GreenEcoNet

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

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Contents

• The structure for a case study in the GreenEcoNet platform
• What constitutes a “Green Solution”? 
• Categorisation of SMEs
• The internal model’s data properties
• The SME properties
• Properties for Green Solutions
• Do we need so much structured data?
• Use Cases – Possible interactions between the platform and its users
• Questions for participants
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:

  o Improves operational performance, productivity or efficiency, while or because of reducing environmental risk and minimizing waste, pollution and resource use;

  o Facilitates compliance with environmental regulations.

• An organizational method or business process for dealing with environmental issues by:

  o Preventing pollution through input substitution or a more efficient operation of processes;

  o 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);

  o Increasing efficiency or reducing waste through closed-loop collaboration (recovery, re-use or recycling);

  o 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):
  o **Discoverable** by the platform’s users through the searching functionality of the platform and
  o **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.
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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