



ICT and BIO for boosting Agrofood in the Region of Murcia

- A mapping exercise of KETs -

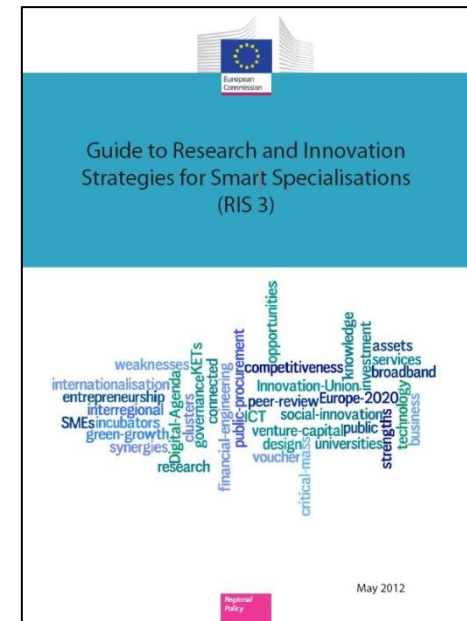
Murcia, 11th April 2013



KETs in RIS3 process

"in addition to specific technological or sectoral priorities, it is important to pay attention to defining horizontal-type priorities, referring to the diffusion and application of Key Enabling Technologies (KETs)"
(Guide to RIS3, European Commission)

- *It means mapping regional capacities and expertise for boosting 'regional businesses'*
- *Capacity / expertise can be an opportunity to become 'technology leaders'*
- *Lack of capacity or expertise can be an opportunity for creation of new enterprises*



Biotechnology for boosting Agrofood in the Region of Murcia

BIO for boosting Agrofood in the Region of Murcia

We have been promoting Biotechnology since 2005, as one of the priority areas according to the Plan of Science and Technology 2003-2006 in the Region of Murcia.

Background:

- Biotechnology Sectoral Program (BioCARM)
- Scientific-technological foresight in the field of biotechnology in the Region of Murcia (2005)



Working Plan for Biotechnology promotion

- Identification of enterprises and permanent assistance.
- Identification of new activities (entrepreneurs, diversification, investment) and support to start up projects.
- Cataloguing of trends and main working areas at universities and other research centres in the Region of Murcia.
- Actions on Technology Watch and Technology Transfer



- 1) Guide of biotechnology resources in the Region of Murcia**
- 2) Guide for the creation of biotechnology companies**



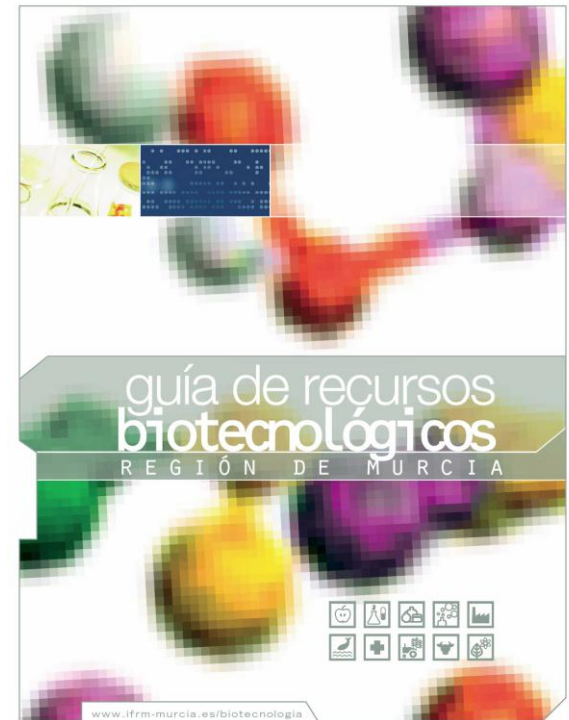
Guide of biotechnology resources in the Region of Murcia

Objective:

