

Smart Specialization and entrepreneurial discovery

Theory and reality behind the concept



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INTRODUCTION

- Recently, a model of development has spread that answers the issues related to the actual competitive context throughout the search of smart specialisation of the territories.
- This model has reached important relevance in the **Regional European Policy** (ex ante conditionality for Structural Funds).
- Importance of the **“ENTREPRENEURIAL DISCOVERY”** concept as key aspect of the model and its strategies.

However...

...important conceptual gaps....

OBJECTIVE

1. Advance in the clarification of the concept of entrepreneurial discovery both in theoretical terms and on practical terms.
2. Establish a series of recommendations that, linked to the role of the entrepreneurial discovery in a RIS3, will allow those in charge to identify and support initiatives and processes in this field.



WHAT TO CHASE?

Specialised diversification in time

Constant innovation, as a **process of combining** ideas, experiences etc., **to generate new solutions** that respond to **needs and/or market trends** at international level



How to **EXTENT AND SYSTEMATIZE** these processes of **ENTREPRENEURIAL DISCOVERY?**

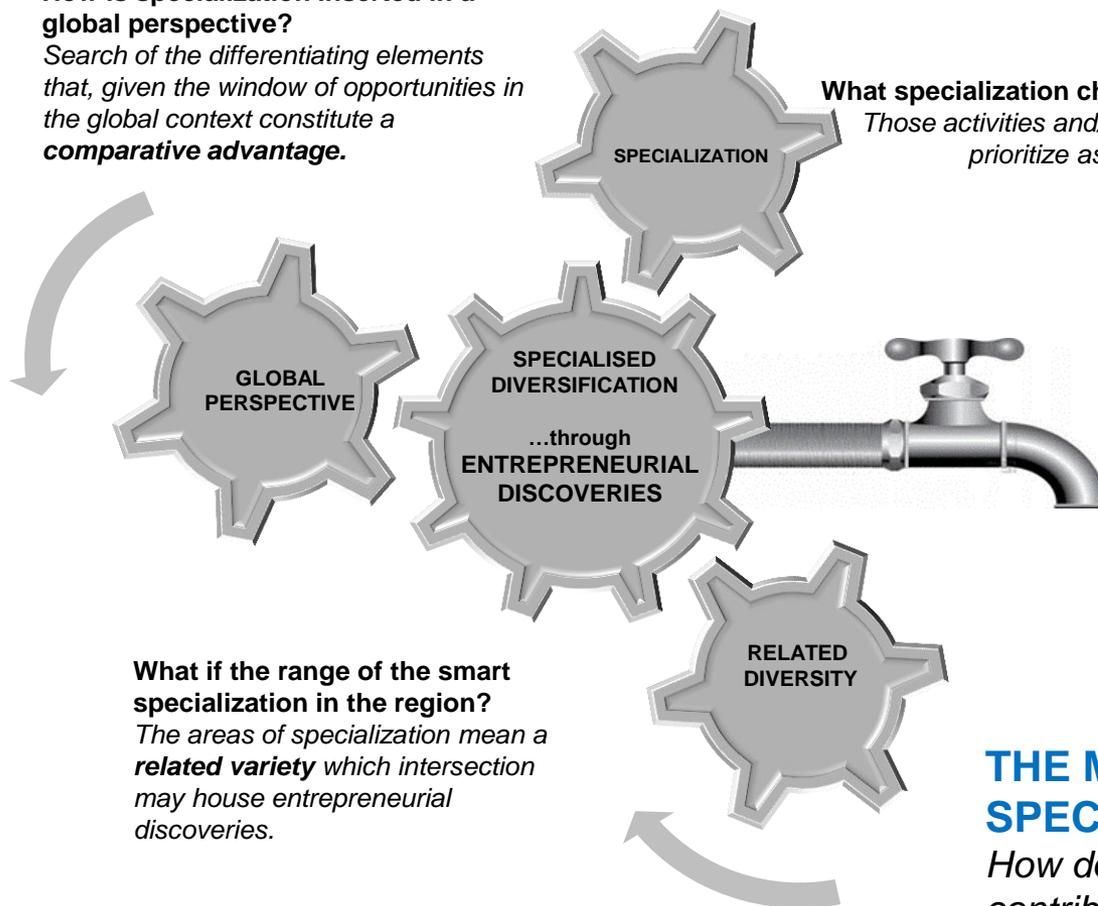
**POSSIBLE FOR ALL
REGIONS**

How is specialization inserted in a global perspective?

