

ACTION PLAN

Regional Ministry of Agriculture,
Livestock, Fisheries and
Sustainable Development,
Government of Andalusia

TABLE OF CONTENTS

PART I - INTRODUCTION.....	3
General information.....	4
REGIONS4FOOD Project.....	5
Overall and specific objectives of the Action Plan.....	6
PART II - POLICY CONTEXT.....	7
The Policy Instrument.....	8
Background and rationale.....	9
PART III - METHODOLOGICAL APPROACH	17
Challenges/needs addressed.....	18
Approach to the preparation of the Action Plan.....	19
PART IV - ACTIONS	21
ACTION No.1	22
Relevance to the project & background.....	22
Nature of the action.....	24
Stakeholders involved.....	27
Timeframe	27
Costs.....	27
Funding sources.....	28
Output and result indicators	28
ACTION No.2	29
Relevance to the project & background.....	29
Nature of the action.....	29
Stakeholders involved.....	34
Timeframe	35
Costs.....	36
Funding sources.....	36
Output and result indicators	36
PART V - MONITORING SYSTEM	37
ANNEXES	44
Endorsement letters.....	45

PART I: **Introduction**

General information

PROJECT	REGIONS 4FOOD
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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 by the means of improving regional policy instruments to promote agri-food sector digitisation and better face new challenges in relation to ICTs.

The project arose as a proposal within the partner regions' Smart Specialisation Strategies (RIS3), where innovation and the ICT sector are key factors, and where the Thematic Partnership in Traceability and Big Data has been framed since 2017.

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

The lifelong learning process of the project has concluded with the development of seven regional Action Plans that will improve these policy instruments, which are the main outcome of the project. In addition, they will be disseminated and will serve as an example for other programmes and regions.

Other outcomes to be highlighted which have emerged from the project's learning process are:

- Increasing the professional capacity at all levels: staff, organisational, regional and beyond the project
- Strengthening cooperation between quadruple helix actors, both at regional and interregional level
- Contributing to the new programming period by providing strategic political recommendations

To achieve these objectives and results, competent regional public administrations in seven EU countries have worked together to exchange their experiences and share good practices. The partnership of REGIONS 4FOOD consists of a geographically balanced combination of seven regions with different levels of development regarding the innovation of their agri-food ecosystems.

As a result of intensive work over three years and mutual learning, partners have elaborated their regional action plans.



Overall and specific objectives of the Andalusia's Action Plan

“Strengthening innovation ecosystems and improving the governance of quadruple helix cooperation in the agri food sector”

The specific objectives of the **Andalusia's Action Plan** are:

- To boost the generation of new synergies in the agri-food sector
- To promote the technological transfer in the agri-food sector
- To support the digitisation process in the agri-food sector
- To improve the Andalusia Smart Specialisation Strategy's governance in the agri-food sector
- To encourage the commitment and participation of key agents in the agri-food sector

PART II: **Policy Context**



The Policy Instrument

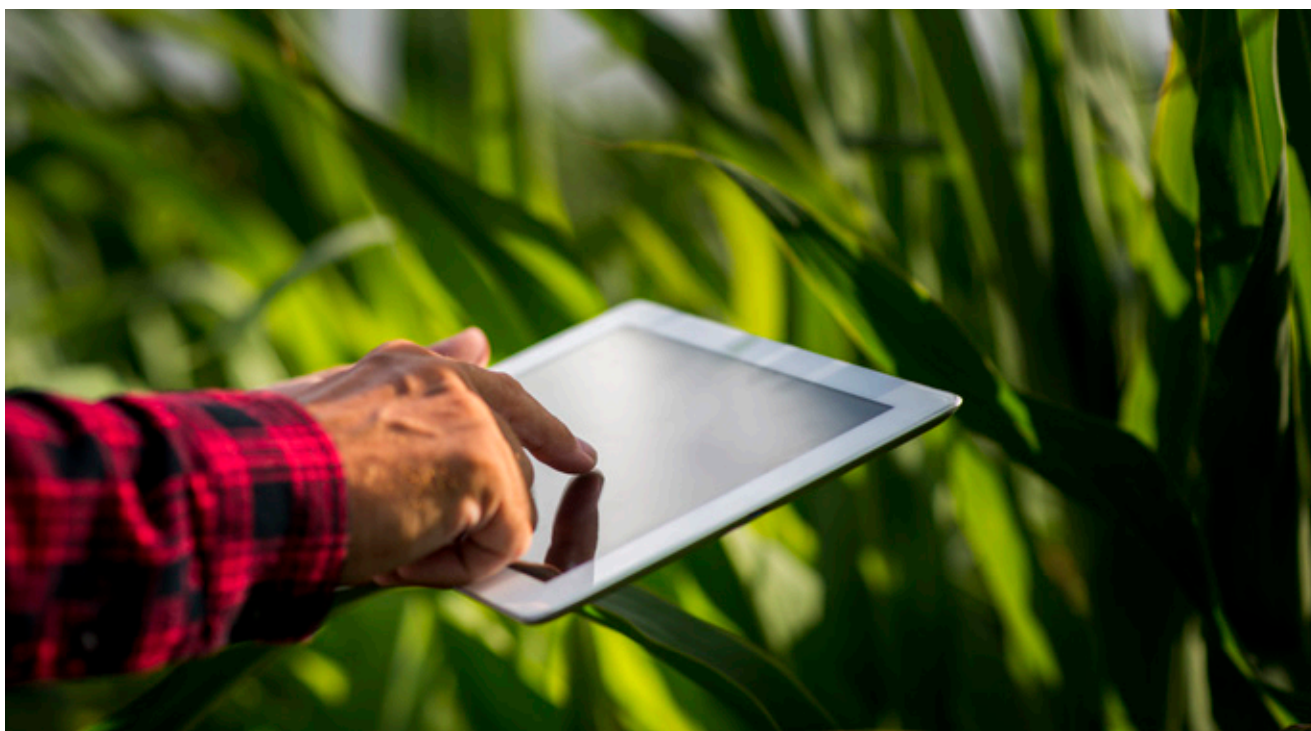
The **Action Plan** aims to impact the Horizontal Strategic Goal of “**Investment for Growth and Jobs programme**” and to improve the Policy Instrument addressed “**ERDF Regional Operational Programme Andalusia 2014-2020**”.

Our **Action Plan** will be targeting the same Policy Instrument that was referred in the application form. This instrument is under the Priority Axis 1 “Strengthening research, technological development and innovation” of the Interreg Europe programme which is primarily dedicated to the improvement of Structural Funds policies with a focus on innovation policies and in particular Regional Innovation Strategies for Smart Specialisation.

No additional policy instrument is foreseen in this Action Plan: we still plan to influence and improve the original addressed policy instrument as planned. However, Action No.2 has only been adapted to the needs and current context of Andalusia region, with a focus on 2021-2027 period.

Therefore, the following policy instruments will be influenced too:

- **RIS3 Andalusia 2014-2020**
- **S4 Andalusia 2021-2027**



Background and rationale

COVID-19

The COVID-19 pandemic and the containment measures required have profoundly disrupted people's lives and the economy. The pandemic struck the European economy when it was on a moderate path and still vulnerable to new shocks. Given the severity of this unprecedented worldwide shock, it is now quite clear that the EU has entered the deepest economic recession in its history.

Under these assumptions, EU GDP is forecast to contract by about 7.5% this year 2020, far deeper than during the Global Financial crisis in 2009, and to rebound by only 6% in 2021. This rebound, however, would leave the European economy, at the end of this forecast horizon, about 3% lower than the output level implied by the autumn forecast.

The COVID-19 crisis is a symmetric shock hurting all member states. Their strong economic interconnectedness is magnifying the aggregate demand and supply shocks. While the recovery looks set to be incomplete in almost all countries, the impact of the crisis and the way member states will emerge from it is set to be uneven. How well countries emerge will depend not only on the severity of the pandemic and the stringency of their containment measures, but also on their specific economic exposures and initial conditions, and the discretionary policy responses that their levels of policy space allowed them to afford. Due to their strong interdependencies, an incomplete recovery in one country would spill over to all the other countries and dampen economic growth everywhere.

In Spain the GDP is projected to decline by 11%-12% in 2020 before rebounding and grow by 6%-7% in 2021, and in Andalusia the decrease would be by 10%-12% in 2020 and an increase by 5%-6% in 2021.

EU RESPONSE TO COVID-19 CRISIS

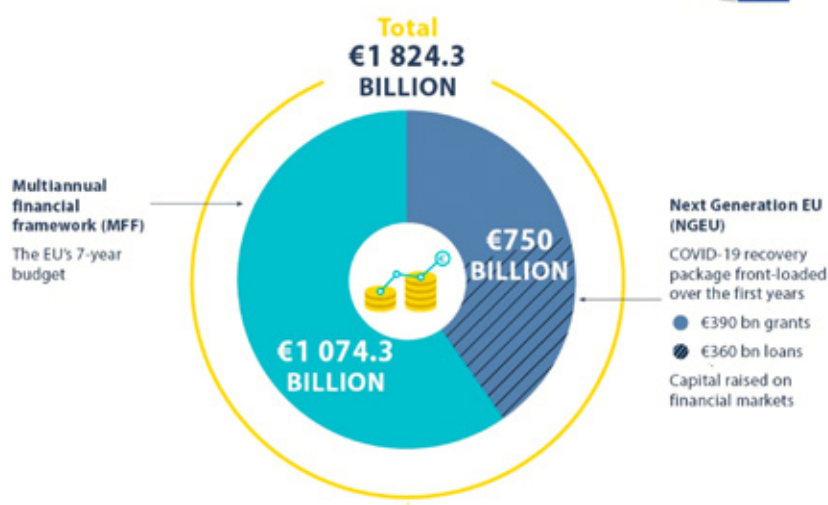
The monetary and fiscal policy response to the crisis, both globally and in the EU, has been swift and strong with unprecedented measures taken to contain the macroeconomic fallout and alleviate liquidity pressures. In the EU, policy announcements contributed to the stabilisation. These liquidity measures amount to 22% of EU GDP and were complemented by existing EU budget instruments offering support of up to about 4.5% of EU GDP.

