PASSPARTOOL BRIEF TECHNICAL NOTE 1
Thematic Workshop 1 on Non R&D-driven innovation
Process, outcomes and lessons

1. Aim and introduction

The Passpartool thematic workshop 1 addressed the topic of "Non-R&D driven innovation". The topic was chosen for a variety of reasons. Non-R&D innovation appears critical in an increasingly complex world, where technology itself is not a key differentiator between successful and less successful firms. It is also seen as a key for promoting competitiveness of micro and small business, as it represents a way for innovating for firms with limited financial resources. Last but not least, R&D and non-R&D activities may coexist and reinforce each other.

Whilst innovating without performing R&D is a widespread (Huang, Arundel, & Hollanders, 2010) and productive (Barge-Gil et al., 2011) activity, it is less visible to the public, and has lower priority on the policy agenda. Passpartool, as a project, wants to explore and give policy prominence to the issue, exploring instruments to promote and monitor non-R&D innovation.

Passpartool partners identified several challenges related to managing and stimulating non-R&D innovation:

1. To understand the differences between the management and success drivers of non-R&D and R&D innovation;
2. To understand how to increase firms'/managers' awareness and importance of non-R&D innovation;
3. To understand how policies can be adapted to address firm needs and stimulate non-R&D innovation;
4. To understand how to avoid overlap between different types of social and cultural innovation

The thematic workshop 1, and its preparatory activities, attempted to address these questions. Notably, significant effort went into framing the definition of non-R&D innovation (de facto answering point 4 above) in order to limit any overlap with the other themes addressed within the project (namely: SMEs innovation, social Innovation, creativity and cultural innovation)

TW1, which was planned in March 2020, had to be conducted online due to the COVID-19 pandemic, on two separate sessions on the 22nd and 29th of June. In its structure, it pursued three interrelated aims:

- To build a shared and more sophisticated understanding of non-R&D driven innovation, addressing the questions raised by project partners;
- To identify interesting practices/experiences within the Passpartool consortium;
- To explore the implications for monitoring and evaluating this type of activities.

This document summarises the preparation, the implementation, and the outcomes of TW1 and is organized as follows: Section 2 provides a conceptual framework to navigate the

different facets of Non-R&D Innovation. Section 3 introduces some examples of non-R&D innovation policies implemented by Passpartool partners. Section 4 provides the outcomes of TW1, in which a set of good practices were selected and an in-depth reflection on monitoring non-R&D innovation was conducted. Section 5 provides some policy implications and conclusions.

2. Non-R&D innovation: conceptual insights for Passpartool

In the linear model of innovation, R&D expenditures appear as a key input to develop innovative products or services. This model, however, does not capture all innovative activities. Innovation, i.e. the implementation of new processes, products, services or business models, often emerges without formal R&D investment[1]. Such *Non-R&D innovation* originates from a new exploitation and marketing of existing knowledge (Freeman, 1994; Bender and Laestadius, 2005). For policymakers, it is important to understand how to support these activities within and between firms, as they are drivers of innovation and economic growth (Barge-Gil et al., 2011).

For the purpose of Passpartool TW1, we adopted the following broad definition of Non-R&D Innovation: ***Non-R&D innovation*** *refers to innovation that does not originate from dedicated or contracted R&D teams. It refers to non-science-based, and it goes beyond the application of a systematic body of knowledge into a new product. Such innovations often originate from less systematic research activities and result from creativity, inspiration, incorporation of cultural aspects, et cetera.*

Non-R&D innovation is about reconfiguring existing technical and non-technical elements to create additional value to customers by using different marketing approaches, addressing the needs of new customer groups, developing a new product in an existing product category, or developing a completely new business model.

We articulate the topic of "Non-R&D innovation" by focusing on firms' processes and activities and distinguishing between:

1) The non-R&D innovation expenditures;
2) The non-R&D based learning mode based on Doing, Using and Interactive;
3) The non-R&D innovative outputs of firms' activities.

Table 1 provides examples of these different dimensions of non-R&D innovation activities. Remarkably, pursuing non-R&D innovation requires a specific set of capabilities, such as: the ability to identify relevant knowledge, wherever it exists; the integration of its various components; their synthesis and adaptation to the peculiarities of the firm – usually implying a process of transformation and reconfiguration of knowledge (Bender and Laestadius, 2005).

[11] See for instance: Arundel et al., 2008; Diukanova and Lopez, 2014; Khan et al., 2010; Martin et al., 2005.

Table 1 Unpacking the concept of non-R&D innovation

Non-R&D innovation expenditures
• acquisition of advanced machinery; • acquisition of computer hardware and software; • acquisition of patents and licenses; • trial production and tooling up; • market research or feasibility studies; • design and production engineering; • customer surveys, consultancy assignments that lead to the development of innovations
Non-R&D learning mode of firms
• Non-R&D human capital development (creativity trainings, time of service employees, etc.) • Participation to systemic learning activities (e.g. Hackatons, networks) • modifications and incremental changes often based on activities like adaptation, learning by-doing, and process- and design-optimization; • imitative activities which do not require R&D including the adoption of user innovation; • recombination of existing knowledge resulting in design and process improvements.2
Non-R&D innovative Output
• product or service innovations: new television concepts, dog walk service, artisanal production, reparation services of technical equipment, neighbourhood watch. • marketing innovations: new way of marketing or pricing products, including servicing new customer segments, new packaging, new pricing schemes, using clients as endorsers, promoting an ecological or social image. • process innovations: new ways to reduce costs and become more efficient, including use of visitors to clean up after event, use of volunteers to walk with elderly, use of self-service pick-up points, use of technological surveillance cameras. • business model innovations: new ways of earning money, like becoming a platform or offering a product-as-a-service concept. • organizational innovations: implementation of novel organizational methods affecting business practices, workplace organization, and the management of external relations.

3. Non-R&D innovation: examples from Passpartool partners

In order to prepare for TW1, Passpartool organised a Peer Review among project partners, as well as a set of interviews (conducted by UoG). The exercise and the fieldwork (described in box 1) allowed partners to reflect on the concepts at stake and provided a common ground for the discussion during the online events.

Passpartool TW1: peer-review and interviews

Step 1: each partner prepared a document (about 500-600 words) that described the project (aims & motivation/how did the project stimulate non-R&D innovation/project restrictions), the strength and weaknesses of the approach followed, and the existing knowledge gap.
Step 2: a paired partner prepared a peer reflection that described the uncertainties, the strong and points for improvement (200-400 words), and sent this document to the reviewed partner.
Step 3: the paired partners interacted when things were unclear, and then wrote a revised document that integrated the original document, and included a section that highlight the learnings/advice from partner, as well as the areas for knowledge development. Each

[2]Arundel et al., 2008.

partner sent a copy to ARTI (LP) and UOG (AP5) that carefully read the revised documents as input for the TW1.

Step 4: To maintain a high level of interaction UoG decided to schedule 1-on-1 virtual meetings with each partner. Prior to the virtual meeting, the partner received a reflection from UoG on the strengths and discussion points. Then during the virtual meeting (about 60 minutes per meeting), at least two members of UoG interacted with at least two members of each partner to reflect on the project itself, the good practices/learnings that were derived from the project, and the remaining challenges. These meetings allowed for a thorough discussion of the non-R&D innovation projects and were positively evaluated by UoG and the partners.

Box 1 Peer Review and Fieldwork

Each partner provided 1 or 2 initiatives which stimulated non-R&D innovation, as summarised below. The initiatives proposed by Passpartool partners all fell in the category "**Non-R&D learning mode of firms"** and ranged from support for network-building, peer-learning, to hiring knowledge workers, innovation consultancy.

Table 2 Non-R&D innovation initiatives from the Passpartool consortium

Partner	Policy initiative	Short description
ARTI Puglia	InnoAid	**INNOAID** offers support services for (technical or non-technical) design-driven innovation. This kind of services aim at developing new product / service strategies and concepts, based on the systematic analysis of market trends, social and cultural dynamics and the latent needs of customers and integration between meaning innovation and technological innovation. It pays attention to usability, ergonomics, energy efficiency and resources/ materials, minimization of environmental impact, reusability and recyclability.
Lithuanian innovation center	Inospurtas	**Inospurtas** aims at increasing the innovation of enterprises and to encourage them to intensify the development of R&D&I activities by providing innovation advisory and innovation support services to enterprises. The advisory services include sessions on R&D&I activities and the increase of their effectiveness, technology transfer, innovative entrepreneurship, participation of companies in international R&D&I programs and value chains, and pre-commercial procurement…
FUNDECYT Extremadura I	Office 4 Innovation (O4I)	**O4I** is a tool that addresses the relation among key regional agents, by giving special attention to the effective connection between University and Research and Technological Centers, as main actors in generating knowledge that will later be transferred into the business network
FUNDECYT Extremadura II	Actyva	**ACTYVA** is a non for profit multi-stakeholder Cooperative of "Associated Work". ACTYVA gives recognition to the small primary and artisan production of the Province of Cáceres. It fosters access to the market to these productions under a quality brand of social character, also stimulating the local economy.