Search of the differentiating elements that, given the window of opportunities in the global context constitute a **comparative advantage**.

What specialization characterises the region?

Those activities and/or technology domains to prioritize as part of the bet to reach a **competitive advantage**.



SMART SPECIALIZATION as a continuous process generator of employment and wealth for the territories.

+ JOBS
+ WEALTH

What if the range of the smart specialization in the region?

The areas of specialization mean a **related variety** which intersection may house entrepreneurial discoveries.

THE MECHANISM OF THE SPECIALISED DIVERSIFICATION

How do the entrepreneurial discoveries contribute to the process of smart specialization?



HOW TO ACHIEVE IT?

The importance of the process and its planning

The **systematization** of these **innovations** that **throughout the entrepreneurial processes** generate wealth and employment contributing to the economic development of the region, should be the core of the RIS3:

- **How to generate elements of the environment** that facilitate and promote them.
- **How to discover/identify them** through time,
- How to **identify the leaders** of such processes and **hidden innovators** that may shelter entrepreneurial discoveries, and
- **How to support them** so that they consolidate and are constituted as activities of the future.

What is entrepreneurial discovery? (I)

- Foray, D., David, P.A., Hall, B. (2009)
- RIS3 Guide. IPTS 2012

*“the **creative combinations of different knowledge** (technological and/or no technological), transverse to various economic sectors and that, from a **window of opportunity**, generate a new market activity susceptible of being exploited commercially, that contribute to a **specialized diversification.**”*

Who are those entrepreneurs?



Entrepreneurial in a “wide” sense and as result of the interrelations between:

- Enterprises
- Associations and clusters
- Science and Technological Parks
- Technological Centres
- Social Agents
- etc.

ENTREPRENEURIAL DISCOVERY (I):

Theoretical approximation

The **entrepreneurial discovery** may appear both in the “**initiative**” (the opportunity **already takes place**) or in the “**process**” (the opportunity is already **latent**) and **the RIS3 should already act on both**

INITIATIVE

It is already taking place, it has been identified and the discovery is being consolidated

“Known innovators”

Enterprises, entrepreneurs, etc. that are known innovators at a national and international level, that know the support frames and have access to them

