



**Personalised Sustainability Coaching for SMEs -  
PeSCoS**

Final Report

Public Part

## Project information

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Beneficiary organisation: AVACA Technologies S.A.

Project coordinator: Dr. Nikolaos Skarmeas  
Project coordinator organisation: AVACA Technologies S.A.  
Project coordinator telephone number: +30 210 6412070  
Project coordinator email address: [nskarmeas@avaca.gr](mailto:nskarmeas@avaca.gr)

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## Executive Summary

Plenty of SMEs would like to diminish their negative impact on the earth for environmental and economical reasons but aren't sure exactly what to do about it as there is no comprehensive advice.

The PeSCoS project ([www.pescos.eu](http://www.pescos.eu)) will provide a personalized training system for **SMEs to be able to eliminate their unsustainable ways and embrace new, greener habits.**

### Target Audience

The targeted SMEs belong to the following industries:

- Food & Beverage
- Services
- Shops (retail)
- Production (raw materials, industrial SMEs)

### Key Objectives

The main objective is the implementation of a **personalised, adaptive training system for SMEs** to embrace “greener” habits and it will be realised through the following intermediate objectives:

- Analyse the **State of the Art** in carbon footprint calculators.
- Identify **SME sustainability needs** in partner regions in order to personalise the unsustainable ways withdrawal plans based on their characteristics.
- Develop the appropriate **training material** to cover all important aspects of environmental sustainability.
- Organise **platform assessment** experiences to satisfy the demands of users.

### Participants Involved

- A **software house** that will implement and support the PeSCoS platform.
- A **university faculty of process and environmental engineering** that will lay the scientific background.
- An experienced **consultancy active in the area of energy efficiency** with a large network and access to industrial SMEs.
- An **environmental agency** comprising a network of 16 municipalities.
- A **technology foundation** working closely with public administrations.
- A **strategic communication consultancy** that has experience in marketing communications and applies a product-based quality assurance methodology.
- An **environmental consultancy** which conducts (EPA – U) energy scans and calculates carbon footprint for SMEs from the target groups.

### Approaches Used

The process starts by calculating the current carbon footprint and producing a detailed report comprising all the appropriate actions that will turn the business greener. The SME is prompted to select the actions that they wish to implement and

the time frame for the implementation indicating the size of the business and whether cost or total return on investment is more important.

### **Major Results/products achieved**

- State of the Art in calculating carbon emissions.
- Sustainability needs report capturing the needs of the SMEs.
- Methodology for producing personalised withdrawal plans.
- Mechanism to elaborate personalised withdrawal plans based on the responses to the questions per energy area.
- Training programme comprising training content (questions, answers, actions, read more about content) in 7 languages.
- PeSCoS platform facilitating access to the training programme content and integration with the PeSCoS "Genie" tool.
- Website badge awarding scheme.

### **Plans and Prospects for the Future**

Opportunities from the potentially exploitable project results listed below are currently being pursued or investigated:

- Sustainability coaching and consulting Services;
- Industrial footprint calculator implementation;
- Personalised eLearning Engine extensions.

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# 1. Project Objectives

PeSCoS is a personalised training system for SMEs to be able to eliminate their unsustainable ways and embrace new, greener habits. The aim is to offer personalised training to SMEs on the amount of carbon, energy, Euros and other resources they expend through hundreds of choices and daily actions in an effort to diminish their negative impact on the earth. Following the completion of the training, SMEs end up with a personalised unsustainable ways withdrawal plan they can follow themselves to reduce their CO2 emissions.

The PeSCoS training system is geared towards small and medium businesses looking to save money, be less harmful to the environment and create a "strong environmental brand ethos" amongst customers and staff.

The SMEs that benefit from the project directly comprise small and medium businesses from the following sectors:

- ❖ Food & Beverage;
- ❖ Services;
- ❖ Shops (retail);
- ❖ Production (raw materials, industrial SMEs).

SMEs belonging to these main target sectors were involved throughout the life of the project. During the initial phase of the project and the identification of the **SME sustainability needs** in partner regions they were approached either through the establishment of direct contact or via trusted intermediaries, but also through the World Wide Web. The partners initiated direct contact with key people from the industries of interest that were already in their list of contacts due to past and present projects, as well as due to personal acquaintances. Engagement through intermediaries also maximised reach. SME associations were reached directly by the combined network of the partners. A special **questionnaire** was created and translated to all the languages to drive the requirements identification process. SMEs were exposed to the questionnaire offline (face to face interviews) and online (Survey Monkey) and provided their feedback with regards to their perception for matters concerning the sustainability of their specific business and more importantly their perceived needs.