On 27 May 2020, the European Commission published its proposal for a powerful, modern and revamped long-term EU budget that will serve European economy struggling with the aftermath of coronavirus pandemic.

New technologies have already shown to be irreplaceable during the crisis; they kept people connected and businesses running. Now, digital will play a crucial role in propelling the recovery and as such, the sector will benefit from significant funding proposed by the Commission. Paving the way are instruments such as Digital Europe programme and Connecting Europe Facility, however other programs, including Horizon or Creative Europe, are sprinkled with digital flavour.

The entire budget of the new Multiannual Financial Framework (MFF) now stands at EUR 1.1 trillion. In addition to that, the European Commission also proposed a new recovery instrument, called Next Generation EU – worth EUR 750 billion that will run from 2021-2024. This instrument will also feed into some of the digital strands (for example: Invest EU programme). All this makes the next EU budget very large and complex.

Overall budget 2021-2027



The digital sector will be fed with the seven following main programmes:

1. Recovery and Resilience Facility: EUR 560 billion
2. Horizon Europe: EUR 94.4 billion
3. InvestEU: EUR 31.6 billion
4. EU4Health: EUR 9.4 billion
5. Digital Europe Programme: EUR 8.2 billion
6. Connecting Europe Facility - Digital: EUR 1.8 billion
7. Creative Europe Media: EUR 1.5 billion

Andalusia will receive EUR 1,881 million from the REACT-EU fund in 2021 and 2022, representing 18.8% of the Spanish total amount, according to the Spanish Ministry of Finance.

THE REGIONAL POLICY CONTEXT OF THE AGRI-FOOD SECTOR

Andalusia has been classified by the EU as a transition region for the period 2014-2020, as its GDP per capita is between 75% and 90% of the EU member states' average.

The growth of the Andalusia economy in 2019 was 2.1%, according to data from the Institute of Statistics and Cartography of Andalusia, one tenth more than the national rate (2%) and nine tenths more than the Euro zone rate (1.2%).

Regarding the **agri-food industry in Andalusia**, the main figures to be highlighted are:

- First industrial sector at regional level with 6,572 agri-food companies in 2019
- 1 out of 5 (18%) national agri-food companies located in Andalusia in 2020
- 99% of regional agri-food companies were SME (less than 250 workers) in 2020
- Annual employment of 55,37 jornals x1,000 (1 Annual Work Unit: 228 jornals) in 2018
- 23% of industrial employment at regional level in 2020
- 3% of total employment at regional level in 2020

The primary sector represented 8.7% of total employment in Andalusia in 2020 (by gender: women and men workforce's share of 5.1% and 11.4%, respectively)
Annual turnover of regional agri-food sector of EUR 17,778 million in 2018
4.9 million people living in rural areas (59% of the population) in 2020
Usable Agricultural Area (UAA) reached 4.4 million hectares (58% of area) in 2016
98% of municipalities were rural in 2020
Gross Value Added (GVA) represented 6.6% of regional GVA in 2019
Production of Agricultural Sector (PAS) reached EUR 12,332 million in 2020
By sub-sectors (PAS): 81.1% Crops; 16.4% Animal; 1% Services; and 1.5% Other
In Crops sub-sector: 40.5% Vegetables; 36% Fruits; 12% Olive Oil
In Animal sub-sector: 36.5% Pork; 17.9% Poultry; and 17% Milk in 2018
Agricultural Income (AI) at regional level reached EUR 8,845 million in 2020
Value of quality designations reached EUR 468 million in 2019
By sub-sectors: Wines (34%); Olive oil (23%); Spirit drinks (15%); Hams and Shoulders (8%) in 2019
Value of agricultural exports at regional level reached EUR 11,255 million in 2020
Extra virgin olive oil sub-sector represented 13% of regional exports in 2020
76% of national extra virgin olive oil exports in 2020
Exports at regional level reached 8.1 million tons in 2020
UE was the main destination of Andalusia's agri-food exports (65%) in 2020
By countries in 2020: Germany (17%); France (13%); UK (10%); Italy (9%)
Regional balance of net exports (agri-food) reached EUR +7,317 million in 2020
5 Interprofessional Agri-food Organisations (IAO) at regional level and 26 at national level in 2020
Relevant cooperativism in agri-food sector at regional level
578 agri-food cooperatives in 2020
27% of national agri-food cooperatives in 2020
29% of national agri-food cooperatives employment in 2020
38% of national agri-food cooperatives turnover in 2018

Sources: Characterisation of Andalusian Agri-food Sector 2019 by Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development, Government of Andalusia; V Report of Andalusia Agri-food Sector by KPMG; Ministry of Agriculture, Fisheries and Food, Government of Spain; Ministry of Labour, Migration and Social Security, Government of Spain; National Statistics Institute (INE); Agricultural macro-magnitudes of Andalusia 2020; Active Population Survey 2020 (EPA); Spanish Institute of Foreign Trade (ICEX); Structural Statistics of Companies 2018; Agri-food Cooperatives of Spain (2018); and European Commission.

The region of Andalusia has specialised technological parks and research centres of recognised prestige; a relevant science and technology public system, which makes it a national leader in e-government and pioneer in ICT services to citizens; and an incipient business generator with high growth potential in the field of innovation. All these assets require interconnection, dynamisation and consolidation through an ecosystem that operates as a business growth catalyst of a smarter, more modernised and with greater technological content economy.

Macroeconomic figures in particular and the nature of the economy in general therefore indicate that the region requires strategies and policy instruments to achieve economic, social and territorial cohesion, and to narrow the gap with the European average, with a new approach to the digital economy. And, among these, the **ERDF Regional Operational Programme Andalusia 2014-2020** stands out.

Additionally, other policy instruments such as the Andalusian Innovation Strategy 2014-2020 (**RIS3 Andalusia**); the Smart Specialisation Strategy for Sustainability of Andalusia (**S4 Andalusia 2021-2027**); the Andalusian ICT sector Promotion Strategy 2020 and the Digital Enterprise Action Plan 2020; the Employment Agenda, Andalusian Economic Plan 2014-2020. Strategy for Competitiveness; and the Andalusian Industrial Strategy 2014-2020 (EIA2020); are also policy instruments that promote and create new synergies and ecosystems for the digitalisation process in the Andalusian agri-food industry.

SWOT ANALYSIS

Prior to the launching of REGIONS 4FOOD Project in June 2018 (Malaga, Spain), a research work was carried out to identify “Strengths, Weaknesses, Opportunities and Threats” in Andalusian agri-food sector and its situation on R&D&I.

Subsequently, on the basis of the conclusions drawn after the implementation of the two methodologies developed within the framework of the REGIONS 4FOOD project: 1) the methodological guide for the identification of barriers, needs, relational capital and good practices; and 2) the methodological guide for the creation of data and technology catalogues, both related to the digitisation of the agri-food sector, an update of the SWOT was carried out, with the following results:

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Creation of open data by the Public Administration has a positive impact on the digitisation process	Poor vision of the value chain	Creation of 1 ecosystem for digitisation of the agri-food sector is strategic	Partnerships to attract technologies and private initiatives to implement projects are necessary
Designed a digital maturity model with key points to address the digitisation by companies	Low connectivity in rural areas	Relational capital is key to complement the ecosystem: SMEs must be nodes with large companies	New and dynamic process that requires continuity
There are no companies deactivated or fully disconnected to stored data	Regional roadmap for digitisation is necessary	Strengthening the digital culture and training are key to speed up digitisation: Innovation centres must play an important role	Complexity to increase and improve relational capital
Most companies store data in databases that allow data to be migrated to other systems	Companies' data not available on open data portals	Open Data model commitment by the Public Administration due to the high added-value generation	Level of stakeholders' commitment could have a negative impact on the institutionalisation of learning
Nearly half of companies use software that allows real-time data check by graphics/KPI to improve decision-making	Companies' IT systems not evolved enough to capture data and generate results	Legislation to raise awareness and apply data traceability in companies: simplification of processes, mandatory requirements	Use of inadequate infrastructures for Big Data by companies
Agri-food sector is 1st industrial sector in Andalusia with 6,572 companies	There is no “Machine Learning Models” in companies	Nearly half of companies use data to control or adjust value chain processes and to make decisions	New professional profiles are required to make New Technologies more accessible and meaningful

LESSONS LEARNT FROM REGIONS 4FOOD PARTNERS

The interregional learning has been remarkable thanks to the multiple exchanges of experiences through study visits and interregional seminars, mainly during the first four semesters of the project.

Firstly, at the I Interregional Seminar held in Malaga (Spain, June 2018), the partners presented their regional contexts, which allowed them to better know each other and set a starting point for the exchange of experience and mutual learning scheduled for the following months.

