

# D.3.3.1 TESTING METHODOLOGY GUIDELINES

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**Working Package 3 Testing**

**Version 21**

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## 1. Introduction

### a. The Green mind project

The transnational challenge of Green mind project is the development of economic competitiveness and innovation in the green and smart mobility industry, by strengthening regional and transnational cooperation between businesses, research bodies and authorities.

More in detail, Green mind aims at:

- testing new market intelligence, public funding screening, B2B matchmaking services for SMEs
- building a transferable model of the tested services for clusters and agencies
- setting up a transnational innovation network involving authorities, business and research sector
- implementing a transfer-programme targeted to clusters and agencies to foster their transnational activities
- delivering a policy support programme to mainstream the project results based on the Smart Specialization Strategies of the involved regions

Being active in a context of fast technological advancements and stricter environmental policies, Green mind has the objective of strengthening the transnational activities of clusters and agencies to support SMEs systems in exploiting the market opportunities and tapping the raising demand for green and smart mobility products and services in key mobility sectors such as transport and logistics, automotive, energy, and IT.

More specifically, Green mind focuses on the following products and services: clean fuels and infrastructures, green and automated vehicles, green and automated vehicles, Mobility as a Service, new business models for green & smart mobility.

Green mind's transnational approach lies in a joint learning, knowledge sharing and capacity building process for innovation in the MED area and involves eight partners from eight different regions in the Mediterranean, these are– Emilia Romagna, Central Macedonia, Andalucía, Occitanie, Jadranska Hrvatska, County of Istria, Sarajevo, and Vzhonda Slovenija.

### b. Purpose of the Testing Work Package

In order to fulfil the above mentioned objectives, the testing and piloting activities of Green mind project has been structured in a Testing Work Package the purpose of which is analysed in detail in the following section 2.

### c. Scope of the Methodology for Pilots Implementation

The main scope of this document is to provide a concise and sound step-by-step technical analysis of the methodological framework for pilot setup and implementation within the Green mind project, so as the processes and the outcomes of the project to become fully replicable and transferable.

More specifically, this document includes the description of all processes of the Testing Work Package. These processes are categorized under one of four distinct categories. These categories are:

1. Service Pilot Set-up
2. Service Pilot Testing
3. Service Pilot Evaluation
4. Transnational Network Preparations

Every process is analyzed to its constituents and specific guidelines are presented. Therefore, all activities and their deliverables are presented in-depth.

#### d. Document's targeted audience

This Methodology for Pilots Implementation focuses on the following audiences and the accomplishment of the respective relevant objectives:

- Green-mind consortium partners: as a tool for the optimal coordination and proper development of all pilot related activities in each Green-mind region
- Stakeholders, and more specifically the SMEs: as a guide through-out the implementation of pilot development and testing

#### e. Document structure

In the next parts a thorough outline of the Testing Work Package is offered. Then, the document's three core sections are analyzed, namely: setting-up the pilots, testing the pilots, and evaluating the pilots. Finally, the methodological guidelines for the preparation of a transnational innovation network are presented and elaborated.

Whenever is necessary, the most relevant flowcharts supplement the methodological suggestions.

#### f. Deliverable status

This document is the first version of the proposed methodological framework that has to be followed within the Green mind project.

The methodological framework is consisted of a **step-by-step** technical analysis of the processes that form the Testing Work Package and thus it has to be specified in collaboration with other partners and most importantly with the final users (SMEs). This can become possible through a process of exchange of opinions and ideas about the applicability and correctness of the processes that are described in this document. As this process is dynamic, the partners' and final users' proposals should be taken seriously under consideration and exploited producing updated versions of the current methodology that will be delivered in the future.

This fact leads to a better analysis of the guidelines and constituents that are presented and in a more efficient implementation of the guidelines in the future.

More specifically:

- The pilot implementation methodology requires feedback from deliverables with deadlines that expire after D.3.1.1's deadline. Such an example is deliverable "3.2.2 Preliminary study of the services that SMEs require and need". Having produced and delivered D.3.2.2's requirements facilitates the clear identification of who is a green and smart mobility stakeholder, as well as what means to be one, what are their needs, and how to engage

them properly and involve them meaningfully through-out the project's processes and for the project's needs (i.e. see transnational network)

- The service pilots require feedback from several deliverables with deadlines that expire after D.3.1.1's deadline. These are: "D.3.2.3 Preliminary market analysis", "D.3.2.4 Public funding preliminary listing", and "D.3.2.5 Analysis of B2B fairs". The outcomes of said deliverables influence the structure and essence of the three pilot services directly as they consist of material relevant to the market under analysis, and the existing B2B initiatives and public funding opportunities, in other words, it discusses concepts that lie at the heart of Green mind's operations
- The pilot evaluation requires insight from the implementation of the pilot services (see Service Pilot Testing). The outcomes of testing will define the exact concepts and analytical frameworks within which the evaluation will be performed – whenever the framework of analysis is not predetermined by the needs of the project or the process

In order to facilitate all the aforesaid requirements and produce a sound and clear methodological framework, every step of the three core Green mind phases should be implemented and catalogued in-depth, in detail, and with extreme care. That is why an agile approach is adopted in favor of a waterfall one.

In contrast to the waterfall technique which provides a sequence of distinct steps from setting the requirements to validating the outcome with no intermediate breaks for feedback, the agile approach offers the advantage of regular corrective iterations (Figure 1). Therefore, the concept is developed and assessed as it is developed, in other words testing is part of the process and not a distinct entity. This logic provides extreme levels of flexibility, as well as enhanced quality for the produced outcome.

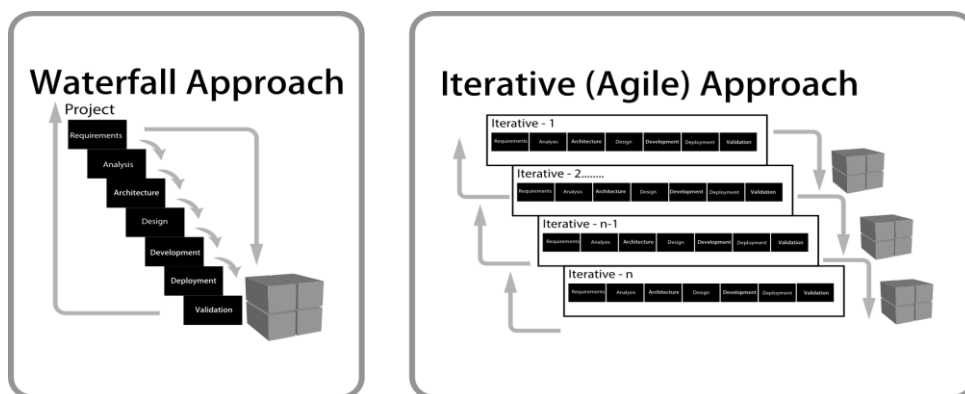


Figure 1. The Waterfall and Agile Approaches in Management

After each step an updated version of the methodology will be produced in order the final outcome to be a solid and detailed methodological framework that can be transposed and implemented in similar cases in other regions of the Med and EU areas.

## 2. The Testing Work Package

The Testing Work Package (WP3) has the aim of shaping and demonstrating new services for SMEs active in the green and smart mobility industry in the MED area. These services will benefit SMEs in multiple levels, as they intend to support their competitiveness, innovation capacities, and international visibility at the same time.

Alongside with the Transferring Work Package (WP4), WP3 lies at the centre of Green-mind's operations in terms of importance, and allocated time and budget. More specifically, WP3 is responsible for the conceptualization, development, implementation, and evaluation of Green-mind's most important outputs, the service pilots, the model, and the transnational network.

