

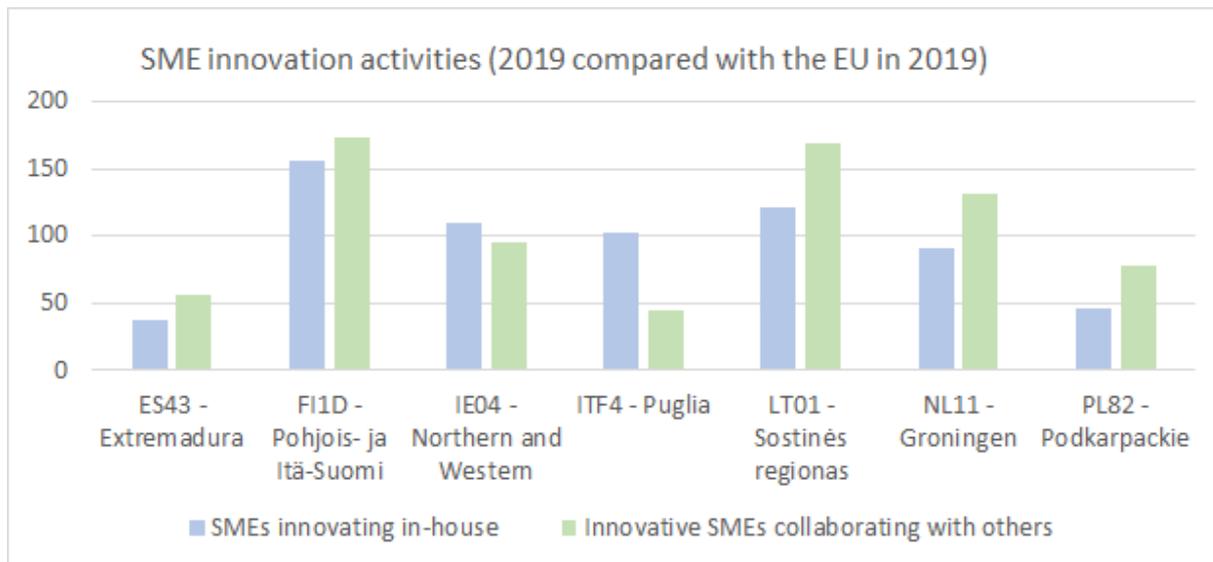
# PASSPARTOOL

## Thematic Workshop 2: SME Innovation

### Process, outcomes and lessons

#### 1. Aim and introduction

The PASSPARTOOL Thematic Workshop 2 (TW2) addressed the topic of “SME Innovation”. The topic was chosen for a variety of reasons, including economic significance, lack of clear definitions that complicate uniform measurement, and a lack of data on of SME innovation across regions. First, small businesses are an increasingly important driver of economic activity throughout many European regions. Despite their importance, much of the research on innovation is concentrating on large firms or solely on small high-growth technology-oriented firms. The majority of small businesses, who are not high-tech, are often left out in these studies. Second, as our understanding of innovation evolved from a very technology-focused and R&D-driven perspective into a broader conceptualization, a better understanding of SME innovation is becoming more essential and relevant. At the same time, critics of overly broad innovation conceptualizations have described innovation “‘as too fuzzy’ a concept to be measured and accounted for” (OECD, 2019). To allow a more precise differentiation, it is commonly suggested to differentiate between innovations that are more technical (R&D-driven) versus non-technical (non-R&D driven). For the purpose of TW2, we defined SME innovation activities to describe all activities that “are intended to result in an innovation” (OECD, 2019) and ‘SME innovation’ as a new or improved product, business process, or business model, that is “introduced on the market or brought into use by the firm” (OECD, 2019). Products refer to goods and services as well as combinations of both, while business processes cover supporting activities and operational changes. Third, there is a lack of adequate data on SME innovation that makes it hard to develop effective policies. Hence, there is a need for monitoring of SME innovation to understand the challenges related to SME innovation, particularly on the ‘soft aspects of innovation’. Previous research indicates that SMEs are often facing substantial obstacles to pursue innovation, and go unnoticed in standard (national) reports that are aimed at hard measures like R&D expenditures and patent applications (Gupta and Barua, 2018). These obstacles are relevant for the PASSPARTOOL partners as they provide an insight into the communalities and differences of SME innovation challenges. For example, financial- and knowledge-related obstacles, can vary substantially across regions. Unfortunately, there is only little information available that allows us to investigate regional differences in sufficient detail. The European Innovation Scoreboard 2020 provides some general information about regional variations in SME innovation activities at the NUTS 2 level (see Figure below).



