Centro Region of Portugal - RIS3

1 - Overview of our RIS3

1.1 Main regional characteristics

Centro Region of Portugal has (2017) 2.231.346 inhabitants (representing 21.8% of the population living in the country); it has 100 municipalities and covers an area of 28.462 km^2 (that represents 31% of Portugal's area, being the second largest). It has a strategic position, being situated in the middle of the two biggest urban centres (Lisbon and Porto).

In Centro Region, there are three Universities (Coimbra, Aveiro and Beira Interior), six public polytechnic institutes and a large number of research units and technological centers in several areas. The number of companies is (2017) 261.971 (being more than 90% SMEs). In 2016, the companies were the ones with more expenditure in R&D activities, closely followed by the higher education institutions.

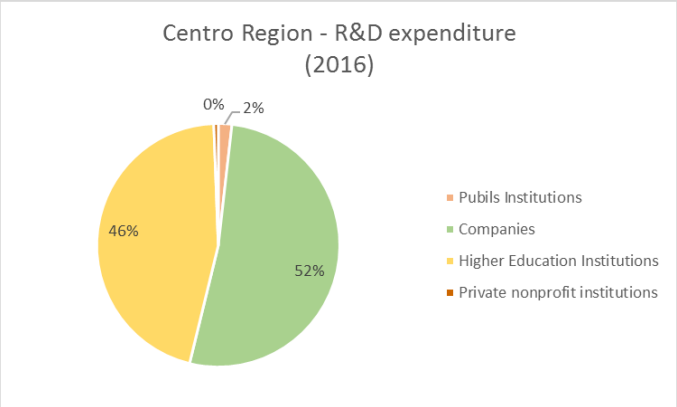


Chart 1 – Centro Region R&D expenditure in 2016 (INE)

The companies are distributed, by economic activity, the way we can see in the chart below.

