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Bioeconomía en América Latina y el Caribe 2015

Latin America and the Caribbean Bioeconomy 2015



Santiago 7 y 8 octubre de 2015



Session 1: / Sesión 1:

Regional, national and local bioeconomy strategies

Moving towards the Spanish Strategy on Bioeconomy





**What did we have
before
starting work on the
spanish bioeconomy strategy?**



Spanish Strategy for Science, Technology and Innovation 2013-2020



**NATIONAL
PROGRAM FOR
THE PROMOTION
OF TALENT AND ITS
EMPLOYABILITY**



**NATIONAL
PROGRAM FOR
FOSTERING
EXCELLENCE IN
SCIENTIFIC AND
TECHNICAL
RESEARCH**



**NATIONAL
PROGRAM FOR
BUSINESS
LEADERSHIP IN
R&D&I**



**NATIONAL
PROGRAM FOR
RESEARCH AIMED
AT THE
CHALLENGES OF
SOCIETY**

Knowledge: From idea to market

State Research, Development, Innovation and Technology Plan 2013-2016

BIOECONOMY



**SOCIETAL
CHALLENGE**

CLIMATE CHANGE

Mitigation: GHG

Adaptation (temperature, rainfall,
extreme events)

FOOD SECURITY

Global grow population

Urbanization

Middle class

WHY BIOECONOMY IS A SOCIETAL CHALLENGE?

COMPETITIVINESS

Traditional jobs

NEW JOBS sustainable
prod industrial bio
biorefineries

**REDUCING
DEPENDENCE ON NON
RENEWABLE
RESOURCES**

(fuel resources and carbon
sources)

**MANAGING
RESOURCES
SUSTAINABLY**

Land, soil, water,
ecosystems

FLORA & FAUNA
biodiversity,



Topics related with Bioeconomy in National Research, Development, Innovation and Technology Plan 2013-2016

- **Challenge 2. – Food quality, safety and security. Sustainable and productive agriculture. Natural resources sustainability. Marine and maritime, and interior water research**
 - Conservation and integral, efficient and sustainable management of agro ecological systems and resources
 - Sustainable improvement of agricultural, livestock and forestry resources
 - New processes and technologies in agrifood systems
 - Food quality and security. Novel foods and Food chain optimization
 - Food safety, traceability and risk management. Strategic management tools and innovation nets
 - Competitiveness and sustainability in marine fish and aquaculture
 - Marine research
 - Bioproducts
- **Challenge 3.- Safe energy, efficient and clean**
 - Bioenergy
- **Challenge 5. Climate Change and efficient use of raw materials and natural resources**





**What has conditioned the decisions
about our strategy?**

Our strengths / weaknesses



¿what is the importance of our different sectors?

Agrifood sector

- 5,3% GDP
- 7% occupied population
- 900.000 farms
- 30.000 companies
- 17 % exports

Non health biotechnology: 530 companies with R&D&I (INE, 2013)

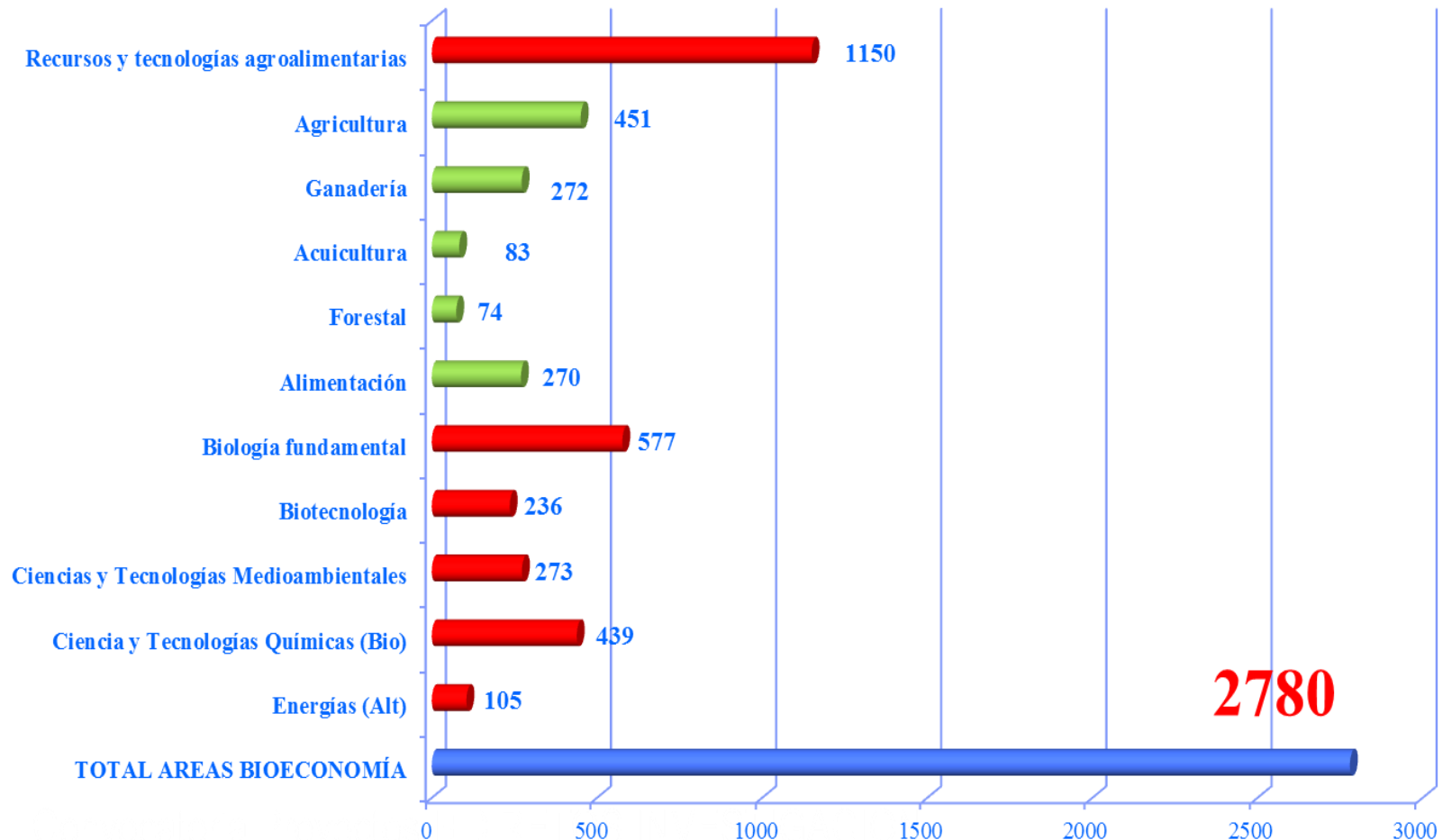
- Animal health and aquaculture: 196
- Food: 314
- Agriculture and forestry production: 206
- Environment: 182
- Industrial: 159