We observe relatively high scores of ‘SMEs that innovate in-house’ for the regions Pohjois- ja Itä-Suomi (Northern and Eastern Finland), Sostinės regionas (Capital region of Lithuania), Puglia, and Northern- and Western Ireland. With respect to ‘Innovative SMEs collaborating with others’ we observe that Pohjois- ja Itä-Suomi, Sostinės regionas, and Groningen score relatively high. We observe relatively low scores for Extremadura, Puglia and Podkarpackie. SMEs (between 10-49 employees) active in regions with lower scores experience greater difficulty in stimulating SME innovation, because they are more likely to experience a lack of internal/external finance, lack of qualified employees, lack of collaboration partners, difficulties in obtaining public grants or subsidies, face greater uncertainty in demand, and higher competition (see CIS data).

PASSPARTOOL partners identified several challenges related to monitoring SME innovation:

1. To understand how to measure SME innovation because existing data largely ignores smaller businesses;
2. To understand how to connect SMEs such that they are willing to share information on their innovation activities;
3. To understand how innovation policies can be evaluated to assess their impact on SME innovation.

The thematic workshop 2, and its preparatory activities, attempted to address these challenges. Significant effort went into framing the definition of SME innovation; the OECD definition appeared useful but still requires nuance to be applicable to the PASSPARTOOL partners. TW2, which was planned in August 2020, had to be conducted online due to the COVID-19 pandemic, on two separate sessions on the 28<sup>th</sup> and 29<sup>th</sup> of October. In its structure, it pursued three interrelated aims:

- To build a shared and more nuanced understanding of SME innovation, addressing the questions raised by project partners
- To identify interesting practices/experiences within the PASSPARTOOL consortium on measuring SME innovation, as well as the region-specific challenges

- To explore the implications for monitoring and evaluating activities aimed at promoting SME innovation.

This document summarises the preparation, the implementation, and the outcomes of TW2 and is organized as follows: Section 2 provides a conceptual framework to navigate the different facets of SME Innovation, how the partners measure it, and what challenges the SMEs face in their region. Section 3 introduces some examples of SME innovation policies implemented by the Northern Netherlands Alliance (PP4), and how it evaluated the effectiveness of monitoring activities regarding SME innovation. Section 4 provides the outcomes of TW2, in which a set of good practices were selected and an in-depth reflection on monitoring SME innovation was conducted. Section 5 provides some policy implications and conclusions.

## 2. SME Innovation: Conceptual Insights for PASSPARTOOL

SME innovation activities describe all activities that “are intended to result in an innovation” (OECD, 2019) and “SME innovation” as a new or improved product, business process, or business model, that is “introduced on the market or brought into use by the firm” (OECD, 2019). This encompassing definition includes process innovations, service innovations, product innovations, and business model innovations (i.e., the firm’s introduction of new ways of earning money). As discussed in TW1, it may include societal or social innovations that not necessarily strive for commercial goals.

All participants were asked to reflect on the OECD definition. Most of the partners agreed with the definition, but several indicated some nuances were necessary before being applicable to each region. For instance, that SMEs attitudes toward innovation can vary significantly across countries, regions, and sections and that those differences matter significantly when it comes to policy decisions. Others indicated that the type of innovation should be specified (e.g. product innovation, technological innovation, business model innovation), and for what purpose (increase efficiency, reach new customers, increase revenues and profits, etc.).

