

*RIS3 Vivo Policy Brief 3*

**LINKING CLUSTERS AND THE RIS3  
ENTREPRENEURIAL DISCOVERY PROCESS**

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## 1. Introduction: Why linking clusters and RIS3 is important

The central element of research and innovation strategies for smart specialisation (RIS3) is the so-called 'entrepreneurial discovery process' through which regional strategies emerge and are shaped over time. Indeed, along with the convergence of industrial policies with science, technology and innovation policies in recognition of the key role that knowledge and innovation play in the competitiveness of modern economies, it is this conception of an entrepreneurial discovery process that essentially distinguishes smart specialisation strategies from older incarnations of industrial policies.

Like the old industrial policies, smart specialisation strategies are about making choices around which economic activities in a territory should be targeted for active support. Where they differ is in who makes the choices on which activities to target and how those choices are made. In smart specialisation strategies the decisions on which activities to prioritise for research and innovation investments should emerge through engagement among a constellation of regional actors from the quadruple helix of business, research, government and civil society. This engagement is critical, as it is the collective intelligence of these agents that has the best chance of understanding the market potential and technological feasibility of competing paths, along with their likely socioeconomic impacts in the region.

Yet as smart specialisation strategies have moved from design to implementation, the practical challenges of maintaining the interested and focused engagement of relevant stakeholders have become evident in regions across Europe. Different regions have taken different approaches to facilitating entrepreneurial discovery processes, but there are common challenges in stimulating and maintaining the interest of firms, aligning the activities of universities and integrating civil society.

Indeed, in practice the early implementation of RIS3 processes has been strongly government-led or public-research led.<sup>2</sup> This has highlighted other challenges related to ensuring that government has the right capabilities. Firstly to play a truly facilitating role, engaging other actors, and secondly to be sufficiently responsive in its own policies and funding mechanisms to the outcomes of that engagement.

In the context of these challenges for ensuring a dynamic, multi-agent entrepreneurial discovery process, clusters and cluster organisations can play a particularly critical role. Clusters themselves are the building blocks of regional economies; they represent the areas of specialisation in related activities already existing in the region, and it is these areas of specialisation that must provide the foundations for new path development. Moreover, in the vast majority of European regions there are dedicated public policies and/or dedicated organisations oriented towards supporting cooperative dynamics within the regions' clusters. Existing clusters and cluster organisations are therefore natural starting points for building the entrepreneurial discovery processes required by smart specialisation strategies.

While the synergies between clusters and the RIS3 entrepreneurial discovery process seem obvious, in many places it is proving difficult to make an effective link on the ground. Yet precisely because clusters are the building blocks of regional economies, it is critical to better link cluster dynamics with smart specialisation processes. This challenge is being felt across Europe. It is clearly seen, for example, in the attempts of the European Commission to bring together the approaches of different directorates, in particular DG Regional Policy (the origin of the smart specialisation agenda), DG GROW (focused on enterprise, following a clusters agenda) and DG Research (focused on funding university research).

In Euskadi the challenge is particularly pertinent given the strong presence and legacy of cluster organisations, which have emerged and evolved with almost 30 years of consistent support from a dedicated cluster policy. Understanding how to best

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<sup>2</sup> See, for example, Aranguren et al.'s (2018) findings from eight regional cases, Kroll's (2017) analysis of less-favoured regions, or Marinelli and Perianez Forte's (2017) analysis of a survey of the bodies registered as implementing entrepreneurial discovery processes on the S3 platform.

leverage the knowledge, experience and reach of these institutions within the regional entrepreneurial discovery process is therefore likely to be critical to its effectiveness.

The aim of this *policy brief* is to set out what we know about the relationship between clusters and the RIS3 entrepreneurial discovery process (the state-of-art) from both academic analysis and practice, and to reflect on how Euskadi can advance in the widely-shared challenge of linking them more effectively.

## 2.- The RIS3-cluster link: What is the current state-of-art?

The smart specialisation policy framework arose initially from the observation that many regional governments had been replicating investments in certain areas of science, technology and innovation (STI) without really taking into account the plurality and diversity of their specific contexts. The essential argument, very quickly translated into a European policy agenda, was for regional STI strategies that are smart in the sense of targeting areas with clear potential for new innovation paths building from the existing productive capacities and capabilities of the region.

