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Smart Specialisation at work: The entrepreneurial discovery as a continuous process

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Smart Specialisation at work: Empirical insights on the Entrepreneurial Discovery Process – from RIS3 design to RIS3 implementation

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Abstract

The term Entrepreneurial Discovery Process (or EDP) originally referred to the identification of areas for investment in research and innovation (i.e. priority-areas), through an inclusive and evidence-based process grounded in stakeholders' engagement. The experience of the S3 Platform has highlighted, on the one hand, that the concept itself has evolved from being a process limited to the identification of investment-priorities in the design-phase of a Smart Specialisation Strategy, into a continuous activity, which keeps going throughout the strategy's implementation; on the other, that there was a significant gap in understanding how different actors engaged in the EDP. Such *continuous EDP* implies that stakeholders are kept engaged in the refinement of priority-areas, the identification of instruments that would implement them, as well as the RIS3 governance and monitoring mechanisms that would allow the expected competitive advantages to emerge. With this report, we address both issues. Firstly, we submit the concept of continuous EDP to an empirical test. Secondly, we look in depth at the role of different stakeholders in the EDP (especially in the design phase of RIS3). To do so, we present the results of a survey run in the S3 Platform, aimed at monitoring current practices in the EDP. The survey provides information on how the 4-ple helix has taken part in the EDP and provides insights on the relationship between the different actors and the public body responsible for the EDP. The results confirm that once investment priorities have been identified with the involvement of stakeholders, various mechanisms that keep them engaged in following the development of such priorities are often put in place. Finally, the results indicate that the EDP, as a continuous process, is proving positive and satisfactory.

Contents

1 Introduction: understanding the Entrepreneurial Discovery Process

The term Entrepreneurial Discovery Process (EDP) was introduced to refer to the bottom-up identification of investment-priorities on research and innovation, within the design of a Smart Specialisation Strategy. In the EDP, stakeholders' interaction -accompanied by sound evidence- is used to explore new techno-economic opportunities and to feed into public decision-making processes.

Six years since the onset of S3, the S3 Platform of the Joint Research Centre has detected a demand for a deeper understanding of how EU regions have engaged in such process.

In particular, it has appeared necessary to map more rigorously two aspects:

- *the EDP as a 'continuous process', starting from the way in which the process had been organised in the design phase and moving to the ramifications of the EDP throughout the strategies' implementation.*
- *the actors that took part to the EDPs in EU regions and their role within the EDP*

As for the former point, Periañez et al (2016) highlighted the need for a reflection and update of the EDP concept itself. The EDP appears to have evolved from an activity conceived exclusively for choosing investments priorities under the ERDF Thematic Objective 1, into a continuous process permeating S3 implementation (*ibid.*). Such *continuous EDP* does start with the identification of broad priorities during the definition of RIS3, yet keeps going throughout the strategy's implementation: stakeholders are kept engaged, in different ways, in the refinement of the priority-areas, the identification of instruments that would implement them, as well as the RIS3 governance and monitoring mechanisms that should deliver the expected competitive advantages in each area.

To explore such knowledge gaps, the S3 Platform in collaboration with the project Targeted Support to Lagging Regions launched a survey in early 2017 and this report presents the results of this study. The report is organised as follows: section 2 describes the structure and aims of the survey, as well as the information on the response rate and geographical distribution of respondents. Section 3 delves into the results of the survey, covering three parts: (3.1) the way the EDP has developed during the RIS3 design phase and continues during RIS3 implementation; (3.2), the role of different stakeholders in the EDP and (3.3) an evaluation of the EDP. Section 4 concludes and identifies future steps for research and policy-support[1]

2 The survey on EDP: structure and aims

The unit of analysis of the S3 Platform survey is the Entrepreneurial Discovery Process itself, from the onset of RIS3 design to its implementation.

The survey explores various elements of the policy cycle to identify the role of different stakeholders within it, and their ability to keep reflecting on investment-priorities and feeding into the policy process. The survey is organised in 3 parts[2]:

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[1] The thorough understanding of the EDP derived from the survey will serve as a basis for planning further activities of the S3 platform and of the project "RIS3 Targeted Support in Lagging Regions".

[2] The whole survey is annexed to the report.

- ***Part 1*** *looks at the* **EDP during the design phase of RIS3** *(i.e. until the approval of the RIS3, OPs and Action Plans). This part focusses on how the identification of investment priorities was organised, paying attention to the actual, desired and expected role of different stakeholders. This part of the survey provides, on the one hand, an in-depth understanding of how the 4-ple helix took part on the EDP, on the other it explores the mechanisms, structures and methods that were put in place to identify the first broad set of investment priorities.*
- ***Part 2*** *looks at the* **EDP during the implementation-phase of RIS3 policy cycle***. This part effectively tests the concept of continuous entrepreneurial discovery. It explores how regions are keeping (or planning to keep) stakeholders engaged with the implementation and the evolution of the priority areas, allowing further discovery to take place. This is done by looking at the instruments chosen for implementation, as well as the governance system. It also looks at broader stakeholders' involvement in RIS3 as a pre-condition for continuous EDP.*
- ***Part 3*** *gives the respondents the opportunity to* **self-evaluate the EDP***-experience, along four different dimensions.*

Throughout the survey we cover a wide array of stakeholders, going beyond the traditional private, public and research sector, and including the 4th helix and other actors whose role remains still unknown, yet deserves to be explored. The actors covered are listed in the table below:

Table 1 Stakeholders list and abbreviation
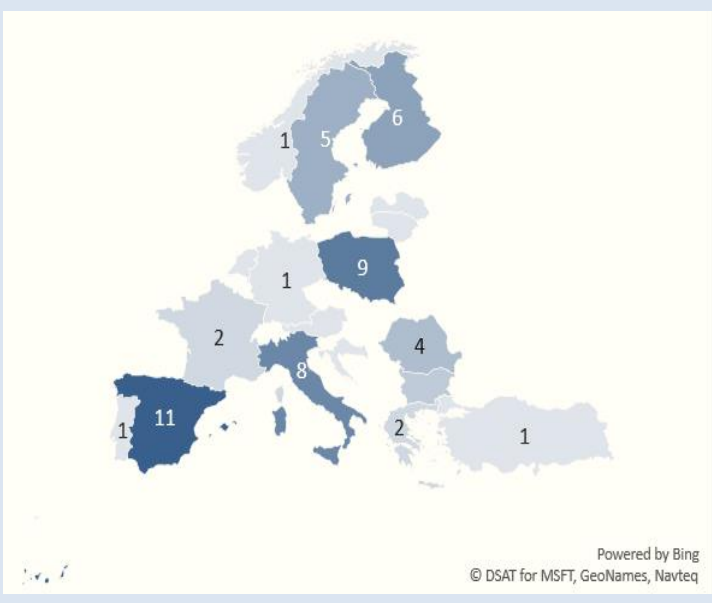
Stakeholder invited	Short name	
Higher education institutions	High edu.	Research sector (1st Helix)
Research organisations	Research org.	
Regional government and agencies	Reg. gov.	Public sector (2nd Helix)
Local government	Loc. gov.	
National government	Nat. gov.	
European Commission	EC	
Regional SMEs	Reg. SMEs	Private sector (3rd Helix)
Regional Large firms	Reg. l. firms	
Business associations/Chambers of commerce	Buss. Assoc.	
Clusters organisations	Clusters	
Incubators, accelerators and business parks	Inc., acc., bus. parks	
Foreign firms	For. Firms	
National firms	Nat. firms	
Civil society organisations (NGOs, etc.)	Civil society	Civil society (4th Helix)
Labor unions	Labor unions	
User-centered communities and labs	User-centred spaces	
Communication media	Media	Other
Financial entities (e.g. banks)	Financial ent.	
Risk capital	Risk cap.	

The survey was targeted to the bodies implementing EDP and was sent to all entities registered in the S3 platform. It was open for approximately 7 weeks between January and February 2017.[3] The JRC received a total of 59 answers.[4]

Table 2 provides information on the distribution of the respondents and geographical location. As indicated in the table, respondents cluster largely around less development (42.4%) and more developed regions (45.8%), with only 5 transition regions replying to the survey. Interestingly, 2 non-EU regions also took part.

