ACTION PLAN

Emilia-Romagna Region

ART-ER S.cons.p.a.

REGIONS 4FOOD
Interreg Europe

ART-ER
ATTRACTIVENESS
RESEARCH
TERRITORY

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PART I
Introduction

General information of the Partner

PROJECT	REGIONS 4FOOD
PARTNER ORGANISATION CONCERNED	Partner 4 - ART-ER
COUNTRY	Italia
NUTS2 REGION	Emilia-Romagna
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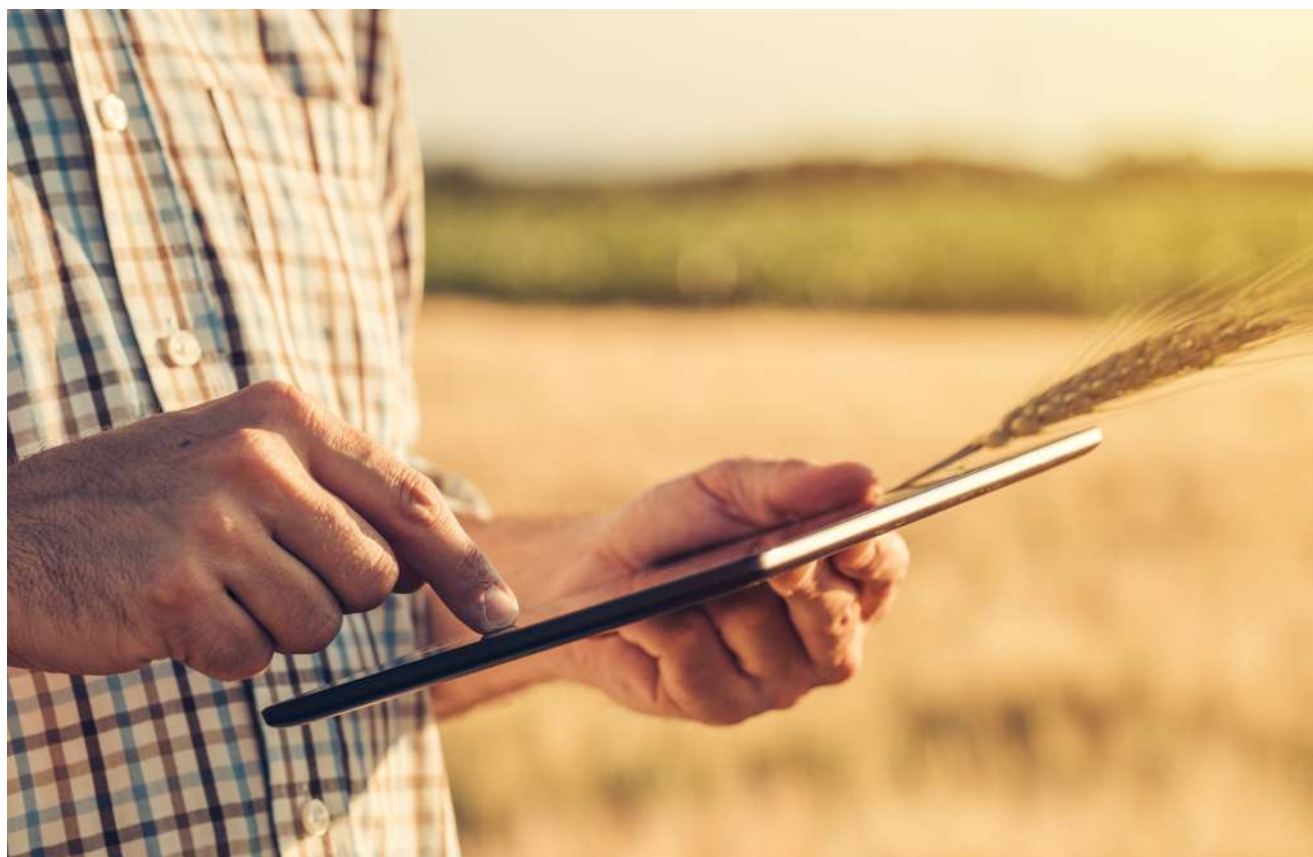
REGIONS 4FOOD Project

Objectives

REGIONS 4FOOD project focuses on maximising the innovative potential of all actors of the agri-food value chain, through improving regional policy instruments to promote digitisation and better face new challenges in relation to ICTs.

> **The aim of REGIONS 4FOOD project is to better exploit ICTs potential and deliver innovation to agri-food industry and hence, smart progress and growth.**

Specific objectives of REGIONS 4FOOD project are:

- To bring together regional authorities / RIS3;
- To involve quadruple helix actors of the agri-food value chain and connect the world of research and agri-food companies;
- To guide future agri-food policies and strategies;
- To generate added-value from R&I and Smart Specialisation to agri-food industry.
- To promote public-private governance mechanisms.

Outputs and outcomes

For each region, the issue of digital innovation in the agri-food sector has been approached in relation to the specific policy instrument addressed.

The learning process throughout the project lifetime has concluded with the preparation of seven Regional Action Plans to improve these Policy Instruments. The Action Plans are the main project output.

However, other outcomes from the REGIONS 4FOOD learning process also deserve recognition:

- An increase in the professional capacity at all levels: staff, organisational, regional and beyond the project.
- A reinforcement of cooperation among quality helix actors, both at regional and interregional level.
- Contribution to the new programming period by providing strategic recommendations.

To achieve those objectives and results, relevant regional policy organisations from seven EU countries have worked together to exchange their experiences and share practices on the above-mentioned policy issue.

The REGIONS 4FOOD partnership is a balanced combination of regions of varying development levels and also in terms of geographical coverage.

As a result of intensive work lasting over three years, partners have produced their regional Action Plans.
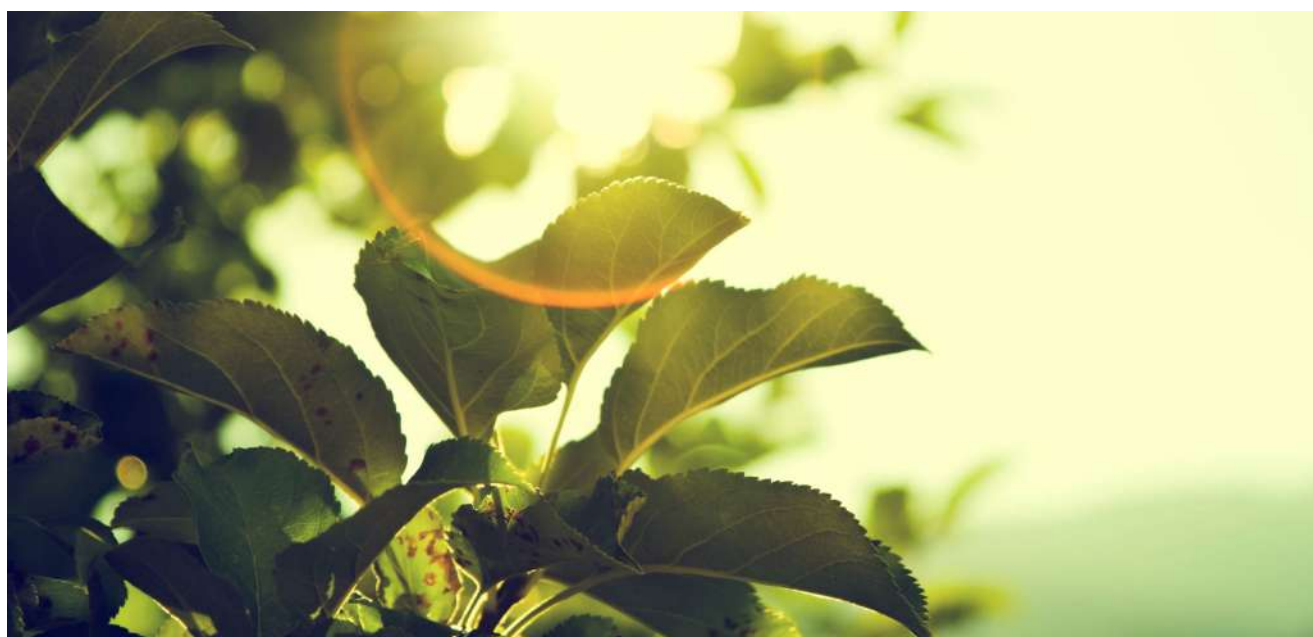
Overall and specific objectives of the Action Plan for Emilia-Romagna

An integrated regional strategy promoting cross-cutting competencies and quadruple helix engagement in the agri-food value chain.