### *Entrepreneurial Discovery*

In this context the notion of a regional entrepreneurial discovery process attempts to describe an inherently entrepreneurial process of discovering emerging, promising paths that build from the existing actors, competences and activities of the region. Marinelli and Perianez Forte (2017) note that this process is continuous, and present from the initial identification of priorities through to the implementation of the strategies, where stakeholders are engaged in the refinement of priorities, the identification of policy instruments, and associated RIS3 governance and monitoring mechanisms.

This continuous process of discovery is nevertheless difficult to put into practice, precisely because it requires the engagement of multiple stakeholders that may not be used to engaging, and that may have conflicting interests and distinct visions. Indeed, the academic literature is still far from clear on what a regional entrepreneurial

discovery process should look like and how it should be operationalised. It is nevertheless generally accepted that it:

- Should have a strong analytical component and evidence-base for selecting and refining priorities;
- Should be strongly participative;
- Should combine elements of *bottom-up* and *top-down*; and
- May have different stages with different characteristics (e.g. initially establishing fairly broad priorities, and then increasing the granularity to 'dig deeper' into more specific paths within those priority areas).

#### *Differences and Synergies between Entrepreneurial Discovery and Clusters*

Given the focus of RIS3 on starting from existing productive capacities and capabilities, it is unsurprising that smart specialisation has been linked to clusters ever since it first emerged. Yet the rapid adoption of the smart specialisation agenda meant that there was initially relatively little time and space to reflect on how smart specialisation related to other already-established policy initiatives, such as cluster policies and cluster organisations.

Foray et al. (2011) warned early on that smart specialisation is not the same thing as a cluster policy, although he pointed out that “vibrant innovative clusters” could be a “classic outcome” or an “emergent property” of a smart specialisation strategy (*Ibid*, p. 16). As RIS3 started to be designed across Europe, inevitably prompting discussions about the relationship with existing cluster policies, analysis then focused on understanding the differences and similarities between clusters and smart specialisation strategies (Aranguren and Wilson, 2013; European Commission, 2013; Todeva, 2015).

Clear differences between the smart specialisation entrepreneurial discovery process and cluster dynamics include:

- The scale at which they are articulated: region vs cluster, which implies that the RIS3 entrepreneurial discovery process is likely to cut across traditional cluster boundaries.

- Their focus: innovation investments in specific innovation-intensive activities vs overall cluster competitiveness across the whole economy.
- Their overall goals: the transformation of regional economies vs enhancing the performance of the cluster and its constituent parts.

Yet despite these differences there are very clear synergies between cluster-level dynamics and regional-level processes of entrepreneurial discovery. European Commission (2013) summarised these in terms of their shared rationale – productivity and innovation as drivers of competitiveness – and their shared reliance on the advantages of proximity relationships. These synergies were also explored by Aranguren and Wilson (2013), whose analysis suggested that existing cluster dynamics embody important elements of the entrepreneurial discovery process:

- Both cluster and RIS3 dynamics seek to facilitate forms of cooperation among firms and a range of other agents that are developing related/complementary economic activities: they are both systemic dynamics, which implies new, experimental forms of governance and leadership to articulate effective decision-making processes.
- Both cluster and RIS3 dynamics are fundamentally place-specific and rely on constructing strategies and activities that build from available place-based assets and capabilities.
- Both cluster and RIS3 dynamics seek to be transformative in the sense of strengthening existing and building new competitive advantages, something that requires processes of prioritization and selection.
- Both cluster and RIS3 dynamics are process-oriented, which raises significant challenges in monitoring and evaluating their effectiveness.

#### *Leveraging clusters for entrepreneurial discovery: Experiences, lessons and challenges*

More recent analysis of the link between entrepreneurial discovery processes and clusters, bolstered by emerging experiences and lessons from practice, has strengthened initial arguments around the potential synergies. Ketels (2017), for

example, notes the similarities between competitiveness policies based on clusters and modern industrial policies seeking to foster structural transformation. He argues that they share an overall focus on “microeconomic structures and systems, moving beyond macroeconomic, economy wide, or single-factor microeconomic explanations of prosperity and development” (ibid, p.2). Moreover, Wilson *et al.* (2017), in their analysis of the future of cluster policies, suggest that this focus on strengthening elements of the microeconomic environment means that cluster organisations “are in a unique position to develop and convey policy-relevant information about those elements and about relevant resource, market, and technological trends” (ibid, p.61). Such intelligence can be invaluable for the entrepreneurial discovery process, and it is therefore no surprise that clusters are playing key roles in the development of territorial smart specialisation strategies across Europe and beyond.