WP3 consists of five distinct activities. These are:

- A.3.1** Methodology for Pilots Implementation
- A.3.2** Pilots Preparation and Planning
- A.3.3** Testing SMEs Services
- A.3.4** Pilots Evaluation and Service Model
- A.3.5** Green-mind Transnational Innovation Network

More in detail, A.3.1 refers to developing structured guidelines for the set-up, running, and coordination of the pilot activities. In A.3.2 the partners formulate the necessary knowledge background upon which Green-mind will develop its processes. Here, the partners exchange information about their experience, identify the needs of their beneficiaries, the SMEs, analyse the market, identify existing public funding and matching opportunities, and start involving the necessary stakeholders. This preparation stage is crucial for the optimal and unhindered development of A.3.3, the testing of the services, as its final outcome is a transnational pilots plan. In A.3.3, the plan is tested in each country in close collaboration with selected green and smart mobility SMEs and a transnational innovation network is formulated. A.3.4 is responsible for evaluating A.3.3's produced results and constructing a transferable model for general use in the MED and EU areas. Finally, A.3.5 refers to online and physical events in regards to the transnational network and the exchange of information between project partners and stakeholders.

Upon the completion of WP3, three main outputs should be delivered. These outputs are:

- Output 3.1** the delivery of three types of services to 200 MED SMEs
- Output 3.2** the development of a transferable model of transnational services for SMEs
- Output 3.3** the creation of a transnational innovation network for SMEs

Figure 2 that follows presents a brief, yet illustrative, outline of the flow of activities from setting-up the pilots, to the preliminary analyses, the pilot testing, and the evaluation of the pilots. A more comprehensive of the aforesaid activities and their mechanics is presented right after in figure 3.



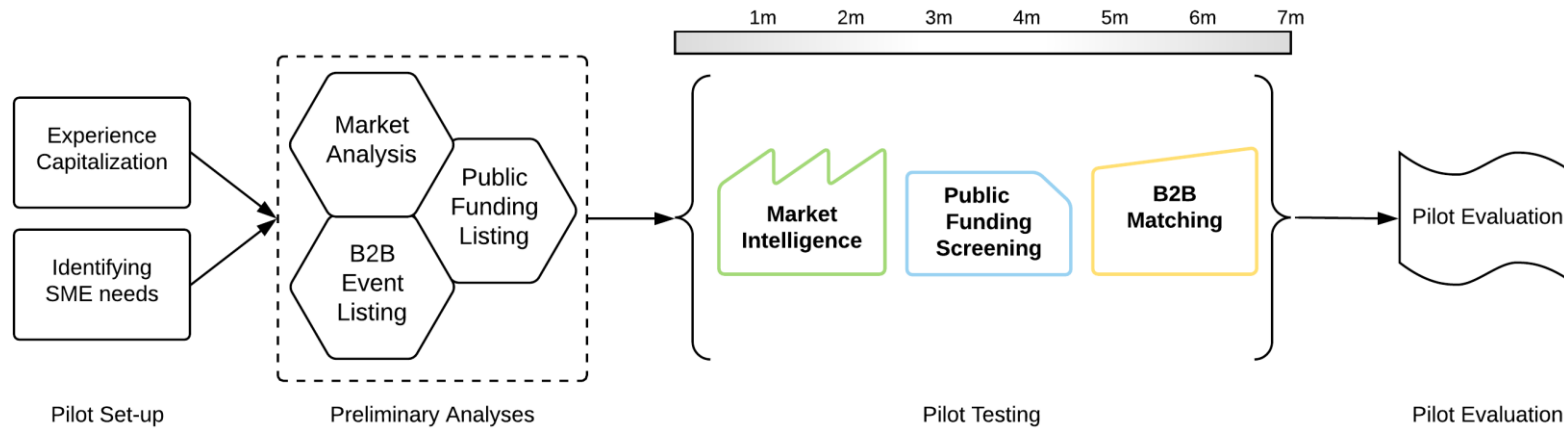


Figure 2. The flow of processes during pilot activities

## Pilot Testing

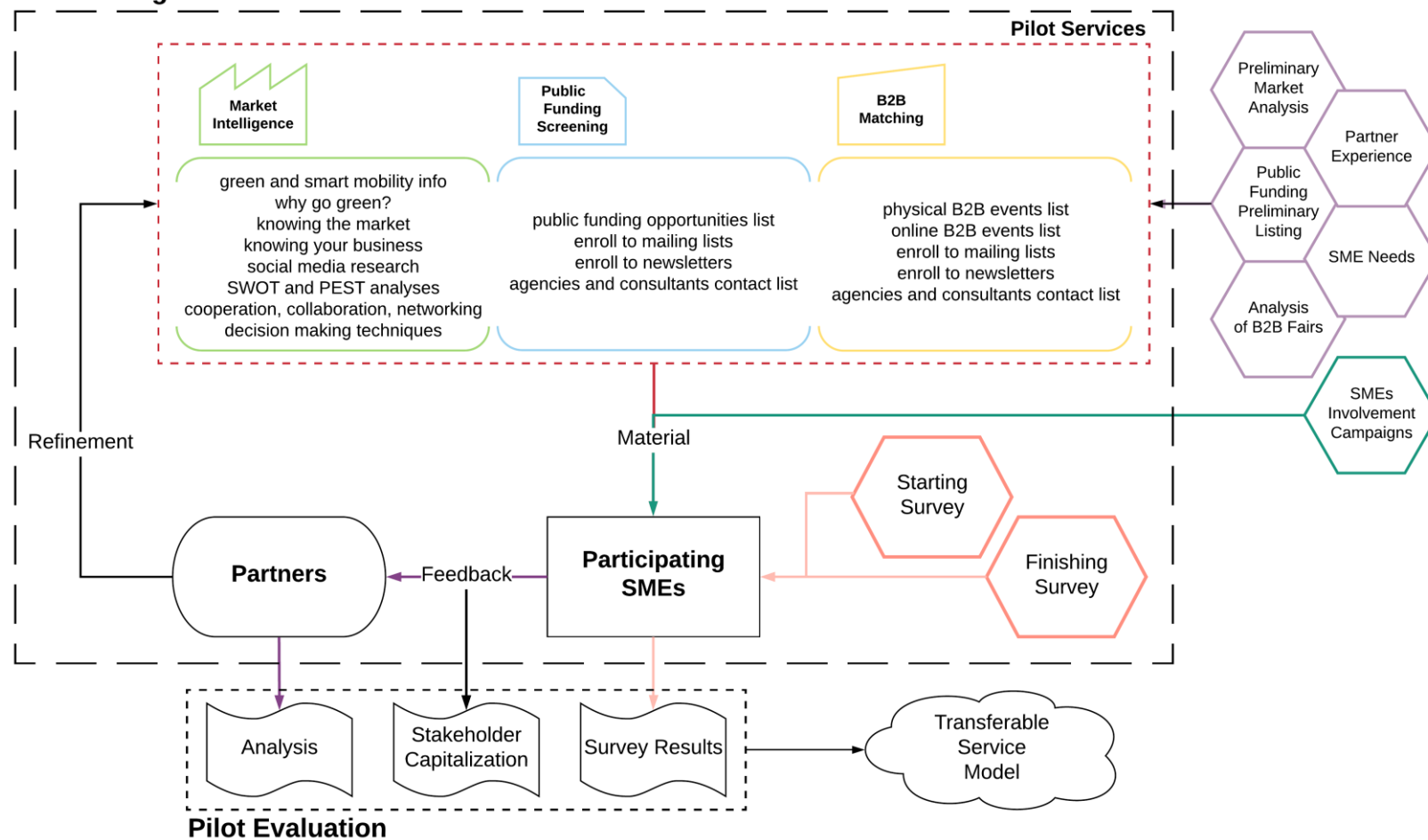


Figure 3. The mechanics of Pilot Testing

### 3. Service Pilot Set-up | Methodology

#### a. Pilots implementation methodology

Here a joint and detailed methodological framework for pilot implementation from start to end is developed. This consists of detailed step-by-step guidelines for all phases of set-up, testing, and evaluation of the pilots. The methodology is divided into four core areas: service pilot set-up, service pilots, service pilot evaluation, and the preparations of the transnational innovation network.