Biomass sector (BIOPLAT, 2013)

- 176 biomass companies for energy and other purposes
- 47 Companies devoted to biotech

¿what are our strengths in research?

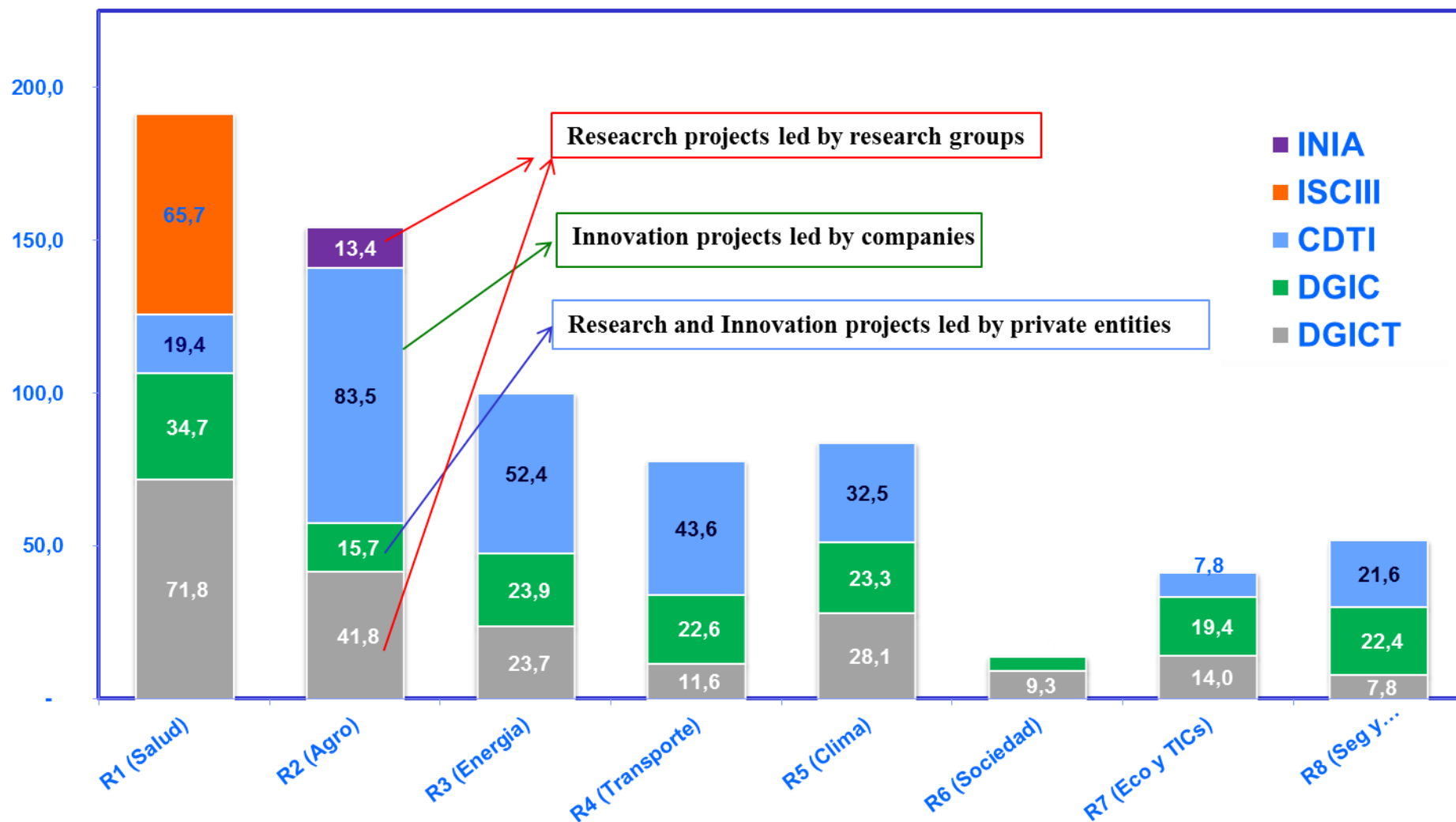
active research projects 2015 in different areas of the bioeconomy