Secondly, the implementation of two methodologies: 1) the needs and barriers to the digitisation of the agri-food value chain; and 2) the regional catalogues of data and technologies; as well as the development of a map of the sector's relational capacity in each region, allowed the regions to know the data and technologies' state of art in their region, and also to make recommendations for their improvement in each one of them and at project level.

Thirdly, the identification of good practices carried out by partners in their regions during the first semester of 2019 in the digitisation of the agri-food value chain brought added-value to the learning process.

Fourthly, the study visits to the good practices during 2019 served to discover and learn "in situ" a wide and heterogeneous number of good practices. They also helped to get a deep learning about the good practices; identify those that are more interesting and with highest potential to be replicated; and inspire the actions included in this **Action Plan** to improve the policy instrument tackled by the project.

Among the twenty-nine good practices identified (three of them online due to COVID-19) we considered five of them particularly in line with the objective we want to achieve: strengthening innovation ecosystems and improving the governance of quadruple helix cooperation in the agri-food sector.

In these five good practices, we found inspiration and learnt lessons that we have turned into actions, which will enable to contribute to the improvement of the **ERDF Regional Operational Programme Andalusia 2014-2020**. These good practices were:

- 1 Tecnocampus, Pays de la Loire (France, May 2019)
- 2 Agroliving Lab, South Ostrobothnia (Finland, September 2019)
- 3 Green Techlab, Limburg (Netherlands, October 2019)
- 4 Clust-ER Agrifood, Emilia Romagna (Italy, October 2019)
- 5 Forum S3, Emilia Romagna (Italy, October 2019)



Finally, the contribution of the interregional seminars to the learning process among partners and the progress in the development of the project should be noted:

- II Interregional Seminar held in Nantes (France, May 2019), where the regional results of the mapping were presented: identification of barriers, needs, relational capital, and catalogue of data and technologies. Also, during a two-session brokerage event, project partners presented the good practices selected in their regions (public and private initiatives and projects) dealing with the digitisation of the agri-food value chain. These sessions enabled project partners to have a first approach to what is being done in the other regions in that field, and also make a choice on which ones they wanted to visit in the next semester as they could have an impact in the policy instrument tackled.
- III Interregional Seminar held in Pazardzhik (Bulgaria, November 2019), where partners presented conclusions of the interregional learning resulting from the study visits undertaken to date and how they could impact their action plans, making a reflection on which good practices visited could have a greater incidence in the improvement of their policy instrument. In addition, the structure of the draft **Action Plan** was presented and the first recommendations for its elaboration were presented by partners with experience in projects from previous Interreg Europe calls.
- The Interregional Capitalisation Seminar celebrated online due to COVID-19 (November 2020), where project's partners shared about the learnings of the Action Plans' peer review process and how it contributed to their improvement; and also presented their contributions, previously discussed and debated with their regional stakeholders, to the first draft of the Strategic Political Recommendations.
- During the Interregional Political Seminar, project partners presented their final **Action Plan** version to be implemented during Phase II, together with innovation and digitisation experts in agri-food value chain from their regions and project partners' policy makers responsible for the partner's regional strategies on digital innovation in the agri-food value chain, and also discussed, debated and finally agreed the Strategic Political Recommendations (Joint Agreement). An EU expert on innovation policies in the agri-food value chain dinamized the debates and exchanges.

CONTRIBUTION OF ACTION PLAN TO THE IMPROVEMENT OF THE POLICY INSTRUMENT

The **ERDF Regional Operational Programme Andalusia 2014-2020**, the policy instrument selected, has as thematic objective to enhance research, technological development and innovation (TO1); and as specific objectives to encourage the creation and consolidation of innovative companies and the development of R&D&I activities led by companies (SO1.2.1), and to promote the transfer of knowledge and cooperation between companies and research centres (SO1.2.2), among others. In addition, these objectives were included in the Andalusian Innovation Strategy 2014-2020 (**RIS3 Andalusia**), and the **Action Plan** will therefore contribute to develop those identified as more innovative objectives within the operational programme.

The **Andalusia's Action Plan** includes two actions fully described in section IV:




1) CONSOLIDATION OF THE ANDALUSIA AGROTECH DIGITAL INNOVATION HUB - DIH AGROTECH

2) CREATION OF A SPECIFIC WORKING GROUP IN THE AGRI-FOOD AND HEALTHY EATING SECTOR WITHIN THE FRAMEWORK OF THE ANDALUSIA SMART SPECIALISATION STRATEGY'S GOVERNANCE.

These actions that will contribute to improve the policy instrument tackled thanks to their implementation in Phase II, are the result of the interregional learning obtained thanks to the activities undertaken in the project. In particular, the study visits to the five good practices aforementioned (Tecnocampus; Agroliving Lab; Green Techlab; Clust-ER Agrifood; and Forum S3), all related to the innovation ecosystems promotion and the improvement of the Smart Specialisation Strategy's governance. Each one of them tackles this issue, which is the objective of our **Action Plan**, from different angles but all of them leading to the same result.

Action No.1 is linked to an innovation ecosystem that acts as generator and accelerator of innovation and digitisation in the agri-food sector, whose vision is to be an international reference in the incorporation of ICT technology in the agri-food value chain. It will strengthen the figure, mission, operations, strategy and objectives of DIH Agrotech, amongst which are the provision of new capacities to companies, the increase of the competitiveness of companies through the application of digital innovation in each of the phases of the agri-food value chain, and the boost of strategic alliances between different quadruple helix actors, that will also enable Andalusian SMEs to participate in more European projects and initiatives through DIH Agrotech. These objectives are aligned with those of the policy instrument **ERDF Regional Operational Programme Andalusia 2014-2020**'s ones, so this action will have a positive and innovative impact, which will introduce a novel instrument into European policies, having been able to integrate different sectoral and regional policies. DIH Agrotech is a new project financed by ERDF Regional Operational Programme Andalusia.

Action No.2 was conceived to be linked to one of the **RIS3 Andalusia 2014-2020** specialisation priorities and grounded to the own Andalusia Smart Specialisation Strategy's governance, whose implementation and development was recommended to be reviewed in view of the **S4 Andalusia for the 2021-2027 period**, in order to improve participation and institutional commitment, as the Progress Intermediate Evaluation Report indicated in June 2019. According to this Report assessing the first half of the **RIS3 Andalusia** validity period, such an action will definitely contribute to strengthen the commitment and coordination between the responsible management centres and the other actors in the sector; enhancing good governance, which in the current programming period 2021-2027 is a favourable condition for regional programmes; besides it will encourage the entrepreneurial discovery process, facilitating the identification of innovation opportunities by the members of the working group that will be created. These objectives are aligned with the Smart Specialisation Strategies, which in the previous period was an ex-ante condition "to strengthen research, technological development and innovation" of the **ERDF Regional Operational Programme Andalusia 2014-2020**, the policy instrument selected. Thus, this action will have a positive impact on the evolution of the Andalusia Smart Specialisation Strategy's governance and, furthermore will improve it, being essentially based on the **RIS3 Andalusia 2014-2020** experiences acquired and the correspondent monitoring and evaluation processes, under the new perspective and context of the **S4 Andalusia 2021-2027**.



PART III:

Methodological Approach

Challenges/needs addressed

Data has become a key asset for the economy and our society. “Big Data” is leading technological innovation and the development of new tools and professional skills, so 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, and to achieve this, “Big Data” has to become a major tool for fast data processing and analysis, which will help the 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 designing and implementing specific integration and management procedures that let us take full advantage of the new economic opportunities (security, traceability, customer services, quality, etc.) based on information, data and cognitive technologies, and promote innovation-driven growth, where “Big Data” will play an essential role.

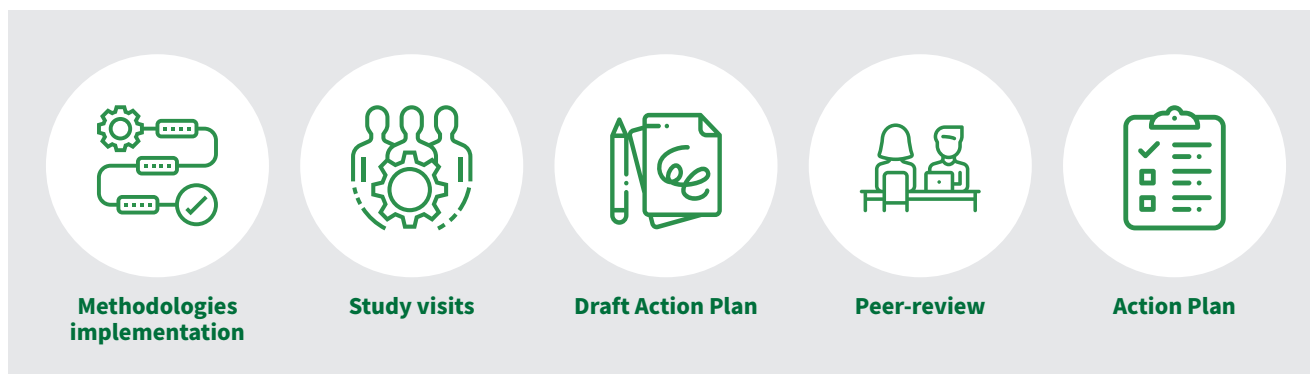
As a result of the participation of relevant regional authorities, the research sphere, ICT and agro-businesses, and civil society in the exchange of experience process, project partners have elaborated seven regional Action Plans (one per partner/region) which include measures that improve the technology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

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



Approach to the preparation of the Action Plan

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



Identification

The Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development of the Andalusian Government, 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 practices related to the digitisation of the agri-food sector
- Catalogue of data and technologies in the agri-food sector

Exchange of experiences and good practices

The results of these mappings were presented, shared and discussed within the framework of the interregional seminars organised jointly with the steering committee meetings.