As noted by Marinelli and Perianez Forte (2017), “regions have responded to the EDP, by finding ways to favour an in depth interaction and engagement with local actors in the development of S3 priorities”. Entrepreneurial discovery processes require soft spaces that address coordination and information asymmetries and facilitate effective decisions on the targeting of specific activities and paths. In many places clusters are already playing a key role in this new dynamic, offering ‘spaces’ for public-private engagement.

Indeed, in general the emphasis of cluster organisations on fostering cooperative relationships among triple helix agents from business, research and government fits very well with the focus of modern industrial policies on public-private-research interaction determining the prioritisation of economic activities (Rodrik 2004; Foray 2014). In this regard Koschatzky *et al.* (2017, p. 178) go as far to suggest that “the main tenets of the new smart specialisation agenda” ... “have been practised for years by cluster agencies, both explicitly and implicitly.” What they argue has thus far been missing is “an overarching framework that provides an interface between the activities of cluster organisations and regional support policies that have mostly remained horizontal in nature” (*Ibid.*). In that sense RIS3 provides the (often) missing strategic approach at regional level, around which clusters and cluster organisations can focus on implementation.

For Koschatzky *et al.* (2017) all of this raises an important question around how smart specialisation is influencing cluster policies, or how cluster policies are adapting to smart specialisation strategies. They analyse this issue in Germany, and argue that part of the answer lies in the strategic tradition of the region. For example, where regions already have a strong tradition with territorial strategy there is likely to be less impact from smart specialisation on the functioning of cluster organisations, as those organisations already exist in the context of a strategic approach to regional development and are already playing their roles in that context.

Thus in some places we can observe smart specialisation strategies that have themselves been explicitly built around existing cluster dynamics: Bremen or Baden-Württemberg, for example. In other places we see new cluster policies being built alongside and linked to the new strategic approach promoted by smart specialisation: Navarre or Bogota, for example. And in other places we observe cluster policies adapting themselves to the needs of evolving smart specialisation strategies: North-Rhine Westphalia or Sweden, for example. Finally, there are places where the cluster policy and smart specialisation strategy remain quite separate: Catalonia or Saxony, for example.

On the whole cluster policies provide a pool of 25 years of practice and experience with public-private-research interaction that are being integrated into modern industrial policies, enhancing trust and confidence in their effectiveness to boost productivity, competitiveness, and territorial development. Yet there is much still to be learned.

The cluster organisations that have progressively formed to support clusters in regions across Europe over the last 30 years have their own established dynamics, which are often built on many years of previous interaction among their members. Opening up these dynamics so that they feed into broader regional-strategy processes that require the engagement of new and different stakeholders alongside significant cross-cluster interaction is not straightforward. Indeed cluster organisations can be guilty of focusing collaboration and engagement around the 'usual suspects', and of having a weak spot when it comes to fostering entrepreneurship (and the emergence of new



companies that might compete with their members). Moreover, while inter-cluster collaboration is high on the policy agenda it is often relatively un-developed in practice, which may present barriers to cross-fertilisation and the development of new paths stemming from 'un-related variety'. Finally, while the natural focus of many cluster organisations is on private-private or private-research engagement, there is scope for improving how these spaces facilitate private-public engagement and also public-public engagement (for example between different levels or departments of government). Indeed, linking cluster dynamics to the entrepreneurial discovery process not only has the potential to support a wide engagement of relevant firms, but should also ensure that government policies (smart specialisation strategy framework, cluster policy, R&D policies, innovation policies, etc.) are working in the same direction.

