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Bridging thinkers and doers: first lessons from the Entrepreneurial Discovery Process in Eastern Macedonia and Thrace

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Abstract

At the core of regional smart specialisation strategies (RIS3) is the bottom-up identification of a limited set of priorities for which regions think they have potential to obtain a comparative advantage. For setting such priorities entrepreneurs are in the driving seat, by identifying business opportunities together with other research and innovation actors. Such a process, also referred to as an entrepreneurial process of discovery (EDP), has been widely described in theory, but reported experiences on its implementation are scarce. This policy brief takes stock of a novel experience in implementing an EDP process in the Greek region of Eastern Macedonia and Thrace, drawing on practices from a European Parliament Preparatory Action in which the JRC-IPTS has been engaged, centred on the refinement and implementation of a RIS3 strategy in this region. The region one of poorest regions in Europe and was heavily hit by the crisis. The challenge of implementing a RIS3 strategy in this context offers lessons not only for the region itself but also for other convergence regions in Greece and Europe

Bridging thinkers and doers: first lessons from the Entrepreneurial Discovery Process in Eastern Macedonia and Thrace

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1. Introduction

Regional smart specialisation strategies (RIS3) are aimed at developing regional competitive advantages following a vertical [1] prioritisation logic (Foray & Goenaga, 2013). Central to such prioritisation is the bottom-up identification of a limited set of priorities where regions believe they have potential to obtain a comparative advantage, through close collaboration especially among regional businesses and research organisations. Such a process is also referred to as an entrepreneurial discovery process (EDP) and is understood to be an ongoing process, not a one-off exercise. Through such EDP, priorities are identified based on opportunities discovered by stakeholders across the quadruple helix of government, industry, academia and society at large. Indeed, entrepreneurial knowledge is most often distributed across a regional system, hence entrepreneurs need connections with other quadruple helix actors. While several authors have written about the concept and rationales of such EDP (Foray & Goenaga, 2013; Hausmann and Rodrik, 2003; Martínez-López & Palazuelos-Martínez, 2014), few experiences have so far been codified about the actual implementation of such discovery process.

This policy brief takes stock of a novel experience in implementing an EDP process in the Greek region of Eastern Macedonia and Thrace (REMTh). The experiences reported are part of a European Parliament Preparatory Action implemented by the Institute for Prospective Technological Studies of the European Commission's Joint Research Centre (JRC-IPTS), centred on the refinement and implementation of a RIS3 strategy in this region over a 15 month period (September 2014 – November 2015). The region is one of poorest regions in Europe and was heavily hit by the crisis, making the implementation of a RIS3 all the more challenging. The Preparatory Action therefore also aims to draw lessons on RIS3 implementation for other convergence regions in Greece and Europe, and to provide a test bed for advancing theories on smart specialisation.

This policy brief comprises four further sections: section 2 reviews the concept of EDP and describes the specific implementation approach followed in REMTh. Section 3 provides an initial qualitative evaluation of the approach based on the feedback of international experts participating in events organised as part of the Action. Section 4 concludes by highlighting the main lessons, so far, and the way forward.

[1] Vertical prioritisation favours e.g. selected technologies, or fields, or a population of firms.

2. The Enterpreneurial Discovery Process: from theory to practice

The concept of the entrepreneurial discovery process, as developed and used by the S3 platform [2] of the Joint Research Centre, is one if the pillars of RIS3. It is intended as an inclusive and interactive mainly bottom-up process in which participants from policy, business, academia, as well as other sectors, engage with each other to identify potential new activities and opportunities. The process is based on the recognition that the public sector does not have innate wisdom or the *ex-ante* knowledge of future priorities and that stakeholders' engagement is essential for establishing the direction of local development.

Foray & Rainoldi (2013) put the generation of cross-sectoral information spillovers at the core of the EDP. Partnerships and networks among stakeholders are critical to integrate fragmented knowledge, allow spillovers to occur and ultimately open up new technological and market opportunities.

Clearly, there are several ways to support and encourage the generation of such spillovers (see Kroll *et al.* 2014 for a review), not least, because each EDP approach is context dependent. Within the Preparatory Action the entrepreneurial discovery process is being implemented through a series of EDP focus groups, which are described below. In particular, section 2.1 details the general structure of the EDP process, section 2.2. describes the methodology applied to the participatory exercises at the core of the events and, section 2.3, reports the ideas resulting from this process .

2.1 General structure of the EDP process

In order to pursue the core aims of the Preparatory Action, the JRC-IPTS, together with partners in the region, has organised four EDP focus groups, each centred on one of the sectors identified by the region as having particular potential for smart growth.