- Service pilot set-up consists of the following key parts:
  - The pilots' implementation methodology
  - The pilots' preparation and planning
    - The capitalization and systematization of previous experience and relevant projects
    - A preliminary study of SMEs needs and the services they require
  - Stakeholder involvement
    - Stakeholder involvement in pilot activities
    - SMEs involvement campaigns and local workshops
- Service pilots are divided into the following areas:
  - Market Intelligence Service
    - What is Market Intelligence
    - Preliminary Market Analysis
    - Market Intelligence Service Pilot Testing
  - B2B Matching Events
    - What is B2B Matching
    - Preliminary Listing of B2B Matching events/sources
    - B2B Matching Service Pilot Testing
  - Public Funding Screening
    - What is Public Funding Screening
    - Preliminary Listing of Public Funding sources
    - Public Funding Screening Service Pilot Testing
- Finally, service pilot evaluation is divided into the following areas:
  - Pilots evaluation
    - Survey Results Analysis
    - Analysis of the Pilot Testing Process and its Results
    - Feedback from Stakeholders and Capitalization Events
  - The Service Model
    - Transferable Service Model for SMEs Services in the Green and Smart Mobility Industry

## b. Pilots preparation and planning

All actions and processes in pilots' preparation and planning are crucial for the identification, development and evaluation of the pilot testing phase. In preparation and planning, all specific points regarding the participants, stakeholders or otherwise, and the relevant services, market intelligence, B2B matching and public funding screening, are defined clearly.

### Capitalization and Systematization of Previous Experience and Relevant Projects

In order to explore the level of knowledge and experience regarding green and smart mobility industry amongst the partners of Green mind a questionnaire is developed. More specifically, the questionnaire assesses the level of partner knowledge in matters of the green and smart mobility industry (i.e. clean fuels, transport infrastructure, low carbon economy products/services, green and automated vehicles, applications, services, and enterprises active in the Mobility as a Service sector, new business models), and the services under focus (market intelligence, B2B funding, and public funding screening). The questionnaire is supplemented by a brief section where the relevant literature is reviewed and all technical terms are defined.

The questionnaire is disseminated to the partners, and they, in turn, offer their insight about all green and smart mobility areas. The responses are categorized in two different categories:

- the level of knowledge/experience about green and smart mobility, and
- the level of knowledge/experience about the services

Each category is divided into three levels of knowledge/experience. Finally, a report in which all answers are briefly presented, combined, categorized, and discussed in meaningful ways is written<sup>1</sup>.

### Preliminary Study of the Services that SMEs Require and Need

A questionnaire is developed and disseminated amongst partners and aims at identifying what are the needs and requirements of SMEs in the MED area and each participating territorial context, and what types of services these SMEs require so as to increase their innovative and competitive potential. The questionnaire is supplemented by a thorough literature review in regards to the nature of SMEs and their characteristics in regards to innovation.

In response, country and region-specific information and ideas are gathered, analysed, and connected to the theoretical state-of-the-art to develop an initial framework of analysis.

Local SMEs are contacted and engaged in all participating territorial contexts. Based on these contacts and the developed framework, a SME-specific questionnaire is developed and disseminated to a certain number of SMEs. The number is agreed beforehand and it is the same (give or take) for all territorial contexts. Finally, a report in which all answers are briefly presented, combined, categorized (industry and region-wise), and discussed in meaningful ways is written<sup>2</sup>.

## c. Stakeholder Involvement

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<sup>1</sup> For more information, please refer to deliverable 3.2.1's report

<sup>2</sup> For more information, please refer to deliverable 3.2.2's report

Here, an outline of stakeholder participation during pilot implementation and a presentation of campaigns and events for stakeholders are presented.

#### Stakeholder Involvement in Pilot Activities

Each pilot activity, from the set-up to the evaluation of the results, has different needs and therefore requires the involvement of different stakeholders.

Figure 4 presents an illustration of stakeholder involvement through-out the whole process.

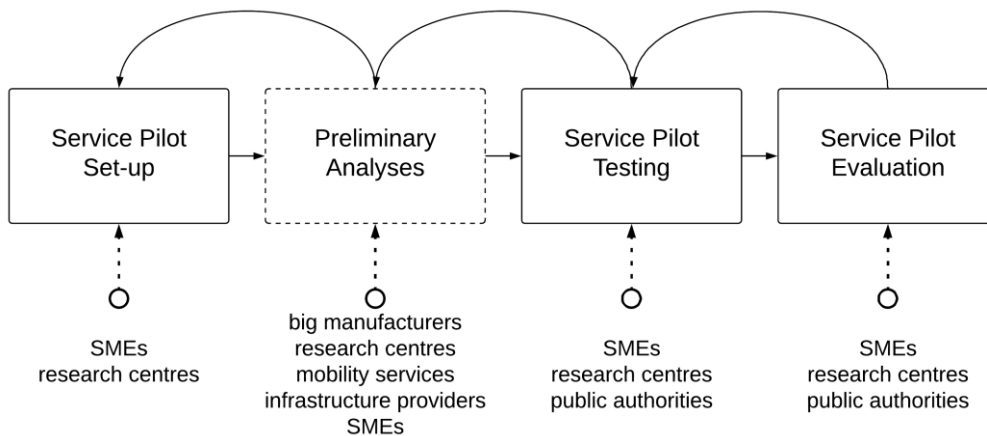


Figure 4. Stakeholder involvement in pilot activities

#### SMEs Involvement Campaigns and Local Workshops

Campaigns that aim at engaging local SMEs are organized in each territorial context. A list of relevant SMEs is produced locally, they are approached, in-person or otherwise, are presented with the pilot material, and their willingness to participate in the actual pilot testing is assessed.

Also, one local workshop in each territorial context is organized with the participation of local stakeholders and, most importantly, local SMEs and local public administration. The scope of the workshop is to involve the relevant stakeholders and recruit them towards the pilot testing phase, and consequently the evaluation phase. Thus, the workshop is organized before the implementation of the pilot services, but after the preliminary analyses of the services.

These stakeholders can be SMEs related to green and smart mobility, local authorities, research centres and universities, large enterprises, infrastructure providers, and other concerned parties. The audience-bases might be expanded to include international guest-lecturers, or other relevant and interested parties.

Within Green mind, one local workshop takes place in each territorial context. So as event uniformity to be achieved, a common event methodology that describes what each event should include must be developed in advance. Extra technical matters regarding the need for speech translation during the event should be also taken into consideration. Also, all event material should be produced in both the local and the English languages. More in detail, Green-mind partners need to organize local workshops in the following regions:

1. Ferrara, Emilia-Romagna, Italy
2. Thessaloniki, Central Macedonia, Greece

3. Málaga, Andalucía, Spain
4. Toulouse, Occitanie, France
5. County of Istria, Croatia
6. Sarajevo, Sarajevo, Bosnia and Herzegovina
7. Ptuj, Vzhodna Slovenija, Slovenia
8. Split, Jadranska Hrvatska, Croatia

Finally, a collective report is produced explaining, describing, and critically discussing the aforementioned workshops and campaigns.

#### 4. Service Pilot Testing | Methodology

The service pilots are understood as an integrated package that allows SMEs, in cooperation with research bodies, to understand the market, seize funding opportunities, and promoting business internationalization.