### 3.- How can Euskadi advance in this challenge?

The entrepreneurial discovery process in Euskadi has been organised through the establishment of steering groups corresponding to three initially-identified priority areas (biosciences-health, energy and advanced manufacturing) and four initially-identified opportunity niches (food, creative and cultural industries, urban habitat and environmental ecosystems). As in many regions, the design and early implementation phases of the RIS3 were strongly government-led. However the overall process has followed the four commonly-agreed desirable features of entrepreneurial discovery processes mentioned above (strong evidence-base, participative, combining bottom-up and top-down, different stages of granularity). It has therefore often been held up as a reference case.

Aranguren *et al.* (2016) analysed the early implementation phase of the Basque RIS3, noting that the steering groups initially developed their activities around two main objectives. Firstly, to understand and explore what is behind each priority, identifying a set of 6-8 key technology or business areas underpinning them, and identifying key projects already underway. Secondly, to visualize and socialize the activity underway, identifying key people in research in each area, and trying to 'spread the word' and

generate noise and dynamism. In the more recent implementation phase the entrepreneurial discovery process has evolved to focus on the development of new collaborative lead projects and strategic initiatives (including those that cross priorities), the widening of steering group dynamics among SMEs, and a horizontal focus on market-closeness, research excellence, talent and the sensibilization of business to social impact.

More generally, the RIS3 approach in Euskadi is built on a strong trajectory of regional competitiveness strategy, which has been implemented in part through a long-term policy of supporting cluster organisations. The change in approach with the advent of smart specialization has therefore been incremental rather than radical, and this is reflected in the articulation of the link between the entrepreneurial discovery process and clusters, and the types of challenges that this involves.

The design and evolution of the entrepreneurial discovery process has taken into account existing cluster dynamics. Indeed, the idea of creating steering groups as spaces to bring together private and public actors recognised from the beginning that existing cluster associations should play a key role in the process so as to build where possible on dynamics already in place.

Moreover, like in the examples of North-Rhine Westphalia or Sweden cited above, the existing cluster policy has undergone a process of adapting itself to the evolving smart specialisation strategy. It was reformed in parallel with the design and early implementation of the RIS3 (Orkestra, 2017), and is subject to ongoing reflection and peer review in the framework of an Interreg project exploring how cluster policies can be leveraged for the successful implementation of RIS3.<sup>3</sup> As a result of this process an action plan has been developed which includes issues such as working on the scope of clusters to be more inclusive and strategic, aligning the cluster policy with the mix of other programmes that support collaboration, enhancing the international linkages of clusters, upgrading cluster management competences, and leveraging monitoring and evaluation for policy learning.

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<sup>3</sup> See: <https://www.interregeurope.eu/clusters3/>

The strong variation in the characteristics of each priority, and the existing cluster dynamics within each area, has meant that the entrepreneurial discovery process has developed in different ways in each case. While the government initially set the rules of the game and decided which actors should constitute the steering groups, the groups themselves have established their own governance and the actors involved are changing over time. This means that the specific challenges for improving the effectiveness of the link between cluster dynamics and the entrepreneurial discovery process are different across the priority areas.

The link between existing cluster dynamics and the steering group process is most strongly developed in the energy priority, where the energy cluster organisation is playing a leading role in coordinating the dynamics of the steering group. The cluster has strong coverage of the key relevant stakeholders, and indeed the working groups that have been established within the RIS3 process correspond broadly to those that were already functioning within the cluster.

The link is arguably least developed in the biosciences-health priority. Here the cluster organisation was relatively un-developed prior to the launch of the steering group, with key actors missing and the organisation itself behaving more like a sectoral association than a cluster organisation. A challenge here, then, is to build a truly collaborative cluster dynamic within the context of the entrepreneurial discovery process, which is opening the way for the engagement of key actors such as the health system. Given the strong research base of these activities in the Basque Country, lessons could also be learned from studying the evolution of research-driven clusters in other places.

The most complex and challenging context for articulating the link between cluster dynamics and the entrepreneurial discovery process is in the advanced manufacturing priority. This priority area cuts across the activities of many cluster organisations in the region, and really emphasises the need to build inter-cluster dynamics. In this sense the steering group can be seen as a platform into which a range of different cluster dynamics can feed. However, until now there has been variation in the role and

implication of different clusters in the activities of the steering group, and on the whole their implication has been relatively limited. The governance structure of the steering group has recently been changed, and a key challenge is to (re-)activate the engagement of all relevant cluster organisations within this new framework, so that the synergies between their cooperative dynamics and their potential reach into the SME population are not lost.