Northern Netherlands Alliance	1) KEI (Knowledge and Innovation) 2) VIA (Accelerator Innovative Ambitions)	**KEI** offers subsidy to SME's to hire a PhD for a newly developed position, or hire an employee from another SME, a bigger enterprise, or knowledge institution, and place them in a new position. It also offers subsidy for the secondment of their own employees within the EU. **VIA** provides subsidy for SME's to hire an independent expert for the development and implementation of a new way of organising, a new business model, or a collaboration with other parties. The main aim is to get SME's within the region to become more future-oriented and increase their ability to innovate
Rzeszow Regional Development Agency	Transferencja	The aim of the project **Transferencja** is to convince SMEs of the importance of cooperation with scientists and the possibilities of strengthening the competitiveness and innovation of SMEs through such cooperation.
Rzeszow Regional Development Agency	Urban Lab Rzeszów	**Urban Lab Rzeszow** is an instrument of cooperation of the city of Rzeszow with enterprises, scientific entities and NGOs, which activity aims at the improvement of residents' quality of life by using innovative solutions for solving identified problems and generating additional value using urban resources.
Regional Council of North Karelia	Futures Fund Findland	**Future Fund** is a kind of low-threshold financing instrument. The general aim of the Future Fund is to promote the intellectual and economic development and activity of the region. Projects financed by the Fund must meet the objectives of the Regional Strategic Program. Projects must therefore have a local or regional impact to improve overall activity and vitality. The projects need to have a new and innovative approaches in its field of activity, too, they are often development and research projects and projects promoting the marketing and visibility of the region.
Donegal County Council-LEO	1) Co-Innovate 2) Profinet	**Co-Innovate** is open to all existing micro, small and medium enterprises. It supports DUI learning and Innovation Outputs through a five-stage process. Stage 5 support will be toward the further development of a new product or service. **Profinet** is a facilitated peer-learning network model used since 2008. It aims at increasing the innovation management capabilities of owner-managers through shared learning, throughout 18 months, potentially following up with the so-called Profinet-Plus.

These experiences were discussed during the first session of Thematic Workshop 1, which aimed at identifying two good-practices, in order for them to be explored further in the second

session. The consortium chose the initiatives presented by **the Northern Netherlands Alliance** and by **LEO – Donegal County Council.**

4. Outcomes of TW1.

The discussions during the fieldwork and during the online events led to interesting observation, exploring the issues raised at the onset of the document, namely:

1. The divers of non-R&D innovation vs R&D innovation;
2. The tools to increase firms'/managers' awareness and commitment to non-R&D innovation;
3. The policy tools to address firms' needs and stimulate non-R&D innovation;

4.1 Drivers of non-R&D and R&D innovation: not so different after all!

The discussion highlighted the complementarity, rather than the difference between R&D and non-R&D innovation. The expert presentations (by Dimitrios Pontikakis) showed that the economic value from innovation **comes from bundles of R&D and non-R&D innovation** (Evangelista and Vezzani, 2010). Indeed, there are several reasons why it makes sense to think of R&D and Non-R&D innovation as synergetic actions:

- non-R&D investments can be the precursors of R&D (e.g. IT systems that generate data for researchers to analyse)
- in given sectors (i.e. Biotech), R&D projects require large co-investments in marketing to succeed (Corrado and Hulten, 2010, p. 100).
- novel organisational structures and business models may prompt R&D in completely new avenues
- non-R&D engineering activities, including observations and challenges encountered during "routine" construction, installation and maintenance, are frequent inspiration for R&D
- design thinking – incl. but not just graphics, fashion, industrial, systems design – can result in architectural innovation, and inspire new business models.

In line with the above, the Northern Netherlands Alliance (NNA) explained their interest in developing support for non-R&D innovation through the KEI and VIA instruments, which -as discussed above - subsidise knowledge exchange through temporary hires, exchange of personnel and other means (see Appendix 3 for more details). The support for KEI and Via lay on strong empirical grounds: an earlier analysis of the NNA's annual survey data among SMEs revealed that SMEs can improve the economic returns of their innovation activity when they simultaneously introduce organizational innovation (i.e., alter the organization setup and procedures).

To conclude: Non-R&D innovation, albeit valuable *per se*, also provides **the in-house apparatus necessary for R&D**, including *measurement, instrumentation, prototyping and quality control capabilities, proprietary data for experimentation and analysis, knowledge of sources of financing and investment possibilities, project scheduling, procurement, management and bargaining of contracts.*

4.2 Non-R&D innovation: Increasing awareness and commitment among SMEs by clearly responding to their needs

Section 4.1 has provided strong policy and private reasons to engage in Non-R&D innovation. Still, Passpartool partners share the need to understand better how to engage firms in this process. The good practices selected in TW1 provide some insights on how to do so.

Both NNA and LEO has stressed that, in order to engage SMEs, it is critical to be able to respond to their manifested needs. Developing monitoring systems and having channels to communicate with firms and stakeholders across the policy cycle, appears as a precondition to adequately articulate policy instruments for non-R&D innovation.

For instance, **Profi-net**, which involves active engagement with and by owner/managers of small firms over a prolonged period, enables the development of close business-to-business relationships and business to support-agency relationships. In Profi-net, firms agreed to actions and outcomes that were followed up by dedicated managers who provided structured guidance in subsequent meetings. The findings from the evaluations and the experience of the Local Enterprise Office Donegal indicate that the programme is robust and produces strong businesses impact, because participating firms are engaged and actively reminded of their set tasks.

On the other hand, the **KEI** and **VIA** instruments were not an instant success, as candidate SMEs were not aware of the instruments or found it difficult to apply for them. Rather than taking a one-directional communication approach, NNA visited those places where SMEs were active and present, in order to understand their needs and adapt the instruments thereafter. Both schemes now provide full freedom for firms to identify collaborators to hire temporally or to engage in an exchange scheme, which results in a high application rate from SMEs. [3]

4.3 Adapting policies to firm needs and stimulate non-R&D innovation: the importance of a good monitoring system

Thematic workshop 1 has clearly indicated that pursuing non-R&D innovation is complex. The theme is still fairly unaddressed by policy makers who have limited knowledge on how to develop adequate and effective instruments.

The good practices identified, as well as the discussion pursued throughout the two online sessions, suggest that a good innovation monitoring system is essential to detect and address firms' needs and articulate an adequate policy response.

This effort needs to be accompanied by setting proper expectations as non-R&D measures will not generate economic impact in the short term.

A clear logic of intervention, with related indicators, needs to be articulated, to help navigate non-R&D innovation policies and adjust them in time. To this aim, it is useful to define for each measure its expected results, outputs and inputs.[4]

[3] To measure the innovation outcomes of KEI and VIA, NNA conducted an ex-post analysis together with a university to assess the effectiveness of the instruments. This evaluation helped to confirm the positive impact of the instrument, and highlighted areas for improvement regarding the design and execution of the instruments.

[4] The presentation given by Dr Yannis Tolias on session 2 of TW1, and attached in Appendix 2, answers these questions for the four measures selected as good practices.

However, as emerged during the TW1 discussion, such monitoring approach may not be sufficient. Questions such as "*What is the level and value of learning?*", "*What and how much knowledge has been exchanged?" and* "*What is the level and value of business networks?"* cannot be answered easily through an input-output framework and yet are essential to the non-R&D innovation processes at stake.

Effort should thus be put on identifying and codifying the learning mechanisms that each individual measure tries to spur. A first step in this direction is to reflect on the assumptions that underpin each measure, that is, the implicit pre-conditions for the measure success. The latter can point us to the learning processes that the measure is trying to activate and to the challenges that may arise.

At the same time, it is important to conceptualize non-R&D innovation measures, and their monitoring system, as one element of a **broader policy mix**, keeping in mind the synergies and complementarities with R&D.

5. Policy reflections: Three directions

The discussions held in preparation and during TW1 identified three policy directions to pursue.[5] Namely:

Address the complementarity between R&D and non-R&D innovation by promoting them in bundles:

- Support formal R&D as well as non-R&D innovation (look into management, design, marketing, training, information technologies, etc.);
- Adopt a "systemic look", thinking in terms of the full policy mix rather than individual instruments;
- Pay attention to the trade-off between R&D and non-R&D support. This policy area is largely unexplored and requires a trial and error approach as well as peer exchange and learning.

Promote learning between firms:

- Offer targeted approaches that respond to firms' actual needs;
- Be aware of SMEs' challenges (i.e. they are unable to commit as many resources as larger firms to certain type of activities);
- Facilitate learning between firms that have similar innovation levels or that seek the same novelty tier (e.g. new to the market / new to the country innovation)

Support learning within firms:

- Start always from a clear identification of firms' needs.
- Include measures that favour knowledge exchange and on-the-job training in the policy mix;
- Schemes supporting firms' human capital require mechanisms that allow matching the demand and supply of skills.