The exchange of good practices has been carried out through study visits, where both project partners and stakeholders participated. Prior to the visits, project partners had identified among the good practices proposed, the ones that were most interesting to them in terms of their capacity to improve the policy instrument tackled.

Preparation of draft Action Plans

Following the template prepared by the Lead Partner, the first draft Action Plans 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 draft Action Plan.

Peer-review

The overall objective of the peer reviews was that the partner owner of the good practice inspiring the actions of another partner draft **Action Plan** evaluated it, taking into consideration the partner context on innovation strategies. It must be highlighted that twenty-seven online (due to COVID-19) peer reviews have been organised from June to November 2020. The process has been carried out as follows:

- First, each project partner determined if the peer review concerned the whole draft **Action Plan** or just specific action(s)
- Second, partners sent to peer the draft **Action Plan** with the instructions on what to review, that is, the whole **Action Plan** or just specific action(s)
- Third, the peer identified the key actors and stakeholders involved in the concerned good practice
- Four, once these agents read the draft **Action Plan**, both project partners met online for ideas exchanging, the document assessment, and if needed, for 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 second draft Action Plans

During Semester 6, the project partners' Action Plans (second draft) have been completed considering the suggested improvements of the peer-review process. They have been 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 (one per partner/region) for validation by the end of Phase I.

PART IV: **Actions**



ACTION No.1:

Consolidation of the Andalusia Agrotech Digital Innovation Hub – DIH Agrotech

Relevance to the project & background

The Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development of the Andalusian Government identified the need of creating an innovation ecosystem in the agri-food sector, as mentioned in the project application form, to boost the generation of new synergies and improve technology transfer in the process of digitisation of this sector, and thus to promote smarter economic growth and with greater technological content. We have also identified the need to guide future agri-food policies and strategies; to connect research to agri-food and ICT companies; to generate added-value from R&D&I and smart specialisation to agro business industry; and to promote public-private governance mechanisms, all under the umbrella of regional public administrations.

In this sense, the Regional Ministry started to work on the idea of creating a DIH to give response to the needs aforementioned and, after the implementation of the different phases of the project and thanks to the interregional learning process mainly coming from the good practices visited, finally decided **to consolidate the figure of the Andalusia Agrotech Digital Innovation Hub – DIH Agrotech**.

After visiting the twenty-nine good practices identified, among others, during 2019, four of them particularly inspired the action that will lead us to the improvement of the policy instrument addressed because these ones also get better the governance of the quadruple helix cooperation; guide future agri-food policies and strategies; connect research to agri-food and ICT companies; generate added-value from R&D&I and smart specialisation to agro business industry; and promote public-private governance mechanisms, all under the umbrella of regional public administrations.

The four following good practices have been selected by Andalusia as inspiration:

1 Technocampus (Pays de la Loire, France)

It is a building that belongs to the regional government and is managed by its agency, located near laboratories and professional associations (INRA and ONIRIS); it brings together different actors who operate in an ecosystem to develop innovation and training projects in agri-food sector, as well as start-ups working in the sector.

It keeps different actors within an innovation ecosystem of the agri-food sector housed under the same roof, which enables the creation of synergies and teamwork, and stimulates the development of new collaborative projects among them, which represents a high added-value.

2 Agroliving Lab (South Ostrobothnia, Finland)

It is a network of farmers, researchers and agri-food and ICT companies, that through regular meetings led by university researchers and feedback, facilitate the exchange of information and experiences that seek to test, validate and develop technological solutions to respond to the needs directly demanded by farmers.

It is an efficient channel through which technology companies obtain real information directly from farmers; and companies also participate in the development and improvement of their own products, thus generating feedback from stakeholders. This initiative is highly likely to be implemented in Andalusia, as it would respond to a real demand, there would be a willingness to participate by private initiatives and the Administration could also contribute.

3 Green Techlab (Limburg, Netherlands)

It is a centre of experience and specialisation that brings together researchers, students and companies in the agri-food sector, with governmental support. Based on the large amount of data generated and available (humidity, temperature, CO2, light, etc.) its mission is to collect, process, analyse and extrapolate the data to design predictive models and make recommendations.

It is a generator of synergies between different actors in the agri-food value chain that seeks to respond to real problems through research, process analysis and development of prototypes. It is a great example of synergies created when academia collaborates directly with SMEs.

4 Clust-ER Agrifood (Emilia Romagna, Italy)

It is one of the seven businesses clusters of specialisation, promoted and co-financed by the Emilia Romagna regional government, and coordinated by ART-ER (PP4), a regional consortium for innovation and technology transfer. Through an ecosystem of public-private cooperation and a high-tech network with industrial research laboratories (92) and innovation centres (14), responses to real problems are provided, innovation tools and funds are also made available for the improvement of the production system. The Clust-ER Agrifood, specialised in agri-food sector, brings together seventy members from laboratories, innovation centres, companies, research centres and other entities.

Ecosystem of participation between universities, companies and innovation and research centres, Clust-ER Agrifood is a successful model that could be replicated in Andalusia. Clusters respond to different legal entity models in which the public administration does not participate as such, but supports and encourages its initiatives. They are non-profit associations.



Nature of the action

The Andalusia Agrotech Digital Innovation Hub - DIH Agrotech is a public-private partnership aiming to create, anticipate, manage and accelerate digital innovation in the agri-food value chain. Its mission is to generate an ecosystem that provides the best conditions for a long-term success of agri-food companies, with a multi-actor, multidisciplinary, integrative, collaborative, open, innovative and global approach, and in which regional government, agri-food and ICT companies, financial institutions, agents of knowledge, talent and entrepreneurship, start-ups and civil society participate actively.

As we have found in particular in the study visits of the good practices Technocampus (PP2) and Clust-ER Agrifood (PP4), having an operational structure with proper management bodies is key to create synergies of collaboration among the different actors with the consequent benefits for all of them.

Following the example of Clust-ER Agrifood (PP4), which represents an innovation opportunities multiplier, a focus on R&D strategic sectors is key to lead innovation and accelerate digitisation of the agri-food value chain. Also, the implementation of multidisciplinary and multiactor collaborations that we witnessed in Agroliving Lab (PP3) and Green Techlab (PP6), the design of a long-term sustainability plan and the drawing up of a service charter, will drive DIH Agrotech to lead the innovation of the Andalusian agri-food sector.

Therefore, in order to enable **DIH Agrotech** to become a leader as generator and accelerator of innovation and digitisation in the Andalusian agri-food sector, the following six **activities** will be implemented within **Action No.1** to strengthen and consolidate its mission:

1. To establish the basis for the collaboration between DIH Agrotech promoting entities.
2. To create management bodies and operational structure.
3. To design a work plan.
4. To design a long-term sustainability plan.
5. To draw up and implement a service charter.
6. To launch a communication plan.



Activity No.1: to design and establish a stable governance structure is key for the provision of services by DIH Agrotech and maintenance of a “one-stop shop” scheme. Taking into account the rigidities that may arise when creating new entities with their own legal personality, a collaboration agreement will be drafted to establish the terms under which the core partners of DIH Agrotech will operate. For this purpose, the different alternatives for the agreement will be assessed, and once the formula is validated, both the organisation and operation of DIH Agrotech will be detailed in the outcome document.

Activity No.2: the creation of management bodies and operational structure. We will create: 1) Management bodies: Managing Director, including a Technical Office; and Strategic Committee, besides a Technical Committee and Working Groups; and 2) Operational structure, including a Head of the Technical Office. In addition, objectives, strategies, resources and schedule will be defined for each body.

Activity No.3: the design of an annually reviewed multiannual work plan is revealed as a necessity to adapt to new needs, especially to guide future agri-food policies and strategies. It will include a working and control methodology to be followed that will advocate agility, effectiveness, efficiency, transparency and cooperation. This plan will have five main lines of action:

- Communication activities
- Actions linked to the identification of funding sources
- Activities related to technological services
- Actions for the creation of new professional profiles, training and education on digital skills
- Initiatives for boosting the innovation and entrepreneurship ecosystems

For activity No.4, a long-term sustainability plan will be designed, including economic-financial aspects that will ensure the viability and sustainability of DIH Agrotech. Different kinds of potential funds and financing programmes will be identified to this aim:

- European Digital Innovation Hub Restricted Call (Digital Europe Programme)
- Horizon Europe, Next Generation EU
- European Regional Development Fund, European Agricultural Fund for Rural Development, European Territorial Cooperation
- Own resources (Services, R&D facilities)

For activity No.5, a service charter will be drawn up and implemented to respond to the following lines of work, highlighting that many of the services included will be provided by DIH Agrotech’s member entities. Therefore, the number of services offered will be in line with the ecosystem:



Training and empowering

Talent creation and acquisition of digital skills applied to the sector:

- Development of training sessions and workshops
- Organisation of discussion forums
- Specialisation courses in digital skills
- Outreach meetings on trends and success stories

DIH Agrotech is currently working together with associations representing farmers and cooperatives on the training of technicians and farmers, which is essential for its multiplier effect.