Finally, the opportunity niches in different ways offer scope and opportunities for emerging clusters and cluster organisations (such as the food or construction clusters) to consolidate and build cooperative dynamics in the context of a broader regional strategy. It is particularly important here not to lose sight of the links between these emerging dynamics and the processes taking place in the other priority areas, and current evidence suggests that the emphasis being placed from the government on cross-priority lead projects is playing a positive role.

Overall, therefore, the challenge in Euskadi is about making sure that the existing cluster dynamics contribute to and are in line with the new RIS3 framework, and that the new framework is used to leverage an upgrading of clusters, cluster policies and cluster organisations. That cluster associations can now apply for support from the RIS3 innovation fund for the development of new collaborative lead projects in RIS3 areas is one response that is supporting this challenge.<sup>4</sup> It is also likely to require, for example, a renewed focus on the leadership capabilities within these dynamics – the all-important human factor – something that has been flagged up in the recent Interreg peer review. It is a process of ‘feeling-as-we-go’ and will require sophisticated monitoring, evaluation and adjustment to the cluster policy (and to other policies) to ensure that cluster dynamics evolve in parallel with and re-enforcing the RIS3 entrepreneurial discovery process.

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<sup>4</sup> 10 of the 18 collaborative lead projects approved in the first round were led by cluster associations.

## References

- Aranguren, M.-J., Magro, E., Navarro, M., Wilson, J.R. (2018). Governance of the territorial entrepreneurial discovery process: Looking under the bonnet of RIS3. *Regional Studies*, <https://doi.org/10.1080/00343404.2018.1462484>
- Aranguren, M.J., Morgan, K. y Wilson, J. (2016). Implementar la RIS3. El caso del País Vasco. *Cuadernos Orkestra* 2016/17\_CAS.
- Aranguren, M.J., Wilson, J.R., (2013). 'What can experience with clusters teach us about fostering regional smart specialisation?', *Ekonomiaz*, (83): 126–145.
- European Commission (2013). *The role of clusters in smart specialization strategies*. Brussels: European Commission.
- Foray, D., 2014. *Smart Specialisation: Opportunities and Challenges for Regional Innovation Policy.*, Oxford: Routledge.
- Foray, D., David, P.A., Hall, B. (2011). 'Smart Specialisation: From academic idea to political instrument, the surprising career of a concept and the difficulties involved in its implementation', *Management of Technology and Entrepreneurship Institute Working Paper 2011-001*, Lausanne.
- Ketels, C., (2017). *Structural transformation: A competitiveness-based view*. Working Paper Series N° 258, African Development Bank, Abidjan, Côte d'Ivoire.
- Koschatzky, K. et al. (2017). 'Cluster policy adjustments in the context of smart specialisation? Impressions from Germany' in D. Fornahl and R. Hassink, *The Life Cycle of Clusters: A Policy Perspective*, Cheltenham: Edward Elgar.
- Kroll, H. (2017). The challenge of smart specialisation in less favoured regions, Working Papers Firms and Regions, No. R1/2017.
- Marinelli, E., Perianez Forte, I. (2017). 'Smart specialisation at work: The entrepreneurial Discovery as a continuous process', *S3 Working paper Series NO. 12/2017*, Seville: European Commission Joint Research Centre.
- Orkestra (2017). *Informe de Competitividad del País Vasco 2017. ¿Y mañana?*. Orkestra. Donosti. Universidad de Deusto.
- Rodrik, D. (2004). 'Industrial policy for the twenty-first century', Kennedy School of Government Working Paper No. RWP04-047, Cambridge MA: Harvard University. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=617544](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=617544).
- Todeva, E. (2015). 'Market-driven clusters as prerequisites and consequences of smart specialisation', in *Journal of Knowledge Economy*, (6): 250-269.
- Wilson, J. R., Konstantynova, A., Aranguren, M.-J. (2017). 'Clusters and cluster policy in the next 10 years', in *20 Years of TCI Network – The Past, Present and Future of Clusters*, [www.tci-network.org](http://www.tci-network.org).