[5] At the more practical level, the discussion also highlighted that it is possible to fund non-R&D innovation under the current ERDF framework, either under TO1 (as for KEI and VIA) or under TO3 (which focusses on business development).

To conclude TW1 provided the opportunity to articulate the policy rationale for non-R&D innovation, to exchange experiences among partners, to focus the attention on the process for firms' learning and networking and to explore the complex monitoring such activities.

Non-R&D innovation emerged as requiring and deserving larger policy attention than currently received. At the same time, it has emerged as extremely difficult to monitor, both because official statistics are currently unsuited at capturing non-R&D innovation and because the intangible outcomes of non-R&D innovation are inherently hard to measure.

Whilst the COVID-19 pandemic has limited the opportunity for peer discussion, forcing TW1 to be held online, the activities organized compensated for the missed face-to-face workshop.

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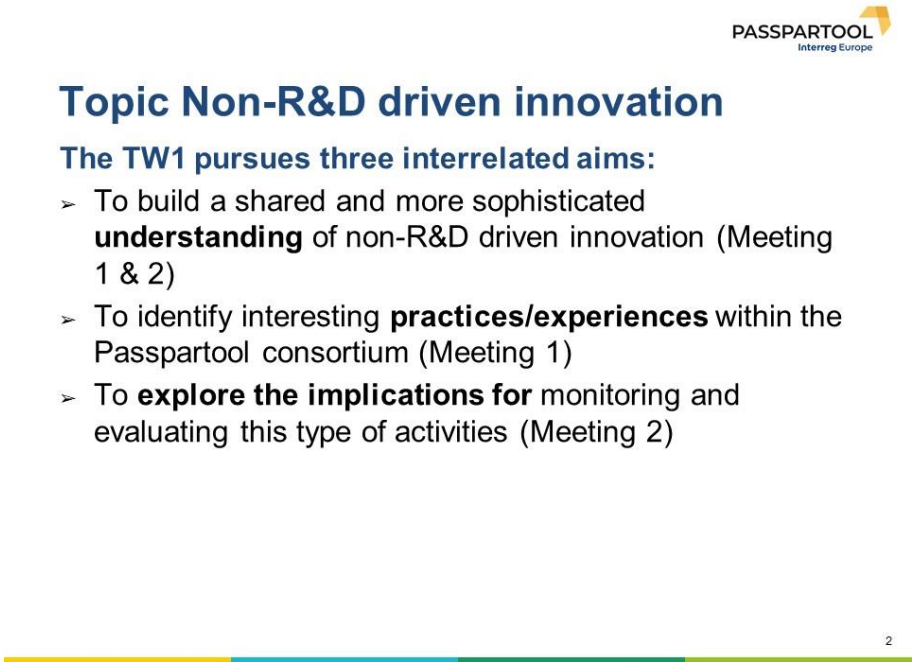
Appendix – 1 Peer-Review outcomes

Summary of Peer Review Exercise: **Prof Thijs Broekhuizen, Dr Erzsi Meerstra-de Haan, Dr Florian Noseleit**



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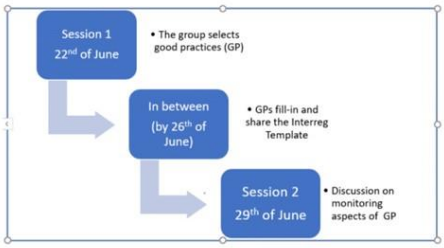
Objective of this presentation

- What did the University of Groningen do?
- **Conclusions:** What did you accomplish?
- **Conclusions:** What instruments & measurements used?
- Main challenges



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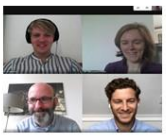
What did we do?

Conducted interviews with each partner on how their policy projects dealt with non-R&D innovation.

SNN (Netherlands)

RRDA (Poland)



LIC (Lithuania)

LEO (Ireland)

RCNK (Finland)

Fundecyt (Spain)

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What did you accomplish?

LIC

- Attained close relationship with companies
- Built critical mass with companies
- Gave advice in a variety of fields

RCNK

- Provided funding to associations who have no other options
- Built a strong community
- Used a wide variety of projects to stimulate the region's innovativeness

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What did you accomplish?

Fundecyt

Actyva

- Original take on innovation through economic sustainability
- Strong regional focus with high impact

Office4Innovation

- Established connections between knowledge centres and companies

SNN

- Improved knowledge position and innovation capabilities of SMEs
- Focused on non-R&D innovation, including organization and market innovation
- Allowed SMEs to involve experts who would otherwise be too costly: incentive for innovation

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What did you accomplish?

RRDA

- Created a centre of innovation
- Linked scientists with businesses
- Fostered collaboration between SMEs and MNEs

LEO

Co-Innovate

- Elaborated on innovation funnel with clear stages & directors that push firms through innovation stages
- Large scope with many involved SMEs, and clear tangible results (realized project funding)

ProfitNet

- Created connections for shared learning
- Clear outputs, well measured and documented

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Instruments

- **RRDA:** Science-business platform allowing for networking and information exchange
- **Fundecyt:** Self-sustaining economic activity system (Actyva) & knowledge sharing system between knowledge centres and entrepreneurs (O4I)
- **RCNK:** Funding for a variety of new and innovative projects
- **LIC:** Consultation for innovation related financial instruments.
- **SNN:** Working with partners to facilitate public-private knowledge exchange and increase awareness of these centers among SMEs.
- **LEO:** Innovation funnel stimulating innovation of SMEs (Co-innovate) & peer learning programme (ProfitNet)

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Measurements

Input:

Collaborations, consultation and recommendations for innovation policy, networks & education, funding (of SME innovation), linking knowledgeable individuals to SMEs.

Throughput:

Knowledge sharing & advice, entrepreneurial activities, regional activities of projects, advisory services, face-to-face meetings, seminars, knowledgeable individuals working at local SMEs.

Output:

Innovation ideas, increase in innovation awareness, # initiatives of entrepreneurs, living self-sustaining, intellectual and economic development of the region, increase in knowledge entrepreneurs on how to implement non-R&D innovation and how to get funding.

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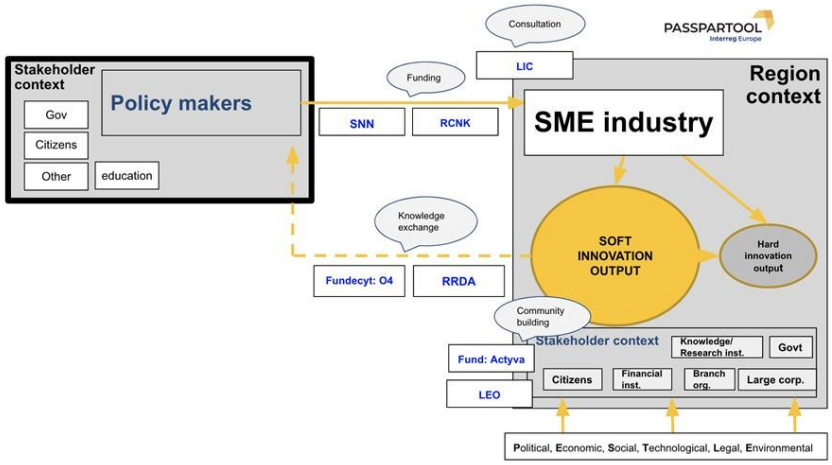
Policy & industry context



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Main challenges

1. Put non-R&D/soft innovation high on priority list

- Companies/SMEs:
  - have low awareness of innovation
  - think that innovation is only technical (R&D or machines)
  - lack R&D knowledge so ignore other innovation possibilities.
- Example project: RRDA
  - "Measuring rising awareness of companies is rather difficult"

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Main challenges

2. Lack of resources of regional parties to innovation

- SMEs/organizations in developing regions often lack resources. SMEs don't know where to find partners.
- Example project: Fundecyt
- "Pooling of resources" & going to 'remote areas' and try to seduce participants by showing financial impact of collaboration

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Main challenges

3. Measuring soft innovation systematically

- Current focus on hard (objective) measures and short-term gains.
- Impact of soft innovation is often less visible, more difficult to measure (preference for easy-to-measure).
- Long-term intangible nature is harder to demonstrate.

- Example project: LIC
  - "Are non-R&D measures really useful?"