The four focus groups covered respectively the sectors of wine (November 2014), dairy & meat (January 2015), tourism (February 2015) and non-metallic minerals (May 2015). Each event lasted between one and one and a half days. The meetings required extensive preparation, based on well-coordinated team work. Whilst the local authorities and a team of local consultants –with a deep knowledge of the territory- engaged with local stakeholders, JRC-IPTS identified key international experts to invite to the sessions and devised an appropriate methodology. Each focus group followed the same basic methodological template. However, methodological and organisational lessons derived from each event, as well as the specificities of the context were embedded in the design of the subsequent ones.

As indicated in Table 1, the focus groups were organised using a combination of plenary and parallel sessions. Regional, national and international experts were

[2] The S3 platform is the Smart Specialisation Platform, a competence center on RIS3 hosted by the Joint Research Centre: http://s3platform.jrc.ec.europa.eu/home.

identified and invited to give scene-setting speeches and to stimulate discussion around (ex ante) selected themes. Plenary sessions were held at the beginning and at the end of the events, and included an introduction to the regional RIS3, an outline of the aims and approach of the Preparatory Action, as well as scene-setting presentations from international speakers. Time was also allowed for open discussion. The parallel sessions, which constituted the core of the EDP, addressed different segments of the value chain of each sector (as defined in Table 2) and included presentations from national and international experts in the field and a phased participatory exercise. The duration of the focus groups generally allowed sufficient time for full parallel discussion, but also enhanced the general networking opportunity of the event. In the weeks that followed each focus group, several follow-up activities were conducted. E-mails were sent in order to inform participants about the further steps of the Preparatory Action. The websites of both the Preparatory Action and of the regional Managing Authority were also updated with bilingual information and news regarding the meetings and related activities.

Table 1 – Template of EDP Focus groups

Plenary introduction • *Presentation of the region and the regional RIS3* • *Presentation of the project* • *Presentation from international expert on the sector at stake*
1st Parallel sessions covering four different parts of the sectoral value chain • *Presentation by a national expert on the specific value chain building block* • *Participatory exercise to stimulate interaction among stakeholders*
2nd Parallel sessions covering four different parts of the sectoral value chain • *Participatory exercise to stimulate interaction among stakeholders*
Plenary conclusion • *Reporting back from the participatory exercise* • *Presentation from international expert on the sector at stake* • *Round-table and QA from the public*

Table 2 – EDP focus-groups parallel sessions

	Parallel EDP sessions			
Wine	*Research and innovation focusing on technological improvements in wine*	*Research and innovation focusing on by-products of grapes and wines*	*Research and innovation related to green energy and the environment in the wine sector*	*Research and innovation in wine tourism –*
Meat & Dairy	*Research and innovation in animal husbandry*	*Food processing technologies*	*Research and innovation in dairy products*	*Organic meat and dairy products and sustainable production*
Tourism	*4 seasons tourism*	*Tourism and cultural heritage*	*ICT and tourism*	*Gastrotourism*
Marble and non-metallic minerals	*Research and innovation for energy and environmental optimization of the marble production chain*	*Management of marble quarries & aggregates – Waste & environmental impacts,*		

2.2 EDP Focus Groups: methodology of the participatory exercise

In each of the parallel sessions, participants were grouped on the basis of their expressed preferences and with the intention of achieving a mix of actors from:

- within and beyond the region as well from outside Greece;
- both the public and private research sectors;
- organisations operating principally in various different parts of the value chain; and
- having a policy and/or strategic perspective as well as scientific and technological perspectives.

Each parallel group had a moderator and a rapporteur (tasked with reporting the outcomes of the parallel session to the plenary as well as with carrying out related follow up activities).

As Box 1 illustrates, the exercise comprised a sequence of five core tasks and aimed at generating and selecting innovative ideas requiring expertise from different sectors (task 1 and 2), creating partnerships around them (task 3) and reflecting on their potential development, outlining the first steps necessary for implementation (tasks 4 and 5).

■ **Box 1. EDP focus group methodology: key tasks**

Task 1. Individual generation of ideas
In task 1 each participant was asked to reflect and fill-in a simple fiche with the following information:

- Personal profile (i.e. entrepreneur, private sector, researchers, etc.)
- Problem faced and potential innovative idea to solve it.
- External expertise/Partners needed to implement the idea.

Task 2 Presentation of ideas
Each participant was asked to present her/his idea to the rest of the group, highlighting also the profile of the expertise needed for its further development. To ensure an open and creative environment, ideas were not criticised at this stage.

Task 3 Formation of "idea-partnerships"
Each parallel group, building on the outcomes of task 2, created a consolidated list of ideas in which similar or complementary proposals were clustered.

Following that, participants were asked to identify those idea(s) which they were interested in developing further. Based on that, the group – guided by the moderator- proceeded to organise itself in different sub-groups or "idea-partnerships". These comprised (ideally) individuals from different sectors (i.e. research and industry) with similar interests.