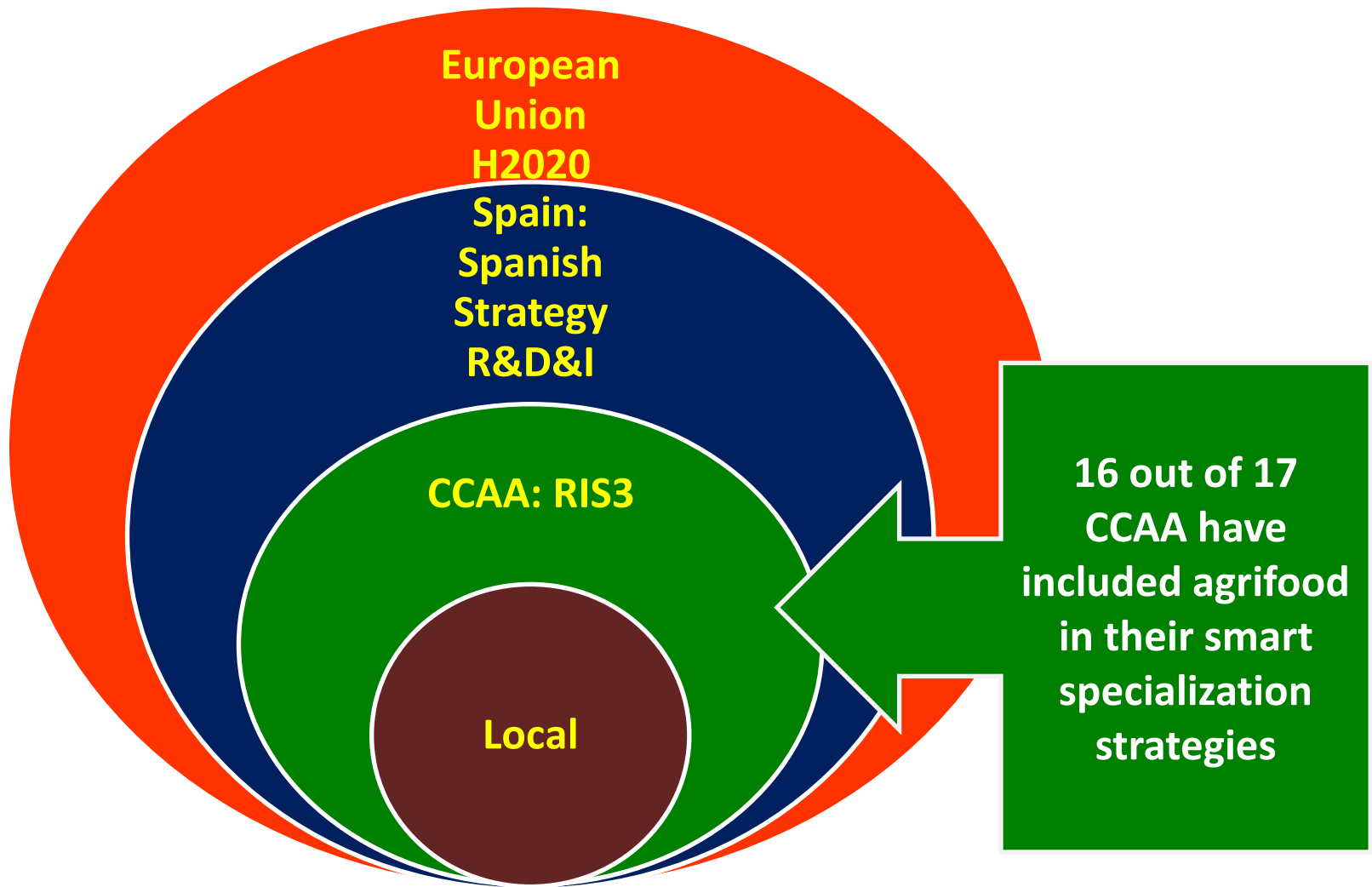
Fuente: DG Investigación e INIA

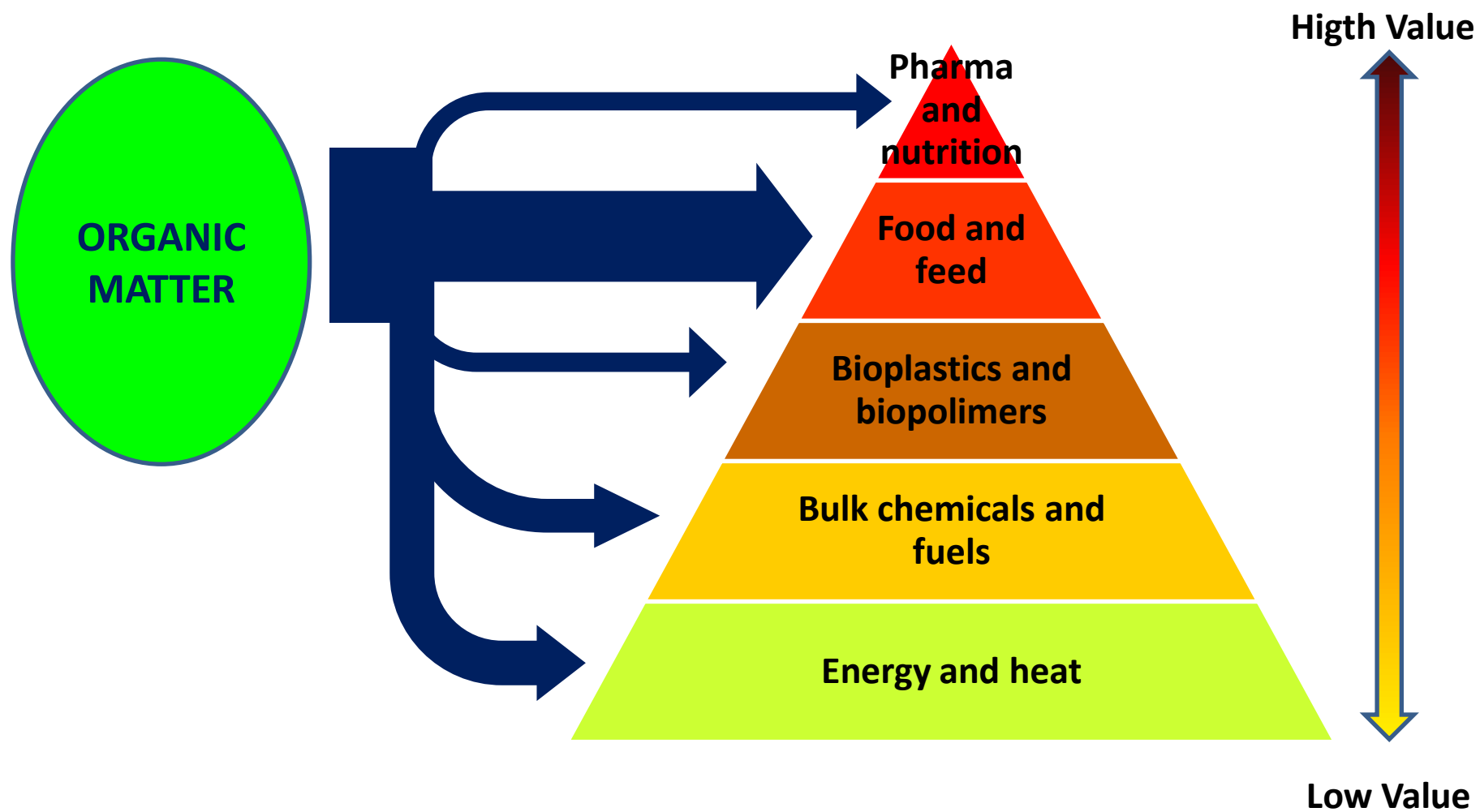
¿what are our strengths in research and innovation?

sources of funding for research and innovation in 2013, for different challenges



¿which are our medium-term policy priorities?