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Main challenges

4. Getting into contact with SMEs/companies is relatively easy, having impact is difficult

- Often easy to get in contact with SMEs (two-way)
- However, often same organizations apply
- Commitment and ability to act upon knowledge exchange and create real impact can still be hard.
- Example project: SNN & LEO
  - Reach out to non-obvious firms & assign managing directors responsible for follow up

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Main challenges

5. Too many projects: how to create synergies between projects?

- Diversity and independence of projects
- Projects often standalone and stop after finishing (no meta-learning or collaboration between projects)
- Example project: RCNK
  - "A lot of projects work independently, with few cross-fertilization and cross-learning"

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Main challenges

6. Humbleness of partners in communicating impact to external stakeholders

- Not enough demonstration of results.
- A lot of impact is created, but often not shown to outside world.
- Outside world is not aware of achievements, and may value actions of partners less.
- Example project: LEO
  - "We try to be modest"

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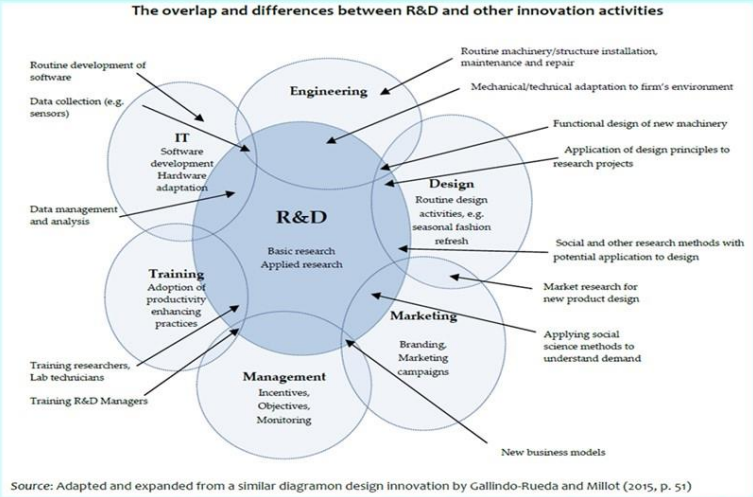
Thank you!
Questions welcome
Project social media

Appendix 2 – Presentations from external experts

***Non-R&D Innovation: Concepts, Instruments and Monitoring*, Dr Dimitrios Pontikakis**

R&D and non-R&D innovation activities



Source: Adapted and expanded from a similar diagramon design innovation by Gallindo-Rueda and Millot (2015, p. 51)

Source: Pontikakis, D. (work in progress), *Business Innovation: What it is, how to measure it and how to get more of it.*

European Commission

Who are the innovation stakeholders who tend to do R&D and tend not to do R&D?

- **R&D**: A few typically large, manufacturing firms, universities, public research institutes
- **Non-R&D**: All businesses who innovate, companies who take their first steps in routine innovation
- Non-R&D innovation particularly important for firms in **services sectors** (may explain UK and NL paradox of high-innovation but low R&D)

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Non-R&D innovation is valuable in its own right

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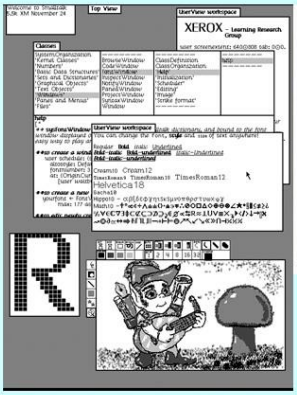
Non-R&D innovation is complementary to R&D



Photocopiers - Invented: Xerox, Popularised by: Mostly others (Henderson and Clark, 1990)
Graphical User Interfaces (GUIs) – Invented: Xerox, Popularised by: Apple/Microsoft

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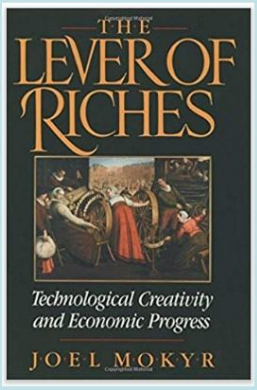
Non-R&D engineering and technology-inspired science

- Far from being exclusively or even mainly about *science-based innovation* , the historical record is littered with examples of *technology-inspired* science.
- As Joel Mokyr (1992, pp. 169-170) puts it:

"[…] **in the past 150 years the majority of important inventions, from steel converters to cancer chemotherapy, from food canning to aspartame, have been used long before people understood *why* they worked**" (emphasis in the original).



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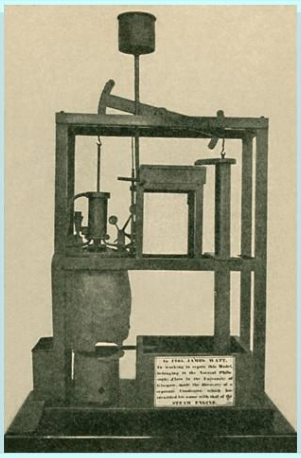
The invention of the Steam Engine

- In the 1760s an instrument maker and repairman at the University of Glasgow was asked to repair a model of the Newcomen Pump.
- Newcomen Pump was then in limited use for over 6 decades. Piston was expected to be both cold and hot at the same time, which it did poorly.
- **James Watt the repairman** - not the university professor or professional researcher – identified this as a key inefficiency and introduced a separate condenser.
- With Matthew Boulton's financing, the *Boulton and Watt* steam engine would literally power the Industrial Revolution that followed.



Burke, J. (1978), "Connections: An Alternative View of Change", BBC documentary series, https://archive.org/search.php?query=subject%3A%22connections%22%20creator%3A%22james%20burke%22

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Evidence on the value of non-R&D innovation activities

Micro-level studies

- Arundel et al. (2008, p. 30-31) find no statistically discernible differences in the **revenue performance** of R&D-performing versus non-R&D-performing **innovating** firms, suggesting that **the contribution of the two modes are comparable**.
- The **most valuable individual examples of innovations** reported by firms **can often be non-R&D** innovations (O'Brien, 2016; CIS analysis)
- Design expenditures alone contribute to **new-to-the-firm/-market innovation** by **as much 30% as R&D** (Ciriaci, 2011; CIS analysis; elasticities).
- Elasticity of **sales of new products** with respect to **marketing innovation** expenditure about **twice as strong as that of R&D** (Garcia, 2011; CIS analysis).
- Economic value from innovation **comes from bundles of R&D and non-R&D innovation** (Polder et al. , 2010; Evangelista and Vezzani, 2010; and Hervas-Oliver et al., 2015)

References
Arundel, A., Bordoy, C., Kanerva, M. (2008), "Neglected innovators: How do innovative firms that do not perform R&D innovate?", INNO-Metrics Thematic Paper, MERIT, March 31
O'Brien, K. (2016) "Is newest always best? Firm-level evidence to challenge a focus on high-capability technological (product or process) innovation", Economics of Innovation and New Technology, 25:8, pp. 747-768
Garcia, A. (2011), "The relevance of marketing in the success of innovations", IPTS Working Paper on Corporate R&D and Innovation, No. 09/2011, doi: 10.2791/75736
Ciriaci, D. (2011), "Design and European firms' innovative performance: A less costly innovation activity for European SMEs?", IPTS Working Paper on Corporate R&D and Innovation, No. 08/2011, doi:10.2791/72880

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Non-R&D innovation is complementary to R&D

- Non-R&D investments can be the precursors of R&D (e.g. IT systems that generate data for researchers to analyse).
- In biotechnology, R&D projects require large co-investments in marketing to succeed (Corrado and Hulten, 2010, p. 100)
- Novel organisational structures and business models may prompt R&D in completely new avenues
- Non-R&D engineering activities, including observations and challenges encountered during "routine" construction, installation and maintenance, are frequent inspiration for R&D
- Design thinking – incl. but not just graphics, fashion, industrial, systems design – can result in architectural innovation, inspire new business models.

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Non-R&D innovation is complementary to R&D: Why?

- Non-R&D innovation provides **the in-house apparatus necessary for R&D**, including:

→ *measurement, instrumentation, prototyping and quality control capabilities, proprietary data for experimentation and analysis, knowledge of sources of financing and investment possibilities, project scheduling, procurement, management and bargaining of contracts*

- Such complementarity **may be why firms spend more on R&D as their total innovation intensity increases** (Chuang et al, 2010, p. 45).
- Complementarities **may be why MNEs locate R&D and other innovation investments in cities where they have previously invested in other core activities of their value chain** (Belderbos et al., 2016 p. 27).
- Advancement of knowledge is **made by both the 'producers' and the 'users' of knowledge** (including knowledge workers closer to routine production)

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Production capabilities vs innovation capabilities

Figure 6.1 - Firm capabilities and their implications for production (/provision) and innovation.

			Types of technological capability A: For undertaking ongoing operations with existing forms of knowledge already in use – i.e. Production / Provision capability	Types of technological capability B: For changing and creating new forms of production/provision with knowledge not currently used –i.e. Innovation capability
Types of innovation	**Components of capabilities**			
Technological product and process innovations	Capital embodied technology	=Physical capital (Tangible assets)	*Example: More of the same machinery increases output*	*Example: (i) Better machinery increases output per unit of input. (ii) Product innovation with unique characteristics amplifies market share*
	Disembodied technology	=Knowledge capital (Intangible assets)	*Example: Learning how to better use existing tools and machinery*	*Example: (i) Own process innovation introduces new production method (ii) Licensing the use of knowledge owned by someone else (e.g. patent licensing)*
	Skills and people-embodied technology	=Human Capital (Intangible assets)	*Example: Deepening knowledge/specialisation within specific field of expertise, e.g. achieving certification, employing more experienced workers*	*Example: Learning new skills or moving to a new area of specialisation*
Organisational and marketing innovations	Organisational and relational aspects of production	=Organisational Capital (Organisation assets)	*Example: (i) Better management of employee/team performance (ii) More marketing of the same product*	*Example: (i) New business models / ways of organising production and delivery (ii) New ways to market products / services*

Source: Adapted and expanded from Bell (2009), p. 11.