PART II
Policy Context

The Policy Instrument

Name of the policy instrument addressed	2014-2020 European Regional Development Fund, Regional Operational Programme Emilia-Romagna Region
Type of policy instrument	Investment for Growth and Jobs programme

Background and rationale
The regional policy context of the agri-food sector

Overview of the regional agri-food sector

The agri-food sector is an economic engine for Italy and, in particular, for the Emilia-Romagna region. This sector is characterised by a high level of specialisation and a great number of products bearing the prestigious PDO (Protected Designation of Origin) and PGI (Protected Geographic Indication) labels. The sector covers the whole "from farm to fork" value chain: starting from farms and all the way to consumers' plates.

The agri-food system in Emilia-Romagna counts around 65,000 farms (80,000 workers), while the number of companies operating in the food and beverage sector is 4,659. This is equal to 11.9% of the total manufacturing sector. The whole agri-food sector employs over 300,000 workers.

Emilia-Romagna was the first Italian region to adopt specific rules on the production of quality-controlled products, as well as the first to adopt a law on food traceability.

Emilia-Romagna specialises not only in producing culinary treasures, but also in food processing machinery. Indeed, the area between Reggio Emilia and Modena accounts for the highest concentration of agricultural machinery production in Italy, whilst between Bologna and Parma the production of industrial food packaging machines is the most competitive on a global level.

Updated data (last available report: 2019) show that the agri-food sector reached record numbers in the three-year period 2015-2017and consolidated this in the year 2018, with 4.7 billion euros (+ 0.4%) in value of agricultural production.

The growth trend for the food industry is also confirmed (aggregate turnover +0.5%). Employment has settled at 70,000 units and the presence of women among self-employed workers is increasing.

In 2018, the favourable trend of agri-food exports continued, for a value of almost 6.5 billion euros (+ 3.6%), equal to 10.2% of total foreign sales of Emilia-Romagna companies. Import is also growing, reaching 6.55 billion euros (+ 4.1%), with the trade balance ending substantially in balance.

Education, training and research

The regional agri-food system is recognised internationally, not only for combining tradition and innovation, but also for achieving high standards of food quality and safety.

Food excellence is nurtured through educational institutions, including ALMA, Italy's most prestigious cookery training school, a large number of secondary schools specialising in hospitality and catering and Chef to Chef, an association grouping over 50 chefs to promote evolution in regional cuisine and its national and international reputation.

Moreover, a number of universities in the region run masters and postgraduate qualifications in relevant fields. These cover a range of digitalisation topics, such as Big Data, and topics directly related to agro-food, such as Masters in Food Innovation, in Agricultural vehicle technology and in food safety.

Digitalisation in agri-food

The agri-food sector in Emilia-Romagna has seen developments in terms of innovation and investment in digitalisation. These include ICT systems, equipment and machineries that are used for a range of activities, from transformation and packaging plants, logistics and food by-products, to waste valorisation.

According to a report published by Nomisma in 2019, in Emilia-Romagna 26% of farms have invested so far in digitisation tools (operating machines with variable dosage; tractors with assisted driving; software, control units, maps and sensors; systems of collection, integration and analysis of information or big data) against a national percentage of 22%. Crops and livestock are by far the best performing sectors in this context.

According to 29.9% of people interviewed for the report, farms have limited economic resources to invest in digitalisation. A further 9% did not invest because they lack the required managerial skills and another 7.5% relied on contractors able to manage this equipment. These barriers are coherent with those profiled in the 2019 REGIONS 4FOOD survey, as shown below.

Digitisation and the relevance of Big Data represent a significant challenge for many agri-food industrial areas (food production, food safety, agriculture, primary production and animal/ plant breeding, industrial biotech, enzyme and microbial discovery). Areas that may benefit most from an innovative use of Big Data are:

· Consumer health, by monitoring food-related data and personal recommendations;

· Economy, logistics and metagenomics, for the characterisation of food spoilage by predictive analytics;

· Quality control based on data collection across the whole value chain, monitoring, traceability, official control of production quality and smart labelling;

· Support to producer organisations and production planning;

· Full data access for scientists by satellite data and precision farming.

Regional policies to sustain innovation in the agri-food sector

Emilia-Romagna Region uses the European Regional Development Fund (ERDF) to foster industrial research and to boost innovation in the agri-food value chain.

In the programming period 2014-2020, through Measure 1.2, Emilia-Romagna Region has promoted large-scale innovation projects addressing S3 areas, including the agri-food sector. 10 projects (corresponding to around 7 million € of regional contribution) relate to digitisation in agri-food.

Among the various projects and initiatives financed by this ERDF funding, it is important to mention the Clust-ER. These communities of public and private subjects are based around the research and innovation centres already present in the regional High Technology Network. In addition, they bring in enterprises and higher education representatives. In this way, they create a critical mass of interdisciplinary knowledge, which should be used to take forward new opportunities and strategic projects. There are currently seven Clust-ERs, among which the Clust-ER Agrifood[1]. These associations are coordinated by the REGIONS 4FOOD Partner ART-ER and have received funding through various calls. The most recent call was published in July 2020 and has provided funding for an updated activity plan. More details on this call are provided below, in the context of specific actions in this Action Plan.

Emilia-Romagna is also actively involved in the European Innovation Partnership for the productivity and sustainability of agriculture (PEI – AGRI). PEI-AGRI activities promotes Operational Groups that foster collaboration among the various actors to merge and make the best use of different knowledge. Farmers, researchers, consultants and, where relevant, businesses, environmental groups, consumer groups or NGOs, cooperate to contribute to greater innovation and competitiveness of businesses and supply chains. Emilia-Romagna has assigned 50 million € to these activities and 93 Operational Groups are currently active. In this framework, they have any invested resources in training, business consultancy and projects. Around 14 million € is dedicated to projects that deal with climate change and, among these, 1.4 million € (6 projects) is dedicated to projects that deal with digitisation.

Barriers and needs in terms of digitalisation in agri-food

The initial survey carried out within the REGIONS 4FOOD project provided a good understanding of the regional ecosystem in the agri-food sector and of the chance to engage directly with stakeholders and representatives of this ecosystem. The 2019 survey carried out within REGIONS 4FOOD then provided interesting results about barriers that affected the digitisation of the agri-food sector, and the needs to be addressed to foster this change. The following table provides an overview of the results.

NEEDS	BARRIERS
A regional roadmap with a coherent policy mix boosting digitisation in the agri-food sector. This should cover, among others, measures to: support projects that could turn digital solutions into viable management practises by enhancing a living lab approach; invest in existing platforms to integrate IoT devices.	Existing gaps between ICT/sensor solutions available on the market and adoption in operational conditions (typical when adapting a technology from one sector to another). They require extra time to be adapted and tested in operational conditions.
Methods and tools enabling analysis or visualization of existing data from multiple sources (devices in fields, factories, trucks) and types (proprietary, open data, etc.). There is a need to harmonise significant amounts of data, coming from different sources and to made them available in a standardised form, on an integrated platform.	High fragmentation of needs from the many different actors along the "farm to fork" value chain. This complicates allocation of resources / investments and provision of relevant information.
Cross-cutting competencies / professional figures in the agri-food sector. This includes competences both in agronomy and in relevant technologies for digitalisation.	The average size of farms is 12-15 hectares, much lower than in other countries, which affects adoption of ICT solutions (low return on investment / benefits not visible on short term).
Tailored solutions for outdoor agriculture (devices). Many IoT solutions currently available are not perfectly designed for outdoor farming.	Lack of awareness about potential of digitalisation and lack of related technical expertise to use the technology adequately. Very few operators see the potential of ICT solutions as quality enhancers (particularly in primary production). Farmers are not currently being involved at the beginning of an innovation process.