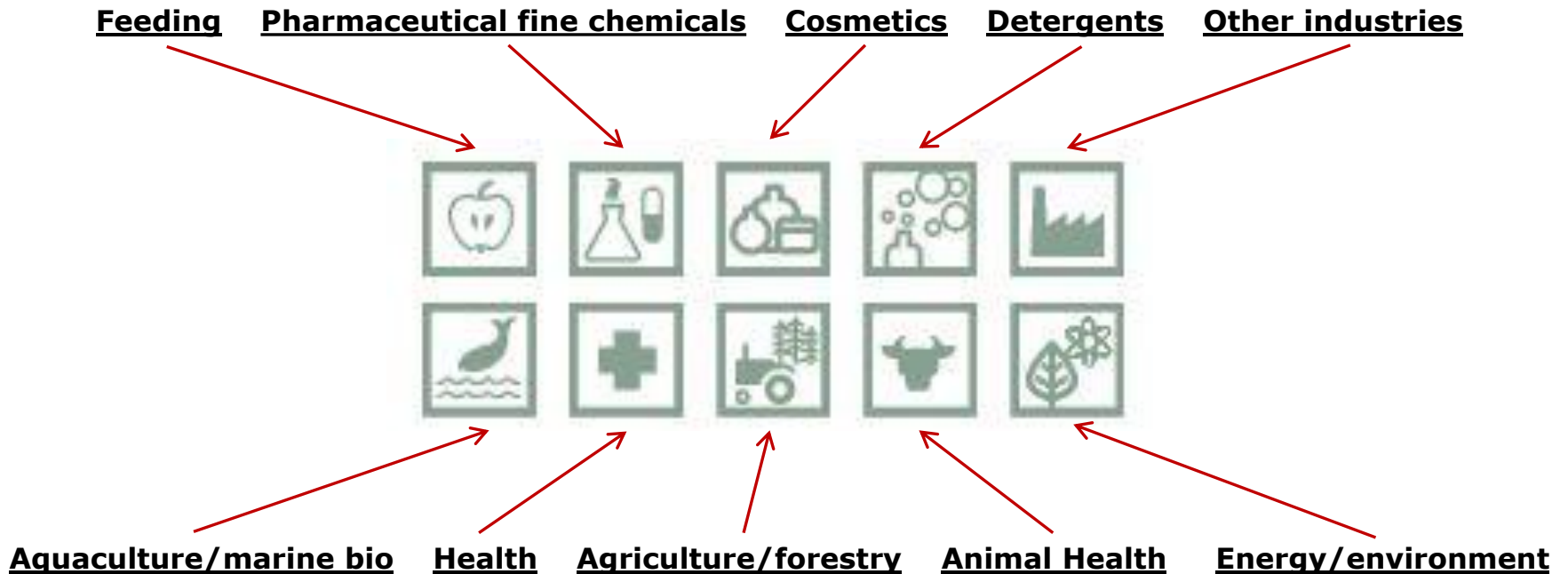
Identification and classification of working areas and technological offer on biotechnology at universities and research centres in the Region.

Methodology:

- Documentary research
- Meetings with technology transfer offices at universities and research centres
- Drafting and sending of the form
- Analysis and validation of collected information
- Writing of the final document



APPLICATION DOMAINS



UNIVERSITIES AND RESEARCH CENTRES MAPPED

Research Centre	Department
University of Murcia (UMU)	Cell Biology
	Plant Biology
	Biochemistry and Molecular Biology
	Genetics and Microbiology
	Physiology
	Animal Production
	Food, Nutrition and Food Science Technology
Technical University of Cartagena (UPCT)	Food and Agricultural Equipment Engineering
	Plant Production
	Science and Agricultural Technology
	Plant Biotechnology Institute
Catholic University San Antonio (UCAM)	Nutrition and Food Technology
CEBAS-CSIC	Plant Nutrition
	Biology of Stress and Plant Pathology
	Food Science And Technology
IMIDA	Animal Production
	Biotechnology and Crop Protection
Oceanographic Centre of Murcia (COMU)	Aquaculture
National Food and Canning Technology Centre (CTNC)	Food Safety Laboratory
Environmental and Energy Technology Centre (CETENMA)	Water, Waste, Energy and Enviromental areas

