

# THE AGRIFOOD SECTOR INNOVATION AND DIGITIZATION

Judit Anda Ugarte

[Judit.anda@juntadeandalucia.es](mailto:Judit.anda@juntadeandalucia.es)

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Regional Ministry for Agriculture, Fisheries and  
Rural Development of Andalusia



# INDEX

**Description of the agrifood sector**

**Needs/Opportunities/Capacities/Experiences**

**Administrative organization**

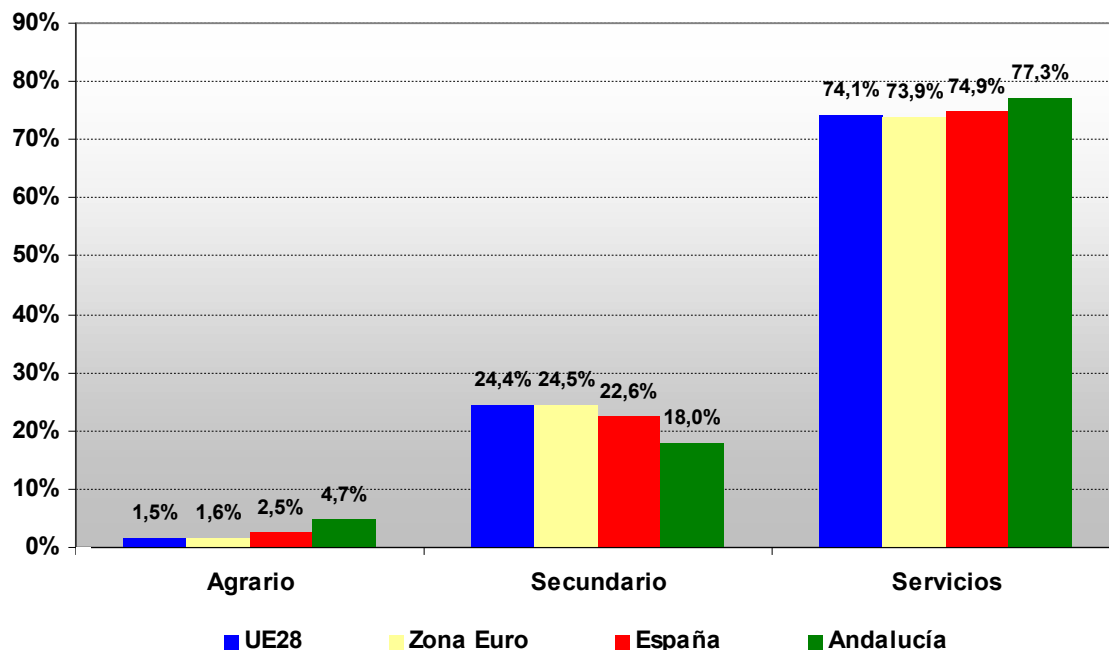
**Strategic Planning**

# INFORMATION ON THE ANDALUSIAN ECONOMY

In Andalusia, the agricultural sector is the sector that contributes most to the GVA (4.7%), compared to the other sectors analyzed: **it represents the double than in Spain (2.5%) and triple then in the EU28 (1.5%)**

If we put together the GVA of the agrifood industry (2.6%), **the agricultural and agrifood sector in Andalusia contribute by 7.3% to the Andalusian GVA**

## Aportación Sectorial al VAB año 2015



# REGION OF ANDALUSIA



**Area:** 87,597 km<sup>2</sup> (17% of the Spanish area, 2% of the EU 28 area, 4<sup>th</sup> region of the EU in terms of surface)

**Population:** 8.4 million people that in 2016 represented 1.7% and 18.1% of the total EU 28 and Spanish populations, respectively.

Andalusia has been classified as a **Transition region** for the period 2014-2020 as its GDP per capita is between 75% and 90% of the average of the EU Member States.

**Andalusia is classified as Intermediate Region** according to the OECD classification because 32% of its population live in rural areas.