SWOT analysis

The following SWOT analysis merges an initial analysis carried out in the project, with results of the above-described survey and with additional elements that emerged during the last year of Phase 1. This updated SWOT analysis provides the background for the Actions defined for Emilia Romagna in the REGIONS 4FOOD project.

STRENGTHS	WEAKNESSES
1. High concentration of PDO and PGI products.	1. Marginalisation of internal areas.
2. Excellence in industrial research thanks to universities and the High Technology Network.	2. Digital divide between lowlands and mid-high territories.
3. High propensity to export.	3. Poor digital integration capacity in the agri-food sector.
4. Policy tools designed to boost innovation and collaboration between research and firms, with some actors (e.g. Clust-ERs) in a good position to support interaction and innovation in the agri-food sector.	4. Small size farms, with limited capacity to adopt innovative measures / to digitalise their activities.
	5. Lack of intermediate / cross cutting profiles, supporting interaction between farmers and ICT companies.
	6. Limited co-creation initiatives that involve users and farmers and limited interaction between traditional and innovative components of the value-chain.

OPPORTUNITIES	THREATS
1. Open data availability.	1. Soil consumption.
2. Policies favouring participation in international networks.	2. Anti-scientific approach/attitude among some more traditional components of the value-chain.
3. Generational change in agriculture.	3. Confusing scenario related to the ownership of data.
4. General trend (EU / national / regional) towards co-creation and quadruple helix engagement strategies in various economic sectors.	4. Potential loss of competitive position, if the transition towards digitalisation is not supported by competent professional figures.
5. General trend (EU / national / regional) towards funding and support actions for digitalisation in agriculture (Agro 4.0).	5. Uncertainty about resource allocation in future programming periods, especially following the COVID-19 pandemic.
6. Reallocation of resources in the final phase of the 2014-2020 period, leading to previously unforeseen calls.	

Lessons learnt from other REGIONS 4FOOD partners

Regional stakeholder group meetings arranged in Emilia-Romagna during the REGIONS 4FOOD project were used to review the good practices proposed by other partner regions. ART-ER also took advantage of study visits organised in 2019, attending with regional stakeholders and sharing learnings with other members of the stakeholder group.

The sections above provide an overview of the needs identified in the region and of the policy framework in which the project is situated. The choice of Actions (as described below) and, as such, of Good Practices from other REGIONS 4FOOD partners, looks to answer the needs that can feasibly be addressed in the current policy context and at the current time:

- Lack of cross-cutting competences in the agri-food sector
- Lack of initiatives that adequately engage all members of the value chain (quadruple helix participation) in initiatives related to the development of the agri-food sector.

On this basis, ART-ER focused initially on 3 good practices, coming from Andalusia, Pays de la Loire and South Ostrobothnia. From these, the good practices from Andalusia and South Ostrobothnia were finally selected as those that could provide most input to the selected actions in Emilia Romagna. The specific input provided to each Action is described in the following section.

GOOD PRACTICES FROM ANDALUSIA MASTERS "DIGITALAGRI" - UNIVERSITIES OF CÓRDOBA AND MÁLAGA MASTERS IN DIGITAL AGRICULTURE AND AGRI-FOOD INNOVATION, UNIVERSITY OF SEVILLE	
Need in Emilia Romagna potentially addressed by this GP	As shown above, the survey and dialogue with the Regional Stakeholders Group showed that the lack of a professional profile that is characterised both with agronomic and ICT skills has become a significant barrier to promoting the agri-food ecosystem and to deploying digitisation processes in the agri-food sector.

Brief overview of GPs	Andalusia showed us that a key point in agri-food innovation is to invest in training and human capital. No innovation is possible without the creation of professional profiles that are able to understand farmers and growers needs, as well as ICT and technology solutions to address those needs. The Masters in Digital Transformation in the agri-food sector ("DigitalAgri") provides postgraduate specialisation in new digital technologies applied to the agrifood sector. It trains professionals to facilitate, support and promote digital transformation in rural areas. It covers topics and technologies such as sensors, IoT, cloud computing, food industry 4.0, precision agriculture, "BIG DATA", decision support systems, cognitive techniques and Artificial Intelligence, specifically applied to agri-food. The Masters in Digital Agriculture and Agrifood Innovation was created to respond to the demand for new profiles in the agri-food sector. It offers students the necessary skills to implement and lead agricultural digitisation and innovation projects. It trains professionals with the ability to combine traditional agronomic knowledge with the application of cutting-edge technologies (sensors, Big Data, Machine Learning, mechatronics, remote sensing, robotics, programming, 3D printing, smart irrigation, etc).
Learning process	Study visit, Andalusia – September 2019 Peer review on Action Plan draft, virtual – October / November 2020

GOOD PRACTICES FROM SOUTH OSTROBOTHNIA	
Need in Emilia Romagna potentially addressed by this GP	Work with regional stakeholders showed that digitalisation update is hindered by a lack of awareness about its potential. The innovation process does not promote sufficient engagement of all players in the food to fork value chain.
Brief overview of GPs	Innovation in the agri-food system is often hampered by the fact that solutions or innovation are not implemented or transferred into production efficiently. Agroliving Lab brings together users (farmers) and companies to improve the usability and acceptability of new ideas. The overall approach of South Ostrobothnia to foster innovation is to gather different part of the value chain and to treat users (farmers in a BtoB model or consumers in a BtoC model) as: · co-creators of innovation · a counterpart in finding problems and needs that must be addressed · a partner in testing and fine-tuning innovative product and services
Learning process	Study visit, Seinajoki - September 2019 Peer review on Action Plan draft, virtual, October 2020

Contribution of the Action Plan to the improvement of the policy instrument

Overview

The analysis of opportunities to improve the selected policy instrument took into consideration the fact that the end of the programming period was approaching and aimed to make immediate changes, as a firm foundation for future change.

Thus, the Action Plan proposes two interlinked Actions that can contribute to the improvement of the 2014-2020 ERDF ROP Emilia-Romagna Region:

Action 1: Regional actions to promote cross-cutting competences in the agri-food sector;

Action 2: Regional actions to engage all members of the value chain (quadruple helix participation) in development of the agri-food sector.

Policy Improvement as a basis for Actions 1 and 2

ART-ER has managed to achieve an initial policy improvement that sets out an operational framework and foundation for the two Actions (both described in detail in Part IV).

Given its structure and tasks, ART-ER identified the Clust-ER Agrifood (see above) as the key stakeholder to work with in order to implement modifications inspired by the project. However, in order to meet the above needs it was key to incentivise cooperation between the Clust-ER Agrifood and other relevant stakeholders, such as the Clust-ER Innovate. This was in line with the above-described REGIONS 4FOOD experiences that showed the importance of cooperation between stakeholders with different expertise, in order to enhance quadruple helix involvement.

The first step was to influence Clust-ER funding modalities, in order to include eligible activities that could go in the direction of REGIONS 4FOOD learnings and of the two Actions proposed.

ART-ER worked in close contact the Regional

Government of Emilia-Romagna and relevant stakeholders to design a call for proposal funding Clust-ER activities. The content was produced with direct input from interregional exchange, during the various learning events and with specific input from the Good Practices described above (and as further detailed in Part IV below).

The call for Clust-ERs, published on the Regional Official Journal (BUR) on 16/07/2020, lists the following activities that each Clust-ER can include in an Activity Plan in order to receive funding (max per Clust-ER 200.000€, from ERDF 2014-2020 and ESF 2014-2020):

- promotion of dissemination activities, favouring those organised in cooperation with other Clust-ERs and regional stakeholders;
- involvement of new typologies of innovators, with reference to civil society, citizens and third sector;
- development of strategic inter Clust-ER projects;
- development of a skill foresight analysis;
- feasibility studies for multidisplinary and innovative training in an inter Clust-ER perspective.