PROCESS

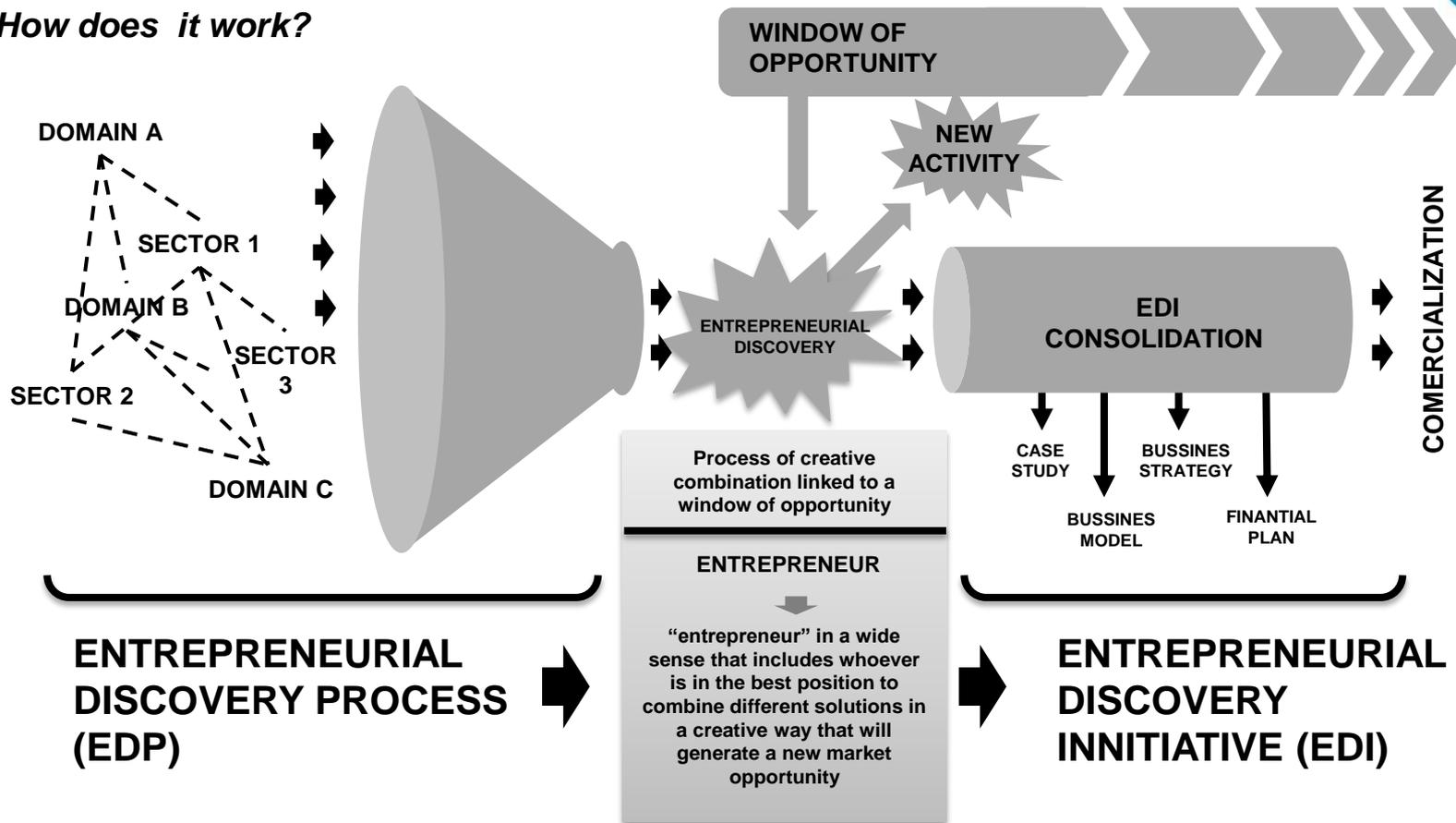
It is latent, or is taking place but is not identified or known as an entrepreneurial discovery and goes unnoticed.

“Hidden innovators”

Enterprises, entrepreneurs, etc. that may contain entrepreneurial discoveries without knowing and that do not know the frames of support and do not access them.

ENTREPRENEURIAL DISCOVERY

How does it work?