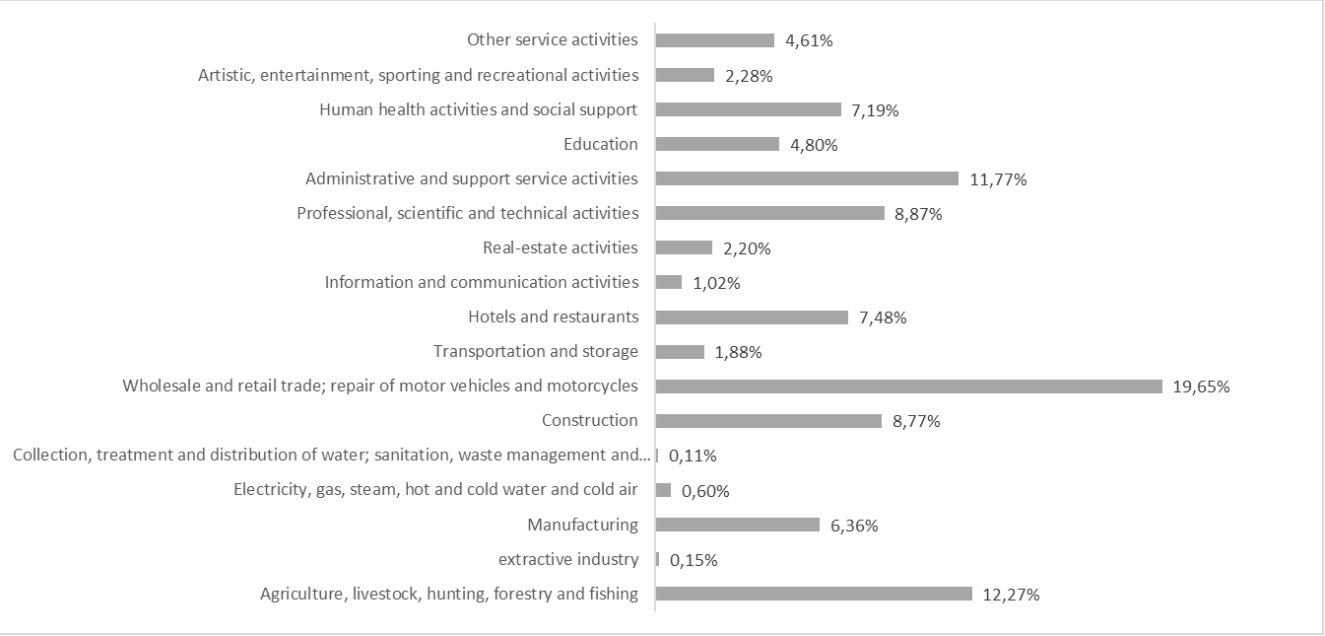


Chart 2 – Distribution of companies in Centro Region, by economic activity, in 2017 (INE)

In 2018, the unemployment rate was 5.8%, below the EU-28 average (6.9%) and well below the national average (7.1%), which makes Centro the Portuguese region with the lowest unemployment rate (Eurostat).

In 2017, the GDP per inhabitant in PPS was 19.983 (66.6% EU=100) and, the proportion of gross expenditure on research and development in GDP was 1.32.

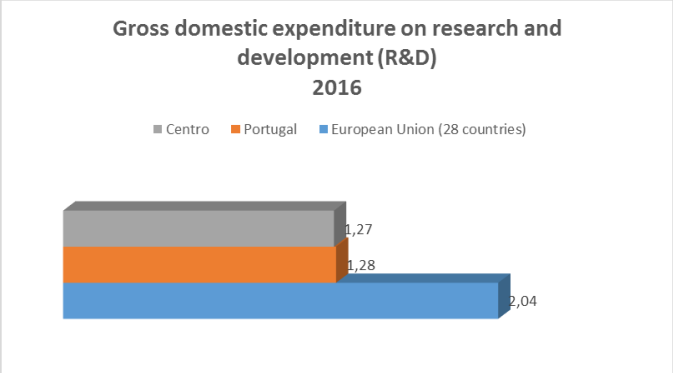


Chart 3 – Proportion of gross expenditure on research and development in GDP, in 2016 (EUROSTAT)

The Region was classified as "moderate innovator+" (85 EU28=100; 121/220) by the Regional Innovation Scoreboard. In the 2014-2016 period more than 40% of the enterprises with 10 and more persons employed had innovation product and process innovation.

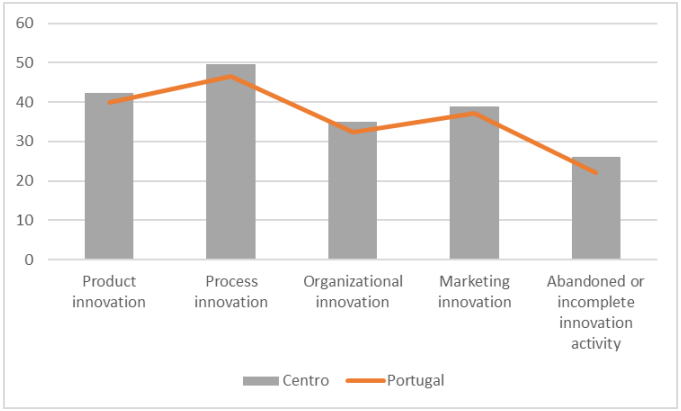
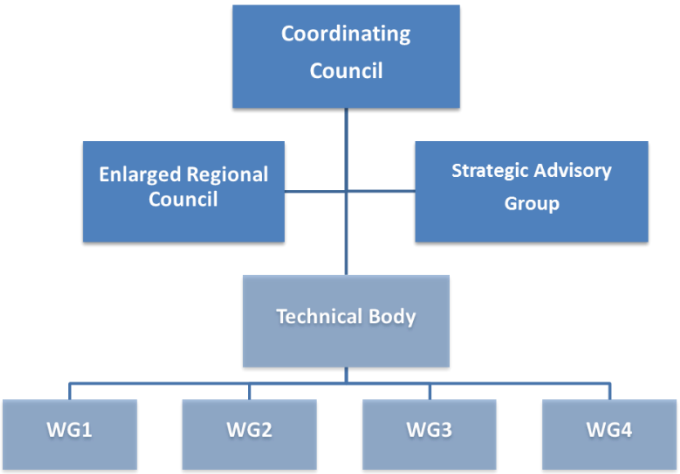


Chart 4 – Proportion of enterprises with 10 and more persons employed with innovation activities, in 2014-2016 (INE)

1.2 RIS3 governance

Centro RIS3 governance model is composed by a Coordinating Council, a Technical body, Working Groups, an Enlarged regional council, and a Strategic Advisory Group (as shown in the image below).