The pilots are developed in English and then translated into each local language, in case there is such distinction, so as to be easily accessible by local stakeholders.

Three service pilots are developed, one for each service, and these are the following: Market Intelligence Service, B2B Matching Service, and Public Funding Screening Service. Figure 5, shows Pilot Testing's basic idea.

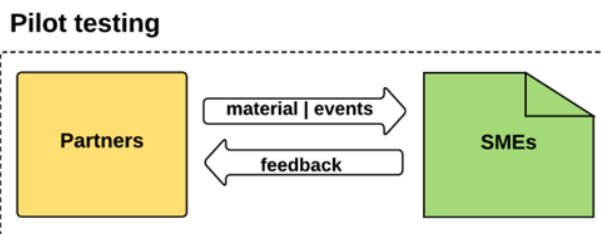


Figure 5. Pilot Testing most basic idea

The pilot testing process consists of a total of steps. These steps cover all pilot processes from defining the green and smart mobility industry/market to performing the pilot actions, evaluating the process and proposing solutions for the local audiences and the preparation of the transferable model. The six steps are the following:

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**STEP 1. The current MARKET situation - Regional Innovation Status and GSM Priorities**

- 1a. Identifying the innovation status of a Region
- 1b. Documenting the Region's mobility priorities and sectors

**STEP 2. The STAKEHOLDERS - Identify and Engage the Mobility Stakeholders in the Region**

- 2a. Identifying the Region's mobility stakeholders
- 2b. Engaging the Region's mobility stakeholders

**STEP 3. The current STAKEHOLDER situation - Identify the Needs of the Stakeholders**

- 3a. Analyse the SMEs needs and/or innovation needs (or capabilities) of the engaged stakeholders in depth

**STEP 4. The Green mind INTERVENTION - Build Stakeholder Innovation Capacity with Intervention**

- 4a. An intervention for Market Intelligence
- 4b. An intervention for B2B Funding – is developed as part of deliverable D.3.3.3
- 4c. An intervention for Public Funding Screening – is developed as part of deliverable D.3.3.2

**STEP 5. Model and results EVALUATION**

- Specific actions TBD – are part of WP3 Activity 3.4

**STEP 6. The proposed SOLUTIONS**

- Specific actions TBD – are part of WP4

In the coming sub-sections, more details about the pilot processes are presented. STEPS 1-3, are preparatory steps towards implementing the pilot testing of the services. STEP 4 is the pilot testing of the services. Finally, STEPS 5 and 6 are part of the pilot testing evaluation. Figure 6 shows the connection between the STEPS and (sub)sections in this document.

### The Green mind Methodology

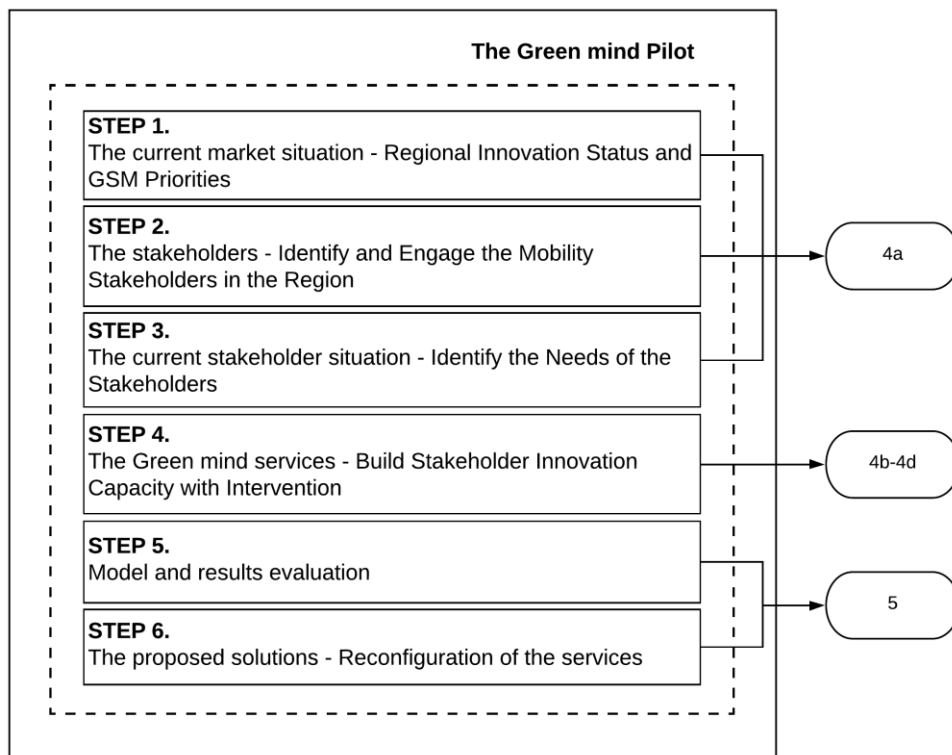


Figure 65 The relation between the Green mind methodology and pilot

#### a. Pilot preparation

During the pilot preparation processes, the following are identified:

#### Regional Innovation Performance

Different innovation indices are employed and analyzed so as the local innovation performance to be assessed at country regional, and city level, and cross-areal comparisons to be made. Some indices that can be employed are the following: the Bloomberg Innovation Index, the Global Innovation Index, and the European Innovation Scoreboard, European Regional Innovation Index and the Innovation Cities Program.

#### Regional Green and Smart Mobility Priorities

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In this analysis, the specialization for each region is identified and described in connection to the regional administration policies and initiatives (i.e. RIS3 and other local mobility innovation priorities).

### Sectors of the Green and Smart Mobility

This action refers to identifying and depicting the sectors of industrial operation at local level and developing a sectorial guiding framework.

### Stakeholder Identification

An identification framework is being built from the literature and local stakeholders that are relevant to the green and smart mobility market are approached to be engaged to the pilot processes.

## b. Market Intelligence Service

The Market Intelligence Service consists of three main steps: a brief theoretical presentation of the service concept, a preliminary market analysis, and a market intelligence service pilot testing. An illustration of the service's sub-steps is presented in figure 6 below.

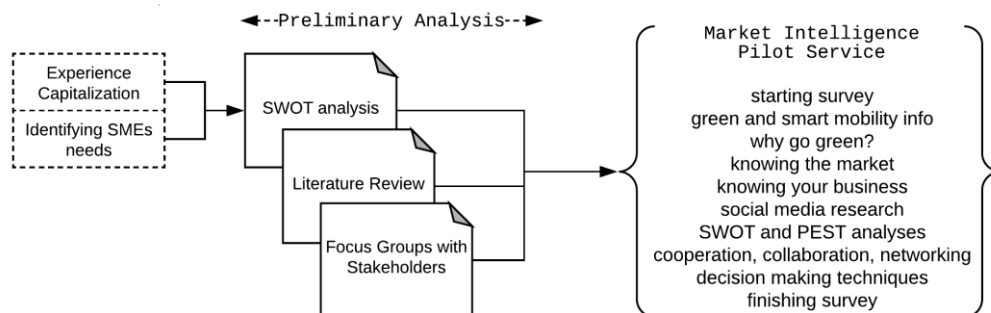


Figure 7. Market Intelligence Pilot Service

## What is Market Intelligence

Market Intelligence is a term that "is used to describe the holistic collection of internal and external business environmental data, by a business, which is to be used to make decisions on the viability of the current business market" (Franco et al., 2011, in Ross et al., 2012, p.6).

Kohli and Jawoski (1990, in Aziz and Yasin, 2010) identified three core marketing intelligence processes: marketing intelligence generation, marketing intelligence dissemination, and responsiveness.