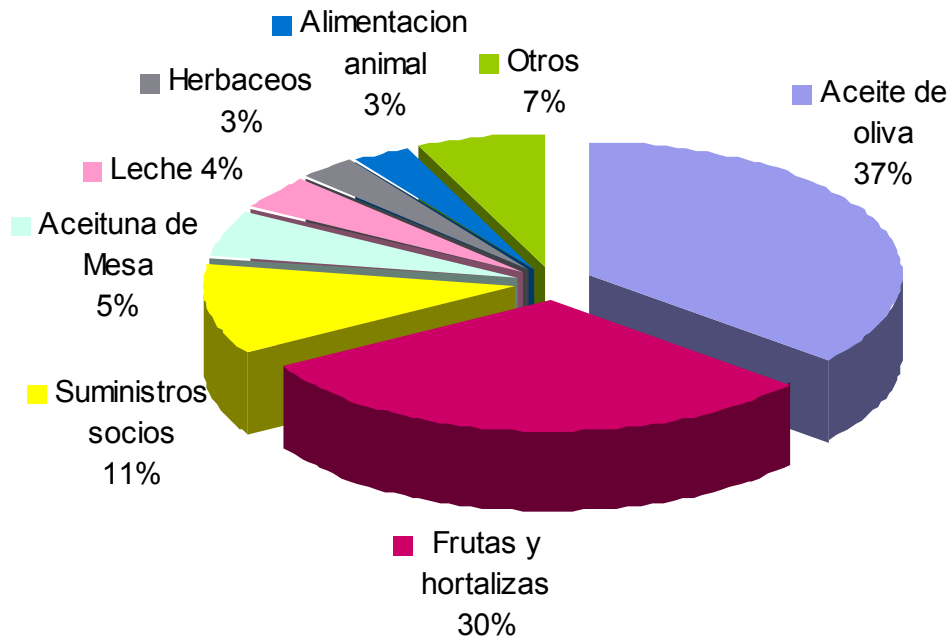
# ANDALUSIAN AGRIFOOD INDUSTRY

It is the second industrial sector in Andalusia: **5,136 companies**

**It represents 22% of the total of the Andalusian industries**

**It employs 46,465 people**

**It is an important cooperative sector**



# THE AGRIFOOD SECTOR IN ANDALUSIA

**The balance of trade of the agrifood industry is positive as its exports have increased by 65% in the past 10 years**

The sectors that export the most are the fruit and vegetables sector and the olive oil sector



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# PARTICULARITIES OF THE AGRIFOOD SECTOR

- Products are **perishable** and they are linked to different and controlled manufacturing processes and therefore, the data derived represent an additional complexity.
- It is based on **natural resources** and on their sustainability.
- It is made up of "**not accurate**" **systems** affected by multiple factors (markets volatility, weather at origin or destination, markets structures, consumption patterns of the population etc.)
- **Imbalance of the value chain** and little information coordinated at the same level. Need of a systemic management of the chain to look for synergies and share data.
- **Consumers** are more informed and more **demanding** and their habits and experiences should revert to the chain.



# NEEDS/OPPORTUNITIES OF THE AGRIFOOD SECTOR CONCERNING DIGITAL TECHNOLOGIES

- The **specific characteristics** of the agrifood value chain make this require **specific data and information management systems**. A lot of information is not used in decision-making
- There is a need to move from “**intuitive**” **decision-making models** to “**smart**” **models** that will increase the competitiveness of the agrifood companies. There are experiences based on new technologies
- Meeting **consumer demands** and incorporating them in **decision-making processes at all levels**.
- Adopting new technologies based on the data and information and fully getting into the **digital economy**
- Bringing **transparency and a greater balance to the whole value chain**.

# CAPACITIES OF THE AGRIFOOD SECTOR CONCERNING DIGITAL TECHNOLOGIES

Capacity to innovate and incorporate technologies

## ACCOMPANYING STRUCTURE

### IFAPA

Andalusian Institute for  
Research and Training  
in Agriculture, Fisheries,  
Foods and Organic  
Production

### CEiA3

Agrifood Campus of  
International  
Excellence

**TECHNOLOGICAL  
CENTRES**

# CAPACITIES OF THE AGRIFOOD SECTOR CONCERNING DIGITAL TECHNOLOGIES

## AGRIFOOD CAMPUS OF INTERNATIONAL EXCELLENCE CEIA3

ceiA3: Agrifood international reference centre on research, training and knowledge transfer based on:

- Inter-university and inter-institutional cooperation
- Interaction with stakeholders of the sector and the public administration
- Strategic partnerships



CeiA3 CLUSTERS: strategic lines

Food and Health

Sustainable agriculture

Animal biotechnology

Plant biotechnology

Food security

Food technology and bioenergy

Agrifood economy and law



IFAPA

# OBJECTIVES OF THE RIS 3

## A RIS3 based on innovation and the digital age



**4 out of 10 objectives** are related to enabling the **Digital evolution**

### FINAL OBJECTIVES

- ⇒ The expenditure on R&D and innovation of the private sector has to represent 50%
- ⇒ Increasing the innovation intensity of innovative companies by 20%
- ⇒ Increasing the number of people working on research by 20%
- ⇒ Doubling the number of innovative companies and the amount they spend on innovation
- ⇒ Increasing the number of patents by 50%
- ⇒ Medium and high level technological activities have to increase their GVA by 50%
- ⇒ The exports of goods and services of medium and high level technologies have to represent more than 60%
- ⇒ Achieving 100% of fast broadband coverage and 50% of households must have connections above 100 Mbps
- ⇒ Increasing the number of people working on research by 20%
- ⇒ 85% of the population must use Internet on a regular basis at work and at home
- ⇒ 40% of citizens and 100% of companies must interact with public administration through the Internet

The final objectives that involve growth are expressed compared to the average for the period 2011-2013 in real terms when they refer to monetary amounts.

## Specialization priorities

### P6. Agroindustry and healthy food

#### Lines of action

P61. Advances in quality, traceability and food safety

P62. Functional and personalized food

P63. Seize the new opportunities in blue economy and green economy

P64. Innovation in processes and products of the food industries

## Specialization priorities

### P8. ICT and digital economy

#### Lines of action

P81. New ICT developments

P82. ICT for business development

P83. Development of new instruments for E-Government

P84. Innovation in digital content

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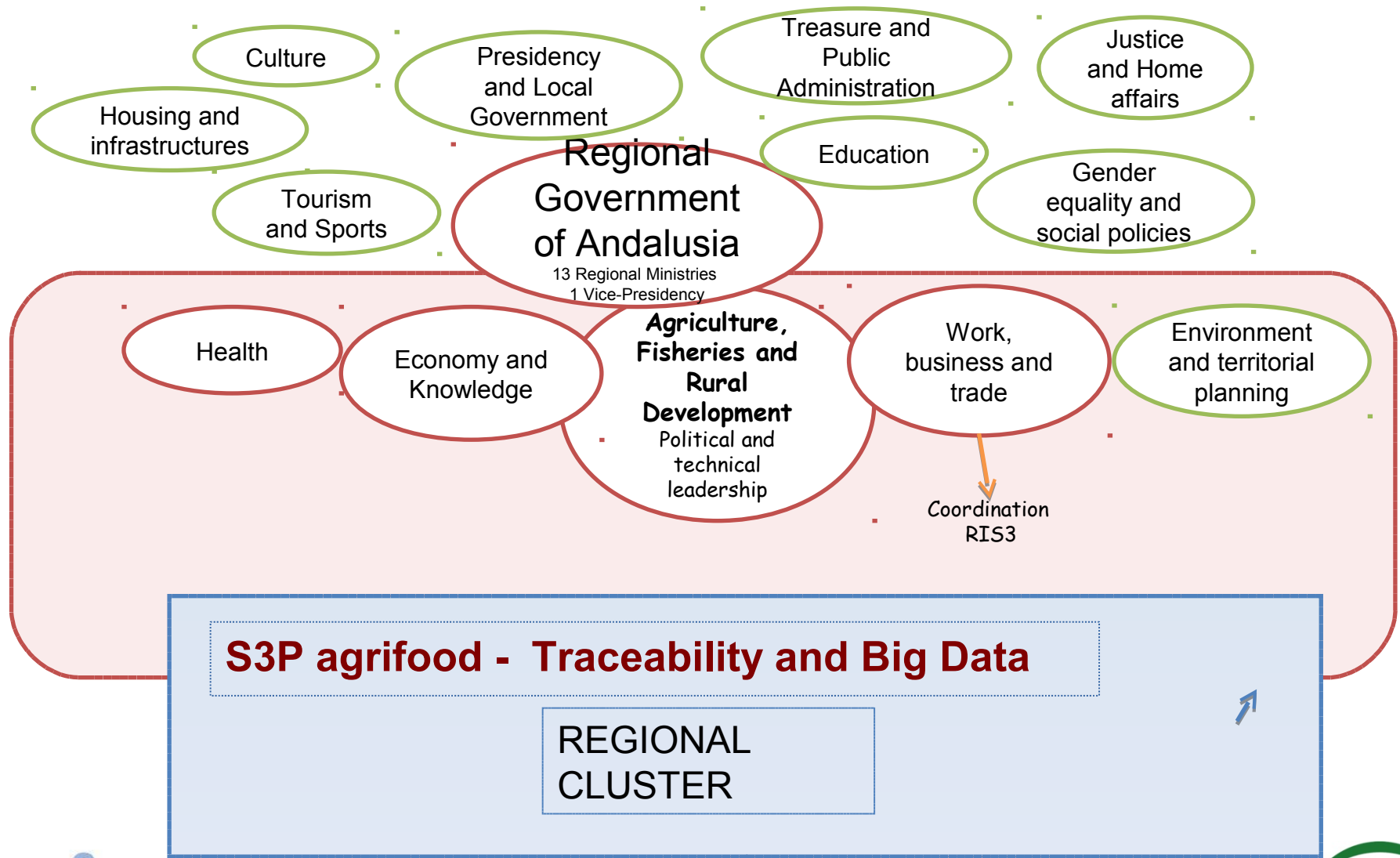
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# REGIONAL MINISTRIES AND INTERNAL GOVERNANCE OF THE SUBPLATFORM ON TRACEABILITY AND BIG DATA IN ANDALUSIA