BIOTECHNOLOGY for AGROFOOD IN MURCIA - STRENGTHS

- Bioproduction and analysis of bioactive compounds. Development of ingredients and functional foods
- Production and purification of enzymes
- Use of vegetal byproducts
- Extraction and purification processes of compounds for food application
- Optimization of fermentation processes
- Techniques of conservation and extension of the shelf life of foods
- Use of plants as biofactories
- Molecular markers applied to the genetic improvement of vegetable and fruit trees. Breeding of new varieties
- Determination of resistance to pesticides
- Biological pest control
- Advanced techniques in the micropropagation of plants
- Improvement of resistance to virus diseases in plants
- Diversification of species and marine aquaculture products
- Conservation of the genetic diversity of livestock species
- Use of livestock waste
- Agri-food diagnostic systems based on molecular techniques
- Rapid diagnostic systems

BIO Mapping is available in:

<http://www.institutofomentomurcia.es/web/innova/biotecnologia>

Information and Communication Technologies for boosting Agrofood in the Region of Murcia

ICT for boosting Agrofood in the Region of Murcia

Background:

Agreement between TIMUR (Regional Association of ICT enterprises) and Instituto de Fomento de la Región de Murcia (Regional Development Agency) aimed at:

- Development of actions to boost ICT Sector.
- Stimulating demand for ICT.

ICT for boosting Agrofood in the Region of Murcia

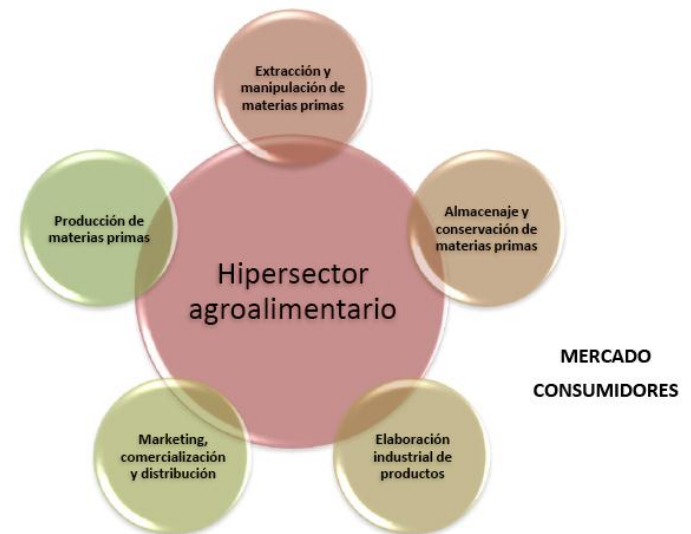
Study for the creation of R&D technology platforms in priority sectors

Including identification of:

- Vertical solutions developed by regional ICT enterprises.
- Industrial sectors in which they could be implemented.
- Opportunities of developing new ICT products and services.

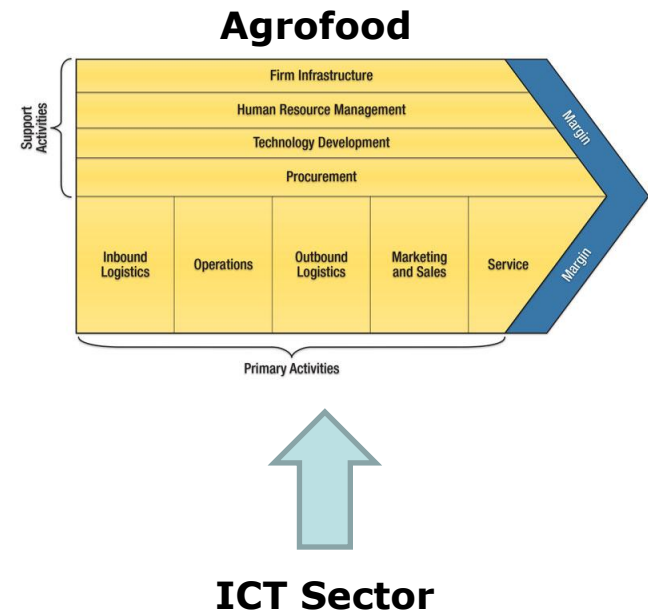
'Smart specialisation' approach:

- Tourism
- Agrofood
- Optimization of water resources
- Energy efficiency
- Logistics and distribution



Methodology











- Entrepreneurial survey on ICT products and services (interviews).
- Map of available ICT products and services.
- Identification of target sectors needs (based on Porter's Value Chain).
- Map of opportunities for new ICT products and services development.
- Global map for each priority sector in the Region.



How to identify opportunities for ICT Developers

In the map, a 'colour code' is used to identify new opportunities, based on:

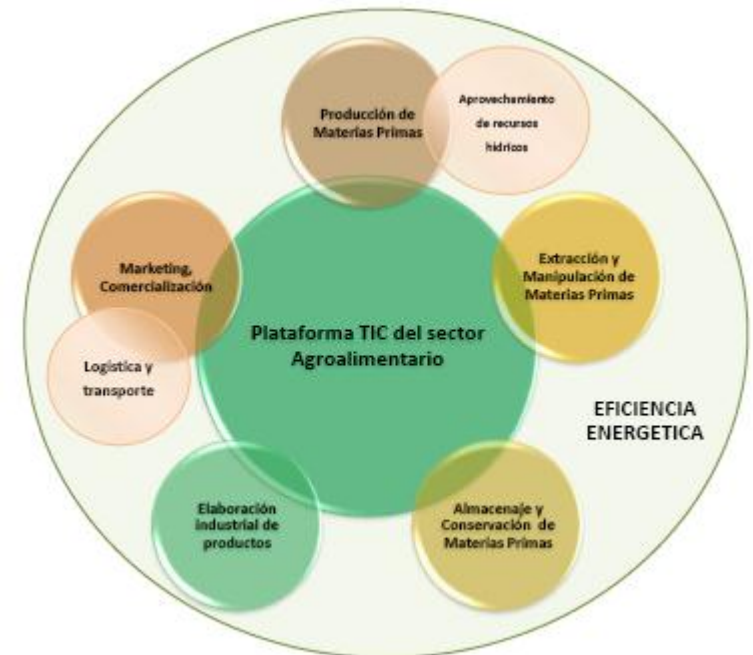
- Degree of development (regional supply): *high-medium-low*
- Degree of implementation (in regional industry): *high-medium-low*

Sistemas y aplicaciones	
Con alto grado de desarrollo e implantación	
Con alto grado de desarrollo e implantación media	
Con alto grado de desarrollo e implantación baja	
Con grado medio de desarrollo e implantación alta	
Con grado medio de desarrollo e implantación media	
Con grado medio de desarrollo e implantación baja	
Con grado bajo de desarrollo e implantación alta	
Con grado bajo de desarrollo e implantación media	
Con grado bajo de desarrollo e implantación baja	
Cero grado de desarrollo	

*FROM high degree of development & high degree of implementation
 TO
 No development*

ICT for AGROFOOD IN MURCIA – STRENGTHS & OPORTUNITIES

- Agriculture, fisheries, cattle raising
- Food Industry
- Logistic and distribution
- Water technologies
- Energy & Enviroment
- Machinery for Agrofood
- Greenhouse technologies
- Chemistry (extracts, additives...)
- Packaging industry





Thank you for your attention!

Murcia, 11th April 2013