Table 2 Respondents by level of development of the region

Type of region	Freq.	%	Geographical distribution
LESS DEVELOPED (of which 2 NUTS3)	25	42.4	
MORE DEVELOPED	27	45.8	
TRANSITION	5	8.5	
NOT EU	2	3.4	

All the responses, including those from NUTS3 and non-EU regions have been included in the analysis in the remaining of the document.

3 Survey results

The wealth of results produced by the survey have been organised in three sections.

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[3] In designing and implementing the survey, the JRC benefited from the close collaboration with the Spanish Regional Development Agencies (Foro ADR), the interregional consortium of the Interreg project ´Beyond EDP´, as well as with the regions participating in the JRC projects "RIS3 Targeted Support in Lagging Regions" and "Higher Education and Smart Specialisation", who all answered the questionnaire.

[4] Assessing the appropriateness of the *response rate* required some reflection. The universe of EDPs, our research subject, is unknown in size because the EDPs were developed in different territorial and administrative context, including:

- NUTS2 level, as part of the regional RIS3, and linked to regionally managed OPs;
- NUTS2 level, as part to national RIS3 and hence linked to national OPs;
- NUTS3 level, independently from structural funds;
- Outside the EU, independently from structural funds.

Without including NUTS3 and non-EU responses, we have assumed that:

- at the very least, there are as many EDPs as there are Operational Programmes tackling TO1 (176)
- at the very most, there are as many EDPs as there are NUTS2 regions (276).

The response rate hence lies between 19.9% (55/276), in the latter hypothesis, and 31.25% (55/176), in the former. This rate can be considered satisfactory.

In section 3.1, ´*A continuous EDP?*´ we explore the organisation of the EDP in the design phase and tests the concept of continuous EDP, by looking at how the discovery in given priority areas, continues throughout RIS3 implementation.

In section 3.2 ´*Engagement of stakeholders in the EDP*´, we explore in depth the role of different stakeholders within the EDP, and their relationship with the public body in charge of it.

Finally, section 3.3 covers the regions *Self-evaluation of the EDP* process, exploring its utility, challenges and the overall satisfaction with the process.

3.1. A continuous EDP?

Understand the EDP and testing its continuous nature requires looking at:

- ***The EDP during the RIS3 design phase*** (*i.e. until the approval of the RIS3, OPs and Action Plans), focussing on how the bottom-up identification of investment priorities was organised.*
- ***The EDP during the RIS3 implementation phase:*** *detecting the mechanisms throughout the policy cycle that allow stakeholders to be kept engaged with the evolution and implementation of the previously identified priority areas.*

3.1.1 EDP during the design phase

To understand how stakeholders were involved during the RIS3 design phase and how priorities were identified we have looked at: a) Which stakeholders were invited; b) The methods employed to engage them; c) The institutional set-up used to deploy the EDP; d) The use made of stakeholders' input. These aspects give insights on the efforts and changes undertaken by the public administration to ensure an active participation of a diverse and new portfolio of stakeholders in the policy cycle.

Which stakeholders?

Graph 1 reports the frequency with which different stakeholders were invited to take part to the EDP **during the RIS3 design**.

Graph 1 Stakeholders invited to the EDP in the RIS3 design phase
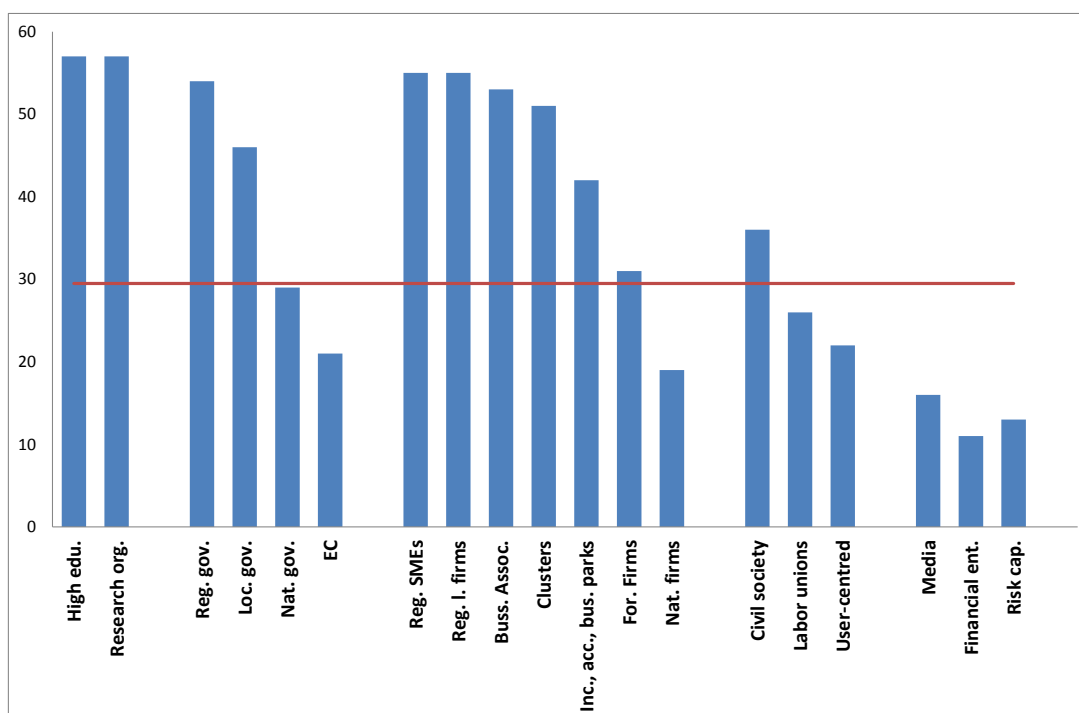
It highlights that research actors were virtually always included in the EDP. As for the public sector, the survey unsurprisingly shows a preference for regional and local actors, which were invited more often than national and EC representatives, in line with the place-based nature of RIS3. As for the private sector, almost all respondents declared inviting regional SMEs, large firms, business associations and clusters. Innovation actors, such as incubators, accelerators and business parks have partaken to the EDP in 42 out of the 59 cases reported. Inviting national or foreign firms present in the territory was less common, with just over 50% of respondents declaring to have involved foreign firms, and only 19 having involved national firms. When looking at the fourth helix, we notice that civil society organisations have been invited in over 60% of the cases, whereas the proportion for labour unions and user-centred facilities is respectively 44% and 37%.

Media, financial entities and risk capital organisations appear –unsurprisingly- as peripheral actors in the EDP and RIS3 process, being invited in only 16, 13 and 11 cases respectively, out of the 59 responses.

All in all the EDP emerges as largely a 3-ple helix business, with some interesting signals emerging from the 4th helix.

How to engage stakeholders to identify investment priorities?

When exploring the methods applied to engage stakeholders to identify investment priorities during the RIS3 design, respondents were asked to choose between **informative** and **interactive methods**. The former referred to those methods by which the public administration received inputs/information from selected actors (*e.g.* surveys, bilateral dialogue), whereas the latter try to capture participatory methods that allowed interaction across participating actors (*e.g.* Public meetings, Workshops). With exception of 6 regions, which indicated that only informative methods were used, the rest of regions opted for a combination of both types of methods.

Institutional set-up: does the EDP need something new?

Respondents were asked to indicate whether, to implement the EDP, the body/institution responsible for the RIS3 **created new structures** or **adapted previous ones**. More than three quarters of the respondents (76.3%) indicated that the EDP had an impact on the existing structures, with 37.3% of respondents adapting existing structures, 25.4% creating new structures and 13.6% both adapting and creating new structures. In those regions which have created new structures or adapted previous ones to facilitate interaction among the public administration and different stakeholders, those structures are kept also during the RIS3 implementation. This proves the willingness of regions in keeping the EDP ongoing.