We also asked the PASSPARTOOL partners to indicate how they currently measure SME innovation (with a focus on the soft/non-R&D driven innovation that is central to the PASSPARTOOL project). Most partners collected – apart from secondary data from national monitors – their own individual primary data. Partners indicated a strong need to overcome the less adequate national data that relies on large firms, and that often ignores micro-firms (less than 5 employees). This absence is troublesome as most economic activities and jobs are created by these micro-firms (e.g., in Extremadura more than 85% of the firms has fewer than 5 employees). Partners measured soft innovation as follows:

### 1. Rate and extent of (soft) innovations

- Product/service, process, environmental, non-technical, organizational, marketing innovations

### 2. Determinants of creation & development of (soft) innovation

- SME characteristics (age, size, industry), collaboration activities (PPP), human capital (training), technology use, subsidy use and (co)financing, R&D activities, acquisition of external knowledge, barriers to innovation, societal orientation, etc.

### 3. Impact of (soft) innovation on competitiveness & welfare

- HARD: innovation performance, profitability, growth, export
- SOFT: realized SDG innovations (climate change, clean water, clean energy, well-being), effectiveness of policies & programs

We, finally, asked the PASSPARTOOL partners to indicate the most important challenges that they face with regard to SME innovation in their corresponding region. The most common challenges that hinder SME innovation include:

- Low awareness of the importance of innovation
- Innovation is considered too costly;
- Lack of financial and time resources available to SMEs to innovate;
- Lack of qualified/suitable personnel (lack of engineers, mismatch between supply and demand of specialists)
- Increasing regional disparities, high potentials and innovative firms leaving region;
- Fragmented innovation support systems (lack of innovation support services and counselling, lack of financial resources, and lack of coherent approach to develop business innovation capacity)

### 3. Monitoring SME Innovation: The Northern Netherlands Innovation Monitor

In order to address the effectiveness of monitoring of SME innovation, Northern Netherlands Alliance (SNN) (PP4) first presented its strategy to push SMEs upward on the innovation ladder. Then, the University of Groningen (AP5) presented the details in how they collect the data to measure SME innovation, and the intention to use the data in the future to also facilitate (give advice on which subsidy scheme fits best according to the SMEs individual data), to inspire (confronting SMEs with new and relevant themes like blockchain, nanotechnology, 3D printing), and to connect (helping SMEs to find each other based on existing skills and knowledge, and shared interests).

The Northern Netherlands Innovation monitor, which has been jointly executed for 5 years by Northern Netherlands Alliance (SNN) (PP4) and University of Groningen (AP5), was selected in the TW1 as a good practice. During the TW2 it served as a showcase to explore how to monitor SME innovation. Hence, the innovation monitor was described in more detail, focusing on the soft innovation measures that are collected during the online survey held annually among 8000 SMEs. The soft innovation measures include (a) organizational innovation, (b) societal orientation, (c) human capital, and (d) ecosystem thinking.

As many partners face difficulties to convince SMEs to share their innovation activities, the TW2 zoomed in on the motivations to *not* participate and what solutions were tried by the University of Groningen (AP5) to tackle non-response.

Challenge	Reasons to not participate	Solutions
Motivating SMEs to join initiative and share SME innovation data	<p>“No time available / boring”</p> <p>“No added value for me”</p> <p>“I do not support government bodies”</p> <p>“I am not innovative or too young/small”</p> <p>“I cannot access the link”</p>	<p>Limit maximum time spent: quality &gt; quantity Introduce new relevant themes</p> <p>Make monitor more relevant</p> <p>No real solution; improve reputation &amp; try to connect</p> <p>Stress that everyone can join, and that all SMEs matter</p> <p>Provide easy-to-understand emails, add URLs</p>

AP5 indicated that the most relevant aspect is to increase the relevance of the survey to SMEs such that SMEs see the added value and importance of participation. To increase the relevance of the Innovation Monitor, AP5 conducted the following tactics:

1. Use simple language (no jargon) (reduce university-business distance, and improve SME's understanding of advice)
2. Increase familiarity & likeability: connect to partners and announce survey on events
3. Send benchmark report (comparison with other SMEs) to each respondent
4. Send subsidy report (based on individual data) to each respondent
5. Value loyal respondents ('personalized' invitation that stresses the partner's appreciation for SME's past time investments)
6. Demonstrate the relevance (stress that results are used as input for altering regional policies)
7. Increase incentive (free ticket for business event)
8. Invite SMEs as speakers to event (reduce university-business distance)

The tactics of strategy 2, 3 and 8 were deemed most effective in stimulating participation, based on the interpretation of AP5.