Coordinating Council: led by the CCDRC, it is composed by a group of the relevant regional entities that assumes the management of the development and follow-up of the works of Centro RIS3.

Technical body: it is composed by CCDRC and the external coordinators of the working groups/innovation hubs. It has executive functions and it is responsible for streamlining the work, organising meetings, monitoring and producing documents, mobilising the necessary resources for this.

Working Groups: they are thematic and are "spaces of entrepreneurial discovery" within which the relevant actors in each area work together, proposing action lines within the priorities, searching to promote innovation and internationalisation, cooperating and networking. Currently, there is a working group for each (of the four) innovation hub(s).

Enlarged regional council: this body acts as a forum for the regional research and innovation ecosystem and it is responsible for validating the entire process, providing inputs, keeping track of the documents that are produced and making key strategic decisions throughout the exercise.

Strategic Advisory Group: composed by personalities of recognised merit that have a strategic thinking about the region and/or smart specialisation and that can give a valuable contribution to the process.

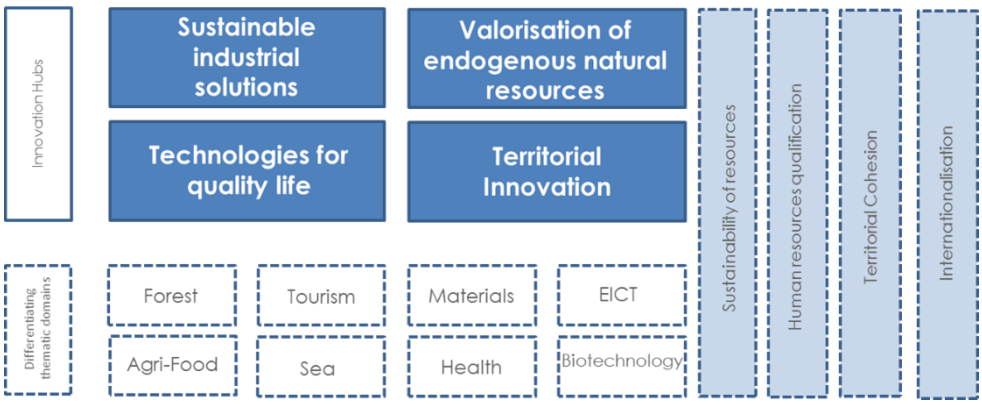
1.1 RIS3 priorities

In the context of the strategic reflection on the future of the region, the various regional actors validated a series of differentiating thematic domains in which the Centro Region is distinctive: Agri-food, Forestry, Sea, EICT, Materials, Health and Well-being, Biotechnology and Tourism. These domains correspond to areas in which there is an installed productive capacity and/or production of scientific and technological knowledge, whether in already consolidated ways or as an emerging reality.

The process of listening to regional actors has also led to the identification of four more cross-cutting priorities, of a distinct nature: resource sustainability (including energy efficiency), qualification of human resources, territorial cohesion and internationalisation.

Interconnecting the differentiating thematic domains and the cross-cutting priorities identified actors have reached four Innovation Hubs that provide the framework of the RIS3 priorities of the Centro Region of Portugal: Sustainable industrial solutions; Valorisation of endogenous natural resources; Technologies for quality of life; Territorial innovation.

These areas are not vertical/sectoral, but horizontal areas under which it is intended to foster the emergence of new activities, new opportunities and new combinations of resources (natural, productive, human, etc.) as well as to promote productivity gains and efficiency in the RIS3 ventures. These are priority areas for galvanising research and innovation projects to which a range of capabilities contribute and which regional actors can mobilise (within and outside the region).