- Innovation contributes to ***both production*** and ***innovation capabilities***
- In-house innovation capabilities develop slowly (if at all), as a function of the sophistication of ***production capabilities***
- ***Non-R&D innovation*** especially relevant to the accumulation of **production capabilities**

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How to promote non-R&D innovation?

- Promote bundles of *non-R&D* AND *R&D* innovation activities: bundles are more valuable, support continuous learning
- This includes bundles of R&D *and also*:

→ *innovation management; design; marketing; training; information technologies* and *non-R&D engineering*

- Promote learning between firms in the same novelty tier (e.g. new to the market / new to the country innovation)
- Subsidise human resources within firms (e.g. a first-engineer, first-programmer) and on-the-job learning
- Capitalise corporate investments in human capital

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Instruments: Sermons, Sticks and Carrots

- Awareness raising
- Regulation

e.g. accounting standards to capitalise corporate HR investments / digitalisation

- Skills development with and within firms

e.g. Centres for Vocational Excellence

- Subsidies / Tax incentives
  - For capability accumulation within firms (e.g. machinery, intangible investments)
  - For in-house non-R&D (and R&D) innovation activities (e.g. a first engineer, a first programmer)
  - For networking and inter-organisational learning

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Tailor policy mix to the needs of different business sector constituencies

Table 9.1 - Business support policy mix according to current capacity and further development needs

Capacity building / development stage → ↓Policy tasks↓	**A.** ... from no innovation to innovation that is at least ***new-to-the-firm***	**B.** ... from primarily new-to-the-firm to innovation that is at least ***new-to-the-market***	**C.** ... from new-to-the-firm and new-to-the-market to innovation that is at least ***new-to-the-world***
1. *Increase the pool of innovators*	Innovation training Innov. vouchers/microfinance Knowledge-intensive employment subsidies	Loan guarantees Public procurement Knowledge-intensive employment subsidies	R&D Subsidies R&D tax incentives
2. *Increase the intensity of innovative effort*	Favourable capital depreciation allowances	R&D Subsidies R&D tax incentives	R&D Subsidies R&D tax incentives
3. *Diversify by extending the range of innovation modes and fostering collaboration*	Promote collaboration between firms (e.g. large, industry-standard setters and SMEs) positioned along the supply chain.	Promote collaboration between firms, public service providers (e.g. extension institutes) and technical/vocational education providers	Promote collaboration in dense networks of firms, universities, public research institutes and other education and service providers.

Source: Adaptation from OECD (2014b), originally based on inputs by Martin Bell.

Source: Pontikakis, D. (work in progress), *Business Innovation: What it is, how to measure it and how to get more of it.*

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Monitoring progress

- Monitoring what:

investments, learning, outcomes (e.g. productivity)

- Monitoring how:

admin data, surveys, corporate accounts, labour stats

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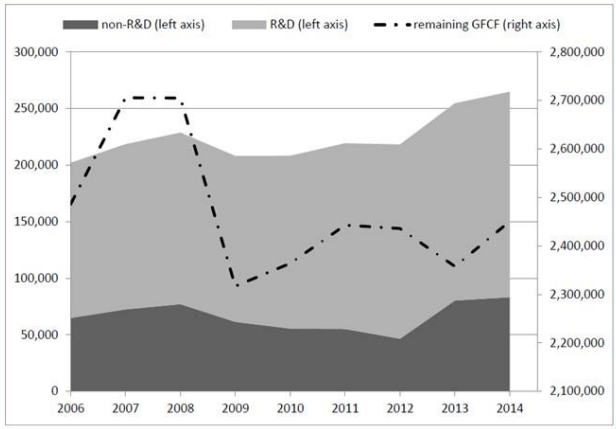
Example: Using the CIS (or a CIS-inspired survey)

EU total expenditures on business R&D, non-R&D innovation (acquisition of machinery and other external knowledge only) and remaining Gross Fixed Capital Formation - GFCF (millions of current EUR)



Source: Own elaboration of Eurostat CIS, R&D and National Accounts Data

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Example: Corporate accounts (tangible and intangible assets)

Table 8.2. – Intangible asset types, data sources and measurement assumptions

ASSET TYPE	DATA SOURCES	MEASUREMENT ASSUMPTIONS	DEPRECIATION RATE (%)
Computerised information			
Software	Recorded in SNA	Includes own use, purchased and custom made software	33
Databases	Included in SNA estimates of software investment		33
Innovative Property			
Science and engineering R&D	R&D Surveys, business expenditures on R&D (BERD) estimates	BERD	20
Mineral exploration	Recorded in SNA	R&D in the mining industry	20
Artistic originals, usually leading to copyrights and licenses	Recorded in SNA		20
New product development in the financial services industry	Input-output and supply-use tables	20% of intermediate purchases of the financial industry	20
New architectural and engineering designs	Services Annual Survey and supply-use tables	50% of purchases of architectural and consulting engineering services	20
R&D in the social sciences and humanities	Included in BERD estimates		20
Economic Competences			
Brand equity (Advertising/Market research)	Surveys of advertising expenditures; Services Annual Survey; supply-use tables	*Advertising*: purchases of advertising services Marketing: outlays on marketing services Doubled to take into account production costs and own account component	60
Firm specific resources (training/organisational structure)	Surveys of employer-provided training	Direct costs and wage costs of employee time in training for market-sector industries	40
Organisational Capital	Employment and earnings data; Services Annual Survey	*Own account*: 20% of managerial wages *Purchased*: 80% of services purchased from the management consulting company	40

Source: OECD (2013b), p. 185.

- Non-R&D innovation registers (partially) as intangible investment
- Simplest way to support non-R&D innovation: include (at least some classes of) intangibles in reimbursable allowances

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Thank you!

dimitrios.pontikakis@ec.europa.eu

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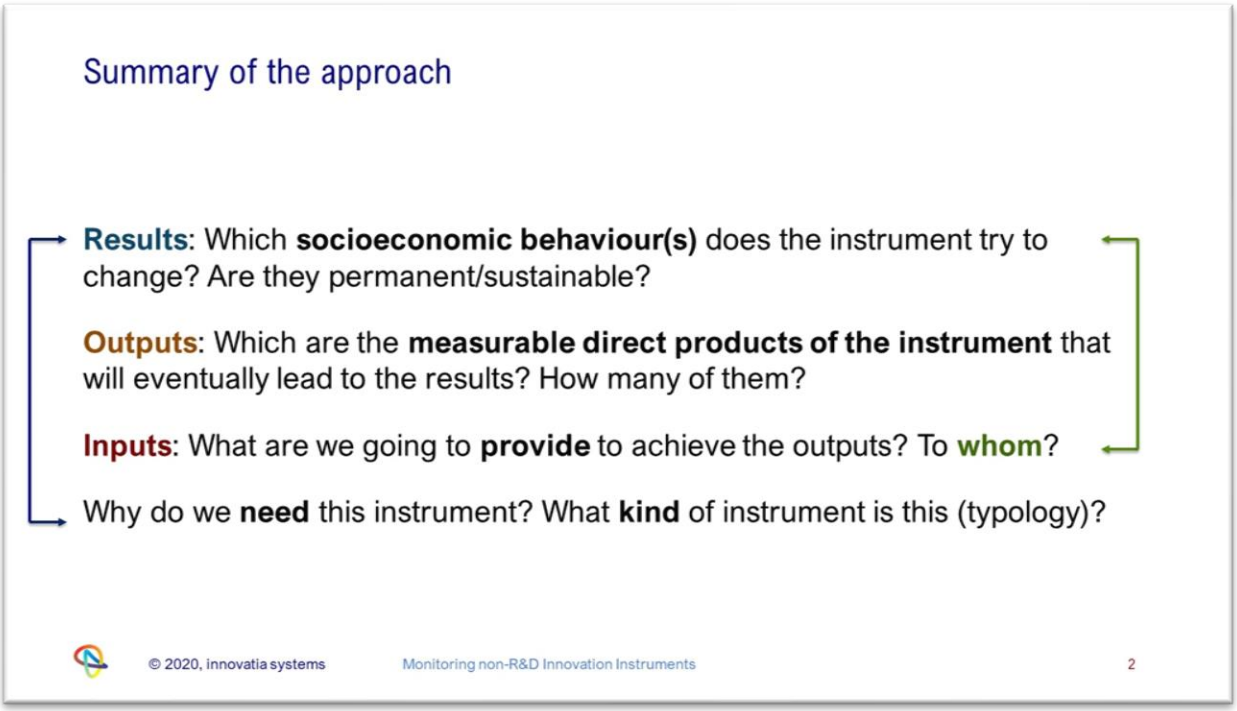
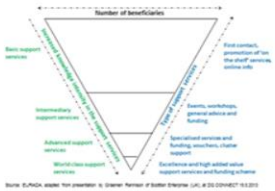
Monitoring non-R&D innovation instruments – Case studies on VIA and Co-Innovate, Dr Yannis Tolias