These results clearly show that EDP has required and received a significant institutional response to accommodate the demands of bottom-up processes. This is illustrated in table 3.

Table 3. Structures for EDP

	Responders
Adapted previous structures	37.3%
Created new structures	25.4%
Created & adapted	13.6%
None of the above	23.7%

Stakeholders' input: what and what for?

Table 4 shows the result of a multiple-choice question, where responders indicated that the EDP was used to gather information **actors' views on investment** for regional development (83%) and to **generate consensus** among them in relation to investment-priorities (76%).

	Responders
Collect views on regional development	83%
Build consensus on investment	76%
Both	63%

Likewise, respondents were asked whether the outcomes of the EDP discussions were used simply as advice or as a binding opinion (thereby committing the regional authorities). Table 5 shows that the outcomes of the stakeholders' interaction has provided a **binding opinion in** 47.4% of the cases and **only advice** in the remaining 52.5% of responses. The fact that in many regions the outcomes of the process were considered binding opinions should be taken as an important success of the process.[5]

	Responders
Providing advice	52.5%
Providing advice and binding opinion	25.4%
Providing binding opinion	22%

All these results confirm that the EDP, in the priority-identification phase, was indeed organised with the intention to allow a bottom-up opinion to emerge and to embed it in the policy decision making.

3.1.2 EDP during the implementation phase

Testing the concept of continuous entrepreneurial discovery during the RIS3 implementation, requires looking at the involvement of stakeholders in the follow-up of the identification of priorities, in particular: (a) the ability of stakeholders to review and refine investment priorities within the **governance system** of RIS3; (b) the deployment of **implementation instruments** that allow different stakeholders to keep exploring priority-areas; (c) the broader participation of stakeholders in **RIS3 implementation,** including **monitoring** and **calls management** as a pre-condition for a continuous EDP.

Which stakeholders in RIS3 implementation?

Compared to Graph 1, graph 2 reports the frequency with which different stakeholders are being (or will be) engaged or in the EDP **during the RIS3 implementation phase.** It highlights that for research actors, there is a strong expectation for their involvement in governance and monitoring. However, they are – unsurprisingly- most frequently seen as active in relation to calls for proposals, as potential beneficiaries.A similar pattern emerges for private sector actors. They are mainly perceived as beneficiaries to be

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[5] It would be interesting to follow up the regional development in those regions where the outcomes of the EDP were binding opinion to assess the success of the process.

engaged in activities related to calls for proposals. Interesting, private-sector representative bodies (i.e. business associations and clusters) are those most often perceived as engaged (or to be engaged) in monitoring and governance, followed by regional firms. As for the public sector, it is interesting to highlight how for regional government, National government and the EC, their main role is in supporting monitoring. Whereas, this is the least frequent aspect mentioned for local government. As for the quadruple helix, the role of Civil Society (NGOs, community organisations) is more or less balanced across monitoring, governance and calls for proposals. Unions, on the other hand, are more frequently considered as relevant for monitoring (in 17 cases) as compared to calls for proposals/implementation (15) or governance (14). Interestingly user-centred facilities emerge as important beneficiaries, with 26 regions considering them important in relation to call for proposals and only 12 and 8 for monitoring and governance respectively.Finally, financial entities, risk capital and media, which are infrequent participants to RIS3, are taken into account mainly as their role with investment/call for proposals, likely as supplementary sources of finance.

Graph 2 Engagement of stakeholders during the EDP elements of RIS3 implementation
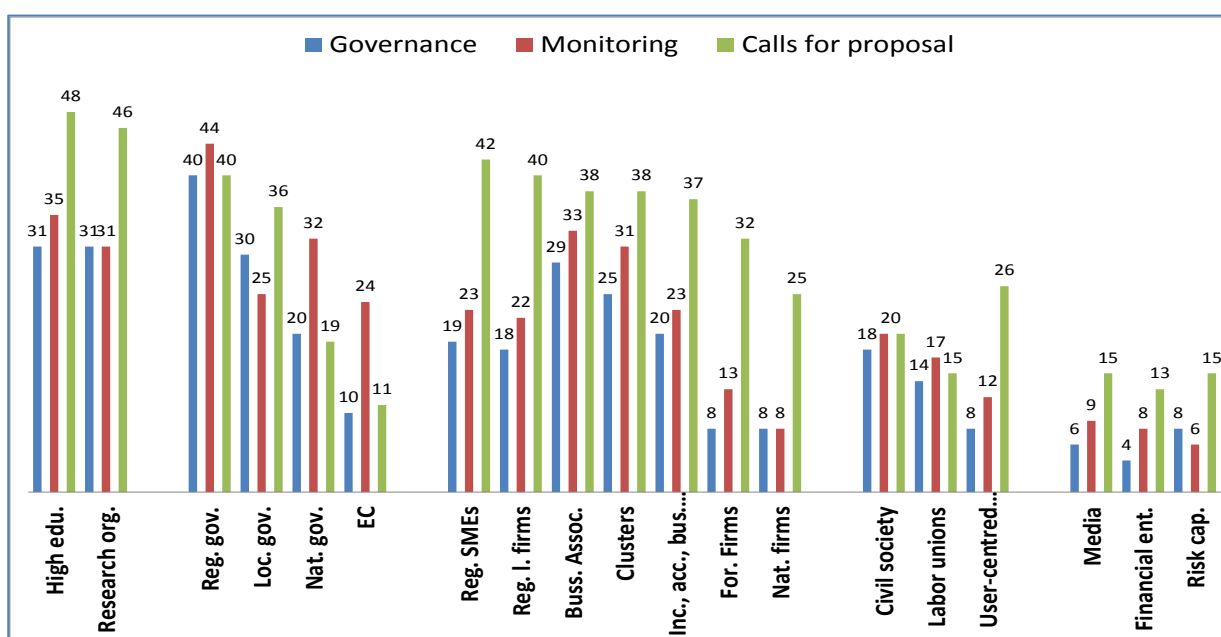
A continuous EDP in the RIS3 governance system

For the EDP to be considered as a continuous process, there must be a governance system that allows a continuous reflection with the stakeholders on the status of current priorities (their refinement or review) and on the identification of new ones.

The survey explored these aspects, foreseeing three different levels of stakeholders' involvement: simple consultation (consisting of sharing information and providing clarification to stakeholders), interaction (allowing for more in depth dialogue between stakeholders and with the public administration), or consensus building (a more intense form of exchange).

Table 6 shows that simpler forms of stakeholders' engagement (consultation and interactive dialogue) are the most common. On the other hand, processes of consensus building are reported only in 49% of the cases for the refinement of priorities and 40.70% in the review of priorities. All in all, however, the vast majority of regions have governance mechanisms that engage stakeholders in the refinement (88.1%) and review (83.1%) of priorities supporting the hypothesis that the EDP is best conceived as a continuous process

Table 6. Levels of stakeholder´s involvement

	Refinement of priorities	Review of priorities
Consultation	66.1%	55.9%
Interactive dialogue	55.9%	49.2%
Consensus building	49.2%	40.70%
Any of the above	88.1%	83.1%

A continuous EDP in the RIS3 implementation instruments

The EDP can continue through the implementation phase also by deploying instruments that implement innovation projects based on triple or quadruple helix collaboration, linked to market needs.

To this aim the survey asks respondents whether they used policy instruments targeted at consortia of actors and, more specifically, whether the consortia are asked to (a) respond to public demand needs (for instance, with calls for Pre-Commercial Public Procurement); (b) develop and pursue shared action plans or (c) respond to the needs expressed by users or consumers' groups.

These instruments effectively embody the EDP, by allowing stakeholders to experiment in previously identified (broad) priorities areas, to refine them and to further the discovery of new market segments.

The results are highlighted in table 7:

Table 7. EDP instruments

EDP-type instruments	Frequency
Stakeholders´ Consortia as beneficiaries of RIS3 calls	88.1%
Consortia addressing public demands needs (PCPP)	45%
Consortia implementing shared action plans	22%
Consortia focussing on users' needs and participation	61%
Either of the three	78%

Results indicate that it is fairly common to target consortia as beneficiaries of RIS3 calls (88.1%), as well as applying instruments where consortia need to target users' needs (61%). Pre-commercial Public Procurement, which can also be considered as an EDP instrument, is used in 45%, whereas only 22% of respondents have instruments supporting consortia implementing shared action plans.