Ecosystems creation

Service oriented to boost our innovation ecosystem:

- Open innovation programmes
- Technological challenges
- Creation of consortia for technological developments
- Acceleration and entrepreneurship programme
- Innovation and business models programmes



Technological services

Pilot initiatives that allow the implementation of platforms as living labs to test and develop innovative and sustainable solutions according to their level of technological maturity:

- Experimental environments for testing innovations
- Development of end-user oriented prototypes
- Evaluation of concepts, new products and services

DIH Agrotech does not foresee the creation of new areas of experimentation as it will collaborate with existing demonstration centres in the region. It will take advantage of the exiting infrastructures.



Data science

Exploiting the potential of open administration for the development of added-value products and improvement of process efficiency. In addition to the national platform of agriculture, Andalusia also has different tools that enable to obtain different types of data.



Trends observatory

Competitive intelligence based on the identification, analysis and interpretation of information and opportunities with strategic value:

- Diagnosis of technological needs and opportunities
- Technology surveillance



Funds and financing strategies

Support to promote and facilitate the connection between funds and strategies:

- Identification of national and international calls
- Sessions on funding sources
- Access to private financing strategies

The importance of giving visibility and motivating farmers in their own terms will be crucial. Therefore, they will have a relevant voice within DIH Agrotech. Initiatives related to training, co-creation and demonstration where public entities represent a key role (such as the Institute for Agricultural and Fisheries Research and Training - IFAPA of the Andalusian Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development), will be focused on promoting the entrepreneurship, the transfer of knowledge and the adoption of technological and digital solutions by technicians and farmers.

Finally, a **Communication Plan will be launched (activity No.6)**, including a website that will contribute to a greater visibility of the DIH Agrotech's activities and achievements. It will disseminate on its mission and objectives, will share its values and experiences, and will connect with actors in the world of research and businesses in a functional and operational way.

Stakeholders involved

- **Founders:** Government of Andalusia and the entity created to DIH Agrotech
- **Funders:** Government of Andalusia
- **Others:** SMEs, large companies, start-ups, universities, research centres, public entities, civil society, etc.

Timeframe

This action will be implemented during 2020, 2021 and 2022 with the following schedule of activities:

- In 2020 and 1st quarter of 2021, development of activities No.1 and No.2
- In 2nd semester of 2021, formal approval of activity No.3
- In 2nd semester of 2022, preparation and approval of activity No.4
- In 2nd semester of 2021, activity No.5
- Activity No.6, being implemented since 2020 and during the project lifecycle

ACTION No. 1	Timeframe						
	S1 2020	S2 2020	S1 2021	S2 2021	S1 2022	S2 2022	S1 2023
No. 1: to establish the basis for the collaboration between DIH Agrotech promoting entities							
No. 2: to create management bodies and operational structure							
No. 3: to design a work plan							
No. 4: to design a long-term sustainability plan							
No. 5: to draw up and implement a service charter							
No. 6: to launch a communication plan							

Costs

The expected costs are equivalent to the estimated budget for the period 2020-2022 and are oriented to cover, among others:

- Staff costs and technical reports: 40%-60%
- Infrastructure: 5%-15%
- Organisation and participation in events, meetings, thematic exhibitions: 10%-20%
- Communication actions of DIH Agrotech: 5%-15%
- Digital maturity assessment and technology watch service: 5%-15%

Note: all costs indicated may vary according to the needs of the agri-food companies.

Funding sources

DIH Agrotech budget for the period 2020-2022 reaches EUR 1,081,910 of which 80% will be financed by ERDF and the remaining 20% by the Government of Andalusia. These financial resources are approved, committed, available and enough for the development of the action.

Additionally, as mentioned in activity No.4, it will search for more funding sources to reinforce and consolidate its economic viability and sustainability. These ones will be:

- Membership fees
- Rates for services provided
- Contributions in-kind based on complementarities with public services oriented towards these purposes
- New funding sources through the participation in European cooperation and innovation projects
- EU Recovery Funds (option to apply)
- European Digital Innovation Hub Restricted Call (option to apply)

Output and result indicators

The expected results following the implementation of the planned activities for the consolidation of DIH Agrotech will be:

- Collaboration agreement established
- Management bodies and operational structure created
- One work plan designed
- One long-term sustainability plan designed
- One service charter offered
- One communication plan launched

The indicators that will contribute to monitor the implementation of activities will be:

- Number of agri-food companies that have received services from DIH Agrotech in their digitisation process per year (target: 25)
- Number of entities related to DIH Agrotech that have submitted international projects per year (target: 10)
- Number of information and/or training actions in which DIH Agrotech has participated per year (target: 10)
- Number of international networks in which DIH Agrotech has participated per year (target: 3)
- Number of web visits/queries, traffic information, SEO/SEM per month (target: 30)
- Number of ICT companies that have offered services through DIH Agrotech per year (target: 12 new companies/year)

ACTION No.2:

Creation of a specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy's governance

Relevance to the project & background

The Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development of the Andalusian Government identified the need to improve the governance of the quadruple helix cooperation in the agri-food sector, as mentioned in the project application form, to attract regional authorities and join forces with the rest of the actors, promote public-private participation and governance mechanisms, and advise on the implementation of better policy strategies.

During the study visit to Emilia Romagna (PP4), we learnt more about the Forum S3 good practice. Under the mandate of the regional government of Emilia Romagna, ART-ER began to participate in the strategic review process at the end of 2017, which, after an extensive and complex work, led to the creation of seven thematic events (forums) in May 2018. Forum S3 are places of open debates for people interested in the regional innovation system, born with the aim of proposing an update of the thematic orientations foreseen by the Emilia Romagna Region Smart Specialisation Strategies, suggesting policies and intervention tools for a more effective implementation strategy, and promoting new solutions for the agri-food sector. The forums begin with an opening speech by an expert, giving an overview of future scenarios, opportunities and challenges, and then other speakers and participants take the floor driving the debate to a specific theme and contextualising it in the Emilia Romagna region. The results of each of the forums contain considerations and proposals for political intervention, reflected in a report published on the regional government's corporate website.

Its participative approach has proven to be a valid tool for involving members of the quadruple helix in the design and configuration of industrial/sectoral policies. It has a horizontal governance model.

This good practice has been of great inspiration on the design of our **Action No.2** because it will enable the improvement of the governance of the quadruple helix cooperation; will guide future agri-food policies and strategies; will connect research to agri-food and ICT companies; will generate added-value from R&D&I and smart specialisation to agro business industry; and will promote public-private governance mechanisms, all under the umbrella of Smart Specialisation Strategies and regional public administrations.

The Progress Intermediate Evaluation Report of RIS3 Andalusia for the period 2014-2018 ended in June 2019, was foreseen in the Specific Evaluation Plan of the **ERDF Regional Operational Programme Andalusia 2014-2020**, indicating that its design, implementation and results would be judged.

The Report concluded that the challenges identified for each of the eight specialisation priorities, including Priority 6 "Research and Innovation in Agri-food and Healthy Eating sector", remained relevant at the time.

However, the Report offered some recommendations to support the possibility for the future Smart Specialisation Strategy 2021-2027 to make the appropriate adjustments and updates. And that also with the objective to adapt them in the most proper way to the new economic, social and environmental context basing the evolution on the evidences risen from the practices developed during 2014-2020, as one of the main inputs at the time to define the current new governance.

The Intermediate RIS3 Andalusia Evaluation Report included a number of proposals for S3 future improvements, three of which (R22, R23 and R24) are specifically focused on improving the **RIS3 Andalusia's governance**. These recommendations find justification on the fact that RIS3 Andalusia's governance bodies have suffered from a weak institutional boost (few sessions held and limited participation of their members), and did not either have been accompanied by proper management processes and procedures (such as a work plan with defined objectives, budgets and schedule).

Furthermore, the Evaluation Report contained a particular recommendation (R27) on the opportunity to **“create working groups that encourage the participation of the agents of the Andalusian innovation system to update the results of the entrepreneurial discovery process”**.

Nature of the action

On the basis of the mentioned above, it is proposed to contribute to the improvement of the Andalusia Smart Specialisation Strategy's governance through the **creation of a specific working group linked to the agri-food and healthy eating sector**.

It should be highlighted that Smart Specialisation Strategies focus on improving the efficiency of public administration in management and public services delivery through, among others, the use of ICT tools and integrated platforms. The participation and commitment at local level in the process design, its implementation and monitoring are essential to ensure that services are tailored to the needs of the region.

Necessary adjustments to the present situation

It has been almost two years of the publication of the **RIS3 Andalusia Intermediate Report**. During these two years, we have been forced to face the occurrence of the pandemic, with the well-known consequences on the development of our lives and responsibilities as public actors, which have had a reflect on the EU, national and regional budget and perspectives.

As far as this REGIONS 4FOOD project and the correspondent Andalusian Regional **Action Plan** is concerned, COVID-19 has also had the correspondent impact producing also a delay on the development of their concretion and then on its implementation too. Thus, the **Action Plan** will be implemented in the context of the recovery from the COVID-19 crisis within the current MMF 2021-2027.

Though monitoring activities are still in place for **RIS3 Andalusia 2014-2020**, at the end of January 2021, the Andalusian Government Board has formally approved the Formulation Agreement for the **Smart Specialisation Strategy for Sustainability of Andalusia, S4 Andalusia 2021-2027** (published at the Andalusian Government Official Journal, BOJA nº19 29.01.2021), entailing that our region is currently involved with the elaboration of its Smart Specialisation Strategy for the current programming period.