What type of biomass can be produced in Spain?

Water scarcity

Estimated Wastes and Residues in Spain (PER 2020, 2011, Probiogas 2010)

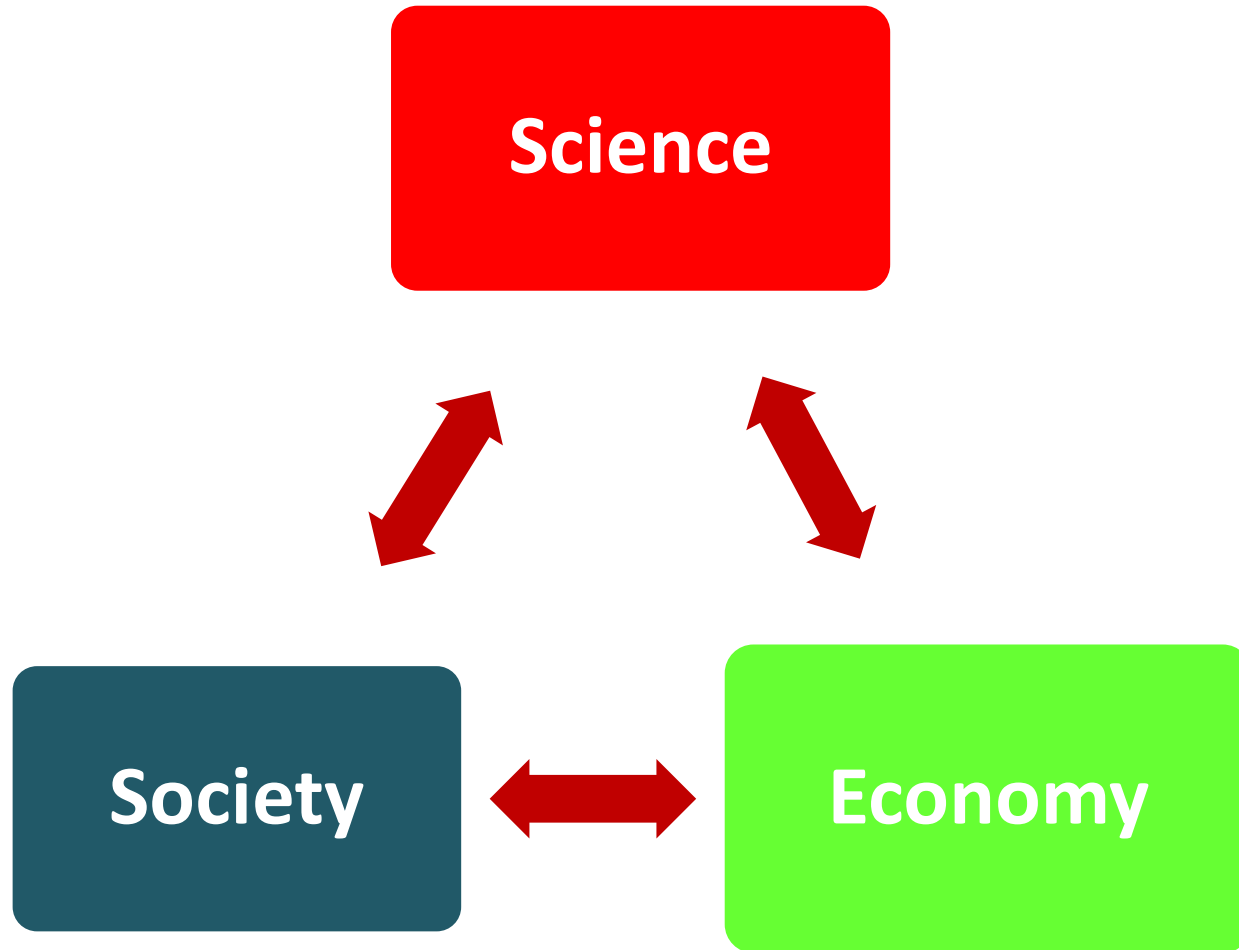
	M t/y	
• Biomass		
• Forestry residues	18	Estimated Availability
• Arable and permanent (trees) crop residues • such as straw or husks, grass silage, • brash and arboricultural arising	30	
• Agro food wastes • Inedible components: peel, skin, husks, cores, fish heads, pulps • Organic material from excess production or insufficient market • Wasted materials from food and drinks: wine, beer, cheese, • Food preparation: fat, cooking oils, food disposed of for safety reasons	31	
• Woody wastes, paper pulp, textiles, etc	6	
• Animal residues • Manures and slurries • Animal bedding such as poultry litter	48	collected and stored
• MSW (municipal solid waste) and Sewage sludge	26	
	159	96 M t/y