All in all, 78% of the regions implement at least one of the instruments identified, validating the hypothesis of a continuous EDP process.

Supporting a continuous EDP through monitoring and calls management

A continuous EDP needs to be embedded in a broader engagement of stakeholders throughout RIS3 implementation. Stakeholders involvement is a pre-condition for a successful continuous EDP. This section illustrates how the engagement of stakeholders is ensured in different phases of the RIS3 implementation guaranteeing the continuity of the EDP.

Stakeholders' contribution to the monitoring phase

To this aim, the survey has explored two complementary aspects of RIS3 implementation: the monitoring process and the management of calls for proposals.

As for the **monitoring process**, the survey explored two ways of stakeholders' involvement in the process: a **direct way**, whereby actors participate in the definition of indicators or in the monitoring committee; an **indirect way** whereby stakeholders are passive in terms of producing monitoring outcomes, but are informed about them and/or are engaged in **decisions** that build on monitoring results. The results of the analysis are provided in table 8, which also highlights that 100% of the regions engage stakeholders in monitoring in at least one of the four ways identified.

Table 8. Role of stakeholder´s involvement during the monitoring

Role / Level	Direct	Indirect	Either direct or indirect
Definition of indicators	47.5%		
Monitoring committee	33.9%		100%
Informed about monitoring outcomes		40.0%	
Involved in decisions based on monitoring		57.6%	

Stakeholders' engagement and calls' management

In relation to **calls management**, a good approach to stakeholders' engagement, which is supportive of a continuous EDP, requires that they are duly informed of the investment plans and if possible, are able to provide feedback on the way calls are being organised. This should make sure that the funds will be appropriately taken-up and the RIS3 priorities implemented. The survey highlighted that 64.4% of regions do publicly present calls to stakeholders and that 57.6% present pre-calls providing the opportunity to receive feedback, before they are published. In turn, 88.1% of the regions engage in either or both of these practices.

The results of this paragraph indicate that RIS3 is commonly being implemented keeping stakeholders engaged, hence supporting a continuous EDP.

3.2. Engagement of stakeholders in the EDP

This section analyses stakeholders' participation and engagement in the EDP process.

For each stakeholder that had been invited to the EDP in the RIS3 design phase, respondents were asked to rate the level of engagement that they **desired**, **expected** and **actually** received[6].

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[6] (e.g. in answering emails, participating in meetings/workshops, providing information to the public authorities, or engaging in any other EDP activity)

The type of engagement is defined as follows:

- ***Actual engagement:*** *effective and real participation of the stakeholder in the EDP activities*
- ***Desired engagement:*** *level of contribution to the EDP activities that the public administration would ideally receive from the stakeholder*
- ***Expected engagement:*** *involvement of the stakeholder in the EDP activities realistically foreseen.*

Answers were organised on a 4-level scale from 0 to 3, with 0 indicating no engagement and 3 indicating high engagement.

Table 9 provides the average for the three scores for actual, expected and desired engagement.

Table 9 Type of participation by stakeholders

Stakeholder invited	Actual	Desired	Expected
Higher education institutions	2.55	2.79	2.60
Research organisations	2.54	2.80	2.62
Regional government and agencies	2.51	2.79	2.58
Local government	2.09	2.62	2.40
National government	2.07	2.31	2.21
European Commission	2.25	2.45	2.42
Regional SMEs	2.22	2.72	2.42
Regional Large firms	2.04	2.67	2.32
Business associations/Chambers of commerce	2.25	2.65	2.42
Clusters organisations	2.43	2.83	2.64
Incubators, accelerators and business parks	2.22	2.78	2.53
Foreign firms	1.70	2.43	1.97
National firms	1.89	2.39	2.06
Civil society	1.44	2.14	1.68
Labour unions	1.48	1.88	1.72
User-centered communities and labs	1.73	2.50	2.23
Independent experts	1.97	2.30	2.31
Media	1.13	2.47	1.80
Financial entities (e.g. banks)	1.22	2.11	1.67
Risk capital	1.67	2.50	2.18

Higher Education institutions have the highest average score for **actual engagement** (2.55), shortly followed by Research Organisations (2.54) and Regional government (2.51). Clusters come shortly after these three actors, with an average of 2.43. Interestingly, when it comes to **desired engagement**, it is clusters to have the highest average score (2.83), followed shortly after by research organisations (2.8), regional government2.79), higher education (2.79) and incubators, accelerators etc. (2.78).

In terms of **expected engagement**, we see again that clusters top the rank, with an average score of 2.64, shortly followed by research organisations (2.62), higher education (2.60) and regional government (2.58). All in all, clusters, research and higher

education together with regional government appear as the main actors in terms of engagement in the EDP process.

3.2.1 Insights on stakeholders' engagement comparing actual, desired and expected engagement

By looking at the difference between actual and expected engagement we are able to draw useful insights on the relationships between the EDP organisers and the different stakeholders.

In particular, when comparing the **actual** and the **expected** level of engagement we can evaluate whether the EDP organiser has a good understanding of local actors.

Specifically, if the **expected** engagement is:

- ***the same as the actual one,*** *it means that the EDP organiser understands well the behaviour of the stakeholders.*
- ***higher than the actual one,*** *it indicates that the EDP organiser is overestimating the interest of the stakeholders.*
- ***lower than the actual one,*** *it suggests that the region had underestimated the level of interest of a given actor. This can be considered as a positive surprise.*

In formulas:

$$Actual_{Engagement} - Expected_{Engagement} = 0 \rightarrow Good\ Knowledge\ of\ the\ Stakeholder$$

$$Actual_{Engagement} - Expected_{Engagement} > 0 \rightarrow Underestimated\ Stakeholder's\ interest$$

$$Actual_{Engagement} - Expected_{Engagement} < 0 \rightarrow Overestimated\ Stakeholder's\ interest$$

Following a similar reasoning, comparing the **actual** and **desired** level of engagement allows evaluating how positive the relationship between the EDP organiser and the individual stakeholders is. Thus, when the **actual** is:

- ***the same as the desired engagement,*** *it means the region has a **satisfactory** relationship with stakeholders, the region gets what they want from the actors (be it a large or small level engagement).*
- ***higher than the desired engagement***, *it suggests an **intrusive** relationship, with stakeholders participating in unwarranted ways to the process of entrepreneurial discovery.*
- ***lower than the desired engagement***, *it indicates an **unsatisfactory** relationship, with the EDP organisers wishing more from the exchange with given actors.*

In formulas:

$$Actual_{Engagement} - Desired_{Engagement} = 0 \rightarrow Satisfactory\ relationship$$

$$Actual_{Engagement} - Desired_{Engagement} > 0 \rightarrow Intrusive\ relationship$$

$$Actual_{Engagement} - Desired_{Engagement} < 0 \rightarrow Unsatisfactory\ relationship$$

The graphs below report, for each group of stakeholders, the proportion of regions having scores equal, bigger or lower than 0, in the difference between ***actual and desired*** and ***actual and expected*** engagement.

a) Research and Higher education – 1st Helix

Research organisations and higher education institutions are two of the main stakeholders in the EDP, for which the actual, desired and expected engagement emerged as the one of the highest in table 9 above.

In graph 3 we notice that these stakeholders are well known: in over 70% of the cases, the actual engagement matched the expected one. Whilst the relationship with these actors is often satisfactory (as reported by 71.4% and 74.5% of the regions, for higher education institutions and research organisations respectively); as shown in graph 4 approximately a quarter of respondents have found the relationship between universities and research centres unsatisfactory (23.2% and 25.5% respectively), that is, they desired a higher engagement than the one actually experienced.