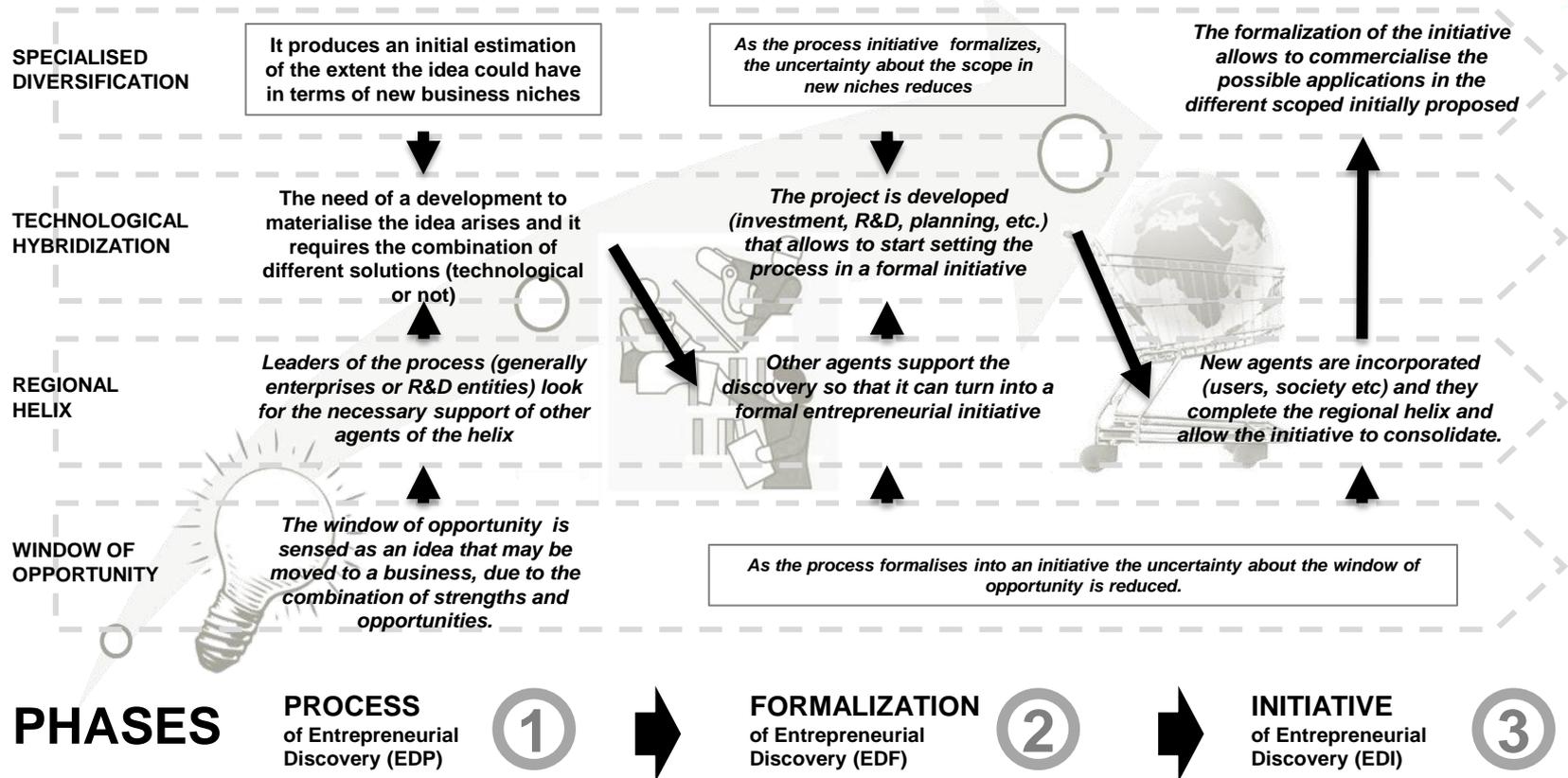
CRITICAL POINTS of an entrepreneurial discovery

What to search?

CRITICAL POINTS	KEY POINTS TO CARRY OUT	ASPECTS TO CONSIDER
Window of opportunity	Do you have a clear market orientation at international level?	<ul style="list-style-type: none"> • <i>Period of commercialisation at the short, medium and long term</i> • <i>Geographic reach: national, European or international</i>
Regional helix	Does the entrepreneur arises and/or is supported by the quadruple helix?	<ul style="list-style-type: none"> • <i>Enterprises</i> • <i>R&D+i Agents</i> • <i>Government</i> • <i>Users</i>
Technological hybridization	Do different knowledge/technology domains combine?	<ul style="list-style-type: none"> • <i>Sector-Sector (Non technological innovation)</i> • <i>Sector-Technology</i> • <i>Technology-Technology (technological innovation)</i>
Specialised diversification	Does it contribute to the diversification of the actual regional specialization pattern?	<ul style="list-style-type: none"> • <i>Incremental Improvement</i> • <i>New product/service generator of new activities</i>

PHASES of an entrepreneurial discovery

The “cycle of life” and its phases.