- Marketing intelligence generation refers to finding the customer needs and market defining factors (i.e. regulation, technology, competitors, environmental forces, etc.).
- Marketing intelligence dissemination refers to the diffusion of the aforesaid information to the organization (or the network) for analysis.
- Finally, responsiveness refers to the actions taken after analyzing the gathered information.

Marketing intelligence sources can be internal (sales, client records, human resources records, staff and manager interaction with clients-stakeholders) and/or external (product and business trends,

competitor actions, financial market activity and social trends: i.e. the internet, networks, media, government, external stakeholders, and financial institutions) (Ross et al., 2012).

### Preliminary Market Analysis

A document is developed in which all territorial contexts are analysed market-wise. The analysis is based on a SWOT analysis template that describes the market situation in each area. The SWOT analysis asks for territorial information as well as for industry and area-specific ones. That means that each SWOT analysis template is actually a collection of smaller, topic-specific SWOT analyses with reference to particular contexts.

For each field-specific SWOT analysis, information and insight about the current and future state of the market, the MED area, and the European Union are asked. The required information are in regards to the green and smart mobility industry in general, as well as information regarding the industry's sub-areas (clean fuels infrastructures, low carbon economy, green and automated vehicles, ITS and c-ITS, and so on).

The information is coupled and supplemented by a set of definitions that clearly identify and define all relevant to the deliverable aspects and terms (industry and area specific). Also, relevant insight is drawn from previous steps, such as the capitalization of previous experience and the study about SMEs' requirements.

Small focus groups with local SMEs and other stakeholders may be formed in order to finalize the analysis' findings.

A report is written in which all answers are presented, combined, categorized (industry and region-wise), and discussed in meaningful ways, while a set of market analysis guidelines are developed in order to be used during the following step, Market Intelligence Service testing.

The gathered information can be somewhere along the following lines:

With a focus to green & smart mobility industry and Market Intelligence:

- Develop an assessment methodology (frames, scales, definitions, and so on) for the different levels of knowledge, existence, quality and use of services so as to achieve homogeneity outcome-wise
- Assess the level of SMEs' knowledge about market intelligence in your area
  - How is market intelligence performed? – formally or informally (i.e. as a daily scheduled process or sporadically, from an employee with expertise in marketing and a MI job description (internally or externally) or as a part-time job description)
  - When is market intelligence performed? – proactively and systematically or reactively and randomly (i.e. after a crisis has occurred)
  - How is market intelligence performed? – internally and/or externally
  - How SMEs in your area collect information about the market, the competition, and potential and current customers?
- Investigate whether there are available marketing intelligence supporting structures in your area
  - Networks-clusters-information hubs
  - Public institutions, organizations, development agencies, and cooperatives

- Private enterprises and institutions
- Assess the level and quality of their services in terms of networking, capacity building, and international and national market knowledge (competition-customers)
  - Services: support, training, consultancy, education, guidance, participatory initiatives-networking-clustering, information channels
- Investigate whether there are available marketing intelligence online services in your language or the English language
  - Online services – i.e. application, social media analytics, google analytics, mobile analytics
  - Marketing Information Systems (MkIS)
- Assess the level of SMEs' knowledge about marketing intelligence supporting structures and online services
- Assess the level of use of online services for marketing intelligence by SMEs in your area

#### Market Intelligence Service Pilot Testing

In this step, a pilot that critically discusses and presents market intelligence is developed. The pilot consists of specific steps and tools that aim at enhancing the competitive and innovation potential of the participating SMEs.

The SMEs that were identified, approached, and engaged during the service pilot set-up, take part into the implementation of the pilot testing of the Market Intelligence Service.

During the testing of the pilot, the participating **SMEs** should become aware of and actively engaged with particular necessary material, meetings, surveys, and feedback processes. A detailed presentation of these necessities follows:

#### Material

Become familiar with the material that the partners produced about market intelligence and green and smart mobility industry and its specificities. For instance:

- A document about the **Green mind project**.

The material is produced during the service pilot set-up and consists of the following:

- What is the Green mind project
- What are the focus and objectives of the Green mind project
- Who runs the Green mind project
- Who can take part in the Green mind project
- How your company can take part in the Green mind project
- Contact information

- A document about the state of the **green and smart mobility** industry in each participating country, and the MED and EU areas.

The material is produced during the service pilot set-up and consists of the following:

- What is the green and smart mobility industry
- How green and smart mobility is considered within the Green mind project

- What are the strengths of the green and smart mobility industry in each country, the MED, and the EU
  - What are the weaknesses of the green and smart mobility industry in each country, the MED, and the EU
  - What are the opportunities in the green and smart mobility industry in each country, the MED, and the EU
  - What are the threats in the green and smart mobility industry in each country, the MED, and the EU
  - How one can capitalize on the existing market knowledge
  - How one can develop new knowledge (brief presentation of tools and measures)
- A document that justifies “**why go green?**”
- The material is produced during the service pilot set-up and consists of the following:
- What is sustainability
  - How sustainability influences our daily life
  - How will influence our lives in the immediate and the distant future
  - What is a green consumer
  - How important are green consumers for the green and smart mobility industry
  - How a company go green and target green consumers on the existence
  - How to identify a green niche market
  - How to introduce a service/product to an audience of green consumers
- A document about **SMEs’ needs**
- The material is produced during the service pilot set-up and consists of the following:
- What are the needs of SMEs
  - What are the needs of SMEs in the green and smart mobility industry
  - How can SMEs identify their needs
  - How can SMEs find solutions for satisfying their needs
- A document about **business competitiveness**
- The material is produced during the service pilot set-up and consists of the following:
- What is business competitiveness
  - How business competitiveness influences SMEs
  - What SMEs can do to increase their competitive advantage
- A document about innovation potential
- The material is produced during the service pilot set-up and consists of the following:
- What is innovation potential
  - How innovation potential influences SMEs
  - What SMEs can do to increase their innovation potential
- A document about **Market Intelligence** (Analysis, Research)
- The material is produced during the service pilot set-up and consists of the following:
- What is market intelligence
  - What are the different types of Intelligence (Business, Competitor, and so on)
  - Why market intelligence is important for SMEs

- How market intelligence enhances the performance of an enterprise
- How market intelligence influences an enterprise's competitive advantage
- How market intelligence influences an enterprise's innovative potential
- How to reach sustainable outcomes by using market intelligence
- Brief presentation of useful market intelligence tools and processes (i.e. SWOT analysis, Pest analysis)
- Brief presentation of useful market intelligence KPIs and metrics

➤ Documents that present specific **market intelligence tools**

The material is produced during the service pilot set-up. Suitable examples include, but are not limited to the following:

- A document about SWOT analysis:
  - What is SWOT analysis
  - How is SWOT analysis relevant to market intelligence
  - Why is SWOT analysis important and useful for SMEs
  - What are the outcomes of using SWOT analysis for market intelligence purposes
    - Qualitative data about the strengths and weaknesses of each enterprise
    - Qualitative data about how these enterprises understand the green and smart mobility industry in their country, the MED, and EU markets
  - A SWOT analysis template and use guidelines
- A document about **PEST** analysis:
  - What is PEST analysis
  - How is PEST analysis relevant to market intelligence
  - Why is PEST analysis important and useful for SMEs
  - What are the outcomes of using PEST analysis for market intelligence purposes
    - Qualitative data about the political, economic, social, and technological factors that influence each enterprise
    - Qualitative data about the political, economic, social, and technological factors are perceived to influence the green and smart mobility industry by the enterprises
  - A PEST analysis template and use guidelines
- A document about Social Media use for **e-marketing**:
  - What is e-marketing
  - What are the social media (Facebook, Twitter, LinkedIn, etc.)
  - How are social media relevant to market intelligence
  - Why is e-marketing important and useful for SMEs
  - Why are social media important and useful for SMEs
  - How can an enterprise extract knowledge from social media
  - How can an enterprise perform social media analysis
  - What are the outcomes of using social media for market intelligence purposes

Such outcomes can be metrics that are provided by social media pages such as page views, increase or decrease on number of followers, positive online mentions on a new product, the number of redirections to the official page of the company, possible increase on online orders and enquiries, posts that perform better than others and also evaluation of the customers' feedback either on their page and on competitors' web pages.