# STRUCTURE OF THE ANDALUSIAN CLUSTER OF THE THEMATIC PARTNERSHIP ON TRACEABILITY AND BIG DATA

**75 MEMBERS HAVE SIGNED THE AGREEMENT**

**PUBLIC ADMINISTRATION**

**7 MEMBERS**

**CIVIL SOCIETY**

**1 MEMBER**

**PRIVATE SECTOR**

**51 MEMBERS**

**31 ICT COMPANIES**

**20 AGRIFOOD COMPANIES**

**ACADEMIA: UNIVERSITIES AND RESEARCH AND TECHNOLOGICAL CENTRES**

**17 MEMBERS**





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# CHALLENGES AFFECTING THE ICT SECTOR

THE IMPORTANCE OF THE CONTRIBUTION OF THE ICT COMPANIES TO THE ANDALUSIAN ECONOMY IS LESSER THAN IN MORE ADVANCED ECONOMIES

LACK OF OWN FINANCIAL RESOURCES FOR BUSINESSES AND DIFFICULTY TO ACCESS TO EXTERNAL RESOURCES

# ICT APPROACH OF EUROPEAN FUNDS

## STRUCTURAL FUNDS IN ANDALUSIA: ERDF + ESF + EARDF

**REGIONAL  
MINISTRY FOR  
WORK,  
BUSINESS AND  
TRADE**

**ANDALUSIAN AGENCY FOR INNOVATION AND DEVELOPMENT  
(AGENCIA IDEA)**

**ERDF OPERATIVE PROGRAMME**

**FOCUS ON COMPANIES TO ACHIEVE INNOVATION**

**GENERAL DIRECTORATE FOR TELECOMMUNICATIONS AND  
INFORMATION SOCIETY**

**STRATEGY TO BOOST THE ICT SECTOR IN ANDALUSIA 2020**

**REGIONAL  
MINISTRY FOR  
AGRICULTURE,  
FISHERIES AND  
RURAL  
DEVELOPMENT**

**RURAL DEVELOPMENT PLAN OF ANDALUSIA 2014-2020  
EARDF FUNDS**

**LAW ON AGRICULTURE OF ANDALUSIA**

# REGIONAL MINISTRY FOR WORK, BUSINESS AND TRADE

## ERDF OPERATIVE PROGRAMME

### FOCUS ON COMPANIES TO ACHIEVE INNOVATION



ACTION	BUDGET (Million of Euro)	LINES OF WORK MANAGED BY AGENCIA IDEA	BUDGET OF THE LINE OF WORK (Million of Euro)
INCENTIVES FOR BUSINESS R&D AND KNOWLEDGE (TO1)	504.2	BUSINESS INCENTIVES	108 (14% projects)
ICTs DEVELOPMENT AND BOOST (TO2)	322.4	BUSINESS INCENTIVES DIGITIZING INDUSTRY 4.0	27.8
COMPETITION AND SMEs (TO3)	686.3	INCENTIVES FOR INDUSTRIAL DEVELOPMENT	145 (4% projects)
<b>LINES OF WORK AGENCIA IDEA (TOTAL )</b>			<b>44.5</b>

# STRATEGY TO FOSTER THE ICT SECTOR. ANDALUSIA 2020

It addresses **9 strategic axes and programmes**



The credit available amounts to **200 million euros**, broken down as follows

STRATEGIC AXES	CREDIT AVAILABLE (thousand euros)
<b>AXIS 1.- HUMAN CAPITAL MANAGEMENT (4 Programmes)</b>	<b>423</b>
<b>AXIS 2.- ENTREPRENEURSHIP (2 Programmes)</b>	<b>321</b>
<b>AXIS 3.- FOSTERING INNOVATION, TECHNOLOGICAL SPECIALIZATION AND PRODUCT REORIENTATION (3 Programmes)</b>	<b>3.215</b>
<b>AXIS 4.- NEW MARKETS AND INVESTMENT ATTRACTION (2 Programmes)</b>	<b>495</b>
<b>AXIS 5.- IMPROVEMENT OF BUSINESS MANAGEMENT (3 Programmes)</b>	<b>561</b>