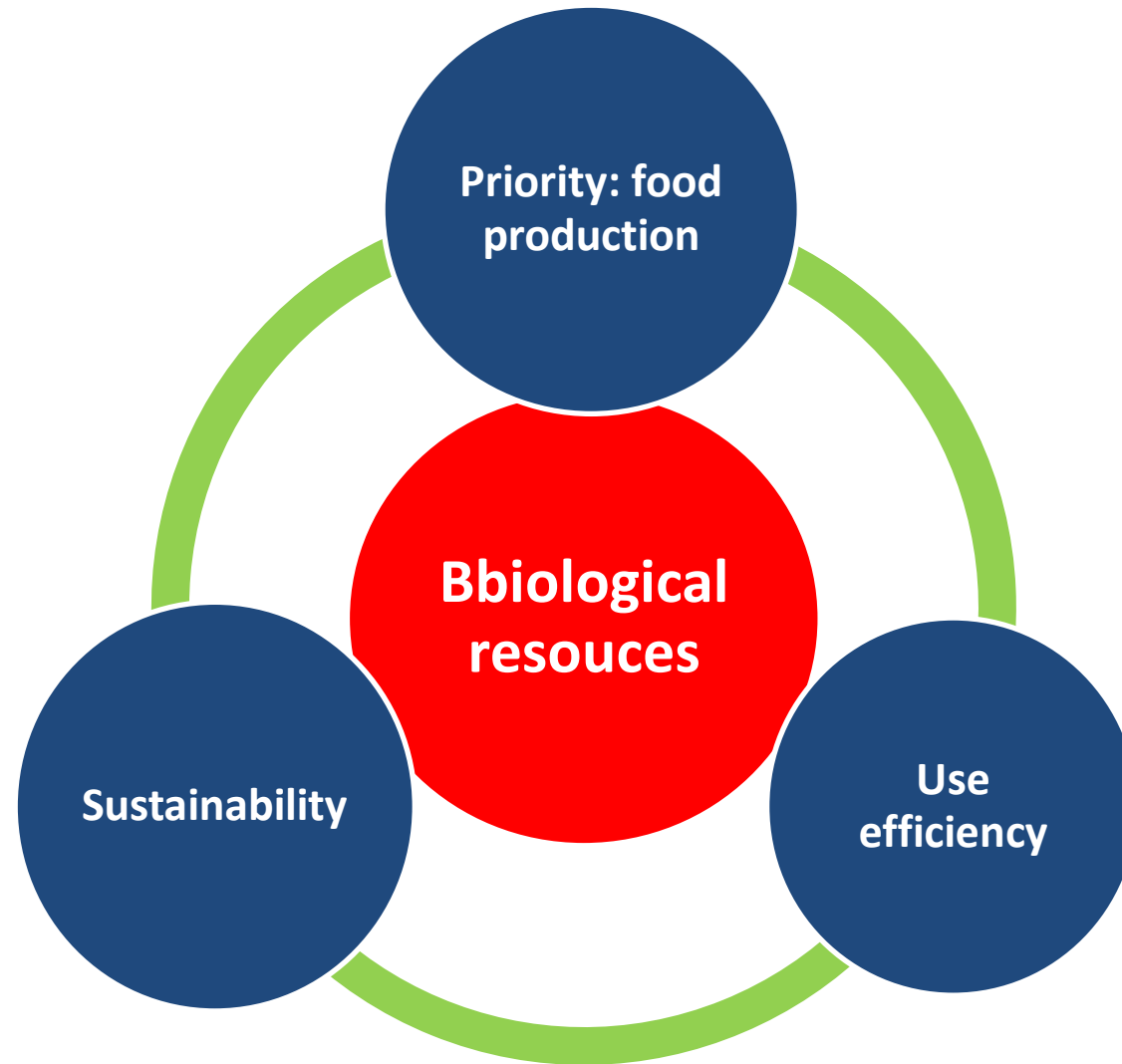
What is the spanish bioeconomy strategy?