Typologies



Support for R&D+I

Target of support	Applied R&D	Solving local issues	Demonstrator	Transfer	Commercial exploitation	Society challenge
Objectives	Developing new concepts			Strengthening human capital		
Nature	Breakthrough innovation	Incremental innovation	Non-technological innovation	Business model innovation	Society-oriented innovation	
Technological competitiveness	Developing and leveraging new knowledge		Mainstreaming knowledge from complementary sectors		Transfer and adjustment to specific regional fabric requirements	
Relations to market	Market push	Market pull		Response to user needs	First client search	
Sector approach	Single sectors		Converging sectors		Multi-sector	
Place of innovation	In situ		Outside the enterprise • Outsourcing • Living labs / Fab labs		Open innovation	

Factsheet: VIA—Accelerate Innovative Ambitions (Netherlands)

What kind of instrument is this (typology)?	Knowledge exchange; Diffusion of new concepts; Non-technological/Business Model Innovation; All types of relations to markets; Multi-sector; In situ;
Which socioeconomic behaviour(s) does the instrument try to change?	Raise awareness of the importance of organizational innovation as an enabler for other types of innovation among the regional population of SMEs.
Which are the outputs? How many of them?	One report / beneficiary; Max 120 beneficiaries
What are we going to provide to achieve the outputs? To whom?	Fees for 1 expert, up to 12.5 kEUR; [Funding rate unknown] [Selection criteria unknown] of XXX.XXX SMEs in the Region
Underlying assumptions	Beneficiaries will pick a knowledgeable expert; Recommendations will be implemented within a reasonable time frame so they can be recorded in the statistics; Other SMEs will follow the [successful] examples and invest more in organizational innovation; Organisational innovation will eventually lead to product/process innovation;

Monitoring VIA

MEANS → ENDS

Inputs:
- Public expenditure budgeted (1.5 MEUR)
- [A pool/registry of XXX experts?]

Outputs:
- Number of SMEs supported (*Dimensions*: NACEv2, Employment Class, age,…)
- Number of Reports Delivered
- Public expenditure spent

Results:
- # of supported SMEs introducing organizational / BM innovations 12 months after the intervention ended (*Dimensions*: NACEv2, Employment Class, age,…)
- Amount of non-R&D investment by supported SMEs in organizational / BM innovation 12 months after the intervention (same dimensions)

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Factsheet: Co-innovate (The Innovation Pathway Programme)

Source: https://co-innovateprogramme.eu/support-offered

What kind of instrument is this (typology)?	Waterfall-like coupling of five innovation support instruments (ultimate focus on cross-border technology transfer for NPD in stages 4-5); Sectoral focus; Product Innovation; In situ (stages 1-3)-Open Innovation (stages 4-5)
Which socioeconomic behaviour(s) does the instrument try to change?	Increase the proportion of SMEs and micro-businesses involved in cross-border R&I collaboration within Northern Ireland, Western Scotland and the Border Region of Ireland
Which are the outputs? How many of them?	19 firms / groups of firms developing new products through cross-border collaboration projects
What are we going to provide to achieve the outputs?	17 MEUR = 1200 business status reviews >> 469 innovation audits >> 94 capability development consulting >> 70 innovation interns >> 15 B2B partnerships + 4 R&I clusters
To whom?	1400 SMEs in XX regions; Sectors: Life Sciences, Agri-Food, Health, Energy
Underlying assumptions	The initial awareness-raising campaign will generate the required number of applicants; A highly-qualified and interested SME can wait for 6 years to see a good R&I project implemented and funded; There are prospects for cross-border R&I collaboration and tech transfer; IPR regime for cross-border collaboration is clear

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Monitoring Co-Innovate

MEANS → ENDS

Inputs:
- Public expenditure budgeted (14.7 MEUR)

Outputs:
- Number of SMEs supported (*Dimensions*: geo, stage, sector, Employment Class, age,…)
- Number of SMEs collaborating with HEI/PROs (same dimensions)
- Public expenditure spent (same dimensions)

Results:
- # of supported SMEs introducing product innovations 12 months after the intervention ended (*Dimensions*: geo, sector, NACEv2, Employment Class, age,…)
- Amount R&D investment leveraged by public support (same dimensions)
- # of cross-border R&I collaborations sustained 12 months after the intervention ended.

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Appendix 3 - Good Practice documents provided by LEO and NNL

Good Practice template - PROFINET

1. Author contact information *[Technical: Contact information comes from your community profile. You can edit it by visiting your user dashboard]* *The owner of the good practice should fill in the form. If you submit a good practice, your personal and organisational profile in the Interreg Europe community will be linked to it.*	
Name:	***Michael Tunney and Peggy Falbo***
Email:	*Michael.tunney@leo.donegalcoco.ie peggy.falbo@leo.donegalcococ.ie*
Telephone:	*--353 74 9160735*
Your organisation	
Country:	*Ireland*
Region:	*Border & Western Region*
City:	*Lettterkenny*
Organisation name:	*Local Enterprise Office, Donegal County Council.*

2. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?:	*Yes*

In case 'no' is selected, the following sections appear:

Location of the organisation in charge:	*Country*	*Drop-down list*
	Region	*Drop-down list*
	City	*Drop-down list*
Main institution in charge:	*Drop-down list of organisations [Technical: it is possible to select 'other' to add a new one]*	

3. Good practice general information	
Practice image:	*Upload your own (in compliance with the copyright rules) or select one from the pool of pre-defined images. Recommended dimensions: 440 x 450 pixels, 1MB*
Title of practice:	*ProfitNet*
Has this good practice been identified in the course of an Interreg Europe project as part of	*Yes* *[Technical: Good Practices originating outside Interreg Europe projects which are relevant to the topics and validated by the Policy Learning Platforms experts will also be included in the database]*

the learning process? (i.e. to be reported under the indicator "number of good practices identified" in the progress report):	

In case 'yes' is selected, the following sections appear:

Please select the project acronym:	*PASSPARTOOL*	
Thematic objective of the practice:	*Drop-down list of the 6 specific objectives*	
Geographical scope of the practice:	*Local*	
Location of the practice	Country	*Ireland*
	Region	*Border & Western Region*
	City	*Letterkenny*

4. Detailed description	
Short summary of the practice:	*Facilitated peer learning with a strong focus on enabling in-company innovation through shared learning and enhancing management skills.*
Detailed information on the practice:	*The practice seeks to address the innovation management capability of owner amnagers of small firms.* *This is a facilitated peer learning network model used by the Local Enterprise Office in Donegal since 2008. The model was developed by the Centre for Research in Innovation Management at Brighton University, (CENTRIM) UK.* *At its core the model has the objective of increasing the innovation management capabilities of owner managers through shared learning and peer mentoring/support.* *Each group of an average of 16-18 firms meets monthly for a structured 3 hour meeting over a minimum of 18 months (number of firms plus 3 months). Each meeting has three distinct elements – individual peer learning, group learning and external expert input. All actions are recorded and agreed individual actions*

	followed up on at the following meeting. The groups rules and norms are established by the group within the first two meeitngs. *Each group is led by lead facilitator (external) and a second facilitator (Local Enterprise staff). Facilitators were trained on the Profitnet model by CENTRIM and their role is that of a facilitator of the dialogue and knowledge exchange between the group firms.* *At the end of the programme firms can progress to ProfitNet Plus. In this stage the focus is much more sharply focused on innovation within the firms. At the outset of Profitnet Plus all firms undergo an individual innovation assessment through which the capability of the firms and that of the owner managers is assessed and potential innovation non R&D innovation projects are identified and prioritised. The implemention of these innovation projects then become the focus of the group meetings over the following 18+ months.*
Resources needed:	*Two staff /facilitators per group committing three days per month. Average annual cost per group (including the lead facilitator) of €15,000*
Timescale (start/end date):	*February 2008 to June 2020/on-going*

Evidence of success (results achieved):	We believe the practice to be good as the outcomes of two evaluations showed :
	- 52% increase in participant turnover.
	- Average of 67% increase in Gross Profit.
	- 78% increase/maintenance of employment.
	- Enhanced business skills i.e. 82% business networking, 76% business strategy and 73% problem solving.
	- Improved Innovation Capabilities and Skills:
	  - 68% leadership and capacity to manage organisational change,
	  - 68% accessing and using external know-how,
	  - 66% scanning the market for new ideas,
	  - 77% reported improvements in goods/services,
	  - 70% reported increase in value-added,
	- 73% reported increase in capacity for production/service

Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*The model involves active engagement with and by owner managers of small firms over a prolonged period of time thus enabling the development of close business to business relationships and business to support agency relationships. The*

	underlying objective of increasing innovation capabilities is not pursued in an up-front manner but is the underlying or horizontal theme throughout the meetings and the peer learning. *The findings from the evaluations and the experience of the Local Enterprise Office Donegal indicate a robust programme that does not require very significant resources to deliver but which produces strong businesses impacts which would be easily replicated in other regions.* *The role of the facilitator as a facilitator of discussion and peer learning and not as a consultant providing possible solutions or answers is an aspect that other regions may wish to gain insight into.* *The model of recording agreed actions and outcomes and following these up as subsequent meetings was another effective element of the project that other agencies or regions may wish to learn more about.*
Further information:	*https://www.localenterprise.ie/Donegal/Start-or-Grow-your-Business/Grow-your-Business/Networks/Profitnet/*
Keywords related to your practice	*Peer Learning, facilitated networks, Innovation, management capabilities.*
Expert opinion	*[1500 characters]* ***[filled in by the Policy Learning Platforms experts in case good practice is published in the Good Practice database]***

Good Practice template – Co-Innovate

5. Author contact information *[Technical: Contact information comes from your community profile. You can edit it by visiting your user dashboard]* *The owner of the good practice should fill in the form. If you submit a good practice, your personal and organisational profile in the Interreg Europe community will be linked to it.*	
Name:	***Michael Tunney and Peggy Falbo***
Email:	*Michael.tunney@leo.donegalcoco.ie peggy.falbo@leo.donegalcococ.ie*
Telephone:	*--353 74 9160735*
Your organisation	
Country:	*Ireland*
Region:	*Border & Western Region*
City:	*Lettterkenny*
Organisation name:	*Local Enterprise Office, Donegal County Council.*

6. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?:	*Yes*

In case 'no' is selected, the following sections appear:

Location of the organisation in charge:	*Country*	*Drop-down list*
	Region	*Drop-down list*
	City	*Drop-down list*
Main institution in charge:	*Drop-down list of organisations [Technical: it is possible to select 'other' to add a new one]*	

7. Good practice general information	
Practice image:	*Upload your own (in compliance with the copyright rules) or select one from the pool of pre-defined images. Recommended dimensions: 440 x 450 pixels, 1MB*
Title of practice:	*Co-Innovate*
Has this good practice been identified in the course of an Interreg Europe project as part of the learning process? (i.e. to be reported under the indicator "number of good practices	*Yes* *[Technical: Good Practices originating outside Interreg Europe projects which are relevant to the topics and validated by the Policy Learning Platforms experts will also be included in the database]*

identified" in the progress report):	

In case 'yes' is selected, the following sections appear:

Please select the project acronym:	*PASSPARTOOL*	
Thematic objective of the practice:	*Drop-down list of the 6 specific objectives*	
Geographical scope of the practice:	*Local*	
Location of the practice	Country	*Ireland*
	Region	*Border & Western Region*
	City	*Letterkenny*

8. Detailed description	
Short summary of the practice:	*Five stage innovation programme with the aim of increasing the number of SME engaging in innovation across the border region and parts of eastern Scotland.*
Detailed information on the practice:	The practice seeks to increase the number of SMEs engaging in innovation, in particualr through enhancing the innovation management capability of owner mnagers of SMEs. This five year, €16.6M, INTERREG funded project between the six border counties of the Republic of Ireland, NI, Scottish Enterprise and Highlands and Islands Enterprise seeks to improve the innovation capabilities of a cohort of over 1,400 businesses. The programme is open to all existing micro, small and medium enterprises. Its priority sectors include Life Sciences, Agri-Food and Health. The programme consists of a five stage process with 1,408 businesses entering stage 1 and only 19 accessing the supports under stage 5. Stage 5 support may be given to individual companies or a cluster of companies and will be toward the further development of a new product or service, and should follow on from the initial stages of the project. Firms are initially screened using a Innovation Ready Reckoner (records key data (Stage1), a subsequent Business Status

	Review and an innovation audit(stage 2), followed by an innovation capability programme which consists of 10 days consultancy to assist a company develop its proposed project(stage3). Stage 4 consists of strategic intervention with a third level university or college over a 12 month period and stage 5 the provision of grant support of up to €300,000 at a rate of 50% . The target is to have a maximum of 19 individual firms or clusters of firms accessing stage 5 support. Stage 4 support requires a firm from one partner region to work with a third level college form another region and Stage 5 requires a minimum of two firms from two separate participating regions
Resources needed:	This is a €16.6M project over a five year period with the majority of resources focussed on stages 4 and 5.
Timescale (start/end date):	September 2017 to June 2021/on-going
Evidence of success (results achieved):	Each stage of the project has set targets and the targets for stages 1-3 and 5 have almost been achieved. Targert numbers were: Stage 1 – 1,408 businesses Stage 2 – 1,200 businesses Stage 3 – 469 businesses Stage 4 – 70 businesses Stage 5 - 19 firms or clusters. The Local Enterprise Office has responsibility for the local delivery of stages 1,2 and 3 and to date 51 firms have availed of stage 1 support(target 61), 48 stage 2 support (target 61) and 2 stage 3(target 5) in Donegal. The programme is still current and no review of the outputs and outcomes has yet been carried out.
Challenges encountered (optional):	The challenges experienced in the project include: • Too much of a focus on achieving targets for stage 4 and 5 and not seeking to address the needs of firms that do not progress. • Inability to address the needs of firms completing stages 2 and 3.

	• Lack of dedicated resources within the Local Enterprise Offices to deliver the programme. • Limited number of local firms with the necessary capability and ambition. • Limited resources of SMEs at local level as match funding is required for stages 4 and 5.
Potential for learning or transfer:	*The model/practice involves a five stage funnel-like programme through which businesses journey and receive an increasing intensity of support at each stage.* *The focus at stage 1 is on small and micro enterprises thus a cohort of owner managers not generally targeted for innovation capability development are directly engaged with.* *The supports throughout the five stages are practical and tailored to the needs of the firms.* *The cross-border nature of the co-operation between firms and between academic institutions.* *The partnership management structure involving 6 partner organisations from three jurisdictions may be an interesting structure for other cross-border regions.*
Further information:	*www.coinnovateprogramme.eu*
Keywords related to your practice	*Innovation, management capability, knowledge..*
Expert opinion	*[1500 characters]* ***[filled in by the Policy Learning Platforms experts in case good practice is published in the Good Practice database]***

Good Practice template VIA

9. Author contact information *[Technical: Contact information comes from your community profile. You can edit it by visiting your user dashboard]* *The owner of the good practice should fill in the form. If you submit a good practice, your personal and organisational profile in the Interreg Europe community will be linked to it.*	
Name:	***Sterre Koops***
Email:	koops@snn.nl
Telephone:	+31(0)50 2068 124
Your organisation	
Country:	*Netherlands*
Region:	*Groningen*
City:	*Groningen*
Organisation name:	*Northern Netherlands Provinces Alliance*

10. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?:	***Yes*** *or ~~no~~*

In case 'no' is selected, the following sections appear:

Location of the organisation in charge:	*Country*	*Drop-down list*
	Region	*Drop-down list*
	City	*Drop-down list*
Main institution in charge:	*Drop-down list of organisations [Technical: it is possible to select 'other' to add a new one]*	

11. Good practice general information	
Practice image:	*Upload your own (in compliance with the copyright rules) or select one from the pool of pre-defined images. Recommended dimensions: 440 x 450 pixels, 1MB*
Title of practice:	*[100 characters]* ***Subsidy scheme to support innovation expenditures (KEI) // Subsidy scheme to support innovation expenditures and innovation outputs (VIA)***
Has this good practice been identified in the course of an Interreg Europe project as part of the learning process? (i.e. to be reported under the indicator "number of good practices	***Yes*** *or ~~no~~* *[Technical: Good Practices originating outside Interreg Europe projects which are relevant to the topics and validated by the Policy Learning Platforms experts will also be included in the database]*

identified" in the progress report):	

In case 'yes' is selected, the following sections appear:

Please select the project acronym:	*Drop-down list of Interreg Europe approved projects* ***Passpartool***	
Thematic objective of the practice:	*Drop-down list of the 6 specific objectives:* *Research and innovation* *Objective 1.1.: improving innovation infrastructure policies* *Objective 1.2.: improving innovation delivery policies* *SME competitiveness* ***Objective 2.1.: improving SMEs competitiveness policies*** *Low-carbon economy* *Objective 3.1.: improving low-carbon economy policies* *Environment and resource efficiency* *Objective 4.1.: improving natural and cultural heritage policies* *Objective 4.2.: improving resource efficient economy policies*	
Geographical scope of the practice:	*Select ~~National~~/**Regional**/~~Local~~*	
Location of the practice	Country	*Drop-down list **Netherlands***
	Region	*Drop-down list **Groningen***
	City	*Drop-down list **Groningen***