TYPES OF ENTREPRENEURIAL DISCOVERY*Paths for structural change through specialized diversification*

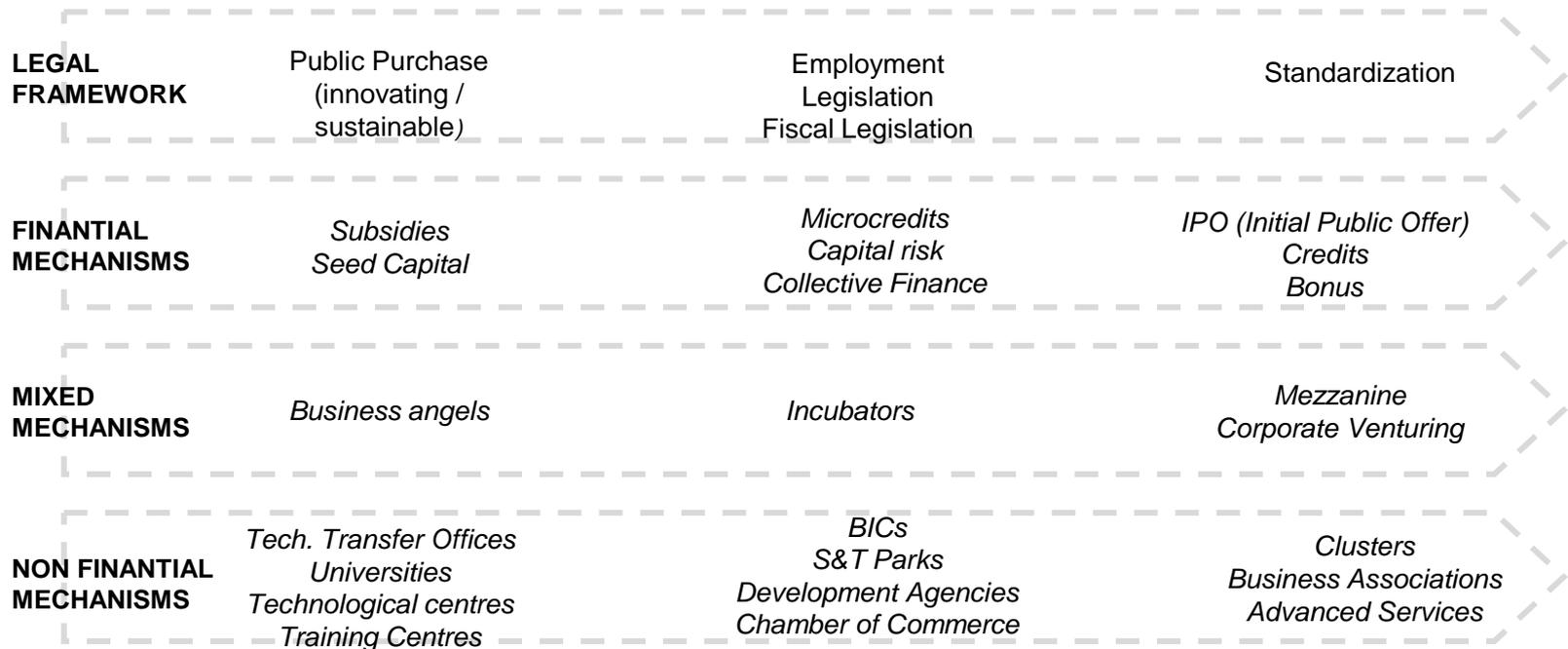
1. **REDESIGNING** actions ("retooling" or modernization of an existing activity) would be based on the support of the improvement of the environmental assets that act directly upon the competitiveness of such activity.
2. The actions oriented to the **DIVERSIFICATION BY SYNERGIES** ("emerging") generate business by combining R&D and innovation and related business activities.
3. The actions of **ACTIVITY EXTENSION** ("extending" or transition from an activity to another new one) consist on the access to a new niche by exploiting economies of scope.
4. The actions of **RADICAL FOUNDATION** ("cross-sectoral" or exploitation of related variety generators of radical innovations) that are seen as new combinations of sectors / technology domains that help generate innovative ideas for new products and services.