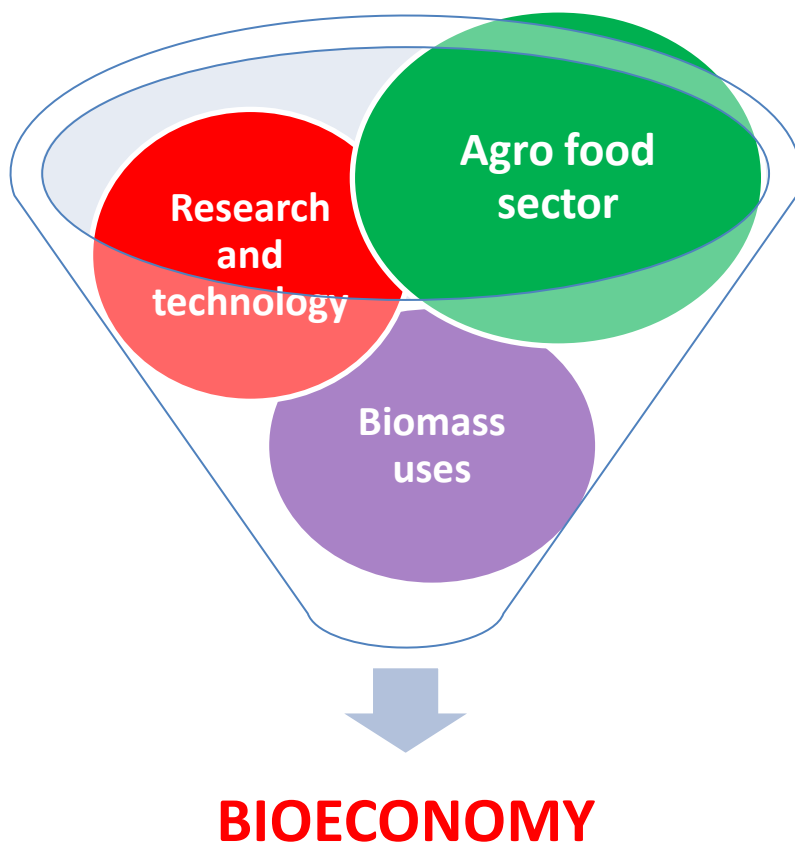
Main pillar: Promote Collaboration



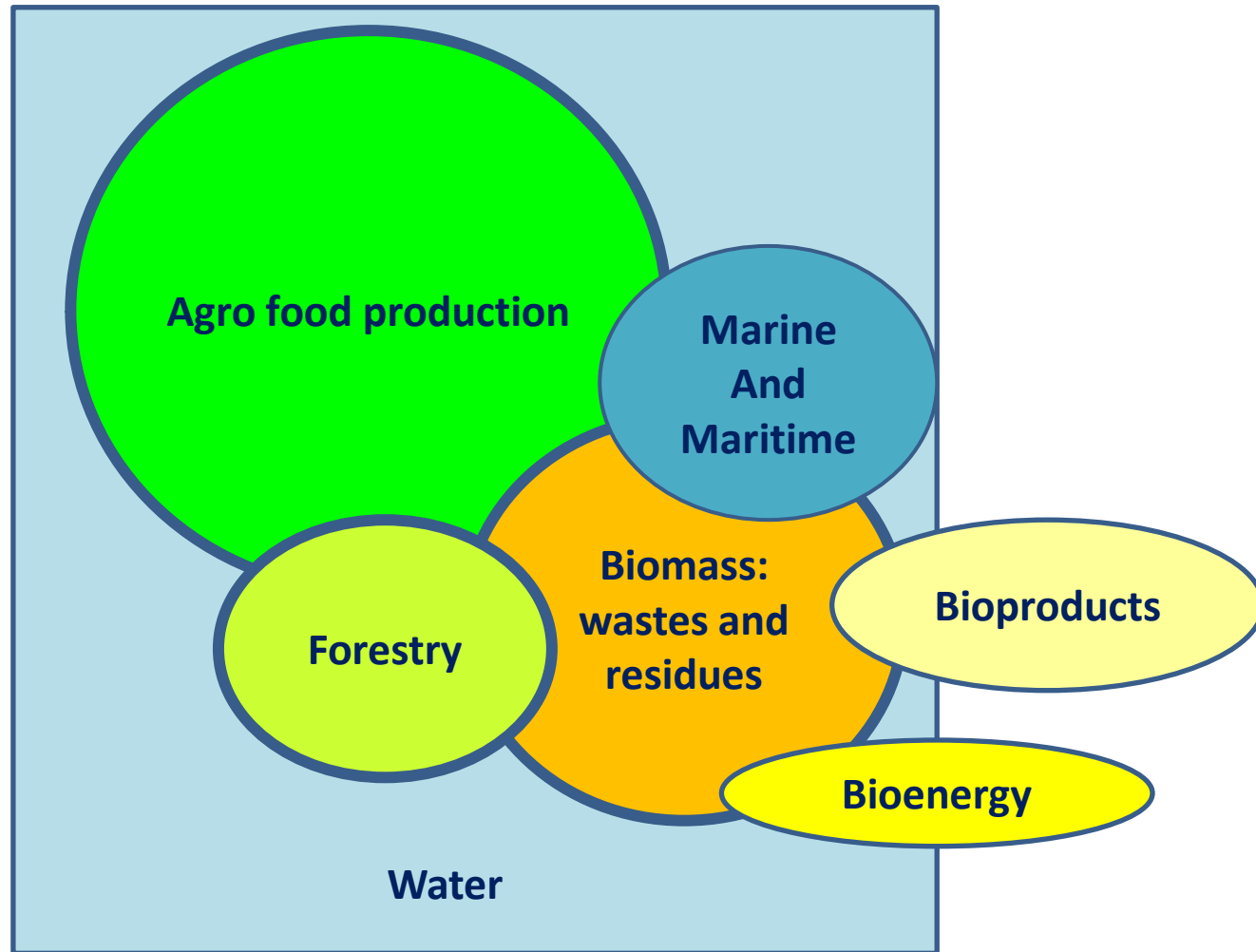
Essential elements of the spanish strategy



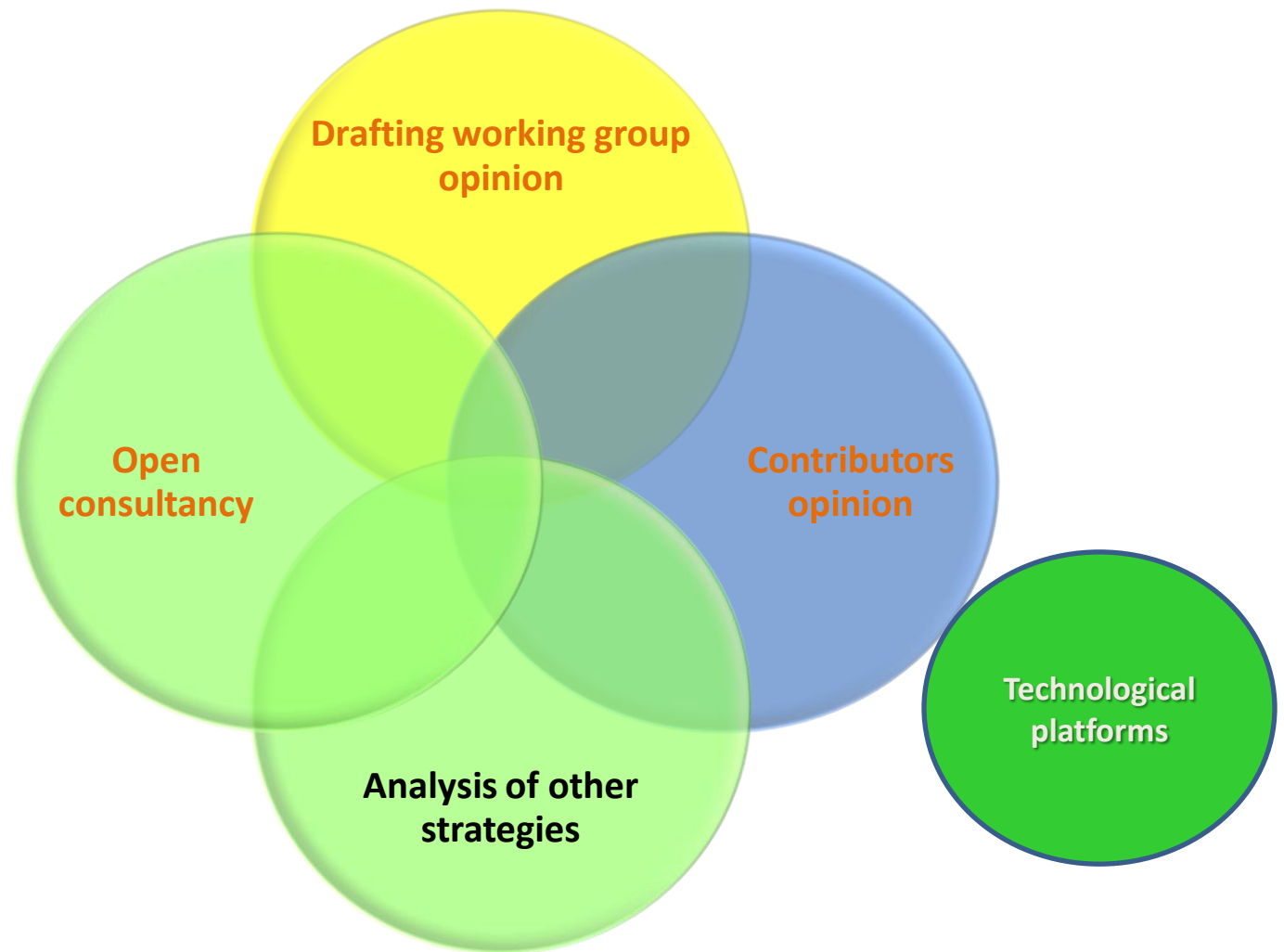
What is our economic goal?