ART-ER's role is to support implementation of each Clust-ER's Activity Plan, promoting inter Clust-ER cooperation and coordination with other regional initiatives.

The Clust-ER Agrifood Activity plan includes a number of sections that are relevant to the next stages of the REGIONS 4FOOD Action Plan.

Chapter 4 of the Activity plan focuses on supporting the regional government in the identification of the skill trends and needs for the future. Among the tasks connected to this objective the following two are directly linked with Action 1 (as detailed below):

- Developing a skill foresight analysis to detect expected changes in the sector and their impact on the skills needed. This will consist in updating work undertaken in 2019 by the Tavolo di Formazione (working group on training), in cooperation with the other Clust-ERs and with ART-ER;
- Promoting and participating in inter-cluster feasibility studies to design to new multidisciplinary professional profiles through innovative training courses. In this context, the Agrifood Clust-ER will carry out studies to identify horizontal skills needed. It will also run practical laboratories for institutions and companies focusing on topics such as: IoT, blockchain and traceability, process digitalisation and quality of agri-food products and food waste management, etc.

Chapter 2 of the Activity plan focuses on developing connections with stakeholders to transform the region in an innovation hub recognised at international level. Among the tasks connected to this objective the following two are directly linked with Action 2 (as detailed below):

- Improving the open innovation platform EROI as a means to foster communication between members of the Agrifood Clust-ER and as a promotional tool. EROI[2] is used in cooperation with ART-ER and with the network of Clust-ERs to incentivise co-creation, connect innovation demand and offer and involve different regional stakeholders in communities of practice through exchange and debate.
- Involving different typologies of innovators in their events, including local stakeholders, civil society, citizens, and NGOs. They will be invited to events (i.e. focus groups) together with entrepreneurs to increase impact of innovation and knowledge transfer at territorial level.

This improved policy framework is directly relevant to the subsequently described actions as follows:

- Inter Clust-ER activities to promote multidisciplinary skills through training programmes (answering the need "Lack of cross-cutting competences in the agri-food sector") – Action 1;

- User involvement in a quadruple helix perspective thanks to dissemination and networking activities (answering the need "Lack of initiatives that adequately engage all members of the value chain in initiatives related to the development of the agri-food sector") – Action 2

This forms part of an overall plan of activities proposed for Actions 1 and 2, as described in detail in Part IV.

PART III

Methodological Approach

> This section presents the common strategy that partners have implemented although with regional specificities to address the challenges of this project.

Challenges/needs addressed

Data has become a key asset for the economy and our society. "Big Data" is leading to innovation in technology and the development of new tools and skills. It has become a new challenge and also a need to tackle.

Generating value at the different stages of the data value chain will be at the heart of future knowledge economy. To achieve this, "Big Data" has to become a major tool for fast data processing and analysis. In this way, it can help decision-making with the aim of increasing productivity and profitability..

Within the agri-food value chain, the large volume and diversity of data generated requires design and implementation of specific integration and management procedures that let us take full advantage of new economic opportunities (security, traceability, customer services, quality, etc.) based on information, data and cognitive technologies. Such proccedures need to promote innovation-driven growth, where "Big Data" will play an essential role.

As a result of participation of regional authorities, the research sphere, ICT and agro businesses and civil society in the exchange of experience process, project partners have elaborated 7 Action Plans (1 per partner/ region), which include measures that improve the technology transfer, close the gap between research and markets and enhance innovation opportunities and smart specialisation areas.

The project has also contributed to addressing the major challenge to digitisation, which is to connect directly producers with consumers and also agro-businesses with tech sector companies and academia.

Approach to the preparation of the Action Plan

REGIONS 4FOOD has a well-defined methodological approach with the following stages:

Methodologies implementation	Study visits	Draft Action Plan	Peer-review	Action Plan
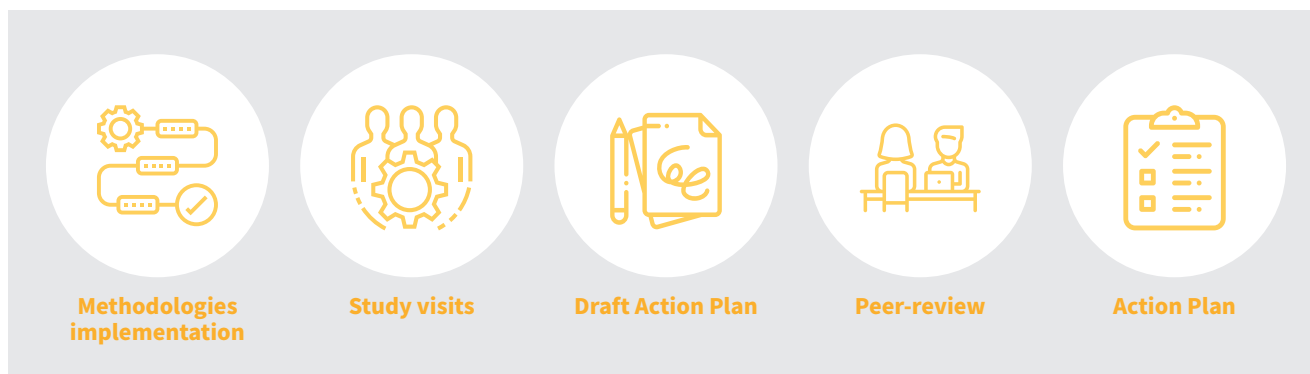
Identification

The Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development of Andalusia, as REGIONS 4FOOD Lead Partner, prepared two methodologies to be implemented by project partners with the support of their stakeholders with the aim to identify in each partner region:

- Needs, barriers, relational capital and good practice related to the digitisation of the agri-food sector.
- A catalogue of data and technologies in the agri-food sector.

Exchange of experiences and practice sharing

The results of these mapping works were presented, shared and discussed within the framework of the interregional seminars organised back-to-back the steering committee meetings.

The exchange of Good practices was carried out through study visits, where both the project partners and their stakeholders took part. Prior to the visits, project partners had identified among the good practices proposed, those that were most interesting in terms of their capacity to improve the policy instrument tackled.

Preparation of draft Action Plans

Following the template prepared by the Lead Partners, the first draft Action Plans draft included the lessons learnt from previous stages, the interregional activities, and the learning at all levels. Project partners also met with their stakeholders to assess the results of these previous works and contribute to the elaboration of their Action Plan draft.

Peer-review

The overall objective of the peer reviews was that the partner owning a good practice inspiring another partners' actions evaluated the Action Plan, taking into consideration the partner context on innovation strategies. 27 online (due to COVID-19) peer reviews were organised between June to November 2020. The process was carried out as follows:

- First, each project partner determined if the peer review concerned the whole Action Plan draft or just specific action(s).

- Second, partners sent to peer the Action Plan draft with the instructions on what to review (i.e. the whole Action Plan or just specific action(s)).

- Third, the peer identified the key actors and stakeholders involved in the good practice concerned.

- Four, once these agents read the draft Action Plan, both project partners met online to exchange ideas, assess the document, and if needed, suggest further improvements to reach the final objective: improving the partner policy instrument tackled by the project.

- Finally, the peers drafted a review report with suggestions to improve the draft Action Plan reviewed.

These suggestions were discussed with the stakeholders and considered in the drafting of the final Action Plan.

Presentation of the second draft Action Plan

During Semester 6, the project partners' Action Plans (second draft) were completed considering the suggested improvements of the peer-review process. They were presented in their regional stakeholders' group meetings.

Action Plans

This methodological process concluded with the submission at the Interreg Europe Joint Secretariat of the seven Action Plans (1 per partner/region) for validation by the end of Phase I.