Graph 3 Actual vs Expected engagement – 1st Helix

Graph 4 Actual vs Desired engagement– 1st Helix
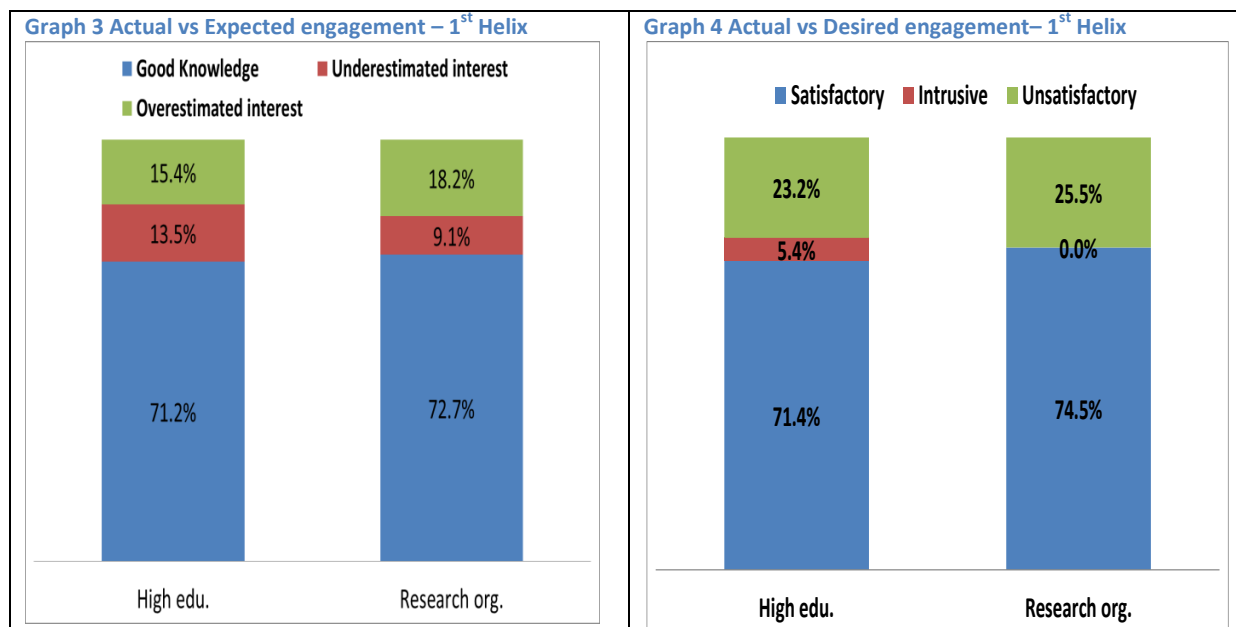
b) Public Sector – 2nd Helix

Graphs 5 and 6 below reveal the patterns of relationship that the EDP organisers have with public-sector stakeholders. It emerges that whilst regional, national and EC public actors follow similar patterns, local government has a somewhat different behaviour.

Graph 5 Actual vs Expected engagement – 2nd Helix
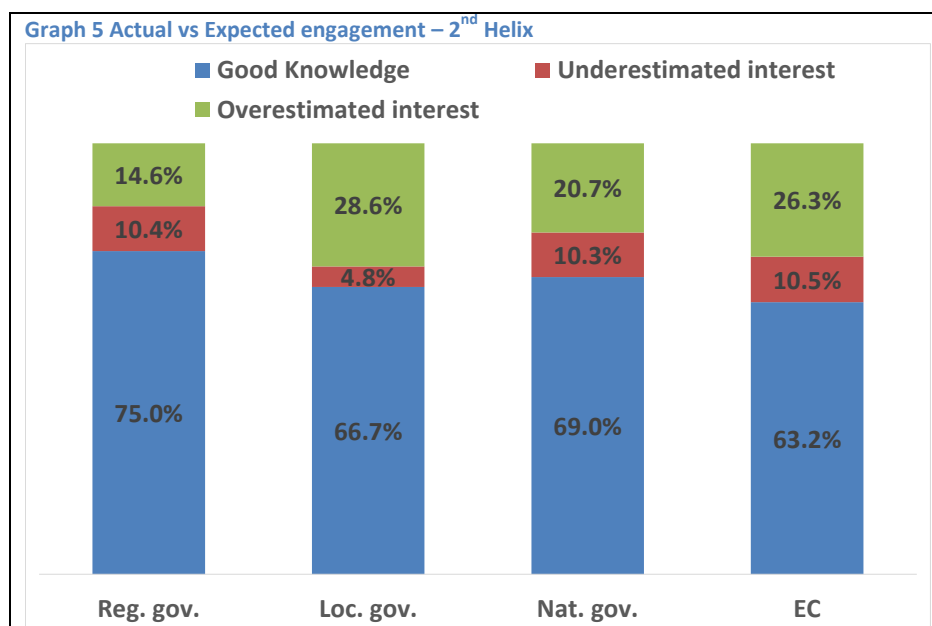
Notably, in graph 5, a high majority of respondents revealed a good knowledge of stakeholders of the public sector, with the lowest proportion emerging for the EC

(63.2%) and local government (66.7%). Interestingly, in the case of local government there were fewer cases in which interest in the EDP was underestimated (4.8% as compared to more than 10% for the other actors), whereas overestimation was most common (28.6%). This suggest a disengagement from the sub-regional level, which is confirmed in graph 6, where the relationship emerges as unsatisfactory in 52.3% of the caseas, as compared to 27.6%, 25%, and 23.5% for National government, the EC and Regional government.

Graph 6 Actual vs Desired engagement – 2nd Helix
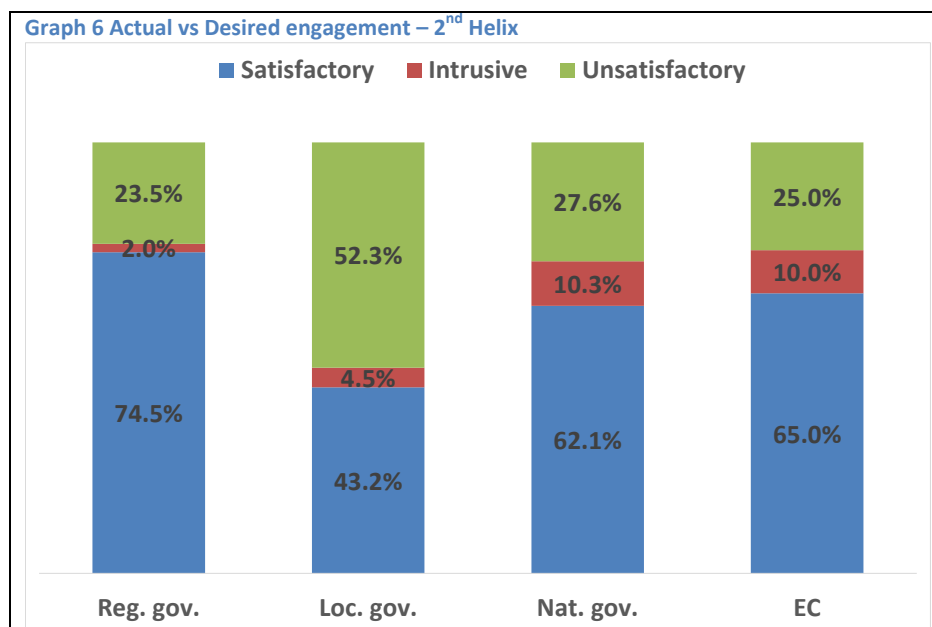
c) Private Sector – 3rd Helix

As indicated in graph 7. in the case of the private sector, the proportion of regions with a good knowledge of and a satisfactory relationshop with stakeholders is, in general, lower than in the case of research and higher education actors. Only for clusters for more than 70% of respondents, the actual engagement reflected the expected one.