The scope for the spanish strategy on bioeconomy



Preparation preliminary document



Definition of bioeconomy

1. **All economic activities** that obtain products and services, generating economic value, using as key **elements biological resources**.
2. Its objective is the **production and marketing of food and forest products, bioproducts and bioenergy**, obtained by physical, chemical, biochemical or biological transformations of organic material not intended for human or animal consumption.
3. That involve environmentally **friendly** processes and the **development of rural environments**.



Strategic objectives

1. Improve the **competitiveness and internationalization** of Spanish companies working in the field of biological resources and generate **new economic and new jobs activities**, through **knowledge generation** and the **incorporation of new scientific and technological developments** that respond to the demands of the productive sectors .
2. **Maintain bioeconomy as an essential activity of our economy and position as a strategic area of knowledge-based innovation at the national and international context.**
3. **Contribute to achieving the full potential of the bio-economy development may have on the horizon of the next 15 years in Spain.**

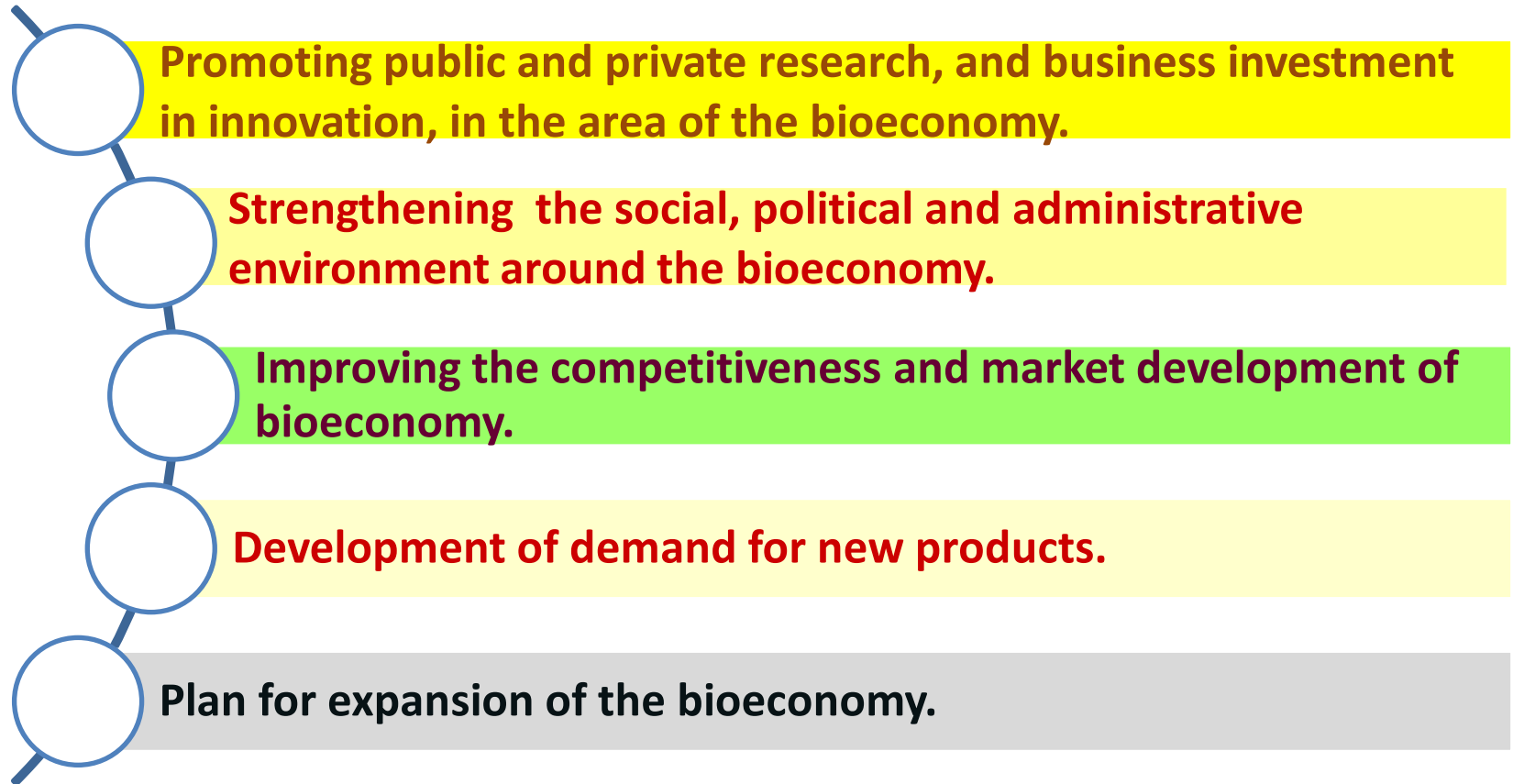


Operational objectives

1. **Permanent collaboration between the Spanish administrations and the productive sectors.**
2. **Interaction between the spanish and international science and technology system , public and private, with the productive sectors and their companies: multidisciplinary teams improve the efficiency of utilization of biological resources.**
3. **Application of knowledge and innovation to the market and innovation.**
4. **Identify and remove constraints to bioeconomy expansion.**
5. **Integrate all supporting tools.**
6. **Facilitate internationalization.**
7. **Tools for education and training of workers.**
8. **Facilitate understanding, dialogue and social awareness about bioeconomy considering all scientific agents, social, economic, financial, and society in general.**
9. **Promote economic development in rural areas and diversification of productive activities.**
10. **Contribute to the mitigation of climate change.**