- Guidelines to use social media effectively  
(increasing a company's online visibility and presence, competition monitoring, identifying new local and global opportunities and trends, and opening-up to customer needs and develop services/products that are relevant to them, techniques for identifying and scanning the competition online)

- A document about **networking** and **clustering** for market purposes
  - What are networking and clustering
  - How are networking and clustering relevant to market intelligence
  - How are networking and clustering important for SMEs
  - What are the outcomes of networking and clustering for market purposes
  - Qualitative data about participation in networks, clusters, and cooperative initiatives
  - Guidelines for identifying opportunities for cooperation, collaboration, and networking with other enterprises, research centers, authorities, and other concerned parties

- A document about a presentation/material of useful decision making techniques (decision matrix, decision tree, etc.)

This material is produced during service pilot set-up

- A document about **decision support**

The material is produced during the service pilot set-up and consists of the following:

- What is decision support
- Why decision support is important for SMEs
- How decision support enhances the performance of an enterprise
- How decision support influences an enterprise's competitive advantage
- How decision support influences an enterprise's innovative potential
- How to reach sustainable outcomes by using decision support
- Brief presentation of useful decision support methods and processes (i.e. decision matrix, decision tree, etc.)

- Documents that present specific **decision support methods**

The material is produced during the service pilot set-up. Suitable examples include, but are not limited to the following:

- A document about **decision matrices**:
  - What is a decision matrix
  - How are decision matrices relevant to market intelligence
  - Why are decision matrices important and useful for SMEs
  - What are the outcomes of using decision matrices for market intelligence purposes
  - A decision matrix template and use guidelines
- A document about **decision trees**:
  - What is a decision tree
  - How are decision trees relevant to market intelligence
  - Why are decision trees important and useful for SMEs
  - What are the outcomes of using decision trees for market intelligence purposes

- A decision tree template and use guidelines

### Meetings

Additionally, the SMEs will be required to participate in local and transnational **workshops** and/or webinars where all the aforementioned concepts will be presented and discussed in the form of seminars, open discussions, and/or structured courses.

### Surveys

Also, the SMEs will be required to participate in two **survey** researches:

- One at the beginning of the pilot testing in which the participants are asked to describe their level of knowledge in matters of green and smart mobility and how they used to approach market intelligence until the introduction of the pilots
  - The questionnaire is produced during service pilot set-up
- One at the end of the pilot testing in which they are asked to provide full feedback in regards to their new state of market knowledge and use of market intelligence techniques and tools during their daily operations and processes after the introduction of the pilots
  - The questionnaire is produced during service pilot set-up

### Feedback

Finally, during the implementation of the pilot testing the participants are required to provide regular and timely feedback about all produced material, suggested techniques, and provided insight. The participants should present details in regards to:

- Whether they understand the material the partners produced, and if it is relevant and helpful
- Whether they applied the proposed techniques and in which depth
- The response they get by being active in mailing lists, networks, and newsletters.

The feedback timeline might be somewhere along the following lines:

- A brief progress report at the end of each month
- A more inclusive report at the end of each trimester (it replaces the monthly report)
- Active participation in project events and workshops – brief presentation of the company's scope, participation intent, and project gains during an event or workshop

All the specific steps and particular details – documents or otherwise – of the market intelligence service pilot are going to be defined and developed on a basis of the material that is gathered through-out the service pilot set-up.

Finally, a report is written in which all the aforesaid points, steps, and their results are discussed in detail.

## c B2B Matching Service

The B2B Matching Service consists of three main steps: a brief theoretical presentation of the service concept, a preliminary listing of B2B matching events/sources, and a B2B matching service pilot testing. An illustration of the service's sub-step is presented in figure 7 below.

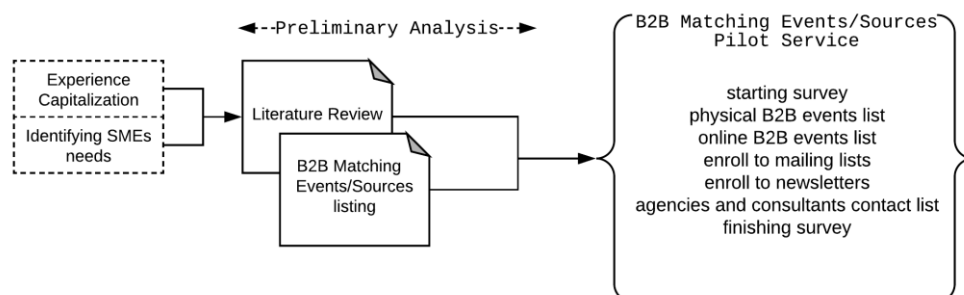


Figure 8. The B2B Matching Pilot Service

### What is B2B Matching<sup>3</sup>

Business-to-Business (B2B) Matching is “the process in which agents, representing traders that are interested in having exchange of economic value are put in contact with potential counterparts to negotiate” (Tomaz et al., 2003, first page). In other words, it is a usual marketing tactic that matches companies together on a basis of their needs, strategies, and organizational philosophy.

There are several forms of B2B matching that range from employing intermediaries and agents, to large gatherings, and online applications/services. The two most important forms are B2B trade fairs and online B2B matching services.

A trade fair is defined as an “organized event where companies exhibit and show their (latest) offers (products, services, etc.) and establish contacts with relevant stakeholders” (Sarmento, 2015). On the other hand, an online B2B matching service is a mobile agent (no human agent) that virtually matches applications to increase efficiency (from one-to-one, to many-to-many) and reduce the costs of the matchmaking process (Tomaz et al., 2003).

### Preliminary Listing of B2B Matching events/sources

Initially, the B2B matching literature is researched and analysed in depth.

Then, a list with information about B2B matching events/sources in each territorial context, the MED area, and the EU area is developed.

All B2B events, fairs, and matchmaking agencies and online sites should be identified, categorized, and briefly described on this list. Any quantitative (i.e. the number of companies participated and the formed collaborations) or qualitative (i.e. feedback from participants/organizer) information regarding these B2B initiatives should be recorded here in detail.

The produced list should categorize the results under the following categories:

- Name

<sup>3</sup> For more information, please refer to deliverable 3.2.5's report



- Type – event, fair, agent, online (application, site, and so on)
- Area of reference – local, regional, EU, global
- Brief description
- Numerical data – participation, collaborations

With a focus to green & smart mobility industry and B2B trade fairs:

- Investigate whether there are B2B trade fairs at a local (country-wide), regional (MED area), or European level
- Gather intelligence about exhibitors and visitors participation to such fairs. For instance:
  - quantitative data: number of fairs, number of exhibitors, number of visitors, number of sales, number of new partnerships, frequency of attendance
  - qualitative data: place of fairs, exhibitor's country of origin, visitor's country of origin, existing infrastructures, fair (and city) accessibility
- Examine whether there have been or there are scheduled to be B2B events (workshops, seminars, webinars, training programs, presentations, conventions) in your area
- Collect information about the topics and outcomes of the aforesaid events
- Collect information about expertise of the participants and presenters of the aforesaid events
- Find whether there are supportive structures and organizations at a local, regional, and global level (national, EU, MED area) private and public institutions, organizations, enterprises, and individuals that:
  - Organize trade fairs and events
  - Support the creation of networks – clusters of SMEs
  - Provide financial aid for participation in fairs and events
  - Provide technical and operational support (from advertising to booking a place at the fair and an airplane to get there)
  - Provide training to improve fair-related competencies (marketing tools, product promotion, communication techniques, etc.)
  - Provide general consultancy
- Find how SMEs in your area collect information and participate in fairs and events (formally-informally, systematically-sporadically)
  - Do they employ people dedicated to gathering such information?
  - Do they have specific business processes dedicated to gathering such information?
- Define the different mobility stakeholders (SMEs, institutions, organizations, public agents, etc.) that are active in your region in the following industry sectors:
  - transport and logistics,
  - automotive,
  - energy, and
  - IT

Finally, a report is written in which all the aforesaid points, steps, and their results are discussed in detail and a detailed literature review is presented.