PART IV
Actions

ACTION 1

Regional actions to promote cross-cutting competences in the agri-food sector

Relevance to the project & background

ART-ER followed the REGIONS 4FOOD project territorial analysis and exchange methodology in order to identify and develop the content of their Action Plan. Thanks to the analysis carried out and described above (PART II – POLICY CONTEXT - Background and rationale), ART-ER identified a lack of cross-cutting competences in the agri-food sector in the region. This is the focus of Action 1.

During the exchange process, with this need in mind, ART-ER targeted two experiences presented by the Andalusian partner. Specifically:

- Masters "DigitalAgri" - Universities of Córdoba and Málaga
- Masters in Digital Agriculture and Agri-Food Innovation, University of Seville

As detailed above (Background and rationale), the GPs from Andalusia showcase practical training solutions, designed to develop professional profiles merging an understanding of ICT and technology solutions, with knowledge of the characteristics, challenges and potential of the agri-food sector.

The study visit organised in Andalusia in September 2019 gave ART-ER and invited stakeholders the opportunity to collect information about the GPs and, importantly, to interact with the GP owners. With this knowledge in hand, they could start working at regional level to adapt the policy framework through transferring part of the lessons learnt to Emilia-Romagna.

Furthermore, the conclusions of the peer review organised with the Andalusian partner and the GP owners to assess the quality of the proposed action in Emilia-Romagna offered additional food for thought.

The peer review for the Masters in Digital Agriculture and Agri-Food Innovation from the University of Seville was held on 29th October 2020. Input from this session can be summarised as follows:

- It is a good idea to start with a small version of the Masters, such as a pilot Action. In Seville, before designing the current the Master's programme, the University started with smaller modules included in existing programmes. These courses were either general with low number of credits or extremely specific (e.g. on topics such as the use of drones). The course was extended as it became clear that there was a demand among the students / potential students;
- Masters are run in cooperation with different stakeholders (e.g. the regional government) and, above all, with enterprises of various sizes (involved from the start of the programme). Their role varies, but always aiming to create long-lasting cooperation: providing tutors for specific modules; providing material, devices and machines for tests (with companies that design technical solutions for farmers; offering scholarship or internship);
- Some of the main challenges at the outset were the time necessary to complete the administrative procedures to set up the Masters and the lack of available tutors (a new programme, requires new expertise – hence the importance of engaging with experts from outside the university).

The peer review for the "DigitalAgri" Masters was held with the University of Córdoba on 06th November 2020. As this session came after the peer review with Seville, it was an opportunity to compare the approaches and see if the two Masters' experiences varied. Input from this session can be summarised as follows:

- The decision to implement a Masters degree, rather than a lower level of qualification came from the need to have students with a basic agricultural knowledge. With the knowledge already consolidated, participants can then focus on learning about the very specific technical / technological topics of the course.

- The Masters developed from a series of research projects that had produced some specific, small-scale courses. These small courses evolved into a Masters upon request from companies to develop new, multi-disciplinary profiles (agricultural knowledge, management and business development skills, as well as technological skills). The average age of participants was between 35/40 years old as participants are not generally new graduates, but people already working and looking to innovate or change career.

- The course involves maximum 30 students. All much come from a relevant background: agricultural or computer engineering. This is an important selection criteria.

- Companies are a huge part of the Masters. These are mainly from the agricultural sector, but some are technology providers interested in the agri market (e.g. IBM). Generally, the companies come from the University's extensive and trusted network of contacts. Specific agreements are signed to define their role. Some are involved as tutors. If they host internships, they have to cover the costs.

- The course is currently run in person, as the virtual approach would not allow for sufficient contact and exchange. For example, the university has a demo farm that students use (with crops, intelligent irrigation, etc). The course also includes a week away, with Hackathons. This would not be possible virtually. NB. The current health emergency means virtual lessons will be used in this time, but it will not become a fixed procedure.

- The course will be officially evaluated at the end of the third edition. One interesting measure of impact is the number of students being employed following the course.

Nature of the action

In July 2020, thanks to the policy improvement described above (PART II – POLICY CONTEXT - Background and rationale), a new set of eligible activities was included in funding the Emilia-Romagna Clust-ERs. Among these activities, the following 3 are relevant to Action 1:

- development of strategic inter Clust-ER projects;

- development of a skill foresight analysis;

- feasibility studies for multidisciplinary and innovative training in an inter Clust-ER perspective.

These activities were included both in the Clust-ER Agrifood Activity Plan and Clust-ER Innovate Activity Plan funded through the ERDF/ESF call.

The objective of Action 1 is to improve the regional offer in terms of training and academic programmes aiming at increasing cross-cutting competences in the agri-food sector. This is achieved by directing the Clust-ER's activity plan towards specific tasks, inspired by the lesson learnt within the REGIONS 4FOOD project.

As the activity plan is funded by the policy instrument considered in Emilia-Romagna within REGIONS 4FOOD, there is huge potential for a series of concrete policy improvements throughout implementation. This will then lead to a final set of actions for long-term, structural change.
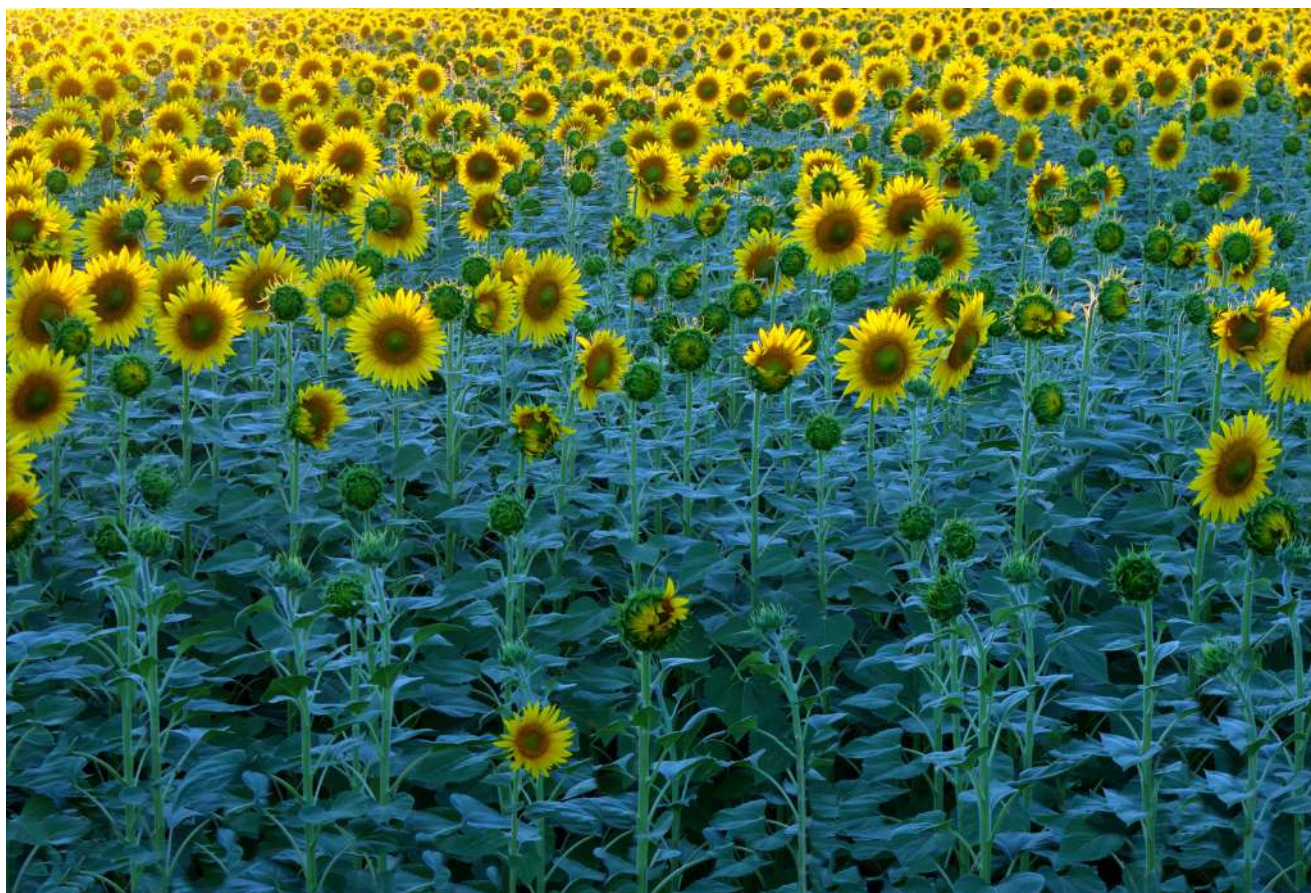
Activities and timeframe