Graph 7 Actual vs Expected engagement – 3rd Helix
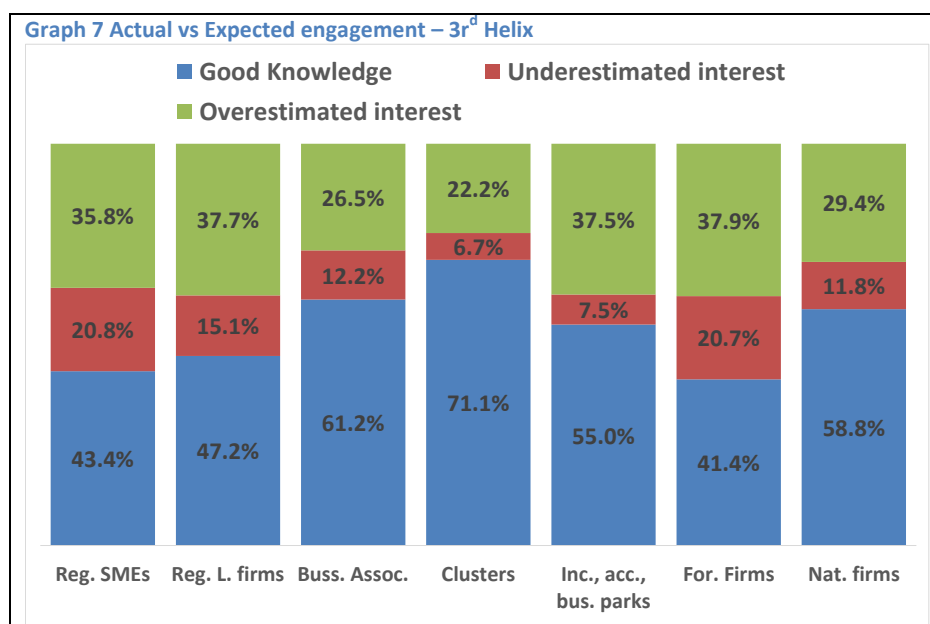
A satisfactory relationship, one in which desired and actual enagement coincide, emerges most often with regional SMEs, business associations, clusters and incubators, as shown in graph 8 below. The relationship emerges as unsatisfactory most often for foreign firms

with facilities in the region (56.7%). Interestingly, more than 1 in 5 regions underestimated the interest of local SMEs and foreign firms, indicating that there is scope for attempting to engage these actors further.
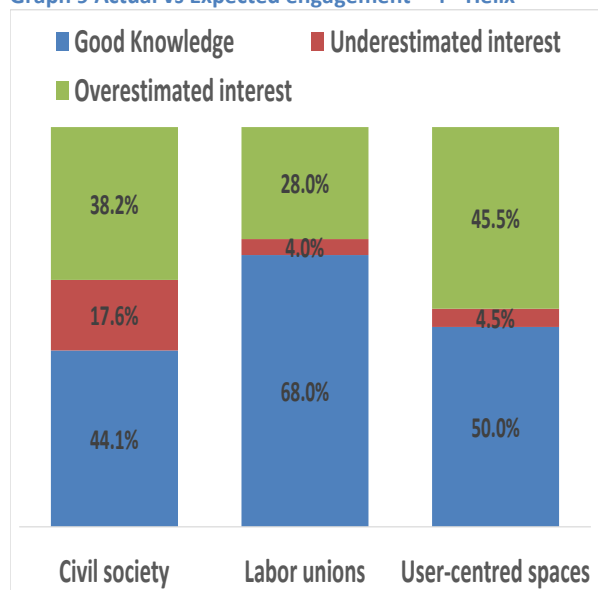

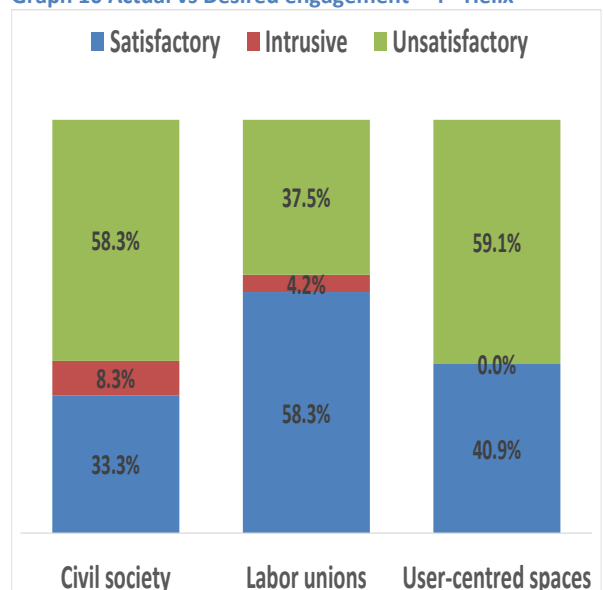Graph 8 Actual vs Desired engagement – 3r^d Helix
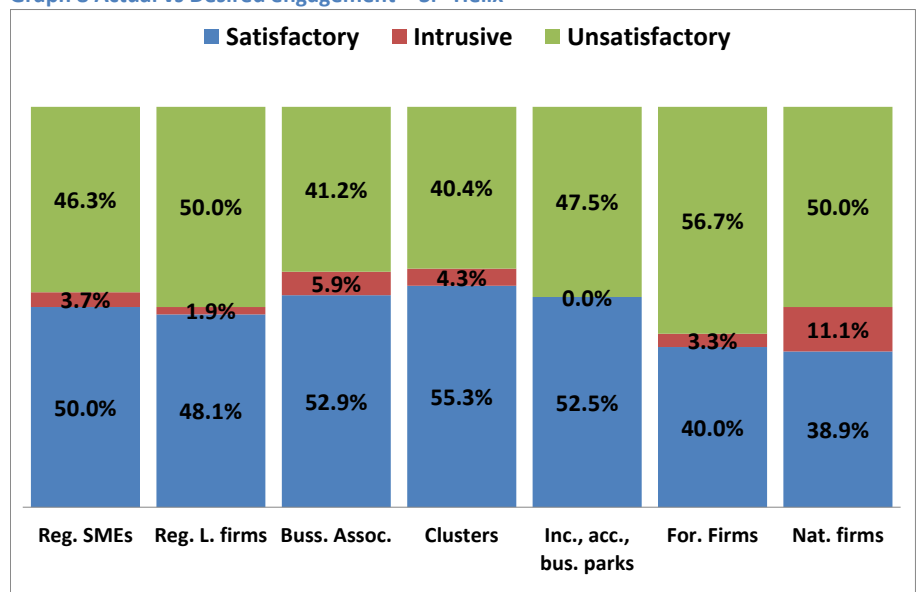
d) Civil Society – 4th Helix

The graphs below refer to peripheral actors in the EDP, which have infrequently been invited or taken part to the process.


Graph 9 Actual vs Expected engagement – 4th Helix

Graph 10 Actual vs Desired engagement – 4th Helix

Among the actors classified as part of the 4th helix, we find that labour unions are the ones that regions know best (68%), and those where a satisfactory relationship is most common (58.3%). Civil society organisations are the least known (only in 33.3% of the cases expected and actual engagement coincided) and the ones where an unsatisfactory or intrusive relationship is most common and (8.3% of cases).The findings indicate that much needs to be done to untap the potential of the 4-ple helix for innovation, with 58.3% and 59.1% of regions finding the relationship with civil society organisations and user-centered spaces unsatisfactory.

e) Other actors

Graph 11 and 12 below report information related to actors that have so far been peripheral to the EDP, namely media, financial entities and risk capital.

