

## Strategic design: Innovation Center in Rural Bioeconomy



## Background: the bioeconomy opportunity - An international investment

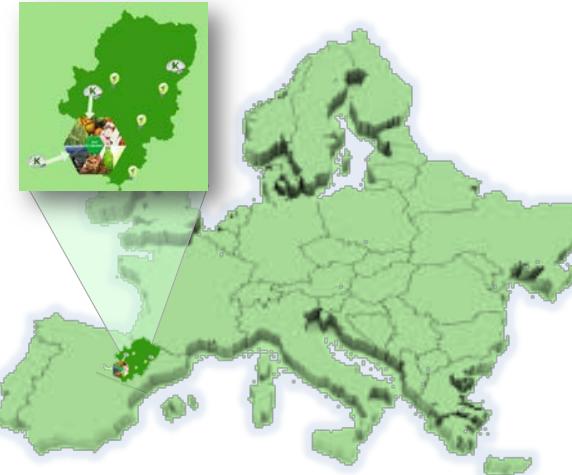
*The Bioeconomy to 2030: designing a policy agenda (2009),*



*A Bioeconomy for Europe (2012):*



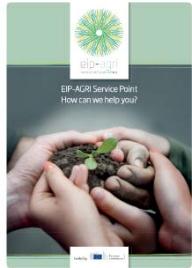
*Estrategia española de Bioeconomía (2015):*



*Positioning Aragon in the emerging scene of Bioeconomics is a necessary and useful strategic investment.*

*Not only to be in agreement with standards for developing economies, but also as an access point to investments and to the national and European R&D funding policies.*

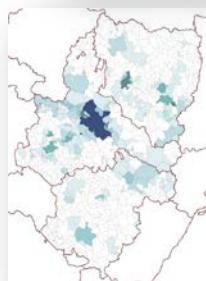
## Background: the bioeconomy opportunity - An international investment



Europa (EIP Agri)



El plan estratégico industrial y la RIS3 de Aragón



"Directriz Especial de Política Demográfica y contra la Despoblación" de Aragón.

Opportunities



- Builds on already existent scientific and technological capabilities (CITA and Unizar), **allowing "things to happen"** quickly.
- Supports the industrial fabric of the **existing agro-industrial sector** and generating **new opportunities** (biotech, industry, tourism, etc.) by the creation of new entrepreneurial projects.
- It is a **source of public prominence** for Aragon in the framework of the Spanish and European investment in bioeconomy.