<b>AXIS 6.- ICT SECTOR STRUCTURING (2 Programmes)</b>	<b>608</b>
<b>AXIS 7.- ICT INCORPORATION TO OTHER PRODUCTIVE SECTORS (3 Programmes)</b>	<b>194,208</b>
<b>AXIS 8.- BUSINESS FINANCING (1 Programme)</b>	<b>60</b>
<b>AXIS 9.- TRACTOR AND INVIGORATING ADMINISTRATION (3 Programmes)</b>	<b>244</b>
<b>CREDIT AVAILABLE</b>	<b>200.136</b>

# RURAL DEVELOPMENT PLAN OF ANDALUSIA 2014-2020

MEASURES	OPERATIONS	PUBLIC EXPENDITURE 2014-2020 (Million Euros)	
M4 Investments in physical assets	4.1.1. Improving the overall performance and sustainability of agricultural holdings	119.2	359.7
	4.1.2. Investments in physical assets in order to improve yields and global sustainability in olive growing farms.	52.0	
	4.2.1. Support to material or immaterial investments for the transformation, marketing or development of new agricultural products in the whole agrifood sector	138.6	
	4.2.2. Support to material or immaterial investments for the transformation, marketing or development of new agricultural products in the olive oil and olive tables sectors	50.0	
M7 Basic services and village renewal in rural areas	7.3.1. Deployment of state of the art broadband infrastructures to provide mobile coverage to rural and agricultural areas in order to promote rural development in rural areas and to improve economic revenues	3.5	12.8
	7.3.2. Support for the creation, maintenance and access to electronic administration systems and communication technologies in order to promote social and economic development in rural areas	9.4	
M16 Cooperation	16.1.1. Support for the creation of operational groups of the EIP for Agricultural Productivity and Sustainability	1.2	18.2
	16.1.2. Support for the functioning of operational groups of the EIP for Agricultural Productivity and Sustainability	11.8	
	16.1.3. Support for the functioning of operational groups of the EIP for Agricultural Productivity and Sustainability in the olive grove sector	5.2	
<b>TOTAL</b>		<b>387.3</b>	

# LAW ON AGRICULTURE OF ANDALUSIA

## DRAFT BILL

In the **second chapter of the seventh title**, that regulates Agricultural, Livestock and Agrifood Production, it aims at:

- the efficient management of energy and waste and plant remains in order to reach a new energy and circular economy model.
- the optimization of the use of productive resources and the minimization of waste derived from the activity.
- **Big Data Decision support through information and communication technologies and other new technologies**