English) material (leaflet, powerpoint presentations, videos, ...) (2019-2020)
- Website design and implementation (2019-2020)
- Organisation of a public event in Brussels (2019)
- Organisation of events to give visibility to the new RII, e.g. in the occasion of [R2B- Research to Business, the Italian exhibition](#) on industrial research and technology transfer promoted by Emilia-Romagna Region since 2005 (2019 and 2020)
- Communication campaign towards users and partners at national and international level and target involvement through dedicated tools (i.e. inbound marketing, to create awareness and attract new targets and lead generation, to generate new lists of potential interesting contacts/beneficiaries) (2020)
- Promotion of international collaborations and alliances (2020) and development of large scale projects.
 - **Target groups of the action**
 - Research actors at regional/national/international level
 - National and foreign companies, including SMEs
 - Public and private institutions (users and partners)
 - Researchers and graduate
 - **Governance structure of the Action and players involved**
 - Emilia-Romagna Region, as policy instrument owner and main actor in the design and implementation of the action
 - ASTER, in charge of supporting the implementation of the Action
 - New RII managing organisations and existing RII (CINECA, INFN, universities and research centres), as partner and beneficiaries of the action
 - **Timeframe:** 2019-2020
 - **Costs:** 150,000 Euro (excluding inbound marketing and lead generation)
 - **Funding sources:** Regional funds (both ERDF ROP and other Region's budget lines)
 - **Indicators to measure results and impact of the action**
 - *Outputs*
 1. 1 conceptual and visual identity kit
 2. 1 set of communication material
 3. 1 website

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4. 1 public event in Brussels + events during major events in the region
 5. 1 communication campaign
 6. (4) new relations with potential partners

- *Result indicators*

- a) number of actors aware of the new RII
- b) number of visits of the website
- c) number of participants to events
- d) number of interested potential partners

- **Risks related to the Action and their mitigation**

- Lack of funds: review of the communication/promotional plan (objectives, actions and expected results) to adjust it to available resources
- Difficulties in passing the right message in the preliminary phase when the new RII is still not up and running: feedback from test cases will be collected to shape specific contents
- Difficulties in reaching the right targets due to the complexity of the topics covered and multiple application possibilities: exchange with target representatives on specific contents.
- As the project funded by the policy instrument (ERDF ROP) is starting in 2019, preliminary actions will be carried out in the first year of Action plan implementation, namely the communication strategy will be shared with the new RII managing organisations and further actions will be discussed as soon as the implementation of the project is at a sufficient stage of development

ACTION 3: SKILLS: strengthening technical and management skills

- **The background**

Skills have been highlighted by all project partners as key for the full exploitation of RII potential both in terms of their management, functioning, relations with the business sector and in terms of knowledge and readiness of research actors, companies and the overall ecosystem to use and exploit RII potential. This was discussed during the peer review in Dresden as one of the topics of FutureSax (in particular as for new jobs needs in the industry of the future), as well as during the study visit in Skane, when meeting the Industry Manager at MAX IV, the coordinator of CanFaster and the director of Medicon Village. RIIs represent a significant resource for education and training, as underlined by NanoLund director, as well as for entrepreneurship promotion and support to talent mobility, which can be additional tasks performed by RIIs. This was shown also by the Skane and Eindhoven examples, namely Automotive Campus and Solliance. The mentioned good practices indicated the relevance of skills and the opportunity to create the right competences needed by research organisations (in particular the new RII) and companies, as well as the training potential of RIIs such as in the case of MAX IV or High Tech Campus Eindhoven.

The topic of skills was also discussed at the November project conference in Brussels with Brainport representatives, with a specific focus on talent mobility and talent attraction. The example of the good practice 'People and Talent' was mentioned and it was recognised as highly relevant to strengthen the action on Skills, with particular reference to the design of a talent mobility/attraction/retention programme. An additional activity, namely a visit and workshop in Eindhoven, was proposed and approved, and finally included in the Action Plan. The visit and meetings in Eindhoven will include a combination of hands-on, inspirational case and strategy presentations, interactive discussions (workshop) and experience sharing with peers and experts. The main focus will be on Eindhoven Region strategies and tools to attract and retain talents and in particular on their web tools in order to develop the Emilia-Romagna ones.

- **Action and objective**

The objective of the action is to increase the knowledge and competencies of different actors of the R&I regional system, from students and researchers to companies and other potential direct and indirect users of the new RII. The aim is to increase the number of trained people able to work in the areas of data economy, for the forthcoming research and application needs that the new investment and related actions will express. An increased request of researchers and young talent by research organisations (and companies) and of skilled people by the industry is expected. The action has the aim to improve the capacity of the ecosystem to satisfy this need.

The following actions regarding skills strengthening are foreseen:

- design and organisation of training modules for graduates, on topics related to the new/upgraded RII (2019)
- design and delivery of awareness/training modules to companies to create a general awareness and knowledge on the areas of possible exploitation of the new/upgraded RII (2019/2020)
- implementation of doctoral programmes on areas related to the new/upgraded RII
- creation of a PhD community and organisation of actions to create connections among PhDs and companies (2019/2020)
- promotion of entrepreneurial skills related to RII exploitation and data economy (2020)
- study visit to Eindhoven and workshop at Brainport Development with People Team to get insights on their good practices and advice on the design and monitoring/implementation of the talent attraction/retention service, aiming at increasing (tech and IT) skills availability to respond to new

needs linked to the new RII and the emerging (connected) data economy.

- design of a talent mobility/ talent attraction service (web tool based) to promote students and researchers mobility and the attractiveness of the new infrastructure at the international level (2019).

- **Governance structure of the Action and players involved**

- Emilia-Romagna Region, as policy instrument owner and main actor in the design and implementation of the action
- ASTER, in charge of supporting the implementation of the Action
- Emilia-Romagna Universities
- Training organisations, as partners for design and delivery
- Business association, as partners of the training action towards companies
- Business incubators, as partner for entrepreneurship promotion actions
- ER.GO (Regional Authority for the Right to Higher Education in Emilia Romagna)

- **Target groups of the action**

- Graduate students
- Researchers (PhDs)
- Companies, in particular SMEs
- Foreign students and researchers
- New entrepreneurs

- **Timeframe:** 2019-2020

- **Costs:** 20,000 Euro (excluding costs for implementation of training actions) + 6,160 Euro for the implementation of the additional activity 'Study visit to Eindhoven and workshop at Brainport Development'

- **Funding sources:** Regional funds (20,000 Euro) + Interreg Europe Funds (6,160 Euro)

- **Indicators to measure results and impact of the action**

- *Outputs*

1. training modules for graduate and delivery
2. training modules for companies and delivery
3. doctoral programmes
4. 1 PhD community
5. entrepreneurship promotion
6. talent mobility/ attraction service

- *Result indicators*

- a) number of trained graduates
- b) number of trained companies

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- c) number of PhDs involved
 - d) 1 talent mobility/ attraction service designed

- **Risks related to the Action and their mitigation**

- Lack of resources: strategic partnerships with stakeholders (universities and schools, training centres, business associations, companies) to develop a cost sharing model
- Lack of participants: information and promotional campaign (with current communication tools and media channel) to raise awareness and create the demand
- Excess of participants: increased resources, alternative delivery tools (MOOC, webinar, etc.)

Date: _____

Signature: _____

Stamp of the organisation (if available): _____