A broad range of SMEs were invited to express their opinions with respect to their needs and requirements regarding environmental sustainability, as well as to outline their expectations from PeSCoS products and services.

The results of the sustainability survey comprised also what information to provide to the SMEs initially to get started on the right track (a list of prerequisites before using the system) and were used as additional input for the personalisation of the **unsustainable ways withdrawal plans** based on the specific characteristics of the SMEs.

The identification of the sustainability needs of SMEs was also important because it provided the opportunity for the SMEs to indicate what they know in terms of the measurements they would be asked to provide to the system. This way it became

apparent what difficulties they would encounter understanding the required information and obtaining the required information and thus it was made possible for the system to help them provide accurate information (prerequisites – what to have at hand before starting the process) and thus improve the overall accuracy of the **footprint calculator**.

After the project had reached the stage when the platform could be made accessible to SMEs, the SMEs were informed and "recruited" through targeted dissemination activities preparing the ground for the organisation and execution of the **assessment exercises**, in the form of hands on assessments with SMEs from the targeted industries.

The assessment period fell within the **pilot period**. To generate interest for the assessment exercises it was emphasized that money would be saved from the reduction in the carbon footprint value.

In the occasions that the PeSCoS tool was successful in convincing SMEs to follow their personalised plans and reduce their footprint, the impact and benefits comprised among others:

- *Transformation of the specific SMEs to more environmentally friendly businesses that are less harmful to the environment:* Direct result from implementing carbon reduction actions proposed by PeSCoS.
- *Cutting of costs associated to unsustainable practices replaced by more friendly approaches:* Direct result from implementing carbon reduction actions that have been identified by PeSCoS as actions resulting to reduction of costs associated mainly with energy consumption.
- *Embedding of the sustainability view point in all aspects of the SMEs daily operation:* Indirect result from experiencing the benefits from reducing CO2 emissions.

An additional impact may be an *increased revenue by reaching out to environmentally conscious consumers*. This is however an unsupported claim at this stage as it is impossible to prove and at the same time measure the financial impact to the businesses in terms of turn over. There are hints however that this could be the case, even to limited extent, in The Netherlands if the Dutch partner manages to increase the visibility of the PeSCoS website badges at local and subsequently national level:



To this end the Dutch partner is using as a means the "Clean Drinks" campaigns on twitter since the @CleanDrinks profile is experiencing high visibility as demonstrated by the number of followers below:



CleanDrinks  
@CleanDrinks

CleanDrinks is a high-standard network event with the aim to address sustainability as an economic opportunity. Join CleanDrinks now! @cleandrinks.com  
<http://www.cleandrinks.com>

<b>777</b> TWEETS	<b>252</b> FOLLOWING	<b>1,800</b> FOLLOWERS	 <b>Following</b>
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The image shows a Twitter profile card for CleanDrinks. The profile name is CleanDrinks and the handle is @CleanDrinks. The bio states: "CleanDrinks is a high-standard network event with the aim to address sustainability as an economic opportunity. Join CleanDrinks now! @cleandrinks.com". The website link is http://www.cleandrinks.com. The statistics are: 777 tweets, 252 following, and 1,800 followers. The 1,800 followers count is highlighted with a red box. The user is currently following the account.

## 2. Project Approach

At the core of the PeSCoS training system is a carbon footprint calculator capable of utilising regionally specific datasets reflecting the types of energy, money and other resources businesses consume because of their choices and operational ways.

The process starts by calculating the current carbon footprint and producing a detailed report comprising all the appropriate actions that will turn the business greener. The actions are divided into categories such as the ones below:

- Simple actions that can be implemented immediately without requiring an investment;
- Simple actions that can be implemented immediately, but require an investment;
- Actions that have prerequisites (other actions need to be implemented first), but require no investment;
- Actions that have prerequisites and require an investment.

Actions		Complete Action	View Information
<input type="checkbox"/>	Question	Actions	Completed
<input type="checkbox"/>	Question 01	Building equipped in a heating system enables maintenance of the required indoo...	<input type="checkbox"/>
<input type="checkbox"/>	Question 02	Building thermomodernisation is to improve the thermal insulation of the barriers s...	<input type="checkbox"/>
<input type="checkbox"/>	Question 03	Large building glazing (e.g. over 50%-60%) makes use of natural lighting of the r...	<input type="checkbox"/>
<input type="checkbox"/>	Question 04	Double glazed windows have a better thermal properties than single-glazed.	<input checked="" type="checkbox"/>

Each action is explained in detail, it includes a time plan and cost estimate (if applicable) for its implementation and a detailed description of the associated reduction in energy consumption or otherwise and costs.

