GreenEcoNet

A best-practice platform to support SMEs transition towards a green economy

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SEVENTH FRAMEWORK PROGRAMME

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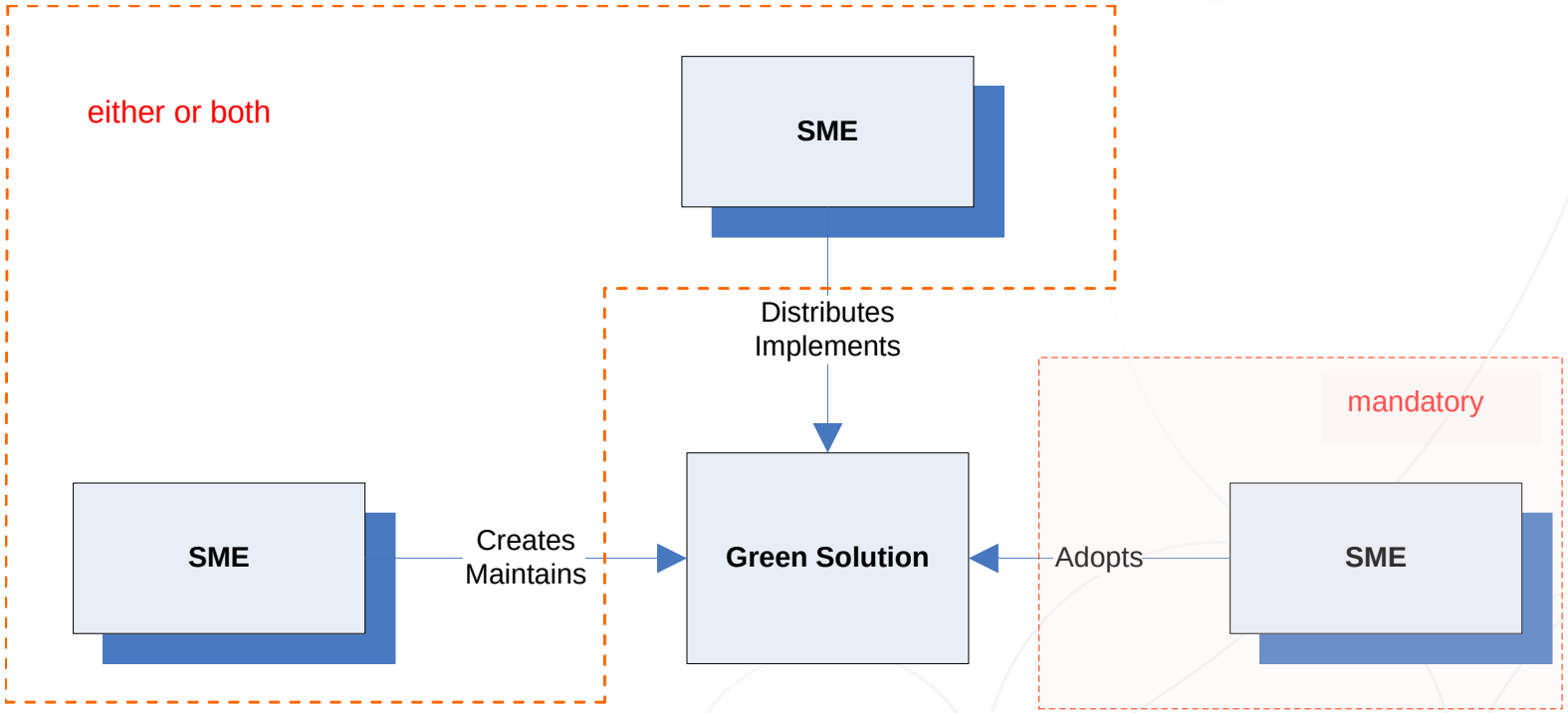
The structure for a case study in the GreenEcoNet platform

A case study in the GreenEcoNet platform has the following structure:



What constitutes a "Green Solution"?