#### 4. Methodology: Analysing Possibility to Use Monitor to Collect SME Innovation

The showcase of the Northern Innovation Monitor was followed by a reflection of an expert (arranged by LP). The expert discussed some of the possibilities to further improve the monitor by (a) using (European) standards for key enabling technologies and societal challenges as used in H2020, and innovation barriers as used in CIS, (b) improving sampling techniques, and (c) labelling of monitor (barometer instead of monitor).

Subsequently, the Northern Netherlands Alliance (PP4) arranged break-out rooms in which groups – consisting of 4 persons from multiple partners – discussed whether the setup and

approach of the innovation monitor, as used by Northern Netherlands Alliance (PP4) and University of Groningen (AP5), would be applicable in the region of interest and/or whether adjustments had to be made. From this discussion it appears that some adjustments are necessary, and that a reputation needs to be built up before SMEs trust the organization and are willing to contribute. Also, some groups indicated that the university-business distance is substantive, and that seeking polytechnic or vocational (more business-oriented) schools would be more effective.

## 5. Reflection on Monitoring SME Innovation: Three Directions

The discussions held in preparation and during TW2 allowed some policy reflections. It helped to identify three (policy) directions to measure SME innovation, namely:

### Measuring SME Innovation is complex but necessary for effective policy making

- SME innovation is often less visible (due to the soft nature), but highly important due to its economic significance. Measuring it will allow to better understand and steer SMEs behaviour and stimulate their innovation awareness, motivation and ability.
- Adopt a “regional look” and identify the “purpose” of innovation,” to get more nuanced and enriched perspective on SME Innovation;
- Collect primary data on SMEs to augment existing secondary data (e.g., national surveys). The collection helps to gain region-specific insights, and include SMEs (especially micro-firms) that are largely ignored in national monitors.
- Use a variety of measures (organizational innovation, human capital, societal orientation) to assess the rate of innovation, the determinants of creation & development of (soft) innovation, and the impact of (soft) innovation on competitiveness & welfare.

### Convince SMEs to share information on SME innovation through relevance:

- Understand SMEs’ challenges by visiting and listening to them (company visits, attend business events, surveys to assess needs and satisfaction)
- Build awareness and a reputation by investing in the relationships with SMEs: come out of the ivory tower and engage with SMEs
- Make use of clever data analyses and offer targeted and specialized feedback that respond to firms’ actual needs.
- Demonstrate the actions that result from SMEs sharing their innovation data (policy changes, addressing specific information needs)

### Invest in long-term mutual relationships based on shared interests

- Measuring SME innovation becomes more useful when measured across several years, as patterns and trends emerge, and allow for (long-term) policy impact evaluations.
- Relationships are only maintained when each party gains benefits from the exchange; hence, organizations should start by addressing a common benefit that they share with SMEs: stimulating their innovation power.
- Focus on small steps to further improve the relationship with SMEs, and focus on helping SMEs to prosper. SMEs will reciprocate and share information if they see the added value of the exchange.

- Demonstrate the impact (and growth) that results from the monitoring of SMEs innovation (e.g., regional growth, improvements in regional innovation capability, attracting highly qualified personnel, attracting financial investors).

In sum, TW2 provided the opportunity to articulate the policy rationale for SME innovation, to exchange experiences among partners about the applicability of an SME innovation monitor, to focus on the challenge to convince SMEs to share SME Innovation information with organizations.

SME innovation is considered highly relevant in the regions of each of the PASSPARTOOL partners. At the same time, it emerged as extremely difficult to monitor, both because official national statistics are currently unsuited at capturing SME innovation and because the intangible ('soft') outcomes of SME innovation are inherently hard to measure. In the TW2, we have discussed several solutions that allow for a long-term measurement of SME innovation.

## References

CIS. Community Information Survey. Available at: <https://ec-europa-eu.proxy-ub.rug.nl/eusurvey/home/helpauthors>

Gupta, H., & Barua, M. K. (2018). A framework to overcome barriers to green innovation in SMEs using BWM and Fuzzy TOPSIS. *Science of The Total Environment*, 633, 122-139.

OECD (2019). Oslo Manual 2018. Available at: <https://www-oecd-org.proxy-ub.rug.nl/science/oslo-manual-2018-9789264304604-en.htm>

## Presentations