2. Skills for S3 policy makers

It is important to note that in the "policy makers" concept we include all the relevant stakeholders that participate in the design, implementation and monitoring of the RIS3. We are not thinking only about the RIS3 technical body but in all the stakeholders that are a part of the regional innovation system and therefore take part in the RIS3 process.

2.1 Identification of skills of the different policy makers

The main objective of smart specialisation is to induce a structural change in the regional economy, based in scientific knowledge and innovation. Being the economic tissue mainly based in micro and SMEs, there is the need to collaborate within the regional innovation ecosystem. On the other hand, RIS3 is in itself a collaborative process. Being the dominant *modus operandi* individual (of all stakeholders, but more particularly companies), there is a general lack of skills to develop such a process.

It is important to identify the skills needed throughout the different phases of the process (design, implementation, monitoring, revisiting) and for the different stakeholders (RIS3 technical body and all the other stakeholders), both technical competences and those needed to work in cooperation. As underlined, our productive system is mainly composed by micro and SMEs, therefore it is very difficult to engage companies in the process (they lack time, availability and resources to do so). Taking this into account, interface entities play a crucial role.

2.1.1 **Skills for the RIS3 technical body,** the one responsible for coordinating the design, implementation, monitoring and review of smart specialisation strategies:

- Techno-economic analytical knowledge (framing questions, understanding and selecting evidence)
- Methodologies to promote participatory workshops (skills for networking, engaging stakeholders)
- Ability to process the different contributions and visions into a coherent strategic framework (top down approach)
- Ability to set a long term vision, translated into quantifiable goals
- Knowledge on funding sources and mechanisms
- Knowledge about funding instruments and their legal framework
- Ability to design new instruments and propose specific calls
- Knowledge on monitoring systems (development of conceptual model)
- Knowledge on data collection (methodologies and sources available, including ODSI)
- Knowledge on methodologies to define taxonomy trees for RIS3 priorities
- Knowledge on development of information systems (mainly for quantitative data)
- Knowledge on qualitative data analysis
- Communication skills

- Knowledge on data presentation (visualization)
- Management and coordination skills
- Collaborative leadership skills
- Deep knowledge on the territory (strengths, weaknesses and potential)
- Identification of new opportunities and potential synergies with other regional S3s
- Expertise on combining different funding streams/instruments, namely ESIF&H2020 (Horizon Europe)

2.1.2 **Skills for the other regional innovation ecosystem players (knowledge providers, companies, end users, etc),** the ones responsible for being the promoters of the economic transformation of the region, by producing (scientific and technological) knowledge and promoting innovation, adding value to that knowledge by its incorporation in the economic and social activities:

- Ability to participate in the process of designing the strategy
- Knowledge about funding instruments available
- Ability to provide recommendations on the instruments design
- Ability to provide recommendations on specific calls needed
- Ability to work collaboratively (at regional, national and international level)
- Ability to use innovative procurement
- Identification of new opportunities and potential synergies with other region's value chains

Specific skills for the RIS3 interface entities, responsible for bridging knowledge providers and those who may add value by using the science, technology, innovation produced (mainly companies).

- Scientific knowledge on the main priority domains and on the main providers
- Deep knowledge on the productive structure and the economic tissue
- Ability to translate the scientific language for business
- Ability to understand the companies' needs;
- Knowledge of the financing mechanisms and instruments available;
- Ability to promote joint collaboration between players
- Knowledge on the relevant networks (local, regional, national, international)
- Ability to represent regional stakeholders

Q1: *Have we missed any important skill for the different phases and the different participants in the process? How to efficiently identify and mobilise the existing skills within the ecosystem?*

2.2 The outward looking of Centro RIS 3

One of the central issues for Centro RIS3 is its outward looking. It is very important to foster the integration of the regional economy in international value chains. For that it is of utmost importance that regional agents join international networks, projects and initiatives.