Task 4 development of ideas (Phase 1).
Each of the "idea-partnerships" formed in task 3 then discussed the idea further, defining it in more depth, identifying the required contributions from different partners, developing the first considerations on framework conditions (legal problems, needs for human capital, capacities, etc.), on financial planning and on the "next" steps.

Task 5 development of ideas (Phase 2)
The "idea-partnerships" then defined the concrete title for their idea, the subsector(s) of interest, a brief project description, a rough estimation of the resources needed, a timeline for the event, and the stakeholder groups involved. The work was conducted under a set of guiding questions and took into account the criteria for funding.

Task 4 and 5 varied across workshops containing similar,yet different, sets of questions.

2.3 Outcomes of the EDP Focus Groups

The outputs of each of the four EDP workshops were a set of entrepreneurial ideas, merging different sectors (research and business) and compatible with the local RIS3 strategies.

The ideas, summarised in Table 3, have been systematically collated and presented as part of a follow-up consultation with stakeholders, conducted via the Preparatory Action website.

An example of the outcomes is presented in box 2. The remaining ideas can be consulted here:

http://s3platform.jrc.ec.europa.eu/ideas-for-pdl2

The outcomes of the EDP focus groups are, however, intended to be broader than the ideas above. They involve facilitating access to international networks, promoting a culture of public/private partnership, increasing trust among stakeholders and the shared development of a vision for the territory.

Table 3. Idea outputs of EDP workshops

WINE	MEAT & DAIRY	TOURISM	MARBLE & NON-METALLIC MINERALS
Local grape varieties	*Cluster for animal husbandry and agriculture*	*Regional/local tourism organisation*	*Geological and Geophysical Research in Marble Quarries; Underground Mining Equipment*
Vineyard network with GIS tools	*Genetic mapping and genetic improvement*	*Off-season tourism*	*Integrated interventions for energy efficiency in quarries and marble processing facilities*
Indigenous microbiota for local wines	*Community supported farming and production;*	*Eco-Tourism*	*Reusing quarry and marble processing residues and scrap*
Prevention of Dekkera/Brettanomyces bruxellensis	*Vertical integration - slaughter houses in small farms*	*Innovative management of cultural heritage*	*Clustering across the marble value chain*
Energy from wine	*Religious certifications of meat and meat products*	*ICT based applications for thematic itineraries*	*Restoration of Marble quarries*
Food Supplements and Cosmetics	*Production of certified traditional meat products and their promotion via marketing innovations*	*Personalised tourism*	*Planning / coordination of access to the raw material*
Organic fertilizers from tsipouro	*Innovative technologies in for local non-pig meat products with improved conservation*	*ICT tools for tourism*	
Animal feeds from wine by-products	*Sustained and integrated promotion of local, traditional fermented food systems from authentic microbial cultures*	*Digital business innovation in tourism*	
Tsipouro-based Liqueurs	*Development of functional products based on local dairy products*	*Regional culinary centre*	
Local varieties & local histories	*Dairy/meat sectors clusters*	*History and cuisine*	
wine, gastronomy, culture & entertainment	*Research and/or technologies for the production of new value added products*		
Branding regional wines	*Energy production from animal waste*		
Wine-Gastronomy / Cultural Tourism	*Network for collecting and managing data on the milk and dairy production chain*		
Wine-value chain cluster			

- **Box 2. Example of output of EDP focus group**

IDEA 1. Local wine grape varieties

Research and exploitation of local wine grape varieties

1. Brief description of the idea-partnership
The idea focuses on research on 6-7 local wine grape varieties, aiming at the definition of their oenological potential and its enhancement during the grape and wine production process. The implementation of the idea comprises two steps: (a) the definition of the varietal character/potential of each variety and (b) the ways to enhance/maximize the initial potential during all stages of wine production, from vineyard site evaluation to the marketing of the final products.

2. Contribution of the different partners
The research will focus on varieties existing in established vineyards but can be extended to the discovery of lesser known ones. Collection and description (both ampelographic and molecular) will be performed by specialized scientists and institutes (molecular biologists, plant pathologists and viticulture specialists). Nursery facilities will join the project to assure the propagation and delivery of the planting stock. For the definition of the varietal character (for both existing and promising varieties), laboratories specialised in grape and wine chemical analysis will be needed and tasting panels must be assembled and trained. To maximise varietal potential, viticulture and oenology experts will be necessary to plan and implement experimental protocols and evaluate the results. Grape growers and wine producers in the region will participate by providing vineyards and wineries for experimental implementation (experimental vineyard blocks, micro-vinifications).