This new process implies the definition and update of S3 governance within the framework of the current **S4 Andalusia**, according with the new EU requirements for Smart Specialisation Strategies as regards **2021-2027 ERDF Regional Operational Programme**, starting the **RIS3 Andalusia Intermediate assessment** conclusions and recommendations.

From these circumstances and approach, **the implementation of activities proposed here below for Action No.2 can only be considered, defined and carried out within the perspective and context of the S4 Andalusia 2021-2027 governance framework.**

Action No.2 Activities

Thus, the following activities will seek to strengthen and complement the creation of a specific working group in the agri-food and healthy eating sector, particularly focusing on the governance of the Smart Specialisation Strategies in Andalusia following the example of Forum S3 from Emilia Romagna:

1. **To create a specific working group in the agri-food and healthy eating sector representing the quadruple helix.**
2. **To integrate the specific working group within the framework of operational structure of S4 Andalusia 2021-2027 governance, and as consequence aligned with it.**
3. **To design a work plan for the functioning of the group.**
4. **To facilitate the possibility of assessing and making recommendations to the agents and policy makers responsible for S4 Andalusia on agri-food and healthy eating to be taken into consideration during the design of the ERDF Regional Operational Programme Andalusia 2021-2027.**

Regarding activity No.1: the creation of a specific working group linked to the Priority related to the agri-food and healthy eating sector. This working group will be represented widely by the main players from the regional scenario of the agri-food and ICT sectors, belonging to both public and private entities. It will include thematic experts from business, research and knowledge, related to the topics of discussion. Finally, it will include recommendations on the integrated gender perspective (as foreseen in the Progress Intermediate Evaluation of RIS3 Andalusia). The number of members will be defined between ten and fifteen.

Regarding activity No.2, the new working group will be integrated into the operational structure of S4 Andalusia's governance, aligned with the criteria that define it for an optimal interaction with the management bodies foreseen in the Strategy Governance.

The composition of this specific working group will be adjusted to the representation of actors from the quadruple helix, with a simple structure and reduced number of members (10-15), highlighting that its impact will depend on the correct institutional configuration in the framework of the current design process of the S4 Andalusia's governance model taking into account the RIS3 Andalusia intermediate evaluation conclusions, ensuring greater operationality, efficiency, effectiveness, flexibility, dynamism, commitment, participation, cooperation and transparency.

It will have ensured multi-level representation, as well as representatives of SMEs, large companies, start-ups, universities, research centres, public entities, consumer organisations, as part of civil society, and DIH Agrotech, taking into account that the panel of key persons must not be extensive/large to avoid difficulties on achieving conclusions.

As for the minimum structure, the group will include members representing the following entities and Andalusian stakeholders from the agri-food sector:

- The Technical Team of S4 Andalusia (Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development, Government of Andalusia)
- DIH Agrotech
- S3 Thematic Platform for Traceability and Big Data
- Andalusian universities
- Technology centers and technology parks
- Relevant companies and start-ups
- Technical Office of S4 Andalusia

Therefore, the specific working group will be interconnected with **Action No.1** which can represent a strategic reference point due to its multidisciplinary, inclusive, collaborative, open, innovative, global and participatory approach, and also linked to the digitisation agents of the Andalusian agri-food sector and different European platforms, projects, alliances, consortiums and/or partnerships related to the working group's competences.

Regarding activities No.3 and No.4, the design of the work plan will be carried out in line with the framework of the current design process of the S4 Andalusia's governance model, and ensuring, in any case, the celebration of meetings with appropriate periodicity.

The effective participation of the Technical Team and agents of the Andalusian Knowledge System in the implementation of the strategy with respect to the objectives, strategies, budget and schedule, will be clearly fulfilled. These will allow a proper monitoring, being essential the involvement and commitment of all members.

The main functions of the group will be:

- Discuss about the results of the actions implemented within S4 Andalusia related to the agri-food specific priority.
- Jointly analyse all aspects related to the area of this S4 Andalusia priority, including potential new trends, evolution of context and the way that it is reacting to the actions as results of the recovery measures put into place, deepening into the regional competences, barriers and, where appropriate, any possible new appropriate actions or measures.
- Propose and/or recommend the set out of new measures to be submitted to the Technical Team and Codecision Group.
- Collaborate with the Technical Office of S4 Andalusia, supporting its tasks by facilitating relevant information, where appropriate, as well as with the rest of actors within the S4 Andalusia's governance structure.

Finally, the meetings of the group will be developed following an open debate mechanism allowing an effective debate and decision-making, according to the design of **S4 Andalusia's governance**, and it will incorporate a subsequent evaluation of the results, including conclusions/reports arising from the debates generated within the group and proposals for recommendations to **S4 Andalusia** on agri-food and healthy eating.

The implementation of each activity mentioned above will be integrated within the framework of the reviewing process of the RIS3 Strategy Andalusia 2020, and particularly by its governance. This is why the details corresponding to the design and definition of each of them will be incorporated into this **Action Plan of the region of Andalusia** as they are concreted in the framework of the aforementioned procedure. It will also happen with the details affecting its timeframe.



Stakeholders involved

- **Main stakeholders:** Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development and Regional Ministry of Economic Transformation, Industry, Knowledge and Universities, both from the Government of Andalusia; and the Innovation and Development Agency of Andalusia – IDEA (*)
- **Others:** SMEs, large companies, start-ups, universities, research centres, public entities, etc., in the agri-food and ICT sectors; consumer organisations, DIH Agrotech and S3 Thematic Platform for Traceability and Big Data

(*) Regarding the IDEA Agency, created in 1987, it is the regional development agency of the Andalusian Government, attached to the Regional Ministry of Economic Transformation, Industry, Knowledge and Universities, specialised mainly in the promotion of innovation in Andalusian society, contributing efficiently and effectively to establish an innovative ecosystem in the Andalusia region. Its main actions focus on: 1) promoting innovation and sustainability, and offering advanced services; 2) developing businesses; providing infrastructure and productive areas; 3) attracting capital and strategic investments; 4) improving the internationalisation of Andalusian companies; and 5) boosting regional development.

It was designated by the Spanish Ministry of Finance and Public Service as the Intermediate Organism for the Management of the Global Competitiveness-Innovation-Employment Grant of Andalusia 2014-2020, an initiative aligned with the **ERDF Regional Operational Programme Andalusia 2014-2020**, with funds of EUR 617.3 million for the achievement of objectives 1-2-3, distributed as following: EUR 135.3 million for R&D&I; EUR 27.9 million for ICT; EUR 448.8 million for industrial development; and EUR 5.3 million for technical assistance.

It also has been the Technical Secretariat of several regional strategies, the **RIS3 Andalusia**, among others, leading the working group that coordinates the design, implementation, controlling and monitoring of the **RIS3 Andalusia** (Andalusian Innovation Strategy 2014-2020), in addition to the Industrial Strategy of Andalusia (EIA2020).

In addition, it should be highlighted that **IDEA Agency is the entity responsible for the Action No.2 of the Andalusia's Action Plan** and **also regional stakeholder of REGIONS 4FOOD project**.

Timeframe

The improvement of the RIS3Andalusia's governance has been rated with a "Very High" priority indicator in the Progress Intermediate Evaluation Report, which specifically recommends "to advance in the institutionalisation of the strategy, incorporating elements that simplify it and make it more efficient, strengthening commitment and coordination between management centres and establishing the operating mechanism of meeting schedules of its different bodies".

Thus, the specific working group will be created within the framework and calendar of the new governance model which will be finally approved for **S4 Andalusia**, taking into account the recommendations and conclusions of the Progress Intermediate Report.

The boost and coordination of the specific working group will count with the support of the Technical Office of S4 Andalusia (Innovation and Development Agency of Andalusia – IDEA), that will play a key role for promoting and managing the meetings, calls, agendas, debates and topics to be discussed during the sessions, according with the following criteria:

- For the better functioning of the group, the appointment of a coordinator/leader person in charge for it may be agreed
- The meeting calls of the group will be made by the Technical Office of S4 Andalusia, where appropriate, they could be proposed by the coordinator/leader
- The group will hold at least one meeting per year
- The first meeting should be held in the first half of 2022
- Meetings may be celebrated in a virtual format through the appropriate tool incorporated into the S4 Andalusia's website
- The group will prepare an annual report that will be submitted to the Technical Team and furthermore to the Strategy Codecision Committee of the S4 Strategy

The specific working group will be created with a vocation of continuity and permanence by contributing with its activities, proposals, recommendations and reflections to **S4 Andalusia** within the framework of the 2021-2027 programming period.

ACTION No. 2	Timeframe				
	S1 2021	S2 2021	S1 2022	S2 2022	S1 2023
No. 1: to create a specific working group in the agri-food and healthy eating sector representing the quadruple helix					
No. 2: to integrate the specific working group within the framework of operational structure of S4 Andalusia 2021-2027 governance					
No. 3: to design a work plan for the functioning of the group			1st meeting		
No. 4: to facilitate the possibility of assessing and making recommendations to the agents and policy makers responsible for S4 Andalusia on agri-food and healthy eating to be taken into consideration during the design of the ERDF O.P. Andalusia 2021-2027					

Note: the activities foreseen will be implemented according to the progress of the **S4 Andalusia's new governance model with a focus on 2021-2027 period**.

Costs

The creation and functioning of the group will be part of the actions and portfolio of tasks included in the **governance of S4 Andalusia**, so the potential costs that could be generated by the meetings will be assumed/covered as part of the budget and activities of the Technical Office budget foreseen.