In this view, the policy mix of the regional strategy needs to include, besides the Regional Operational Programme (which remains its privileged financial instrument) other funding sources and instruments. European Programmes, and Horizon 2020 in particular, play an important role.

Given their central role, interface entities are an important vehicle to pursue this objective. For that reason, we have foreseen an instrument within ESIF (funded by ESF) to promote the internationalisation of interface entities (already included in the annual plan for calls). The main objective of this call is to help stakeholders to be competitive at the European level. It shall be published soon and it's on us to define (i) what should be included (meaning, which kind of activities should it fund, what kind of expenses should be covered) and (ii) who should it address specifically (all types of interface entities? Or focus on certain type(s)?)

Regarding the increase of use of H2020 in the implementation of RIS3, Centro has joined a working group (WG) created within the Stairway to Excellence (S2E) project "H2020 for RIS3". It aims at assisting regional/national Managing Authorities to better integrate ESIF and H2020 funding. Based on issues identified through the S2E analytical work and those that are of interest to WG members, various pilot activities have been identified to support optimal ways to address the issues. Centro will participate in two pilots, being one of them on "Supporting mechanisms for capacity building in framework programme participation" and the other on "Research and innovation Public Private Partnerships for RIS3 implementation" (we intend to focus on circular manufacturing, identifying the networks and potential European partners in this thematic, that is a priority of Centro RIS3).

Q2: *How to design a comprehensive system to develop the missing skills to allow a better integration of the regional economy in international value chains? What else is there or could be designed to reach the goal?*

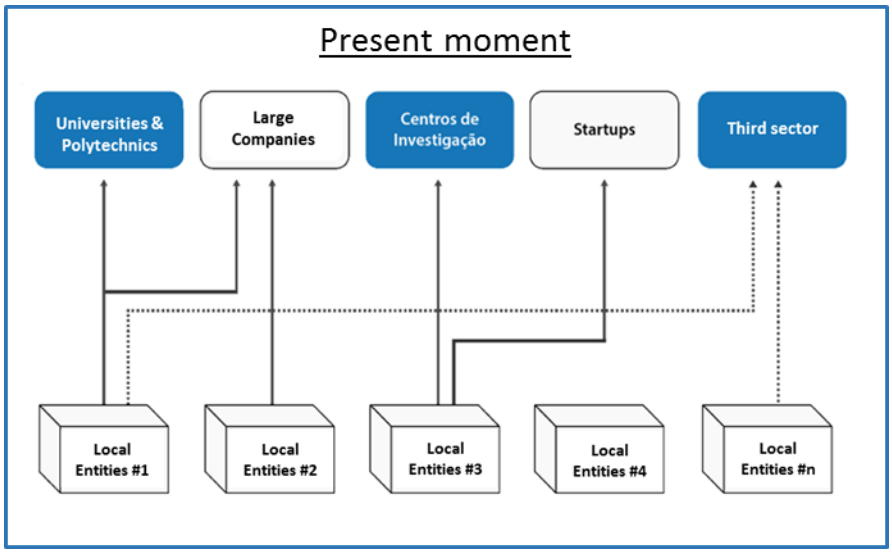
2.3 A regional network of territorial innovation brokers

As mentioned previously, Centro Region economic tissue has a majority of micro and SMEs. On the other hand, companies are very much concentrated in some (few) sub regions, being the rest of the territory in risk of lagging behind, increasing the gap regarding the more developed areas. Moreover, one of the Centro RIS3 priorities is territorial innovation, being cohesion an important objective.