Graph 11 Actual vs Expected engagement – Other	Graph 12 Actual vs Desired engagement – Other
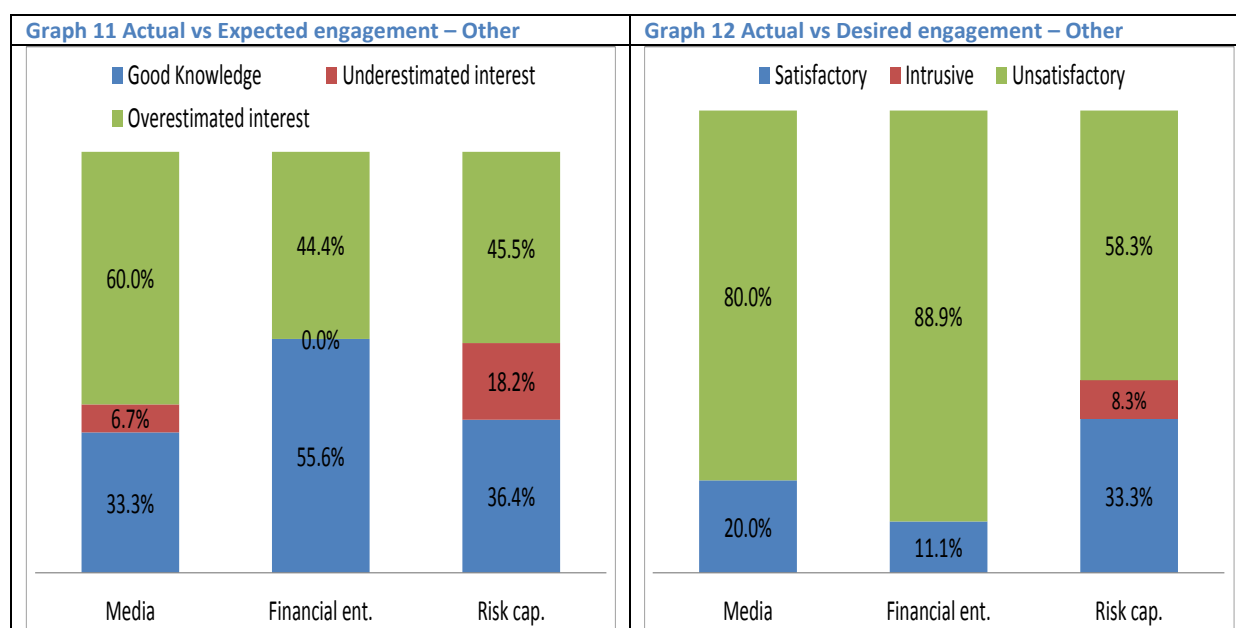
The relationship with these actors is most often unsatisfactory, as indicated on the right hand graph, with 80%, 88.9% and 59.3% of the regions not meeting their desires in terms of engagement with media, financial entities and risk capital respectively. Media and risk capital emerged as poorly known, in graph 11, with approximately one third of the regions displaying a good knowledge of this actor. On the other hand, nearly 56% of the regions who engaged with financial entities gauged their expectations correctly. Despite the overall peripheral role of these actors, some interesting dynamics emerge in relation to Risk Capital with 18.2% of the regions engaging them finding them more interested in the EDP process than expected.

3.2.2 Stakeholders' engagement: future desires

The graph below evaluates how the respondents would like the future engagement with the different types of actors to be.[7]

Whilst, as shown in the previous sections of the report, research actors are well known and enjoy a good relationship with regional bodies in charge of RIS3, and whilst they have been actively engaged throughout the process, the survey highlights that more engagement from their side is desired. In the case of universities over 47% of respondents would like them to be either somewhat more engaged (30.9%) or substantially more engaged (16.4%). The pattern is similar for research organisations, where 37.7% of respondents would like them to be somewhat more engaged and 17.0% would like them to be substantially more engaged.

Among the core EDP actors in the private sector it is interesting to notice that it is regional SMEs and Regional firms where most often respondents are unsatisfied with their past level of engagement and would like a significantly higher participation. For SMEs 15 regions (28.8%) indicated that, whereas for large firms 13 (25%).Among public actors it is interesting to notice a few cases in which local government, national government and the EC are welcome to be less engaged in the future (2,3 and 4 respondents respectively).

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[7] Only respondents who had invited a given stakeholders were asked to evaluate their future desired engagement with the latter.

Some interesting dynamics emerge in the 4-ple helix, where user-centred facilities and civil society feature as the second and fourth actor which, in relative terms, regions would like to be somewhat more engaged (47.6% and 43.8% of regions which engaged them in EDP for the design phase of RIS3 would like to have them participate more in the implementation phase).

As for the remaining actors, it is interesting to notice that experiences with Risk Capital emerge as difficult, with 6 out of the 12 regions that engaged them previously, desiring a lower engagement in the future. As for financial entities, 7 out of 10 would like them to be more engaged. In the case of media, 9 out of 15 would like this actor to be somewhat or significantly more engaged in the process.

Graph 13 Future desired engagement in RIS3 implementation
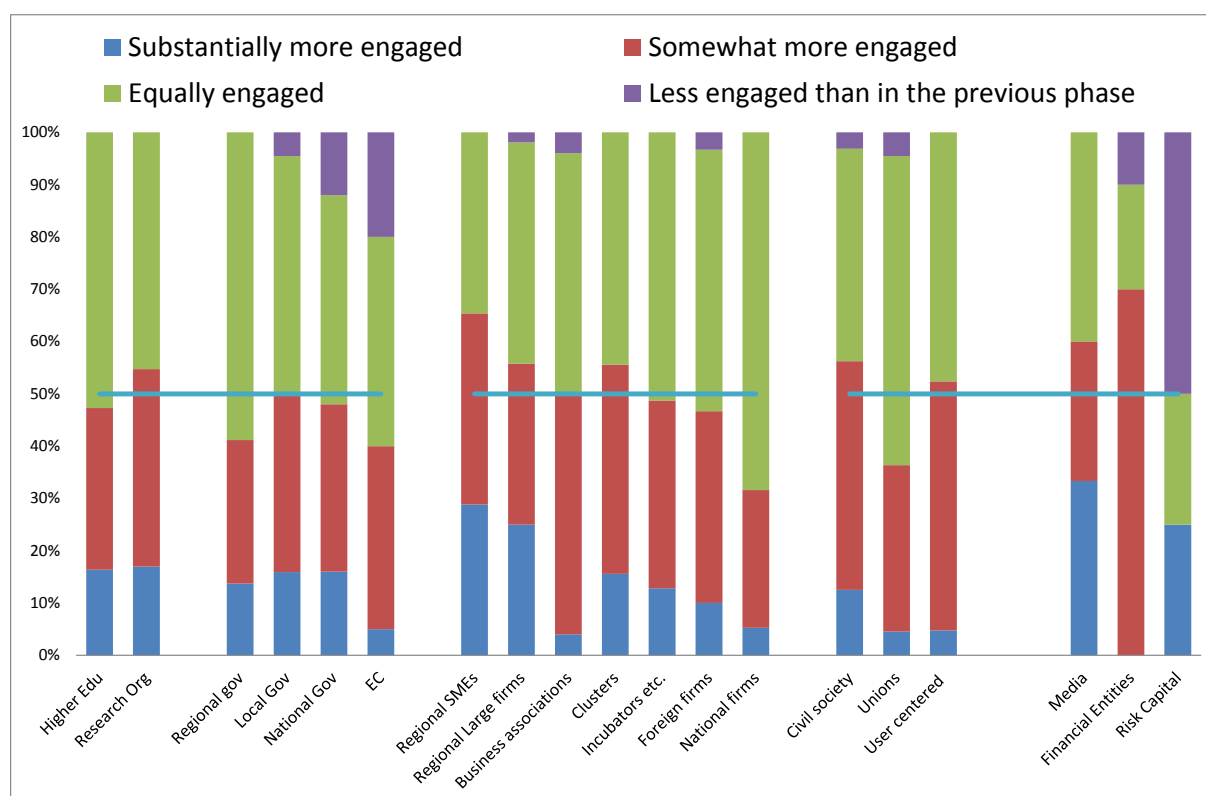
3.3 EDP self-evaluation

To help assessing the impact of the EDP during the elaboration of the RIS3, the first part of the survey asked participants to reflect on the effectiveness and overall experience of the process. When participants were asked if the process was effective in identifying investment priorities for regional development, 93.2% provided a positive answer. Likewise, when asked to consider the EDP as a positive or negative experience during the elaboration of RIS3, 96.6% referred to the process as positive. Interestingly, 39% of the responses pointed out that the EDP had brought conflicts among stakeholders (or between stakeholders and the public administration) during the elaboration of RIS3. Although the survey didn't go in depth into the kind of conflicts it generated, this feature could led to further research in order to understand if the conflicts were due to lack of understanding, conflict of interests or other relevant criteria.