Key strategies



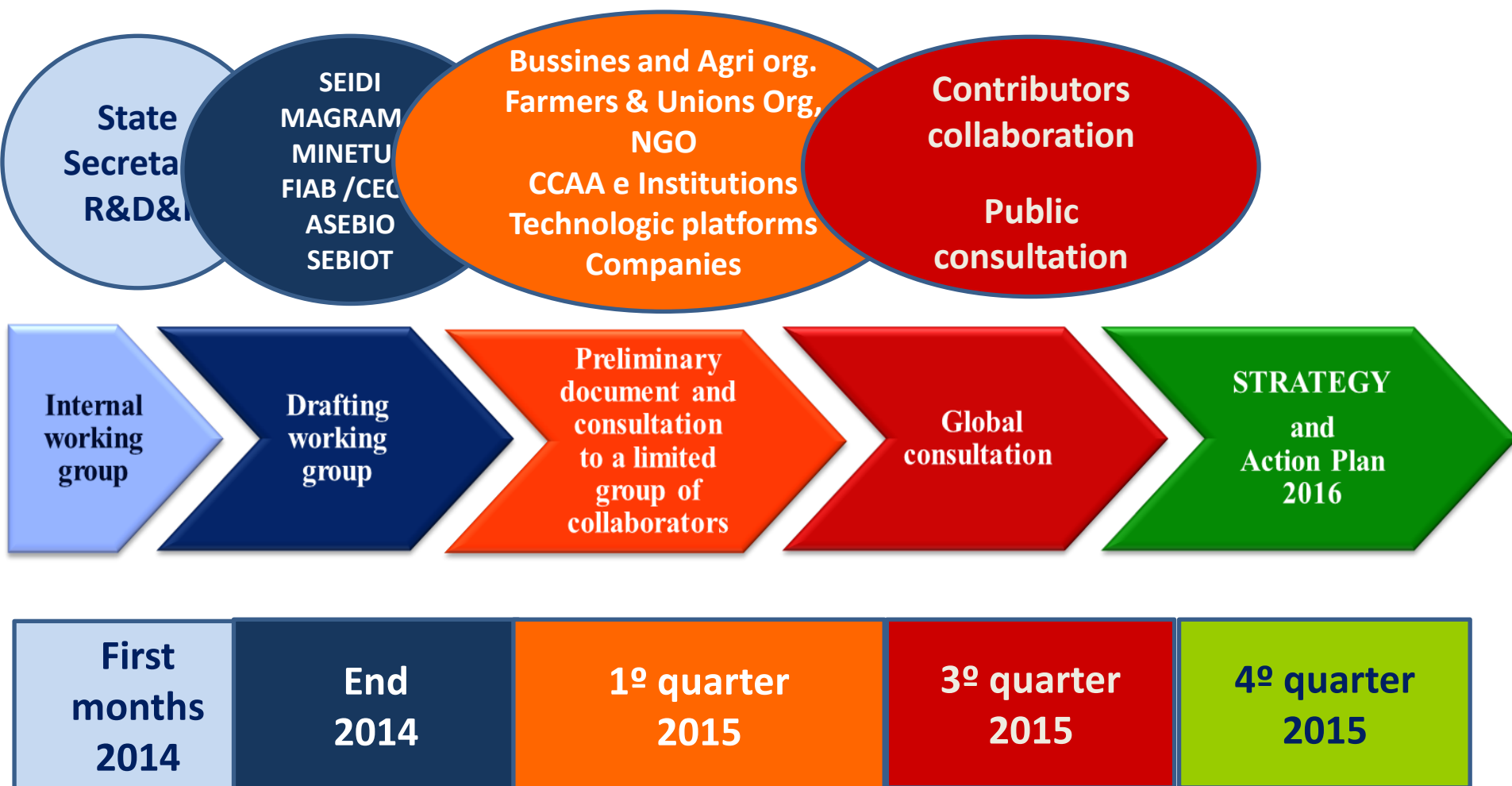
Governance issues

Bioeconomy observatory

- **Monitoring Government working group**
 - Nominated by the Spanish scientific, technological and innovation Policy Council.
 - Spanish Ministries Central Government
 - Regional governments
 - Body in charge of science policy
- **Management Committee: Public - private governing board**
 - Monitoring working group
 - Scientific and technologic working group
 - Technologic platform working group.



Current state of implementation



Challenges

- **How to involve the society?**
 - Who are the key actors: consumers, NGO, etc.
 - Explain the society the concept and their advantages
- **Sustainability demanded by our society**
 - Develop the bioeconomy in a sustainable way
 - Stablish mechanisms to measure: indicators
- **Integrate the autonomous regions strategies**
 - Cooperation between Spanish autonomous regions
 - Sharing best case studies
- **Public private collaboration: remove the gap between science - companies**
 - Researchers:
 - Entrepreneurs, SME and big companies





Introducción

Borrador Estrategia
Española

Zona Debate EEB

Entidades
participantes

Documentos
adicionales

Actualidad

Casos de Éxito

Contacto

Sobre la Comunidad de Bioeconomía

Esta comunidad de interés se crea como un espacio destinado a la información, comunicación y divulgación de los trabajos de elaboración de la Estrategia Española de la Bioeconomía (EEB).

El muro de comunicación para envío de propuestas y comentarios, a través de este portal, será de acceso público y se realizará del 1 al 25 de septiembre de 2015. Asimismo se indica la dirección de correo electrónico bioeconomia@inia.es, como vía alternativa para la recepción de sugerencias.

Documento de REFERENCIA /borrador/



**9-7-15 - ESTRATEGIA ESPAÑOLA DE
BIOECONOMÍA: HORIZONTE 2030**

Moving towards the Spanish Strategy on Bioeconomy

Thank you very much



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