3. First considerations on framework conditions
The main perceived obstacle to the implementation of the idea is the current legal framework, limiting the expansion of vineyards. Within the region, there are grape and wine producers that can support the idea with tangible assets (experimental cultivations and pilot wine-making processes) and human capital. Democritus University of Thrace (DUTH) could also support the action with the participation of specialised labs. Reservations regarding the lack of infrastructure of the Department
of Oenology at Drama might be solved by the participation of other well equipped labs at the Aristotle University of Thessaloniki (AUTH) and the Agricultural University of Athens.

4. First financial considerations
As the duration of the action at full scale deployment would be at least four years, only rough estimates of budget are feasible, and would be in the order of € 2M.

5. Identification of first "next" steps
These include: state of the art analysis regarding current knowledge on local varieties; evaluation of planting material and nursery facilities; and definition of areas and most important varieties for further research.

6. Initial interest of partners: *10 from industry and 5 from research/academic community*

3. Preliminary evaluation

In order to evaluate the extent to which the approach has so far been successful in developing an EDP and, hence, bridging the gap between different sectors (public, private, research) a short evaluation questionnaire was sent to each of the 22 international presenters and Greek experts participating in the first three EDP focus groups.

They were asked the following five questions, and were also encouraged to give explanations for their replies, whether positive or negative.

1. Do you think the event was useful in stimulating the interaction between the research and private sector in broad terms?

2. Do you think the structure of the event was effective in generating creative thinking?

3. Do you think the event was useful in stimulating innovative entrepreneurial ideas for the region? (Please note, that the ideas should be innovative for the region, rather than on the EU or global levels).

4. Do you think the event was useful in opening up networking opportunities both at the national and international level?

5. Was the logistic organisation of the event satisfactory?

The fifteen respondents were all positive about the capacity of the events to stimulate public/private interaction. Interestingly, one respondent highlighted that the supply side (firms and research) was over-represented, and the events would have benefitted from the presence of global buyers (demand side) in the areas under consideration.

The methodology followed has been evaluated positively in terms of its ability to generate critical thinking, though several respondents mentioned that a higher participation of the private sector would have enhanced the results.

Whilst many of the respondents also agreed that the events stimulated entrepreneurial thinking, a couple of them were a bit sceptical, pointing towards the insufficient participation of the private sector and the lack of entrepreneurial culture in the region. Respondents were also positive about the networking opportunities offered by the EDP Focus Groups, although they highlighted that opportunities for international networking were limited. One respondent pointed out that for networking to actually bear fruit one individual event may not be sufficient. The evaluation in terms of logistical organisation was also very positive.

> *"The event delivered a real output for participants. The four working groups have tried to transform the ideas into a practical framework for the generation of several joint projects and ideas. One-to -one meetings, during the breaks also help for developing new ideas or business relationships."*
> *International expert*

Finally, respondents were given the opportunity to provide extra comments. While, only a few respondents did so, one of the more interesting suggestions was to

devise an "EDP Manifesto" highlighting the key lessons from the experience. Another suggestion was to narrow further the sectoral target of the working group, make available more preparatory material for stakeholders in advance of the event and devise better ways to identify the more engaged entrepreneurs.

4. Discussion and conclusions

The EDP workshops have been successful in mobilising and engaging relevant stakeholders in priority sectors. They have allowed stakeholders to explore and catalyse the dynamics of the entrepreneurial process of discovery and to examine the key criteria to identify and pursue relevant projects for the region. More specifically:

- This process has led to an enhanced understanding in REMTh of what RIS3 can do, of the advantages of exploring selected priorities and of the benefits of international cooperation in research and innovation.
- The learning effect is also reflected by the region taking the lead on the organisation of the fourth EDP focus group on non-metallic minerals.
- Awareness and trust building take time: the sustained commitment of key stakeholders over time is essential to the success of the EDP process. In the case of REMTh, the outcomes so far have been highly constructive, with participants actively engaging in the tasks with the necessary building of trust in the stakeholder community with concrete outcomes
- Mobilisation and engagement of stakeholders take time: public authorities, business, university, research and technical institutes, users and citizens need to get used to explore together opportunities, gaps and barriers.

These activities have also contributed to refinement of the EDP focus group approach, and its codification for its application to other key sectors and to other regions. Indications of interest from other regions in undertaking similar activities have also been received.

- Each context of application has specificities to be taken into account, and the complexities of implementation must not be underestimated. There is a need for alignment to local policy/political needs and calendar (understand the context and adapt to it)
- There is also a key role for local "champions" capable of catalysing stakeholders engagement
- The project is also successful in building trust in working with the Commission as "collaborating" rather than "imposing" – a success of REMTh project and S3P
- Replicability: the methodology of the EDP workshops has been codified here for replication elsewhere. The experience in the four focus groups shows that it is critical to manage time sharply. The moderation of plenary a and parallel sessions need to ensure that all members of the audience provide feedback and ideas.

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