The survey also allowed for some self-reflection on other outcomes of the EDP. When asked whether the EDP represented a novelty in the policy process, 51 out of the 59 respondents indicated that this was the case. Furthermore, as the graph below shows, the EDP is considered a satisfactory process in its ability to:

- ***Increase trust among stakeholders***, *where nearly 80% of respondents are either satisfied or very satisfied;*
- ***Increase trust towards the public sector***, *where just over 75% of respondents reveal to be either satisfied or very satisfied;*
- ***Engage stakeholders in regional development***, *where again three quarters of respondents are either satisfied or very satisfied;*
- ***Improve public-policy decision making***, *where again nearly 75% report being satisfied or very satisfied.*

Graph 14. **EDP self-evaluation**
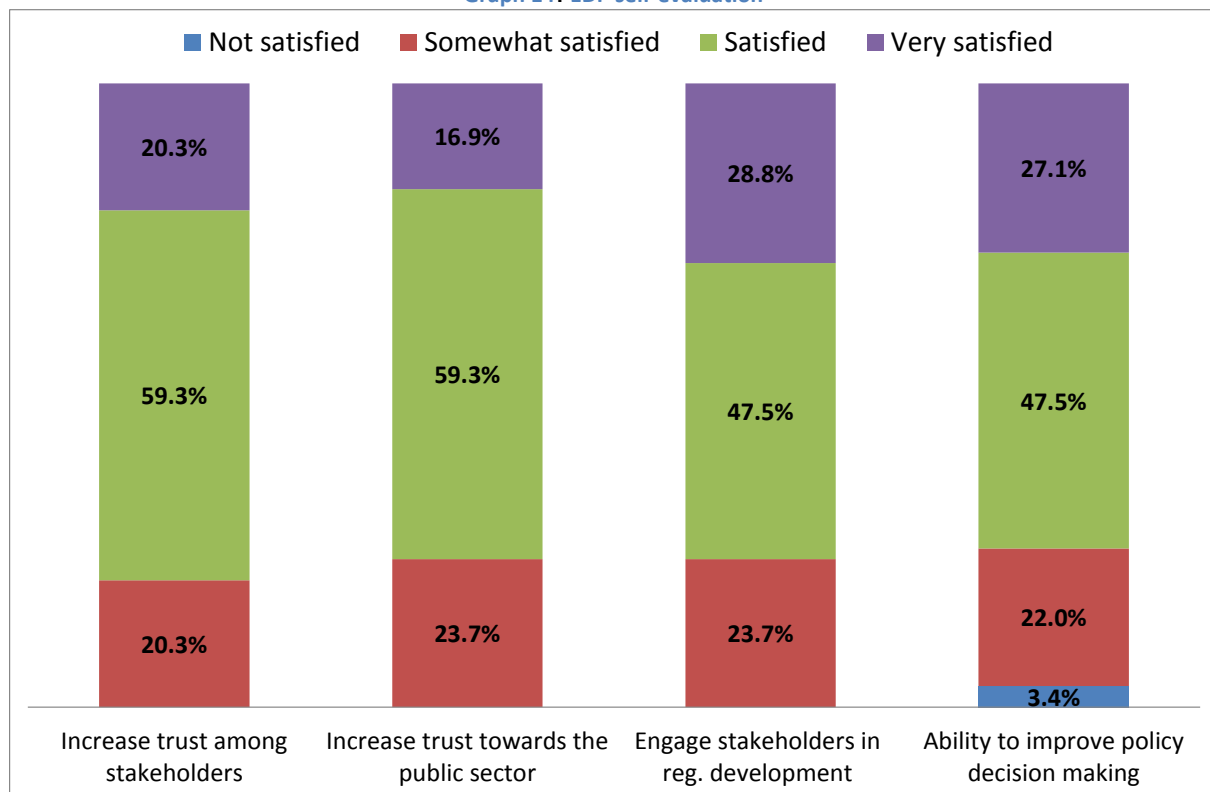
4. Conclusions and next steps

When the term Entrepreneurial Discovery Process (or EDP) was introduced, it referred to the identification of areas for investment in research and innovation (i.e. priority-areas), through an inclusive and evidence-based process grounded in stakeholders' engagement (Foray *et al* 2009). Six years later, the experience of the S3 Platform has required a conceptual reflection **on the EDP itself** and an empirical investigation **on the role of stakeholders within it.** Conceptually the EDP has evolved from being a process limited to the identification of investment-priorities in the design-phase of a strategy, into a continuous activity. Empirically, whilst the EDP was always defined as a bottom-up participatory process, there was a significant gap in understanding how different actors engaged in it.

This report, based on a survey on EDP-practices run within the S3 Platform, has addressed both issues. Firstly, it submits the concept of continuous EDP, developed in Perianez-Forte et al (2016) to an empirical test. Secondly, it looks in depth at the role of different stakeholders in the EDP.

The data confirms that the EDP has evolved from an activity conceived exclusively for choosing investments priorities under the ERDF Thematic Objective 1, into a continuous process permeating S3 implementation.

A continuous EDP implies that once investment priorities have been identified with the involvement of stakeholders, the EDP keeps going throughout the strategy's implementation: stakeholders are kept engaged, in different ways, in the refinement of the priority-areas, the identification of instruments that implement them, as well as the RIS3 governance and monitoring mechanisms that should deliver the expected competitive advantages in each area. The data collected clearly indicates that this is happening.

The survey results indicate that the EDP -as bottom up process- has required and it is still requiring adjustments to the governance system. 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. Our survey has also given insights on the **participation and role of stakeholders** in the EDP, as well as on the **relationship** between the latter and the EDP organisers (i.e. how well the stakeholder is understood and how satisfactory is the relationship).

In terms of participation, the data indicates that the EDP is mainly a triple-helix business. The research, private and public sectors are much more frequently involved than other societal actors. Furthermore, research actors are generally well known by the EDP organisers and their relationship is very often satisfactory. A similar picture emerges with public actors such as regional bodies, national government and the EC. Interestingly whilst local government is an actor that is often well known by EDP organisers, the relationship is often unsatisfactory. As for the private sector, our survey suggests that EDP organisers are better able to understand associations of businesses (i.e. clusters, or representative organisations, business parks) than individual firms. Furthermore, the relationship with the private sector is in general less satisfactory than with the research and public actors. As for the fourth-helix, a peripheral actor in the EDP, our data indicates some untapped potential. Regions which have engaged with civil society revealed to have often underestimated their interest and would like to increase their involvement in the future.

In terms of **stakeholders' role in the EDP during RIS3 implementation**, we see that the research and business sector are indeed expected to take part to governance and monitoring activities, however, their involvement in the continuous EDP is most frequent related to calls management (i.e. commenting on pre-calls, etc.). This reflects the importance of these actors as beneficiaries of RIS3 investment. As for the public sector, and specifically regional and national governments and EC institutions, their main role is in supporting monitoring, revealing a demand for guidance on this crucial aspect of RIS3 implementation.

To conclude, the survey reveals that the EDP has been a positive experience for regions, across different dimensions, and stakeholders' engagement across the whole 4-ple helix continues to be desired.

In delivering a much clearer picture of EDP practices, the survey has unavoidably raised further questions. In particular further investigation and policy support should:

- *reveal what is behind a satisfactory/unsatisfactory relationship, or a good/poor understanding of a given actor;*
- *clarify the institutional and stakeholders' characteristics that favour a good interaction and a functioning EDP;*
- *identify the mechanisms through which stakeholders' engagement can be sustained, especially in activities like monitoring, governance or the management of calls*
- *recognise and share policy instruments, mechanisms and/or structures and good practices, that are effective in supporting a continuous EDP.*

Future activities of the S3 Platform and the project Targeted Support to Lagging Regions, will take these results into account to address the most pressing demands related to RIS3 implementation.

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