Singularity and Results

# BIOECONOMY: a broad and strategic concept

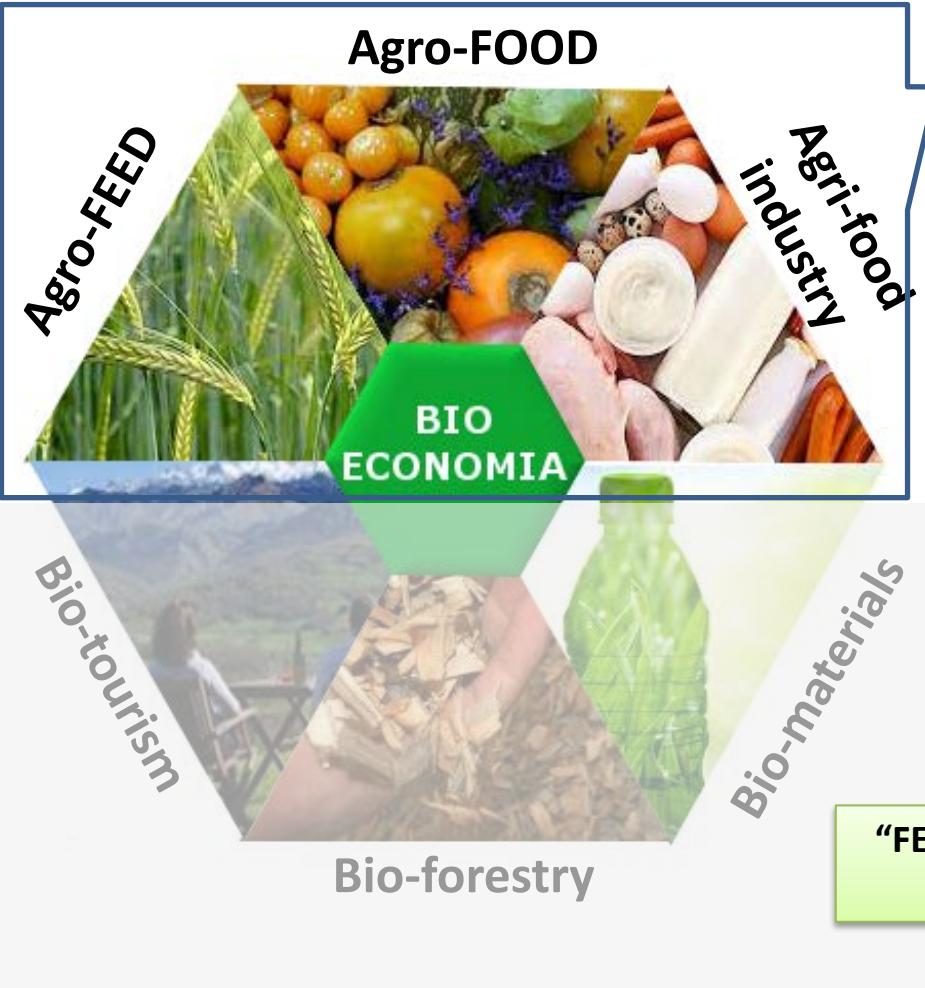


✓ Beyond the agri-food Industry

✓ Multidisciplinary

✓ Integral development

## BIOECONOMY: a broad and strategic concept (2)



Sustainable food models of development.

### Challenges

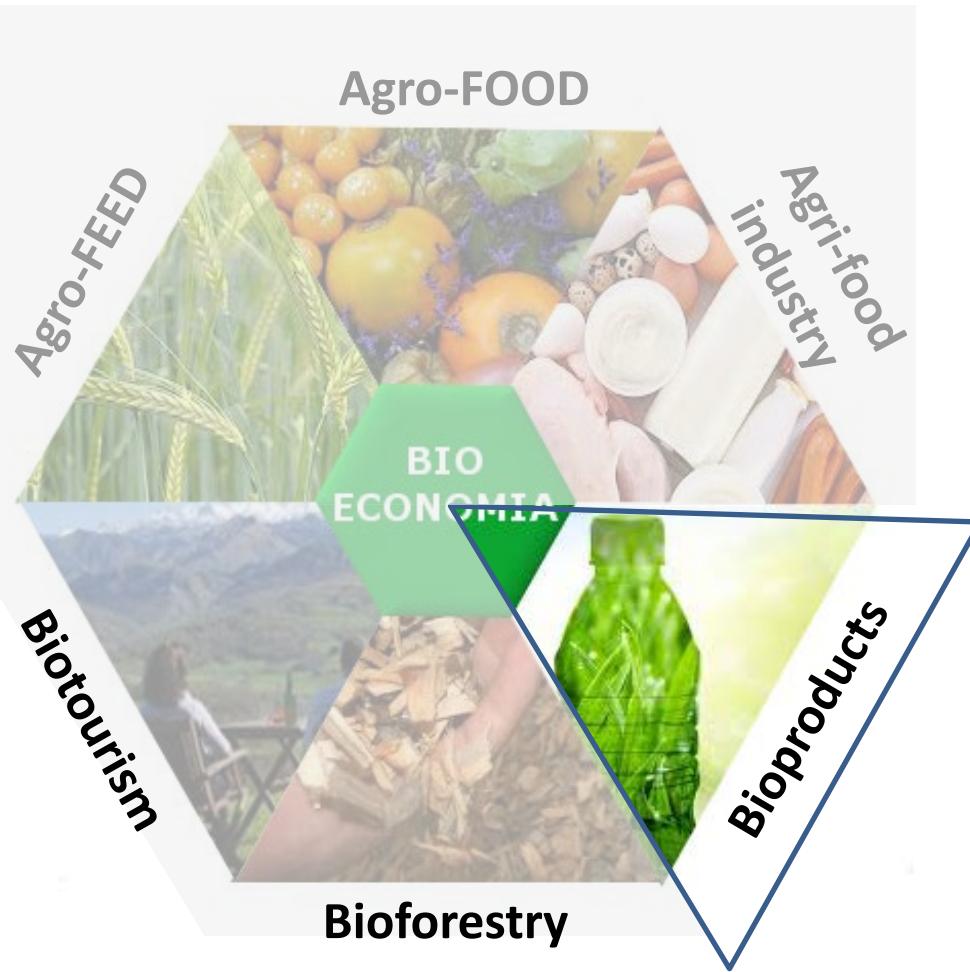
- ✓ Higher food quality at reasonable prices
- ✓ and adaptation to the consumer demands,
- ✓ reducing the impact derived from its production (emissions, water footprint or use of chemicals).