12. Detailed description	
Short summary of the practice:	*[160 characters] This text works as a preview for the good practice and it will appear at card level.* ***The most successful SME's are those that also partake in organisational innovation. The VIA is a subsidy scheme that aids SME's in hiring an independent expert for the development and implementation of a new way or organising, a new business model, or a collaboration with other parties.***
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* **The Northern Netherlands Innovation Monitor found that there was a need among SMEs to have a subsidy scheme that funds organisational innovations. The monitor also found that the most successful SME's are those that also partake in organisational innovation. The VIA subsidy schemes stimulates SME's to further develop their organisation.** **The VIA provides subsidy for SME's to hire an independent expert for the development and implementation of a new way of organising, a new business model, or a collaboration with other parties. The main aim is to get SME's within the region to become more future-oriented and increase their**

	ability to innovate. The budget for this fund was 1,5 million E, with a maximum subsidy per application of 12.500 E. The current success rate of this subsidy scheme is 80%. The VIA embraced organisational innovation after the innovation monitor showed a strong desire among SME's to get funding for organisational innovation. **The type of organisational innovation or business model innovation is very diverse. An interesting example is the case of a medical enterprise whom this subsidy scheme helped to hire external expertise to develop a new revenue model. This allowed the enterprise to enter new (future) markets.**
Resources needed:	*[300 characters] Please specify the amount of funding/financial resources used and/or the human resources required to set up and to run the practice.* **The budget for this fund was 1,5 million E, and the costs to set up and run the practice contain about 5% of that amount.**
Timescale (start/end date):	*e.g. June 2012 – May 2014/ongoing* **2015 - 2022**
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* **Having a subsidy that supports organisational innovation was strongly desired by SME's throughout the region, and, thus, really meets a need. It also allows SME's to keep renewing and innovate their organisation to keep-up with (and stay ahead of) the fast-changing world around us.**
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* **This subsidy scheme was not accessible enough, which we are currently aiming to improve. Where it initially focussed on developments that are new to the market, they now only need to be new to the enterprise aiming to implement it. Another notable point is that those applying mention that the subsidy percentage is too low, making the aim (to lower the barrier of hiring an external expert) less accessible than desired.**
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided (if possible, specify the country, the region – NUTS 2 – and organisation to which the practice was transferred)* *[Technical: A good practice be edited throughout a project lifetime (e.g. to add information on the transfers that have occurred)]* **This good practice shows that the way you organise instruments can help you broaden your focus and help SME's with what they need to make their organisation more innovative.**
Further information:	*Link to where further information on the good practice can be found*
Keywords related to your practice	*Select from existing keywords*
Expert opinion	*[1500 characters] **[filled in by the Policy Learning Platforms experts in case good practice is published in the Good Practice database]***

Good Practice template: KEI

13. Author contact information *[Technical: Contact information comes from your community profile. You can edit it by visiting your user dashboard]* *The owner of the good practice should fill in the form. If you submit a good practice, your personal and organisational profile in the Interreg Europe community will be linked to it.*	
Name:	***Sterre Koops***
Email:	*koops@snn.nl*
Telephone:	+31(0)50 2068 124
Your organisation	
Country:	*Netherlands*
Region:	*Groningen*
City:	*Groningen*
Organisation name:	*Northern Netherlands Provinces Alliance*

14. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?:	***Yes*** *or ~~no~~*

In case 'no' is selected, the following sections appear:

Location of the organisation in charge:	*Country*	*Drop-down list*
	Region	*Drop-down list*
	City	*Drop-down list*
Main institution in charge:	*Drop-down list of organisations [Technical: it is possible to select 'other' to add a new one]*	

15. Good practice general information	
Practice image:	*Upload your own (in compliance with the copyright rules) or select one from the pool of pre-defined images. Recommended dimensions: 440 x 450 pixels, 1MB*
Title of practice:	*[100 characters]* ***Subsidy scheme to support innovation expenditures (KEI) // Subsidy scheme to support innovation expenditures and innovation outputs (VIA)***
Has this good practice been identified in the course of an Interreg Europe project as part of the learning process? (i.e. to be reported under the indicator "number of good practices	***Yes*** *or ~~no~~* *[Technical: Good Practices originating outside Interreg Europe projects which are relevant to the topics and validated by the Policy Learning Platforms experts will also be included in the database]*

identified" in the progress report):	

In case 'yes' is selected, the following sections appear:

Please select the project acronym:	*Drop-down list of Interreg Europe approved projects* ***Passpartool***	
Thematic objective of the practice:	*Drop-down list of the 6 specific objectives:* *Research and innovation* *Objective 1.1.: improving innovation infrastructure policies* *Objective 1.2.: improving innovation delivery policies* *SME competitiveness* ***Objective 2.1.: improving SMEs competitiveness policies*** *Low-carbon economy* *Objective 3.1.: improving low-carbon economy policies* *Environment and resource efficiency* *Objective 4.1.: improving natural and cultural heritage policies* *Objective 4.2.: improving resource efficient economy policies*	
Geographical scope of the practice:	*Select ~~National~~/**Regional**/~~Local~~*	
Location of the practice	Country	*Drop-down list **Netherlands***
	Region	*Drop-down list **Groningen***
	City	*Drop-down list **Groningen***

16. Detailed description	
Short summary of the practice:	*[160 characters] This text works as a preview for the good practice and it will appear at card level.* ***SME's are often too small to house the knowledge to translate ideas into innovations, but this knowledge is available, via other parties. The KEI helps strengthen SME's knowledge position, by subsidising SME's to hire external expertise.***
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* **It was found that many knowledge institutions and other organisations possess information that can be very valuable to SMEs. Yet, much of that knowledge never reaches the SMEs, making them not as knowledgeable as they could be. Because of this gap, the subsidy scheme KEI was developed, which helps to strengthen the knowledge position of SMEs. This subsidy scheme helps an SME to get answers to a knowledge question via interaction with another company or knowledge institution.**

	The KEI offers subsidy to SME's to hire a PhD for a newly developed position, or hire an employee from another SME, a bigger enterprise, or knowledge institution, and place them in a new position. It also offers subsidy for the secondment of their own employees within the EU. The budget for this fund was 4,5 million E. The current success rate is 80%, that is the percentage of the applications that have applied for this subsidy so far and have been approved. When hiring a PhD, the contract has to entail a minimum of three months and a maximum of 48 months. The subsidy covers between the 40-50% of the eligible costs. **The main goal of this scheme is to strengthen the knowledge position of the enterprise; hence, they are responsible for finding the expertise they deem valuable for their development. When seconding an employee, it is vital he or she gains knowledge that they can later apply within their own organisation. Also, when other experts are hired, they need to directly transfer their expertise and innovative knowledge to a permanent employee. The permanent employee should be capable to continue the project by applying the knowledge independently.**
Resources needed:	*[300 characters] Please specify the amount of funding/financial resources used and/or the human resources required to set up and to run the practice.* **The budget for this fund was 4,5 million E, and the costs to set up and run the practice contain about 5% of that amount.**
Timescale (start/end date):	*e.g. June 2012 – May 2014/ongoing* **2017 - 2020**
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* **Careful evaluation showed that the KEI-subsidy scheme indeed improves the knowledge position and the sustainable innovation capabilities of the SME's in our region. Within the range of subsidies that SNN offers, the KEI is a valuable addition that focusses on non-technological innovation, such as organisational and market innovation. It creates the opportunity to hire expertise which would, otherwise, be too costly. It does so via an efficient (low administrative effort) and accessible (demands little basic knowledge and time) subsidy scheme. Also, it is accessible for a wide variety of sectors.**
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* **One of the main concerns regarding this subsidy scheme is the low awareness of the existence of this scheme among the target group (SME's). There is also some doubt on how innovative some projects are. The application is assessed based on objective and rather uncomplicated criteria. It is conceivable that more intricate**

	criteria will help to assess the innovative aspect stricter. Lastly, the focus might be too much on knowledge exchange and guarantee, and less so on actual innovation. It mainly implicitly assumes that the knowledge gained will also lead to actual innovation
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided (if possible, specify the country, the region – NUTS 2 – and organisation to which the practice was transferred)* *[Technical: A good practice be edited throughout a project lifetime (e.g. to add information on the transfers that have occurred)]* *This good practice shows that the way you organise instruments can help you broaden your focus and help SME's with what they need to make their organisation more innovative.*
Further information:	*Link to where further information on the good practice can be found*
Keywords related to your practice	*Select from existing keywords*
Expert opinion	*[1500 characters]* ***[filled in by the Policy Learning Platforms experts in case good practice is published in the Good Practice database]***