Funding sources

Technical Assistance from the **ERDF Regional Operational Programme Andalusia 2014-2020**.

Output and result indicators

The **expected results** following the implementation of the planned activities for the creation of a specific working group in the agri-food and healthy eating sector will be:

- One specific working group created, and integrated within the framework of the S4 Andalusia's governance, and aligned with it
- One work plan designed
- Conclusions/reports arising from the discussions generated within the group and proposals for recommendations to the responsible for S4 Andalusia on agri-food and healthy eating within the ERDF Regional Operational Programme Andalusia 2021-2027

The **indicators** that will contribute to monitoring the implementation of activities will be:

- Number of members of the specific working group by nature (target: 10-15)
- Number of interactions of the specific working group with the operational structure of S4 Andalusia's governance
- Number of meetings/working tables held, periodicity, quorum per year (target: 1 per year)
- Number of conclusions arising from discussions/reports and proposals for recommendations elaborated/disseminated per year



PART V:
**Monitoring
System**

The **monitoring period of the Action Plan** will be from 1st June 2021 (once validated by the Joint Secretariat) 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.

PROJECT'S COMMON MONITORING SYSTEM

Regarding the joint monitoring mechanism, it 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 II (one in Semester 8 and another one in Semester 10) to give project partners recommendations for improvement, if needed.

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

The joint monitoring mechanism has four different sections:

- **Action Plan implementation** (outputs, result indicators, relevant stakeholders)
- **Territorial impact** (self-defined performance indicator, new ones if added)
- **Policy instrument** (addressed, others influenced)
- **Result indicators** (at regional and project level)

Action Plan Implementation

PROJECT PARTNER	ACTION NUMBER	ACTION NAME	1.1) OUTPUT TARGET	1.2) PROGRESS MADE: Completed (Co) Cancelled (Ca) On-going (O) Postponed (P)	1.3) EXPLANATION (problems encountered)	2.1) RESULT INDICATOR	2.2) TARGET	2.3) ACHIEVED (accumulated)	3.1) RELEVANT STAKEHOLDERS ACTIVELY INVOLVED (Yes / No, description)
PP1	1	Consolidation of the Andalusia Agrotech Digital Innovation Hub - DIH Agrotech	Collaboration agreement established			Number of agri-food companies that have received services from DIH Agrotech in their digitisation process per year	25		
			Managing bodies and operational structure created			Number of entities related to DIH Agrotech that have submitted international projects per year	10		
			1 work plan designed			Number of information and/or training actions in which DIH Agrotech has participated per year	10		
			1 long-term sustainability plan designed			Number of international networks in which DIH Agrotech has participated per year	3		
			1 service charter offered			Number of web visits/queries, traffic information, SEO/SEM per month	30		
			1 communication plan launched			Number of ICT companies that have offered services through DIH Agrotech per year	12		
	2	Creation of a specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy's governance	1 specific working group created, and integrated within the framework of the S4Andalusia's governance, and aligned with it			Number of members of the specific working group by nature	10-15		
			1 work plan designed			Number of interactions of the specific working group with the operational structure of S4Andalusia's governance			
						Number of meetings/working tables held, periodicity, quorum per year	1		
			Conclusions/reports arising from the discussions generated within the group and proposals for recommendations to the responsible for S4Andalusia on agri-food and healthy eating within the ERDF Regional Operational Programme Andalusia 2021-2027			Number of conclusions arising from discussions/reports and proposals for recommendations elaborated/disseminated per year			

ACTION PLAN - PART IV - ACTIONS: sub-section "Output & Result Indicator" (according to the information included in the validated regional Action Plan).

Territorial Impact

PROJECT PARTNER	ACTION NUMBER	ACTION NAME	4.1) SELF-DEFINED PERFORMANCE INDICATOR	4.2) TARGET	4.3) ACHIEVED (accumulated)	5.1) NEW SELF-DEFINED PERFORMANCE INDICATOR (if added)	5.2) TARGET	5.3) ACHIEVED (accumulated)
PP1	1	Consolidation of the Andalusia Agrotech Digital Innovation Hub - DIH Agrotech	Number of enterprises developing innovation/ digitisation activities in food industry	20				
	2	Creation of a specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy' s governance						
			SELF-DEFINED PERFORMANCE INDICATOR: specific to each policy instrument, it measures the beneficiaries that are better off thanks to this instrument (according to the Application Form, page 48)			NEW SELF-DEFINED PERFORMANCE INDICATOR: if added to better show the territorial impact (previously the JS & the LP must be informed)		

Policy Instrument

PROJECT PARTNER	ACTION NUMBER	ACTION NAME	6.1) PI ADDRESSED (Application Form, page 10)	6.2) IMPROVEMENTS (Yes, nature of change)	6.3) NOT IMPROVED YET (No, main reasons)	7.1) OTHERS INFLUENCED (which one/s, how)
PP1	1	Consolidation of the Andalusia Agrotech Digital Innovation Hub - DIH Agrotech	ERDF Regional O.P. Andalusia 2014-2020			RIS3 Andalusia 2014-2020
	2	Creation of a specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy' s governance				S4 Andalusia 2021-2027

Result Indicators

RESULT INDICATORS (Application Form, page 47)	TARGET (at project level)	ACHIEVED (accumulated at Andalusian level)	ORIGINAL EXPECTED CONTRIBUTION (by Andalusia)
Number of Growth & Jobs or ETC programmes addressed by the project where the measures inspired by the project will be implemented 100% of policy instruments addressed with structural funds link	5		1
Number of other policy instruments addressed by the project where measures inspired by the project will be implemented 100% of policy instruments addressed without structural funds link	2		-
Estimated amount of Structural Funds (from Growth & Jobs and/or ETC) influenced by the project (in EUR)	27.600.000 €		4.000.000 €
Estimated amount of other funds influenced (in EUR)	10.600.000 €		-

PARTNER'S ACTION PLAN SELF MONITORING SYSTEM

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 organizational needs and internal structure. It has been adapted to both actions, and includes two different sections:

- **Action implementation** (timeframe, meetings, result indicators)
- **Template** (progress, activity's result indicator, relevant stakeholders)

GOVERNMENT OF ANDALUSIA:

Action No.1: Consolidation of the Andalusia Agrotech Digital Innovation Hub – DIH Agrotech

ACTION IMPLEMENTATION								
ACTION NAME	ACTIVITY	TIMEFRAME foreseen						
		S1 2020 (1 Jan 2020 - 30 Jun 2020)	S2 2020 (1 Jul 2020 - 31 Dec 2020)	S1 2021 (1 Jan 2021 - 30 Jun 2021)	S2 2021 (1 Jul 2021 - 31 Dec 2021)	S1 2022 (1 Jan 2022 - 30 Jun 2022)	S2 2022 (1 Jul 2022 - 31 Dec 2022)	S1 2023 (1 Jan 2023 - 30 Jun 2023)
Consolidation of the Andalusia Agrotech Digital Innovation Hub - DIH Agrotech	No.1: to establish the basis for collaboration between DIH Agrotech promoting entities							
	No.2: to create management bodies and operational structure							
	No.3: to design a work plan							
	No.4: to design a long-term sustainability plan							
	No.5: to draw up and implement a service charter							
	No.6: to launch a communication plan							

MEETINGS foreseen with DIH Agrotech (responsible for Action No.1)						
		Semester 6 (Dec 2020 - May 2021)	Semester 7 (Jun 2021 - Nov 2021)	Semester 8 (Dec 2021 - May 2022)	Semester 9 (Jun 2022 - Nov 2022)	Semester 10 (Dec 2022 - May 2023)
Meeting No.1 in order to get info about progress made of Activities No.1, No.2, No.3, No.5 and No.6			November 2021			
Meeting No.2 in order to get info about progress made of Activities No.3, No.5, No.6 and others if not implemented yet				May 2022		
Meeting No.3 in order to get info about progress made of Activities No.4 and others if not implemented yet					November 2022	
Final Meeting in order to consolidate info about implementation of activities						February 2023

RESULT INDICATORS	TARGET	ACHIEVED
No. of agri-food companies that have received services from DIH Agrotech in their digitisation process per year	25	
No. of entities related to DIH Agrotech that have submitted international projects per year	10	
No. of information and/or training actions in which DIH Agrotech has participated per year	10	
No. of international networks in which DIH Agrotech has participated per year	3	
No. of web visits/queries, traffic information, SEO/SEM per month	30	
No. of ICT companies that have offered services through DIH Agrotech per year	12	

Action No.2: Creation of a specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy's governance

ACTION IMPLEMENTATION								
ACTION NAME	ACTIVITY	TIMEFRAME foreseen						
		S1 2020 (1 Jan 2020 - 30 Jun 2020)	S2 2020 (1 Jul 2020 - 31 Dec 2020)	S1 2021 (1 Jan 2021 - 30 Jun 2021)	S2 2021 (1 Jul 2021 - 31 Dec 2021)	S1 2022 (1 Jan 2022 - 30 Jun 2022)	S2 2022 (1 Jul 2022 - 31 Dec 2022)	S1 2023 (1 Jan 2023 - 30 Jun 2023)
Creation of a specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy's governance	No.1: to create a specific working group in the agri-food and healthy eating sector representing the quadruple helix							
	No.2: to integrate the specific working group within the framework of operational structure of S4 Andalusia 2021-2027 governance, and as consequence aligned with it							
	No.3: to design a work plan for the functioning of the group							
	No.4: to facilitate the possibility of assessing and making recommendations to the agents and policy makers responsible for S4 Andalusia on agri-food and healthy eating to be taken into consideration during the design of the ERDF O.P. Andalusia 2021-2027							