### B2B Matching Service Pilot Testing

A pilot that critically discusses and presents B2B matching is produced. The pilot consists of specific steps and tools that aim at enhancing the competitive and innovation capabilities of SMEs.

In this step, the SMEs that were identified, approached, and engaged during the service pilot set-up, take part into the implementation of the pilot testing of the B2B Matching Service.

During the testing of the pilot, the participants should become aware of and actively engaged with particularly necessary material, meetings, surveys and feedback processes. A detailed presentation of these necessities follows:

#### Material

- A document about B2B matching/matchmaking
  - What is B2B matching
  - How B2B matching enhances the performance of an enterprise
- A document that includes available B2B matching physical events/sources (material from preliminary listing will be used)
- SMEs identification of events that are relevant to its operations and needs
- SMEs identify the specific prerequisites in order to enter these events
- Enrol themselves into specific mailing lists and newsletters so as to be constantly informed about new events and sources
- Enrol themselves into as many online applications as possible
  - State their business, intent, and expected outcomes
  - Search for matching partners
- Form ties with other parties
  - Get in touch with other stakeholders, for instance matching agencies and consultancies, to discuss potential future cooperation (i.e. matching supply to demand)
  - Get in touch with other SMEs

#### Meetings

Additionally, the SMEs will be required to participate in local and transnational **workshops** where B2B matching processes will be organized.

#### Surveys

Also, the SMEs will be required to participate in two survey researches:

- One at the beginning of the pilot testing in which the participants are asked to describe their level of knowledge and participation about B2B matching schemes before and how they used to match demand to supply and vice versa, before the introduction of the pilots

- The questionnaire is produced during service pilot set-up
- One at the end of the pilot testing in which they are asked to provide full feedback in regards to their new state of B2B matching processes and participation into events after the introduction of the pilots
  - The questionnaire is produced during service pilot set-up

### Feedback

Finally, during the implementation of the pilot testing the participants are required to provide regular and timely feedback about all produced material, suggested techniques, and provided insight. The participants should present details in regards to:

- Whether they understand the material the partners produced, and if it is relevant and helpful
- Whether they applied the proposed techniques and in which depth
- The response they get by being active in mailing lists, matching databases, networks, and newsletters.

The feedback timeline might be somewhere along the following lines:

- A brief progress report at the end of each month
- A more inclusive report at the end of each trimester (it replaces the monthly report)
- Active participation in project events and workshops – brief presentation of the company's scope, participation intent, and project gains

All the specific steps and particular details – documents or otherwise – of the B2B matching service pilot are going to be defined and developed on a basis of the material that is gathered through-out the service pilot set-up.

Finally, a report is written in which all the aforesaid points, steps, and their results are discussed in detail.

### d. Public Funding Screening Service

The Public Funding Screening Service consists of three main steps: a brief theoretical presentation of the service concept, a preliminary listing of public funding sources, and public funding screening service pilot testing. An illustration of the service's sub-step is presented in figure 8 below.

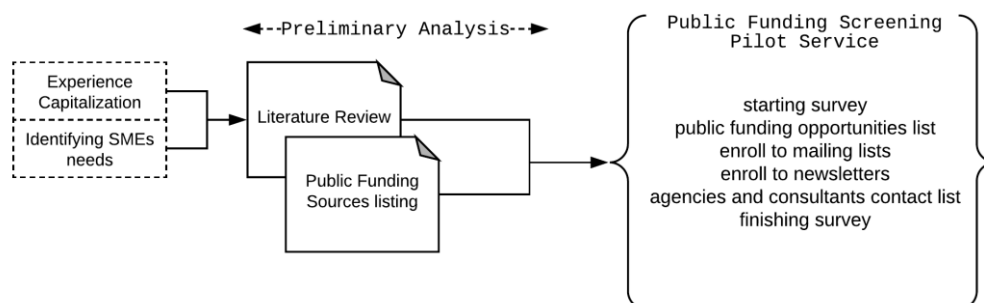


Figure 9. Public Funding Screening Pilot Service

### What is Public Funding Screening<sup>4</sup>

Public Funding Screening is a term that describes every process with a view to assess the potential existence of available public funding opportunities and initiatives. In the particular case of Green-mind project public funding screening refers to monitoring of relevant EU and national programs and calls.

Public funding screening must not be viewed and understood only in pure financial terms, but every potential intervention must be viewed holistically and within a more general perspective (Wattanpruttipaisan, 2003) to generate long-term and sustainable outcomes.

In this direction, Tucker and Lean (2003) argued that PF should be supplemented by proper policy in the following areas: information provision, legislation/regulation, direct funding, and network provision. Similarly, Kauffman (2004, in Gbandi and Amissah, 2014) proposed policymaking initiatives towards improved business conditions (in information, legal, financial matters), formal support procedures for accessing resources, improved financial accessibility, and an expanded network of financial supply through non-financial private organizations.

### Preliminary Listing of Public Funding sources

Initially, the public funding literature is researched and analysed in depth.

A questionnaire is developed in order to explore the territorial opportunities on public funding in each territorial context. The focus of this questionnaire is on the possible funding opportunities for SMEs. Then, a list with information about public funding initiatives and sources is developed.

These initiatives and sources can be either physical or online:

- Physical – consultants, agents, public offices, etc.
- Online

As well as private or public:

- Private sources that refer to public funding – supportive structures such as agents and consultants
- Public sources in general – responsible to communicate the initiatives, support participants or diffuse the funds

All sources of public funding screening should be identified and categorized under the following categories:

- Geographical relevancy: local, regional, European
- Industry relevancy: smart, green, smart and green or not
- Participation prerequisites
- Other (TBD)

The current level of visibility and penetration of these sources to SMEs in the local economy should be assessed and recorded for each country.

When all necessary information is gathered, they are corroborated to produce a document that provides definitions for all relevant terms, as well as a classification of different public funding

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<sup>4</sup> For more information, please refer to deliverable 3.2.4's report

screening methods and their characteristics. Already extant initiatives are analyzed in depth and contrasted against the theory.