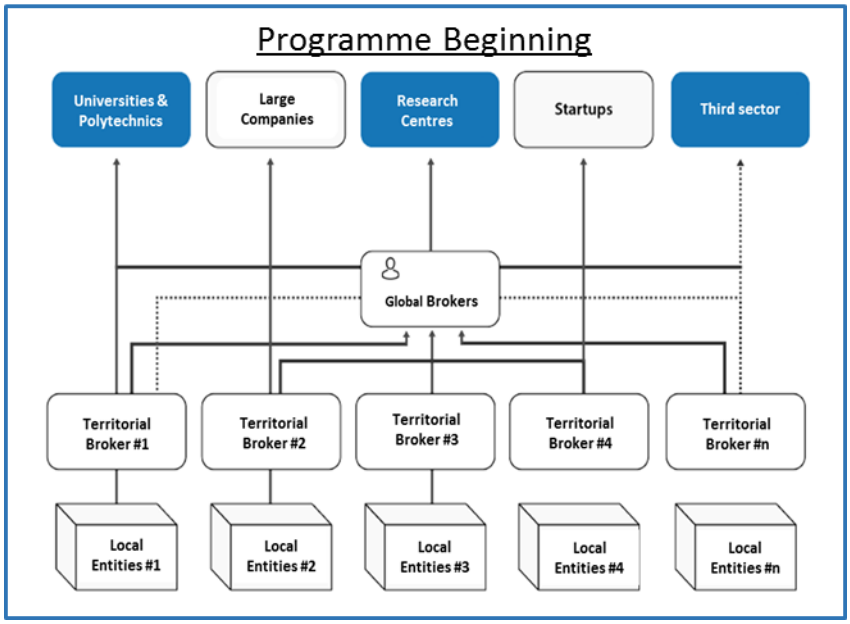
In order to address this issue and taking into consideration the role of interface entities proposed, we have developed a conceptual model to create a regional network of territorial innovation brokers.

In terms of development, 3 key moments can be highlighted:

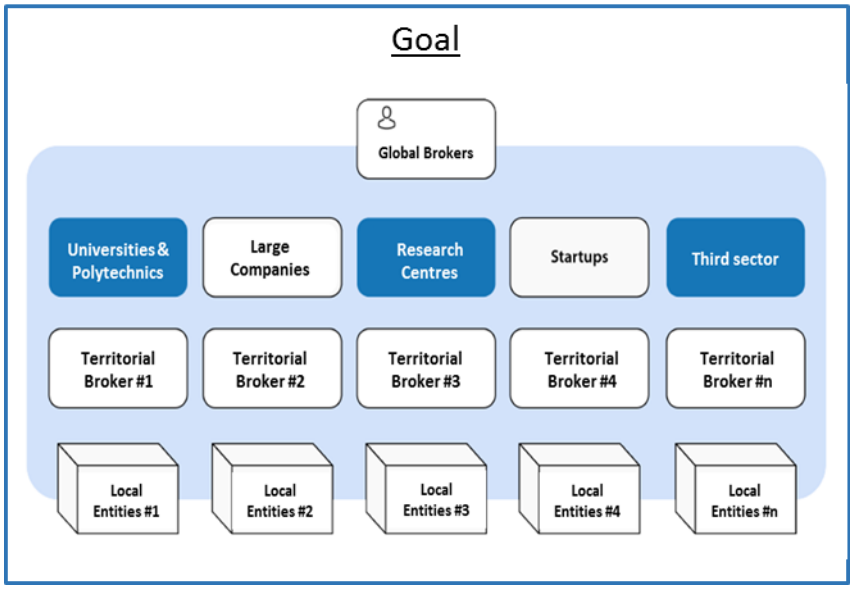
1. Present moment: the different local actors (especially municipalities, local development associations and other territorial agents), have their own networks and development strategies already established. Nevertheless, they face similar problems (for instance, lack of capability to attract smart investment and lack of critical mass aligned with the new challenges), being motivated to explore new solutions.



2. Beginning of the programme: it is intended to promote new connections between companies (startups and SMEs), knowledge centres (national entities from the Scientific and Technological System), the third sector and local development agencies in the field. Brokers (both global and territorial) will be the key to that transformation.



3. Goal (Future): the main goal is that the global brokers train the territorial brokers to become global, able to promote territorial innovation in RIS3 priorities, strengthening the regional innovation ecosystem, in order to boost local opportunities as well as explore synergies and potential cross fertilizations. The ultimate aim is to promote their inclusion in the global value chains.



Q3: *How to operationalize such a model?*