### Guaranteeing:

- ✓ A sustainable use of resources (soil, water, etc.)
- ✓ The biodiversity and ecosystem preservation.

**"FEEDING TERUEL PIG"** - Feed Impact in the last fattening phase of the pig destined for Teruel DOOP

## BIOECONOMY: a broad and strategic concept (3)



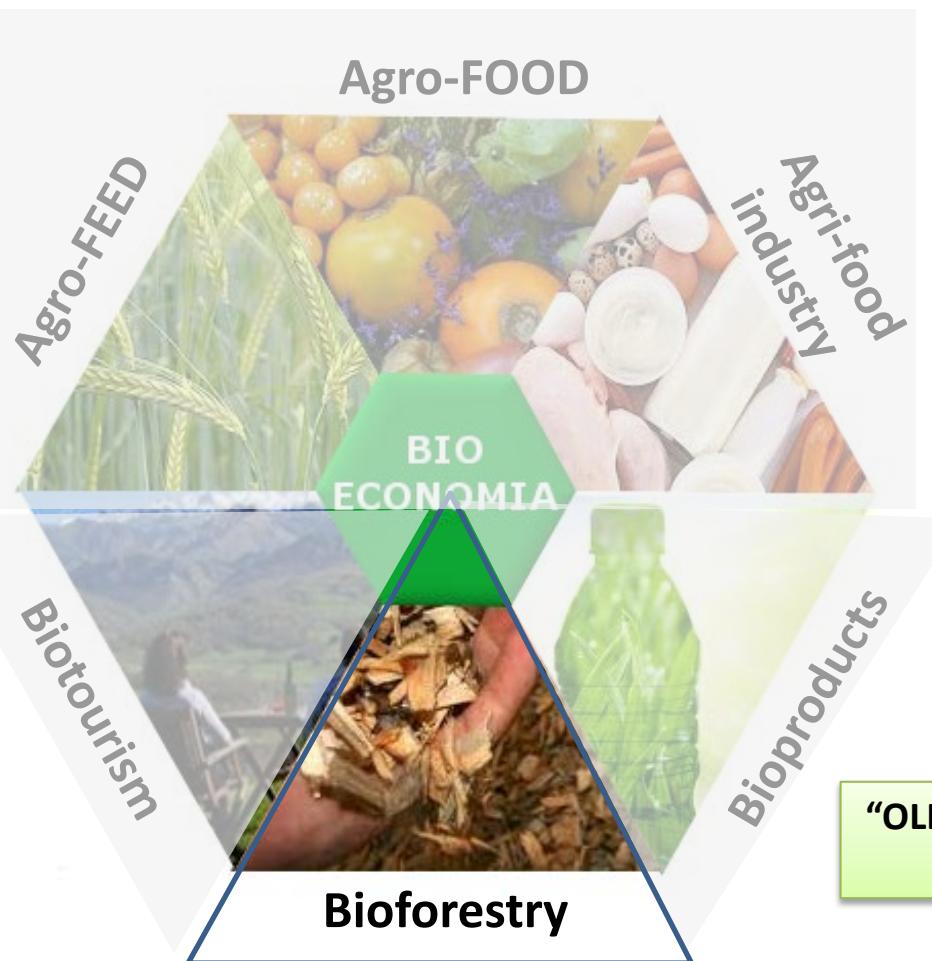
**"BIOFITE"** - New products and methodologies to increase the efficiency of the use of organic matter nutrients of animal origin

### Bioproducts,

result from the **application** of **biotechnology** in the industrial sphere (white biotechnology or industrial), through Biological, Biochemical, Physical, Thermal processes (Fermentation, Esterification, Transesterification, Digestion, Hydrolysis, with the incorporation of enzymes, microorganisms, bacteria, etc.), **biomass is transformed** (non-food crops, vegetables, etc.) into **bioproducts** such as:

- ✓ Bioplastics,
- ✓ Biopaints,
- ✓ Biolubricants, etc.