A "Green Solution" is:

- A product, a technological process or a service that:
  - Improves operational performance, productivity or efficiency, while or because of reducing environmental risk and minimizing waste, pollution and resource use;
  - Facilitates compliance with environmental regulations.
- An organizational method or business process for dealing with environmental issues by:
  - Preventing pollution through input substitution or a more efficient operation of processes;
  - Focusing on the utility of products and services throughout the product's life cycle, rather than only on the value of selling physical products (Product Service Systems – PSS);
  - Increasing efficiency or reducing waste through closed-loop collaboration (recovery, re-use or recycling);
  - Measuring and monitoring issues of material use, energy, water and waste.

Categorisation of SMEs

Businesses can be categorized into one or more of the following categories:

- Producers of green solutions;
- End-users of green solutions seeking to embody resource efficient and environmentally beneficial technologies or business practices in the way they carry out their operations;
- Distributers and implementers (i.e. service providers) that support the end-users to adopt the green solutions.

All case studies must include an end-user/adopter, so that:

- The case study is not just an advertisement;
- The solution's adoption is shown to lead to demonstrable benefits.

The internal model's data properties

- The green solutions and the associated SMEs in the platform's database are described by a set of properties.
- Data availability for these properties will make each solution (equivalently each case study):
  - Discoverable by the platform's users through the searching functionality of the platform and
  - Easy to assess regarding suitability and fitness through the toolkit provided by the platform.

The SME properties

- **Name**: Unstructured
- **Description**: Unstructured
- **Location**: Structured
- **Contact details**: Structured
- **Sector**: Structured
  - International Standard Industrial Classification of All Economic Activities (ISIC), Rev.4
- **Role**: Structured
  - Solution Provider
    - Product Research and Development
    - Engineering and Design
    - Manufacturing
    - Logistics
    - Sales
    - Contractor
    - Service Provider
  - Solution Adopter

Properties for Green Solutions

- **Name**: Unstructured
- **Description**: Unstructured
- **Type**: Structured
- **Scope**: Structured
- **Objective**: Structured
- **Environmental Goods and Services Sector (EGSS) Categorization**: Structured
- **Technology**: Structured
- **Service**: Structured
- **Financing**: Structured
- **Quantified Benefits**: Structured
- **Capital costs**: Structured
- **Operating costs**: Structured
- **Applicability**: Structured
- **Solution Maturity**: Structured

Properties for Green Solutions

- **Type**: Structured
  - Materials
  - Fabricated Structures
  - Chemicals and Compounds
  - Products (Goods)
  - Industrial Machinery
  - Non-industrial Machinery
  - Electrical Equipment
  - Automation (*i.e. how equipment is used*)
  - Information Technology
  - Services
  - Organizational Methods

Properties for Green Solutions

- **Scope**: Structured
  - Buildings
  - Transportation
  - Industrial Processes
  - Energy Production
  - End of Life Product Recovery
  - Land management and Soil Pollution Control
  - Water Management
  - Air Pollution Control
  - Solid Waste Management
  - Waste Water Treatment
  - Agriculture
  - Urban Development

Properties for Green Solutions

- **Objective**: Structured
  - Reduction of Greenhouse Gas (GHG) Emissions
  - Reduction of Ozone Depleting Substances (ODS) Emissions
  - Reduction of Acidifying and Eutrophying Pollutant Emissions
  - Air Pollution Prevention and Mitigation
  - Water Pollution Prevention and Mitigation
  - Soil Pollution Prevention and Mitigation
  - Energy Efficiency
  - Material Resource Efficiency
  - Water Conservation
  - Reduction of Total Waste Generated
  - Protection of Public Health
  - Education
  - Compliance with Regulatory Requirements

Properties for Green Solutions

- **Technology**: Structured
  - Conventional Energy
  - Alternative Energy
  - Energy Efficiency
  - Buildings
  - Materials
  - Agriculture
  - Air
  - Water
  - Recycling and Solid Waste Treatment
  - Transportation

The "Technology" property is categorized by searching the current domain knowledge for each sector.

The detailed structure will be validated by a representative group of experts in the identified sectors.