PAPER OF THE PUBLIC ADMINISTRATION***What is expected from the public Administration as facilitator of the discovery?***

The discovery process should consist on the identification of those activities in which a territory should specialize leaving the leading role to "entrepreneurs". The role of governments should not consist on bureaucratically selecting areas of expertise and boost the chosen development, but to facilitate environmental conditions for it (Foray et al. 2009)

1. provide **incentives to entrepreneurs and other organisations** so that they get involved with the discovery.
2. **evaluate and value the effectivity** of such support, so the the aids are directed to economical sectors with a relevant weight and possibilities of improvement;
3. **provide with complementary investments** of emerging specialisations
4. **provide with information and facilitate the coordination and connections**, both between the different actors of the territory and between this and other territories.

Phases of an entrepreneurial discovery and policies/mechanisms of support



PHASES

PROCESS
of Entrepreneurial
Discovery (EDP)

①



FORMALIZATION
of Entrepreneurial
Discovery (EDF)

②



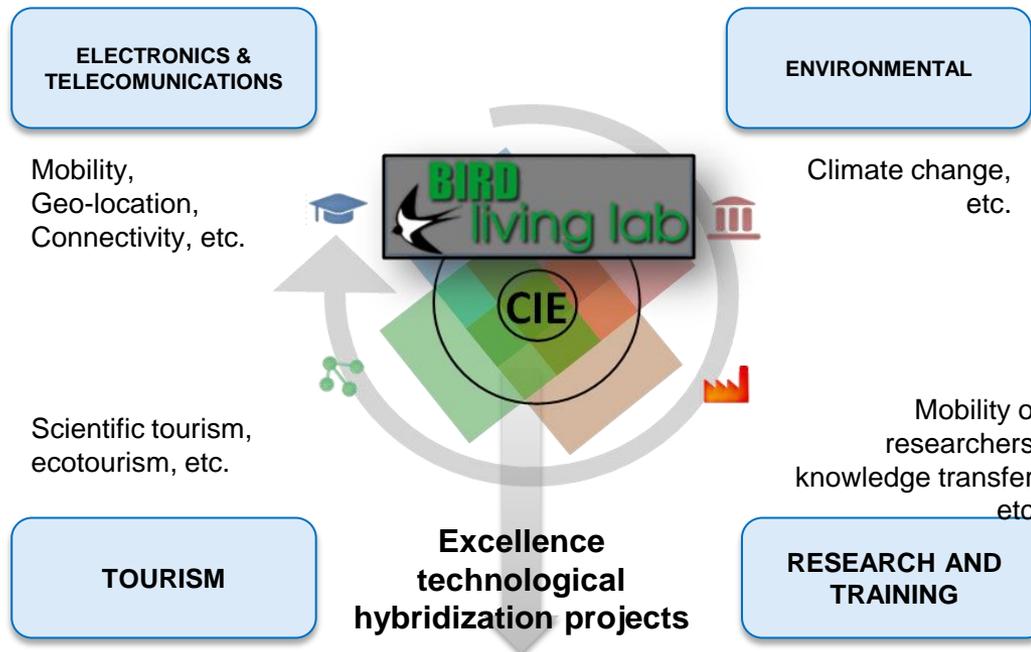
INITIATIVE
of Entrepreneurial
Discovery (EDI)

③

Examples of entrepreneurial discoveries in 3 Spanish regions

Case Study	Region Type	Typology	Approach	Characteristics				Route
				1	2	3	4	
CASE 1 <i>Rural specialisation</i> <i>Urdaibai Bird Centre</i>	Basque Country More developed - Competitiveness	Initiative	Territorial diversification Strategy in rural territories	High	High	High	High	Radical Foundation
CASE 2 <i>Related variety:</i> <i>metal + health</i>	Basque Country More developed - Competitiveness	Process	Reinventing a traditional activity towards emerging technological niche	High	Medium	Medium	High	Emerging
CASO 3 <i>Sectoral modernization:</i> <i>Wealth + high tech</i>	Castilla y León More developed – Phasing-In	Initiative	Access to a related niche through enabling technologies	Medium	Low	Low	Medium	Extent
CASO 4 <i>Exportation Redesign:</i> <i>Food Technology</i>	Extremadura Less developed - Convergence	Formalization	Modernization of the activity to increase market share (outside)	Low	Low	Medium	Low	Redesign

EXAMPLE OF ENTREPRENEURIAL DISCOVERY (I) Urdaibai Bird Centre – UBC – Basque Country



- Urdaibai Bird Centre UBC is an Excellence Innovation Centre (CIE), that favours the exploitation of the Basque related variety.
- In its projects of technological hybridization are generated between different domains of knowledge/activities, that count with international projection
- The link of UBC to global chains of value allow such international projection.