With a focus to green & smart mobility industry and screening (monitoring relevant EU and national programs and calls):

- Develop an assessment methodology (frames, scales, definitions, and so on) for the different levels of knowledge, existence, quality and use of services so as to achieve homogeneity outcome-wise
- Investigate whether there are available public funding opportunities in your region (local funds)
  - Gather intelligence regarding the incentives they offer – financial and non-financial (networking, supportive management and structures)
  - Identify their accessibility, efficiency, sufficiency, and flexibility
- Examine how (and if) SMEs access these public funding opportunities
  - How do SMEs get to know that there are such opportunities available?
  - Identify the main problems that SMEs have when looking to get access to public funding initiatives
  - Provide insight and examples regarding SMEs that are/were succesful on getting public funds
- Investigate whether there are monitoring and screening for public funding opportunities supporting structures, tools, and business models in your area and regionally
  - Online and offline databases, sites, applications, and services
  - Public institutions (i.e. government, cooperatives, industry representatives)
  - Private organizations (i.e. consultancies, industry advisors, companies)
- Gather information about those supporting structures and tools
  - Reasons of use, costs of use, accessibility, and level of use (statistical data)
  - Services: support, training, consultancy, education, guidance, participatory initiatives-networking-clustering, information channels
  - Level and way of use in terms of frequency (formally-informally, systematically-sporadically)
- Find how SMEs in your area collect information about available public funding (formally-informally, systematically-sporadically)
  - Do they employ people dedicated to gathering such information?
  - Do they have specific business processes dedicated to gathering such information?
- Identify the policy trajectories regarding public funding in your area

#### Public Funding Screening Service Pilot Testing

A pilot that critically discusses and presents public funding screening is produced. The pilot consists of specific steps and tools that aim at enhancing the competitive and innovation capabilities of SMEs. In this step, the SMEs that were identified, approached, and engaged during the service pilot set-up, take part into the implementation of the pilot testing of the Public Funding Screening Service.

During the testing of the pilot, the participants should become aware of and actively engaged with necessary material, meetings, surveys and feedback processes. A detailed presentation of these necessities follows:

- A document about public funding screening
  - What is Public Funding Screening
  - How an SME can benefit from public funding
  - Where can an SME search for opportunities for public funding (material from preliminary listing of public funding screening sources will be used)
- How to find public funding screening sources and initiatives?
- Identify the funding opportunities that are relevant to their operations and geographical areas
  - Identify the specific prerequisites of these opportunities
  - Enrol themselves into specific mailing lists and newsletters – the list is developed during D.3.2.4 – so as to be constantly informed about new opportunities
  - Get in touch with other stakeholders, for instance agencies and consultancies, to discuss potential future cooperation (i.e. develop and submit applications, develop consortia, etc.)

### Surveys

Also, the SMEs will be required to participate in two survey researches:

- One at the beginning of the pilot testing in which the participants are asked to describe their level of knowledge and their participation experience in public funding schemes before and how they used to perform public funding screening until the introduction of the pilots
  - The questionnaire produced during service pilot set-up
- One at the end of the pilot testing in which they are asked to provide full feedback in regards to their new state of public funding screening and applying for public funding opportunities during their daily operations and processes after the introduction of the pilots
  - The questionnaire produced during service pilot set-up

### Feedback

Finally, during the implementation of the pilot testing the participants are required to provide regular and timely feedback about all produced material, suggested techniques, and provided insight. The participants should present details in regards to:

- Whether they understand the material the partners produced, and if it is relevant and helpful
- Whether they applied the proposed techniques and in which depth
- The response they get by being active in mailing lists, networks, and newsletters.

The feedback timeline might be somewhere along the following lines:

- A brief progress report at the end of each month
- A more inclusive report at the end of each trimester (it replaces the monthly report)
- Active participation in project events and workshops – brief presentation of the company's scope, participation intent, and project gains

All the specific steps and particular details – documents or otherwise – of the public funding screening service pilot are going to be defined and developed on a basis of the material that is gathered through-out the service pilot set-up.

Finally, a report is written in which all the aforesaid points, steps, and their results are discussed in detail.

## 5. Service Pilots Evaluation | Methodology

### a. Pilots Evaluation

The evaluation of the pilot services consists of information stemming from three distinct sources: the survey results comparison, the analysis of the pilot testing process and its results, and the feedback from the stakeholder capitalization events. The evaluated results contribute decisively to the transformation of the pilot services to one transferable service model.

#### Survey Results Analysis

The results of the starting survey are compared to the ones coming from the finishing survey. The influence of pilot service implementation to the operations of the SMEs is measured and the correlation between business performance and the three services is assessed. More specifically, how (and if) the introduction of market intelligence, B2B matching and public funding screening services reflects on the competitiveness and innovative potential of SMEs is evaluated.

#### Analysis of the Pilot Testing Process and its Results

The analysis of the pilot testing process is used to evaluate the process as a whole, but also the processes' constituents so as to draw important conclusions. The analysis consists of two integrated phases. The former refers to the actual analysis of the results, while the latter refers to producing sustainable results. More specifically:

- The evaluation of the three pilot services in terms of Key Performance Indicators (KPI) and the collection of feedback from target groups, and more especially SMEs, and
- The integration of the pilots results evaluation into a service model which indicates how cluster organizations can deliver the services to SMEs in the MED and EU areas, and what lessons have been learnt.

#### Feedback from Stakeholders and Capitalization Events

One local event/workshop is organized in each territorial context with SMEs as means of stakeholder capitalization towards the formulation of the transnational innovation network. In this stage, the stakeholders are organized locally in clusters.

In each local event, the pilot testing process is discussed, while all participants present their experience and provide feedback. During the event several experiential techniques are employed such as in-depth interviews, discussion panels, group mini-reports and games.

The event proceedings are recorded and a report is produced so as the optimal level of knowledge capitalization amongst participants to be reached.

### b. The Service Model

#### Transferable Service Model for SMEs Services in the Green and Smart Mobility Industry

Based on the pilot testing and the evaluation reports a transferable service model is developed. The model shows the advantages and disadvantages, benefits and negative aspects of the pilot testing



and includes the models of the three implemented instruments. The model is focused on how to help SMEs face the green and smart mobility challenges and opportunities in the MED and EU area.

## 6. Transnational Network Preparations | Methodology

Here, a forerunner for the creation of a transnational innovation network in green and smart mobility industry is developed. This forerunner is necessary in order to ensure the early planning and preparation of the transnational network. The creation of the transnational network aims at rendering the pilot services results sustainable.

At this stage, an initial discussion of the structure of the network is discussed and formalized. The to-be-formed network gets feedback and insight from local collaboration schemes, such as clusters and local networks.

In a first stage, the previous involvement and participation of stakeholders in networks, as well as clusters are assessed. This assessment leads to a first estimation of the stakeholder's willingness and ability to take initiatives to build clusters and partnerships through the transnational network which will be set up. Stakeholders are classified in three levels depending on this assessment:

- 1<sup>st</sup> level:** Participants with little relevance and little participation in other networks.
- 2<sup>nd</sup> level:** Participants who have created networks and connection channels through their activities and it is quite possible to retrieve these contacts.
- 3<sup>rd</sup> level:** Participants who have created or are members of active networks or clusters.

The most relevant and most willing to participate stakeholders are identified and form a network as a tool for sustaining the service pilot results and follow-up cooperation.

The participating parties develop documents that define the most basic features of their participation and assist the network communication. These might be<sup>5</sup>:

- A list of participants that describes:
  - Their role in the network
  - Their business type and role (i.e. SME/innovation start-up or public authority/local government – a detailed list will be produced and disseminated to the partners in advance)
  - Their contact details: country-county-city, telephone, email, social media, website
  - Their contact to the network – the person that will be responsible for the network communication: telephone, email (and/or social media)
  - Their intents for participating to the network
- An emailing list consisting of the aforesaid participants for the optimal and timely communication between the members of the network
- A short leaflet that explains the purpose of the network and asks for more stakeholders to participate
- The participants will probably be asked to fill-in a pre-determined business model template for multi-stakeholder participatory platforms. Applying the template aims at identifying the common ground amongst the participating parties.

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<sup>5</sup> For more information, please refer to deliverable 3.2.7's report

Based on the afore described list of necessities, the participating bodies – SMEs, clusters, research bodies, and authorities – formalize a light transnational network tool for networking in transnational level and sustain the pilot service results.

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