## BIOECONOMY: a broad and strategic concept (4)

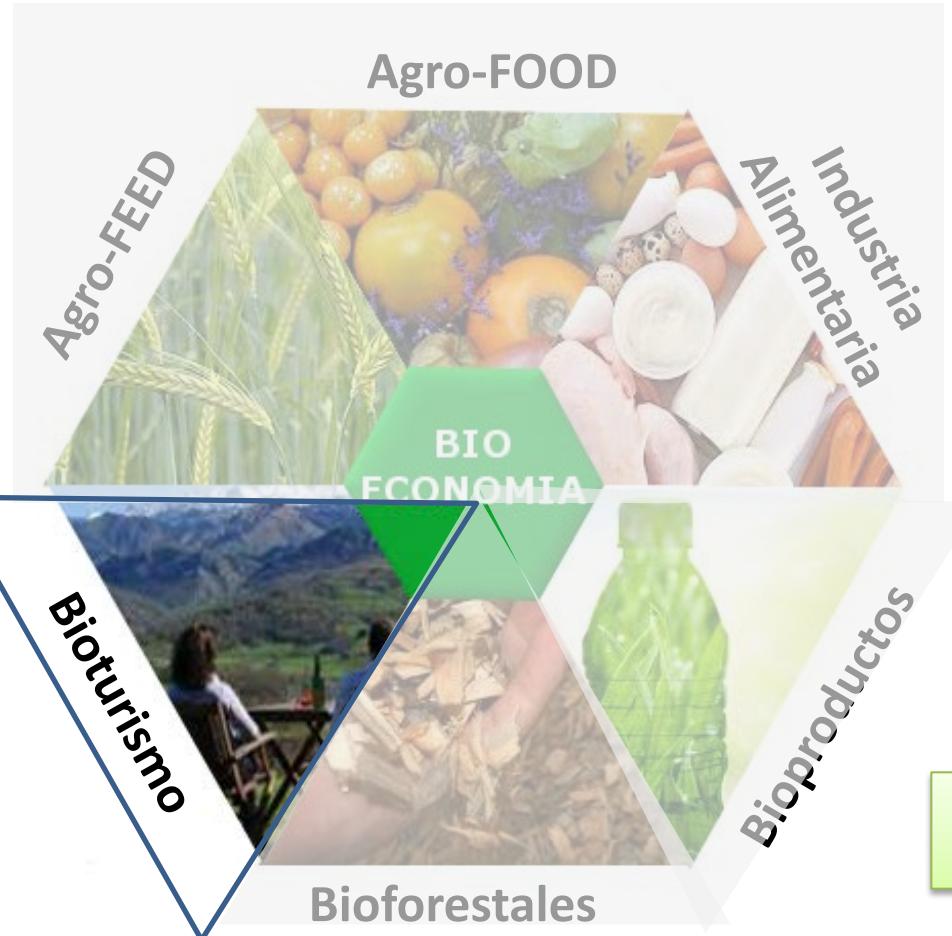


### Bioforestry,

Are the products resulting from the **sustainable management of the forest systems**, generating both **wood products** (Wood, paper, firewood, pellets ...) and **non-timber** (hunting, fungi, resin, cork, pine nut, chestnut, wild fruits, essential oils ...).

**"OLITERUEL"** - Private, social and environmental profitability of the traditional low-yielding olive grove in Teruel

## BIOECONOMY: a broad and strategic concept (5)



### Biotourism,

Are **tourism products** that result from the appeal generated by the **biological resources** linked to a territory of the **rural areas**. Some examples of these **specialized tourism products** are **mycotourism**, **wine tourism** or **ornithological tourism**.

**"MYCOTERUEL"** - Study of mushrooms production potentiality, mycological use and mycotourism in Teruel

## Strategic Approach



Contributing to the **sustainable socio-economic transformation** of the region by developing **innovative solutions** that will generate business opportunities based on **clean technologies**, **renewable natural resources** and **digitalization** in contexts that allow to **solve social challenges**, generating **internationalization** and insertion processes into **new markets** by the **rural bioeconomy**.



## Strategic Approach (2)

### Strategic Objectives of the Center

#### Strategic objectives

- OE1. To promote the generation and transference of knowledge of bioproducts and bio-business development to drive the socio-economic growth of the region.
- OE2. To contribute to the region competitiveness by generating bio-entrepreneurial projects.
- OE3. To contribute to the solution of problems or challenges of the population, applying knowledge that promotes the communities' life quality, particularly to vulnerable ones, through the bioeconomy.
- OE4. To promote relationships with regional, national and international agents within innovation ecosystems.
- OE5. To improve society's perception of the, as well as its impact to different social actors.
- OE6. To integrating (promote) innovation and bioeconomy as part of the economic and social development of the region

## Multi-Agent INNOVATION Platform



**K-driving group**  
**INTEGRATING**  
knowledge within the  
bioeconomy field.

## Multi-Agent INNOVATION Platform

# D-driving group

# INTEGRATING actions of business dynamization.





*Thank you!!!!!!*



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