EXAMPLE OF ENTREPRENEURIAL DISCOVERY (II)

Technological hybridization metal + wealth – Basque Country

PREVIOUS WORK: *2 months*

Identification of matching

96%

Want to participate again

spri

WORK TABLE (I)

23 assistants: 8 sanity + 15 metal

FOLLOWING: *5 months*

- *20 commercial contacts*
- *4 collaborations*
- *1 technology hybridation project (entrepreneurial discovery)*

WORK TABLE (II): *project groups*



EXAMPLE OF ENTREPRENEURIAL DISCOVERY (III) Santa María La Real Foundation –Castilla y León

- Located at a **rural area**, with **low critic mass**, both with a **great historical and cultural heritage**

- **HYBRIDISATION TECHNOLOGY**

Application of ICTs to the cycle of life of the heritage: study, restoration, conservation and diffusion

- **SPECIALIZED DIVERSIFICATION**

Construction, energy efficiency, environment and sustainability, tourism, health and well-being.

- **CUADRUPLE HELIX**

Junta Castilla y León, Province, City, University, Enterprises and Art Foundations

Recently launched by the Centre of Innovation and Entrepreneurship “GIROLAB”



EXAMPLE OF ENTREPRENEURIAL DISCOVERY (IV) Centre for Export in the Meat Sector - Extremadura

- Located on a **convergence region** (2014-2020), with an **agrarian economic structure**

- **HYBRIDISATION TECHNOLOGY**

Application of ICTs to the field of food and food safety, biotechnology and health

- **SPECIALIZED DIVERSIFICATION**

Farming, tourism, hospitality, health

- **CUADRUPLE HELIX**

Government of Extremadura, Ministry of Economy and Competitiveness (MINECO), ERDF, 19 partners and 50 collaborating enterprises, University of Extremadura (UEX)



Orientation to the **export of high added value** + **Pole of Excellence on Food Innovation**

CONCLUSIONS

1. Smart specialisation **is not a list of technologies/sectors** where the region has an advantage, **but a process of discovery subject to a cycle of life** (process-formalization-initiative) that varies in time according to the regional capabilities and the varying environmental trends.
2. The fundamental core of smart specialization resides in the **innovations that arise from the creative combination of technologies and/or sectors** where the region has a high level of specialization/competitiveness and that are generators of new business opportunities, employment and wealth
3. **All regions**, apart from their dominant sectors and their technological/innovation capability, **are potential hosts** of these kind of radical innovations, product of processes of entrepreneurial discovery. Smart specialization is an useful way to approach territorial competitiveness.



CONCLUSIONS

4. Entrepreneurial discovery **does not respond to a unique pattern, nor sectorial nor technological**, but contrary to the random combinations (and practically infinite) that result of the creative ways to take advantage of the windows of opportunity and profiting of the assets that the territory has available.
5. Entrepreneurial discovery can be identified in base to a series of **characteristics**: **specialised diversification**, **technological hybridization**, the role and compromise of the agents of the **quadruple helix** and the **window of opportunity** to which it is directed.
6. A RIS3 must be capable of establishing the **mechanisms to identify/discover** those innovations that through processes of entrepreneurial discovery could end up turning into initiatives. The policy has to **support and consolidate** the entrepreneurial initiatives, generating the different aspects of an enabling environment.
7. The **Administration** must act as a facilitator of the conditions that **generate and systematize the entrepreneurial discoveries** and as **limitator of the imperfections** of the system (in those regions with less favourable conditions).