The Action Plan is based on a precise work plan that covers Phase 1 and Phase 2 and includes the following overall tasks:

TASK	HOW	WHEN
Provide input for changes in the policy framework	This activity consists in organising workshops and exchange activities with the Managing Authority and regional stakeholders to present the ideas coming from REGIONS 4FOOD learning and to identify ways of including them into the regional policy framework	January - June 2020 (Phase 1)
Definition and launch of an improved call for proposal in the framework of the ERDF/ ESF programmes	This activity consists in including a new set of eligible activities going in the direction of REGIONS 4FOOD learning. This process refers to the call that funds the Clust-ER activity plan.	July 2020 (Phase 1)
Analysis of content of modules included in the 2 Andalusian Masters	Both in Seville and Cordoba, the Masters provide a number of different technology based modules. These are analysed in terms of contents and of relevance to the agri-food system in Emilia-Romagna. Similarities, differences and key elements for transfer are highlighted. The peer review sessions and subsequent material sharing are the main source of information. Findings are shared with relevant stakeholders.	First semester 2021 (Phase 1)
Map the current training and education offer in the agri-food field	AR-TER and Clust-ER analyse different programmes and education cycles currently running in the region, in terms of its potential to: 1) promote cross-cutting competences; 2) integrate new modules. Stakeholder exchange meetings (virtual) are held to provide input and share results. This work is carried out in close cooperation with the University of Bologna and the University of Piacenza, with the possibility of organising a joint training offer.	Starting first semester 2021 and ongoing at the start of second semester (Phase 1 - 2)
Detail the concrete implementation steps of pilot test to improve selected programme (new cross cutting module / course)	Based on the analysis above, the University of Bologna and the University of Piacenza are involved. The jointly run the course selected to be improved thanks to inputs coming from the Andalusian GPs. The training (master course) focuses on precision agriculture, targeting enterprise staff and technicians / consultants. AR-TER and Clust-ER coordinate this activity. A pilot testing programme of the modules is defined with the selected training / higher education organisation/s (including all necessary criteria and content). See details in next step.	Starting from June 2021 (Phase 2)

TASK	HOW	WHEN
Pilot test (not funded by Interreg Europe) The updated training programme is tested.	The inter-university course is proposed as a post-graduate level (exact credits to be defined during the planning phase: 2nd level masters for 60 credits / High level training for 10-25 credits / life-long learning for 4-15 credits). The course should complement the graduate courses in precision agriculture already running in the two universities. It will be based around cooperation with enterprises, with tutors being university professors and company representatives. Content will be based around thematic case studies and personalised learning programmes. Approval of the running of the course in expected in June / July 2021. With the approval, exact starting date and duration can be defined. Progress and results are continuously monitored and evaluated. Results are shared with relevant stakeholders.	Expected with the academic year starting September 2022 (Phase 2))
Feasibility study	An in-depth feasibility study analyses the results of all above activities, particularly the Pilot test, and provides indication on how to implement structural changes to the training / higher education programme at regional level. Results are shared with relevant stakeholders.	September 2022 – in parallel with the pilot test above (Phase 2)
Monitoring of further impact	Results and impact of the above described decisions are monitored and evaluated at regional level. Results are shared with relevant stakeholders.	Until May 2023 (end of project Phase 2)

Stakeholders involved

The following stakeholders are the main players in implementing Action 1:

- ART-ER – overall coordination, mapping and support to pilot design

- Emilia-Romagna Region (relevant sectors) – Managing Authority of the policy instrument that funded the calls for Clust-ER, role of strategic direction and monitoring

- Clust-ER Agrifood – definition of concrete tasks deriving from their activity plan, involvement in mapping and, depending on final decisions on the test to be undertaken, in the design of the pilot

- Cust-ER Innovate - definition of concrete tasks deriving from their activity plan, involvement in mapping and, depending on final decisions on the test to be undertaken, in the design of the pilot

- Universities of Bologna, Piacenza, Modena and Reggio Emilia, Parma and Ferrara – involved in mapping activities. University of Bologna and Piacenza involved in the design and implementation of the pilot

Output and result indicators

Outputs

N° of mapping focusing on cross-cutting competences in the agri-food sector (target: 1)

N° of pilot tests carried out to promote cross-cutting competences in the agri-food sector (target: 1)

N° of feasibility studies completed, containing proposals for structural changes to promote cross-cutting competences in the agri-food sector (target: 1)

Results

N° of people participating in regional initiatives to promote cross-cutting competences in the agri-food sector" (target 30)

ACTION 2

Regional actions to engage all members of the value chain (quadruple helix participation) in development of the agri-food sector

Relevance to the project & background

As described for Action 1, ART-ER followed the REGIONS 4FOOD project territorial analysis and exchange methodology in order to identify and develop the content of the Action Plan. The above-described analysis, carried out in close contact with regional stakeholders, demonstrated the high-fragmentation of needs among the many different actors operating in the "farm to fork" value chain.

As such, ART-ER points to co-creation initiatives as a possible means of promoting quadruple helix engagement in the agri-food sector. At this point, it is worth clarifying two main definitions that lie at the basis of this Action. Both terms have become widely used in recent years, as the concept of stakeholder engagement has begun to be considered as an essential component of policymaking:

- Co-creation: this topic will be at the heart of European research and innovation funding for the 2021-2027 programming period. Co-creation is defined as collaborative development of new concepts, solutions, products and services, bringing together experts and stakeholders. The stakeholders vary, but would be expected to cover as much of the value chain as possible. Co-creation is considered as a form of collaborative innovation, which goes beyond mere consultation.

- Quadruple helix: as per its name, the quadruple helix covers the four pillars of science, policy, industry, and society. It recognises that these are the four main groups of actors in the innovation system, thus promoting the idea of public engagement in the innovation chain. It moves forward from a triple-helix model (science, policy, industry) in which society is a passive recipient of innovation.

In both cases, the focus is on wide engagement as a means to ensure that innovation (and funding) is directed towards real needs and that end-products/services are suitable to the overall context. Indeed, one of the challenges it to encourage enterprises to look at the innovations proposed by research centres with a new approach: seeing the potential, rather that considering them as too futuristic.

This value chain in Emilia-Romagna and, as such the potential actors to be engaged, runs all the way from food producers (farmers), right up to consumers. This is a wide concept of the potential users to involve and, as such, requires carefully designed co-creation methods.

During the exchange process, ART-ER studied in detail the good practice from South Ostrobothnia:

Agro Living Lab and eLiving Lab–projects

As detailed above (PART II - POLICY CONTEXT: Background and rationale), this GP actively promotes cooperation between farmers and local agro-technology companies, whereby farmers are included in development and testing of agro-technology machinery and digital solutions. Therefore, this good practice is particularly relevant for engagement of farmers and for promoting interaction and dialogue between the innovative and more traditional elements of the agri-food sectors.

ART-ER received and studied the GP description and attended the study visit in Seinajoki (September 2019). During the study visit, the GP owners presented not only the rationale behind the Agro-living labs, with the

benefits that it can bring for developers and users, but also practical activities undertaken to set up and run the living lab. They focused on the techniques used to identify/profile and engage a network of over 200 farmers. Techniques ranged from direct, personal contact (email/phone), to attendance at sector fairs and other relevant events. Considering practical engagement methods once the network was consolidated, they shared the experience of issuing questionnaires, organising brainstorming workshops and farmer idea tanks and usability testing sessions. They also stressed the importance of going the full circle: once suggestions and input have been gathered and analysed, it is essential to provide feedback to the participants.