Properties for Green Solutions

- **Service**: Structured
  - Environmental Impact Assessment (EIA)
  - SEVEZO II Risk Assessment
  - Implementation and Auditing of Environmental Management Systems
  - Hazardous Materials Handling
  - Restoration and Rehabilitation
  - Reduction of Energy Consumption Schemes (audit, analysis, implementation)
  - Reduction of the Use of Raw Materials Schemes (audit, analysis, implementation)
  - Waste Stream Analysis and Waste Management
  - Engineering Design / Installation
  - Permitting / Compliance Strategies
  - REACH, CLP
  - Technology Assessment
  - …

Do we need so much structured data?

- Structured data provide an interface for guided search in the GreenEcoNet platform's database.

- Structured data help assess if a case study includes adequate detail to be interesting for someone who would read it with the goal of finding solutions to adopt and integrate into their business activities.

Use Cases – Possible interactions between the platform and its users

The collection and presentation of the aforementioned property data corresponds to the following use cases.

Use case 1: The "Search for Green Solutions" functionality

- An SME looking for a green solution registers with the platform, searches for a green solution in its database and receives a ranked list of case studies as an answer.
- Then, the user may navigate the platform's classification scheme using:
    1. Faceted navigation.
    2. A guided search functionality: the users answer a few questions and receive results tailored to their requirements.
- Each case study is assessed in a scale from 1 to 5 regarding its data completeness and the results are presented to the inquiring user in a ranked order.

Assumptions and Questions

Assumptions

- A detailed and multifaceted categorization will enhance the *usability* and added value of the platform.

Reality check – Questions for participants

- Which categories of data would you find *absolutely necessary* to be included in the platform so that to facilitate finding and assessing green technology solutions or best practices for SMEs to adopt?

Assumptions and Questions

- Which categories of data would you *exclude* as non-essential or counter-productive?

- If you would need to search the platform by *business problem or challenge*, rather than by sector or technology, which business problems or challenges do you find most relevant?

Use case 2: The "Offer Green Solutions" functionality

- An SME profiles the green solutions it provides – as a producer, service provider (e.g. Energy Service Companies) or both – in the GreenEcoNet platform's database.

- The platform will also include promotional functionality, so that SMEs know that they are showcasing their case studies:
  1. "Featured Case Studies" box widget
  2. Ability to embed the box widget in other websites

Assumptions and Questions

Assumptions

- SMEs will regard uploading case studies in the platform as an effective way to gain visibility from their products and services.
- SMEs will be *willing to provide detailed data* for their green solutions so that to make their categorization and discovery easier.
- Green solution adopters have rather little to gain from uploading a case study. Solution producers and, even more, SMEs offering integrated service packages (planning, conducting techno-economic assessments, equipment supply and installation) will be the *main sources of case study content*.
- *Confidentiality* issues will not prevent users to provide data regarding solutions and their adopters.

Assumptions and Questions

Reality check – Questions for participants

- Which *incentives and expectations* would you find influential for an SME in order to create a company profile in the platform and fill it in with the – rather extensive – requested case study data regarding green solutions it (the SME) has provided to other SMEs?

Use case 4: The "Search for Partners" functionality

- A registered SME may search the SME registry for partnerships and collaboration.
- Collaboration types include:
  - Joint product development partnership
  - Technology partnership
  - Channel partnership
  - Material and components supply partnership
  - Cooperation so as to close material loops

Assumptions and Questions

Assumptions

- The *Search for Partners* functionality is a strong *incentive for case study contribution*, since each registered SME will be directly associated with the case studies it has uploaded.
- Partnerships are regarded as collaboration around a green solution; therefore the categorization scheme for the green solutions is *adequate* as a way to catalogue expertise and services or search for partnerships.

Assumptions and Questions

Reality check – Questions for participants

- What are the *key success factors* for a platform that aims to connect SMEs with potential partners?
- What lessons, if any, can similar initiatives that have taken place so far offer us? How can GreenEcoNet attain a *second-mover advantage*?

Questions for participants (summarized)

- Which categories of data would you find *absolutely necessary* to be included in the platform?
- Which categories of data would you *exclude* as non-essential or counter-productive?
- If you would need to search the platform by *business problem or challenge*, which ones do you find most relevant?
- Which *incentives and expectations* would you find influential for an SME in order to participate in the platform?
- What are the *key success factors* for a platform that aims to connect SMEs with potential partners?
- How can GreenEcoNet attain a *second-mover advantage*?

Thank you very much for your attention!

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