NOTE: the activities foreseen will be implemented according to the progress of the S4 Andalusia's new governance model with a focus on 2021-2027 period

MEETINGS foreseen with DIH Agrotech (responsible for Action No.1)						
		Semester 6 (Dec 2020 - May 2021)	Semester 7 (Jun 2021 - Nov 2021)	Semester 8 (Dec 2021 - May 2022)	Semester 9 (Jun 2022 - Nov 2022)	Semester 10 (Dec 2022 - May 2023)
Meeting No.1 in order to get info about progress made (if any) of Activities No.1, No.2, No.3 and No.4			November 2021			
Meeting No.2 in order to get info about progress made (if any) of Activities No.1, No.2, No.3 and No.4				May 2022		
Meeting No.3 in order to get info about progress made (if any) of Activities No.1, No.2, No.3 and No.4					November 2022	
Final Meeting in order to consolidate info about implementation of activities						February 2023

RESULT INDICATORS	TARGET	ACHIEVED
No. of members of the specific working group by nature	10-15	
No. of interactions of the specific working group with the operational structure of S4 Andalusia's governance		
No. of meetings/working tables held, periodicity, quorum per year	1	
No. of conclusions arising from discussions/reports and proposals for recommendations elaborated/disseminated per year		

Template

To be completed and reported in each meeting held.

Meeting No.:				
Date:				
Attendees:				
Target:	To get relevant information about progress made of activities			
	PROGRESS MADE: Completed (Co); Cancelled (Ca); On-going (O); Postponed (P)	EXPLANATION (problems encountered, next steps)	ACTIVITY' s RESULT INDICATOR (improvements achieved)	RELEVANT STAKHOLDERS INVOLVED (role, description)
Activity No.:				
Activity No.:				
Activity No.:				
	IMPACT: Yes / No	EXPLANATION		
Self-defined performance indicator: No. of enterprises developing innovation/digitisation activities in food industry				
	IMPROVED: Yes / No	EXPLANATION		
Policy Instrument addressed: ERDF Regional O.P. Andalusia 2014-2020				
	INFLUENCED: Yes / No	EXPLANATION		
Other Policy Instrument				
	NUMBER	EXPLANATION		
Growth & Jobs or ETC programmes addressed where the measures inspired by the project will be implemented 100% of policy instrument addressed with structural funds link				
	NUMBER	EXPLANATION		
Other policy instruments addressed where measures inspired by the project will be implemented 100% of policy instrument addressed without structural funds link				
	ESTIMATED AMOUNT: (EUR)	EXPLANATION		
Structural Funds influenced				
Other Funds influenced				

Annexes



Endorsement letter from the relevant organisation responsible for Action 1

Project acronym ¹	REGIONS 4FOOD
Project title	REGIONal Strategies 4 FOOD 4.0 Revolution
Name of the signing organisation (original) including department if relevant	Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible, Gobierno de Andalucía
Name of the signing organisation (English) including department if relevant	Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development, Government of Andalusia
Name of the action in charge/responsible	Consolidation of the Andalusia Agrotech Digital Innovation Hub – DIH Agrotech (Action No.1)
Name of the policy instrument addressed and others influenced (original)	Programa Operativo FEDER de Andalucía 2014-2020 (addressed) RIS3 Andalucía 2014-2020 (influenced) S4 Andalucía 2021-2027 (influenced)
Name of the policy instrument addressed and others influenced (English)	ERDF Regional Operational Programme of Andalusia 2014-2020 RIS3 Andalusia 2014-2020 S4 Andalusia 2021-2027
Name of partner concerned in the application form (English)	Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development. Government of Andalusia

¹ Information indicated in this table must correspond to the information provided in the application form.

We hereby confirm:

- that we were informed about the preparation of the above-mentioned project,
- that the topic tackled by this project is in line with our organisation's policy and strategy,
- that we acknowledge the participation of the above-mentioned partner in the project,
- that we have actively collaborated in the design and elaboration of the action in charge/responsible,
- that we have involved with the stakeholder group in the exchanging experiences
- that we agree with the action plan statement
- that we are responsible for the implementation of the action No.1 "Consolidation of the Andalusia Agrotech Digital Innovation Hub – DIH Agrotech" included in the action plan

In this scenario, we endorse the action plan presented by the Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development, Government of Andalusia, in the context of the REGIONS 4FOOD project.

Name of signatory	Carmen Cristina de Toro
Position of signatory	General Director of Industries, Innovation and Agri-food Chain
Date and place	
Signature and institution stamp	



Endorsement letter from the relevant organisation responsible for the action

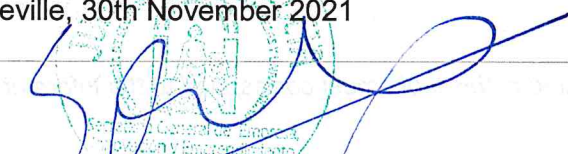
Project acronym ¹	REGIONS 4FOOD
Project title	REGIONal Strategies 4 FOOD 4.0 Revolution
Name of the signing organisation (original) including department if relevant	Secretaría General de Empresa, Innovación y Emprendimiento, Consejería de Transformación Económica, Industria, Conocimiento y Universidades. Junta de Andalucía
Name of the signing organisation (English) including department if relevant	General Secretariat for Business, Innovation and Entrepreneurship Ministry of Economic Transformation, Industry, Knowledge and Universities of the Andalusian Government
Name of the action in charge/responsible	Specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy's governance (Action N°2)
Name of the policy instrument addressed (original)	Programa Operativo FEDER de Andalucía 2014-2020 (addressed) RIS3 Andalucía 2014-2020 (influenced) S4 Andalucía 2021-2027 (influenced)
Name of the policy instrument addressed (English)	ERDF Regional Operational Programme of Andalusia 2014-2020 RIS3 Andalusia 2014-2020 S4 Andalusia 2021-2027
Name of partner concerned in the application form (English)	Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development. Government of Andalusia

¹ The Information indicated in this table must correspond to the information provided in the application form.

We hereby confirm:

- that we were informed about the preparation of the above-mentioned project,

- that the topic tackled by this project is in line with the regional innovation policy and the Andalusia smart specialisation strategy,
- that we acknowledge the participation of the above-mentioned partner in the project,
- that we have actively collaborated through the RIS3Andalusian Technical Secretariat in the design and elaboration of the action in charge/responsible,
- that we have been involved through the RIS3Andalusian Technical Secretariat with the Regions4Food project stakeholder group in the exchanging experiences
- that we agree with the action plan statement from the perspective that its implementation can only be consider, define and carry out within the perspective and context of the S4 Andalusia 2021-2027 governance framework (as it is explicitly stated in the R4F Action Plan)
- that being the General Secretariat for Business, Innovation and Entrepreneurship, the one holding the regional competences for the definition strategic plans for innovation and smart specialization, we are the Andalusian regional government department in charge of promoting the design and elaboration of the Andalusian Smart Specialisation Strategy for Sustainability, S4Andalusia 2021-2027, leading as well its Governance design, implementation and monitoring processes,
- that we are committed with the action No.2 “Creation of a specific working group in agri-food and healthy eating sector within the framework of this regional Strategy”, since its implementation is foreseen within the framework and calendar of the next S4Andalusia governance model
- that the boost and coordination of the specific working group will count with the support of the Technical Office of S4 Andalusia (Innovation and Development Agency of Andalusia – IDEA),
- that in this scenario, we endorse the action plan presented by the Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development, Government of Andalusia in the context of the REGIONS 4FOOD project, within the S4Andalusia governance model and IDEA Agency acting as S4Andalusia Technical Office

Name of signatory	Pablo Cortés Achedad
Position of signatory	General Secretariat of Business, Innovation and Entrepreneurship
Date and place	Seville, 30th November 2021
Signature and institution stamp	

Endorsement letter from the organisation responsible for the Action Plan

Project acronym	REGIONS 4FOOD
Project title	REGIONal Strategies 4 FOOD 4.0 Revolution
Name of the signing organisation (original) including department if relevant	Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible, Gobierno de Andalucía
Name of the signing organisation (English) including department if relevant	Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development, Government of Andalusia
Name of the 2 actions included in Action Plan	Consolidation of the Andalusia Agrotech Digital Innovation Hub – DIH Agrotech (Action No.1) Creation of a specific working group in agri-food and healthy eating sector within the framework of Andalusia Smart Specialisation Strategy's governance (Action No.2)
Name of the policy instrument addressed and others influenced (original)	Programa Operativo FEDER de Andalucía 2014-2020 (addressed) RIS3 Andalucía 2014-2020 (influenced) S4 Andalucía 2021-2027 (influenced)
Name of the policy instrument addressed and others influenced (English)	ERDF Regional Operational Programme of Andalusia 2014-2020 RIS3 Andalusia 2014-2020 S4 Andalusia 2021-2027
Name of partner concerned in the application form (English)	Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development. Government of Andalusia

Ana Maria Corredera Quintana, Regional Vice-Minister from the Regional Ministry of Agriculture, Livestock, Fisheries and Sustainable Development of Andalusia, agrees with the content of this Action Plan.

Name of signatory	Ana Maria Corredera Quintana
Position of signatory	Regional Vice-Minister
Date	30th November 2021
Signature and institution stamp	