Subsequently, the peer review was organised with the Finnish partner and the GP owners to assess the quality of the proposed action in Emilia-Romagna (October 2020). The peer review provided the following input:

- Overall, the GP owner agreed that the adaption of AgroLivingLab was appropriate for the activities planned in the action. They found that the activities themselves were well planned and suitable to achieve objectives.

- Success of the proposed activities depends on the people working in the project and building the network. Personal contacts with farmers are necessary and it is essential to gain the trust of the target groups that should be involved in the co-creation processes. Therefore, they suggested that the Action Plan should include more specific plans on building, managing and coordinating cooperation with the network of farmers (see list of activities below, where this suggestion is incorporated).

- The GP owners provided advice about the best way to engage and motivate farmers. Considering lessons learnt from AgroLivingLab stakeholders they encourage:

  - personal contacts and equal communication (everyone in the cooperation network must be treated as equals);

  - motivating the farmers in their own terms. Make it easy for them to participate, consider their working hours and times that they can participate. Be flexible and realistic. Stay on point, talk about what it important to them.

In short, make a good use of their precious time;

- small concrete goals with visible benefits for the farmers, rather that high-level project contents;

- importance of peer support;

- finding out what the target group wants (talk to the farmers, find out what they want rather than guessing – the needs must come from the farmers), being active and in same level.

These suggestions were shared with stakeholders in Emilia-Romagna and, in particular, with Clust-ER Agri-food.

• The GP owners answered some specific questions designed to help plan the concrete activities within the Action Plan. These included questions about activity planning/implementation, about sharing farmers' needs with technology providers and questions related to budget and human resources. As a result, and in cooperation with Clust-ER Agri-food, the activities in the Action Plan were further detailed (see below).

• As shown below, ART-ER would like to engage not only farmers, but also consumers. This was not directly dealt with in AgroLivingLab, so peer review participants discussed how it might be possible. The GP Owner agreed with the importance of consumer engagement, but stressed that it does make implementation more complicated. They advised to engage consumers at a later stage (starting with the network of farmers and technology providers). Another initiative from South Ostrobothnia (consumer engagement in testing new food products) was discussed in this context. The advice provided was shared with Clust-ER Agri-food and taken into consideration for the activity plan (see below).

Nature of the action

As per Action 1, this Action fits into the policy improvement described above (PART II – POLICY CONTEXT - Background and rationale) and the new activities funded for the Emilia-Romagna Clust-ERs. Again, these are activities included in the Clust-ER Agrifood Activity Plan funded through the ERDF/ESF call. Among these, the following 2 are directly relevant to Action 2:

• promotion of dissemination activities, favouring those organised in cooperation with other Clust-ERs and regional stakeholders;

• involvement of new typologies of innovators, with reference to civil society, citizens and third sector.

Moreover, as co-creation activities could be developed in cooperation between clusters, the following activity could also prove relevant.

• development of strategic inter Clust-ER projects.

The objective of Action 2 is to design, test and consolidate activities that promote engagement of all actors in the regional "farm to fork" value chain. This means a range of measures aimed at engaging and bringing together producers (farmers), innovators (science sector, but also innovators in agri-tech, including SMEs), companies along the production and distribution process and different levels of policy makers, and the consumers themselves.

It is important to note that this Action starts from a strong foundation. Emilia-Romagna has long invested in policies to promote cooperation across the research and innovation chain. In the field of agriculture, the "agricultural knowledge system" was developed to facilitate dialogue between agricultural practice and research and to encourage an inter-sector approach to innovation in agri-food. To date, this system has helped to promote cooperation on themes such as product quality, consumer health and environmental

protection. Indeed, the Clust-ER Agri-food is already based around dialogue and engagement, with 3 working groups already in place, each covering a strategic line of research[3]. Moreover, some experiences of "demo farms" have been put into place in the region. Indeed, Emilia-Romagna has created a regional network of demo farms. One example is based in Acqua Campus innovation centre, and was the site of a study visit within REGIONS 4FOOD in November 2019[4]. This type of centre already carries out engagement and dissemination activities on specific technology (in this case related to optimising irrigation) and could form a solid basis for further co-creation initiatives.

The Clust-ER Agri-food seeks to strengthen initiatives in cooperation with the network of demo farms. Events have been organised for technology demonstration, the most recent example being October 2020 with the demo farm Martoran 5, with over 50 technology providers and 20 agro-food specialists[5].

However, despite such initiatives, farmer and consumer participation remain complicated and, as shown by the analysis undertaken in REGIONS 4FOOD, requires further policy support. Therefore, the Action wishes to build on and extend the existing foundation for engagement in the region. The Action proposes a series of concrete steps to plan and test co-creation activities with various sub-sectors of the agri-food sector. Having used Phase 1 to ensure that the policy framework is in place, to undertake a participative planning action and to consolidate the regional network, phase 2 can begin by testing co-creation activities in the form of thematic focus groups. Results of this testing will be used to provide a clear picture of the feasibility of consolidating such actions in the new programming period.

As per Action 1, the new Clust-ER activity plans will be the basis for this and will be used to test the lesson learnt within REGIONS 4FOOD. The activities described below, each funded at least in part by the ERDF funding, represent a series of small, concrete policy improvements.

Activities and timeframe

The process is based on a precise work plan that covers Phase 1 and Phase 2 and includes the following tasks:

TASK	HOW	WHEN
Provide input for changes in the policy framework (as per Action 1)	This activity consists in organising workshops and exchange activities with the Managing Authority and regional stakeholders to present the ideas coming from REGIONS 4FOOD learning and to identify ways of including them into the regional policy framework.	January - June 2020 (Phase 1)
Definition and launch of an improved call for proposal in the framework of the ERDF/ESF programmes (as per Action 1)	This activity consists in including a new set of eligible activities going in the direction of REGIONS 4FOOD learning. This process refers to the call that funds the Clust-ER activity plan.	July 2020 (Phase 1)

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3 1. Sustainable & precision farming to strengthen the economic and environmental sustainability of regional productions; 2. Quality, safety and traceability in processes, products and nutrition to promote food safety, the quality of food and feed and the sector's attractiveness; 3. Valorisation of agrifood by-products and waste to improve the sustainability – both economic and environmental – of the food production processes

4 www.interregeurope.eu/regions4food/news/news-article/6785/study-visit-in-emilia-romagna-part-i

5 agrifood.clust-er.it/demofarm-day-emilia-romagna-agrifood-clust-er-track

TASK	HOW	WHEN
Consultation on co-creation initiatives	AR-TER and Clust-ER Agrifood (and Cluster Innovate) undertake a consultation with regional co-creation experts and with possible hosts of co-creation actions (including demo farms). This action identifies which types of co-creation techniques (including those to ensure co-creation despite limitations emerging from the COVID-19 pandemic) could be most suitable for the region / for the user groups, in the below testing phase. Interregional input from the Finnish Agro Living Lab GP can also be sought in this phase.	First semester 2021 (Phase 1)
Set up / consolidate the quadruple helix network / define activity plan for co-creation activities	This process puts in place the tools defined in the previous activity, in order to set up the quadruple helix network. A concrete plan for network development and activities is also designed before starting the initiative. This networking process starts from existing networks of actors (farmers / enterprises, consumer associations) and focuses on integrating them into a network interested in taking part in the co-creation process. ART-ER and Clust-ER Agrifood are key players here, with important support from Clust-ER Innovate and other stakeholders. The network is created around sub-sectors: crops (cereal / hay), aquaculture and viticulture are the first to be activated, given that work has already started to understand their digitalisation needs. The activity plan details the concrete activities to be undertaken, as detailed in the next two steps.	Starting first semester 2021 - Ongoing throughout Action (Phase 2)
Test co-creation methods (concrete implementation)	The methods defined above are tested with the network, coordinated by AR-TER and Clust-ER Agrifood. This is Action 2's first concrete, implementation step, where the preparation above is put into action. This testing phase will put into action the methods defined above. A series of thematic focus groups (inspired by the Finnish GP and by the events already promoted by the Clust-ER) will run, each leading to a round up workshops. Each focus group will engage between 15-20 participants. Two focus groups are expected in 2021, with a third in early 2022. The three subsectors above (cereal / hay, aquaculture and viticulture) will be engaged in the testing phase. Progress and results are monitored and evaluated. Based on budgetary availability, other co-creation activities could follow this first testing.	Starting Winter 2021 - Ongoing throughout Action (Phase 2), with first round of testing expected to be completed in 1st semester 2022
Feasibility study (concrete implementation)	An in-depth feasibility study analyses the results of all above testing activities, and provides indications on how to integrate the co-creation techniques as an integral part of policy support measures for agri-food. In concrete terms, this study will provide a series of recommendations that AR-TER and the regional government can consider in their evaluation of future support for Clust-ER co-creation activities. The study will be shared and discussed with all relevant decision makers, with a view to consolidating Action 2 in the 2021-2027 programmes. Results are shared with relevant stakeholders.	2022 – following first round of testing activities – ongoing throughout Phase 2 (Phase 2)
Monitoring of further impact	Results and impact of the above described decisions are monitored and evaluated at regional level. Results are shared with relevant stakeholders.	Until May 2023 (end of project Phase 2)

Stakeholders involved

The following stakeholders are the main players in implementing Action 2:

- ART-ER – overall coordination of Action, support to defining Clust-ER Action Plan, support to co-creation activities and overall development of feasibility study and responsible for monitoring.

- Emilia-Romagna Region (relevant sectors) – Managing Authority of the policy instrument that funded the calls for Clust-ER, role of strategic direction and monitoring.

- Clust-ER Agrifood – definition of concrete tasks deriving from their activity plan, involvement in co-creation activities (from network creation to testing and evaluating tools).

- Clust-ER Innovate – definition of concrete tasks deriving from their activity plan, possible involvement in co-creation activities, particularly engaging innovative enterprises of relevant to the agro-tech field.

- Consortia / networks of companies and farmers unions / representation bodies, including demo farms (Acquacampus, Tebano, Stuard and others) – participating to help create the network to engage in the co-creation process.

- Consumer association (Confconsumatori) – participating to help create the network of consumers to engage in the co-creation process.

- ART-ER staff engaged in TeRRItoria project – ART-ER is a partner of the H2020 project TeRRItoria, which aims to introduce the concept of responsible research and innovation (RRI) into the smart specialisation strategies (RIS3) of participating regions. Public engagement is at the heart of RRI and is one of the main elements that ART-ER wishes to encourage thanks to TeRRItoria. As experts in engagement, staff can be engaged to help define the best way to adapt the Finnish GP to Emilia-Romagna and the most appropriate co-creation methods to select and develop. They can also be involved in monitoring, with a view to strengthening these aspects in the RIS3.

Output and result indicators

Outputs

N° of members engaged in the quadruple helix network (research labs, companies - farmers - consumers associations) (target: 40)

N° of co-creation measures tested on innovation in the agri-food sector (target: 3)

N° of feasibility studies completed, containing proposals for structural changes to include co-creation measures in public policies for agri-food (target: 1)

Results

N° of new initiatives approved for future implementation including co-creation in the development process (target: 2)

FUNDING FOR ACTION 1 AND ACTION 2

Indicative costs and indicative funding sources

Both Action 1 and Action 2 will be funded through the budget allocated to the relevant regional Clust-ER, through the above described regional call (published in July 2020).

The call provides funding for the Clust-ER Activity Plans, into which the REGIONS 4FOOD Action Plan will be integrated. As such, the funding amount indicated here presents a proportion of the amounts allocated to Clust-ERs Agrifood and Innovate.

FUNDING AMOUNT
200.000 €

FUNDING SOURCE
Funded through Regional Operational Programme ERDF/ESF funds (call launched in July 2020).

The call for proposals allocated a maximum of 200.000 € ERDF to each Clust.ER.

Clust-ER Agrifood is the main player in the REGIONS 4FOOD Action Plan and, based on an analysis of their Activity Plan, it is considered that 75% of their activities can be relevant (total 150.000€).

Clust-ER innovate is involved in the REGIONS 4FOOD Action Plan and, based on an analysis of their Activity Plan, it is considered that 25% of their activities can be relevant (total 50.000 €).

PART V
Monitoring System

The monitoring period of the Action Plan will be from 1st June 2021 to 31st May 2023. During this period, project partners will report to the Interreg Europe Joint Secretariat on an annual basis.

There will be two monitoring mechanisms for each Action Plan:

- One is common to the seven Action Plans. It has been designed by the Lead Partner to monitor, analyse and report the implementation of actions.
- An additional self-monitoring mechanism is defined by each partner according to their needs and internal structure.

The joint monitoring mechanism includes result indicators. It will allow project partners to measure their results according to their policy instrument tackled to be improved, and their self-defined performance indicators. Project partners will be required to report to the Lead Partner twice a year (each semester) to strengthen the monitoring mechanism and have the capacity to take corrective measures, if necessary. With the Information provided, the Lead Partner will prepare a monitoring report per semester. In addition, the results will be discussed in the two project meetings foreseen in Phase 2 (one in Semester 8 and another one in Semester 10) to give project partners recommendations for improvement.

Moreover, one additional project meeting (not foreseen in the application form) will be organised online by the end of Semester 7 to monitor, evaluate and share information about the situation at project level.

Additionally, a self-monitoring mechanism has been defined to complement and feed the joint monitoring mechanism and ensure the correct implementation of actions as foreseen, according to our organisational needs and internal structure.

AR-TER will integrate monitoring activities into their existing systems to monitor activities at regional level:

1. Clust-ER having received funding from the call in July 2020 must provide periodic reports on their activities. AR-TER receives and analyses these reports and, as such, will also analyze information provided on the activities related to REGIONS 4FOOD. The indicators proposed for the two actions can be monitored through these reports. Moreover, AR-TER has continuous contacts with the Clust-ER managers, for ongoing monitoring of progress and activities.

2. AR-TER coordinates the Big Data and Traceability working group at regional level. This working group was the basis of the stakeholder group in REGIONS 4FOOD and will continue to be used for stakeholder engagement in Action plan implementation. They will be asked to provide input, to participate (on the basis of each specific role) and to evaluate progress of each action.

Moreover, AR-TER will contribute to the monitoring system at project level, sharing data and findings with other REGIONS 4FOOD partners.

Annex

Endorsement letter

Regione Emilia-Romagna

DIRECTORATE GENERAL
KNOWLEDGE, LABOUR AND ENTERPRISE

	TIPO	ANNO	NUMERO
REG.		/	/
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To ART-ER S.cons.p.a.

Bologna

ENDORSEMENT LETTER

The undersigned, Morena Diazzi, Director General - DG Knowledge, Labour and Enterprise Economy – Emilia-Romagna Region, as Managing Authority of the 2014-2020 ERDF - ROP Emilia-Romagna Region, Axis 1 Research and Innovation, namely the policy instrument addressed by the **Interreg Europe project REGIONS4FOOD "REGIONal Strategies 4FOOD 4.0 revolution"**, was involved by ART-ER in the interregional exchange and learning process carried out during the Phase 1 of the project, to promote the digitization of the agrifood sector in Europe.

In this context, Emilia-Romagna Region endorses the Regional Action Plan defined by ART-ER in the REGIONS4FOOD framework, which results and bring together the contribution of all stakeholders involved, including the Regional Focused Group on Traceability and Big Data for the Agrifood sector.
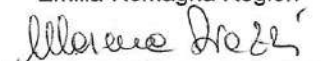
Yours sincerely,

Ms. Morena Diazzi

Director General

DG Knowledge, Labour and Enterprise Economy

Emilia-Romagna Region

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