The screenshot shows a software interface with a sidebar on the left titled 'Actions' containing a list of questions from 'Question' to 'Question 9.5'. 'Question 1' is selected. The main panel displays the details for 'Question 1', which is titled 'Action with prerequisites and investment'. The content is organized into four sections:

- Abstract:** A waste management policy is based on goals and strategies to ensure the preservation of natural resources and minimize adverse impacts on public health and the environment. To achieve these goals should be encouraged the reduction of waste production and its reuse and recycling. To a large extent this requires the promotion, identification, development and adoption of cleaner technologies and products and recyclable materials. Given their role in waste management, it is also important to promote awareness and dissemination actions on waste targeted at employees.
- General Description:** Strengthening the prevention of waste and encourage its reuse and recycling, promote a full utilization of the new organized waste market as a way to consolidate the recovery of waste, with advantages for economic operators as well as stimulating the use of specific waste with high recovery potential.
- Reduce Consumption:** N/A
- Connected Actions:** Development of a continuous training plan for staff/employees of the company.

The SME is prompted to select the actions that they wish to implement and the time frame for the implementation indicating the size of the business and whether cost or total return on investment is more important.

The final software enables SMEs to develop highly customized energy-reduction plans with many different options and the curriculum is divided in modules depending on the energy consumption category being tackled.

The sequential steps of the methodology for achieving the final outcome are the following:

1. Production of the **State of the Art** for carbon footprint calculators.
2. Requirements analyses and **needs identification** process.
3. Design of the PeSCoS **footprint calculator**.
4. Elaboration of the **methodology** for producing **personalised unsustainable ways withdrawal plans**.
5. Documenting of the **carbon reduction actions**.
6. Design of the **training courses**.
7. Development of the **training courses**.
8. Introduction of incentives through the award of **website badges**.
9. Implementation of the PeSCoS **platform**.
10. **Integration** of the footprint calculator, personalisation engine ("Genie"), courses, withdrawal plans and reduction actions to the platform.
11. Provision of **assess** to the platform.

12. Finalisation of the platform through internal **testing** and external **assessment**.

13. Introduction of the **pilot** phase.

Parallel to the execution of these sequential steps, a series of structured **dissemination** actions were designed and documented in a **dissemination plan** and executed to make it possible to achieve the required visibility to attract the necessary numbers of SMEs to achieve the objectives. Such dissemination actions comprise:

- ✓ A web 2.0 look and feel **project website** ([www.pescos.eu](http://www.pescos.eu));
- ✓ A complete **project information kit** comprising various kinds of visuals;
- ✓ An introductory **animation video** for the platform;
- ✓ **Newsletters**;
- ✓ **Participative technologies groups** specifically for the project;
- ✓ **Press releases**;
- ✓ **Publications**;
- ✓ Participation in **events** of high visibility and relevance;
- ✓ **Information days**;

All, the above were monitored in terms of quality by a **quality assurance process** based on **QA metrics** applied to major project deliverables in the context of **regular project reporting**. The quality assurance methodology comprised also the introduction of a **Best Practices and Lessons Learned programme** to facilitate repetition of successful approaches and avoidance of questionable practices.

The sustainability of the results is driven by an **exploitation strategy** with very detailed and specific opportunities to be pursued at partner level and facilitated by a **consortium agreement** defining roles, rights and responsibilities for everyone. Progress during the project life was monitored under regular project reporting against exploitation targets.

The **added value** of the approach followed in PeSCoS can be located in the introduction of personalisation aspects into the design of the unsustainable ways withdrawal plans. The fact that not enough personalisation was part of today's footprint calculators, especially industrial calculators was proven from the conclusions of the state of the art work. Footprint calculators of the future need to move past the generic approach to measuring carbon footprint and move to more specific and personalised approaches targeting specific industries in specific regions. PeSCoS is a first approach towards this direction and aims to go a step further by offering not only a more realistic calculation of the current carbon footprint of an SME but also a complete solution, in steps, for the reduction of the carbon footprint, based 100% on the specific characteristics of the SME.

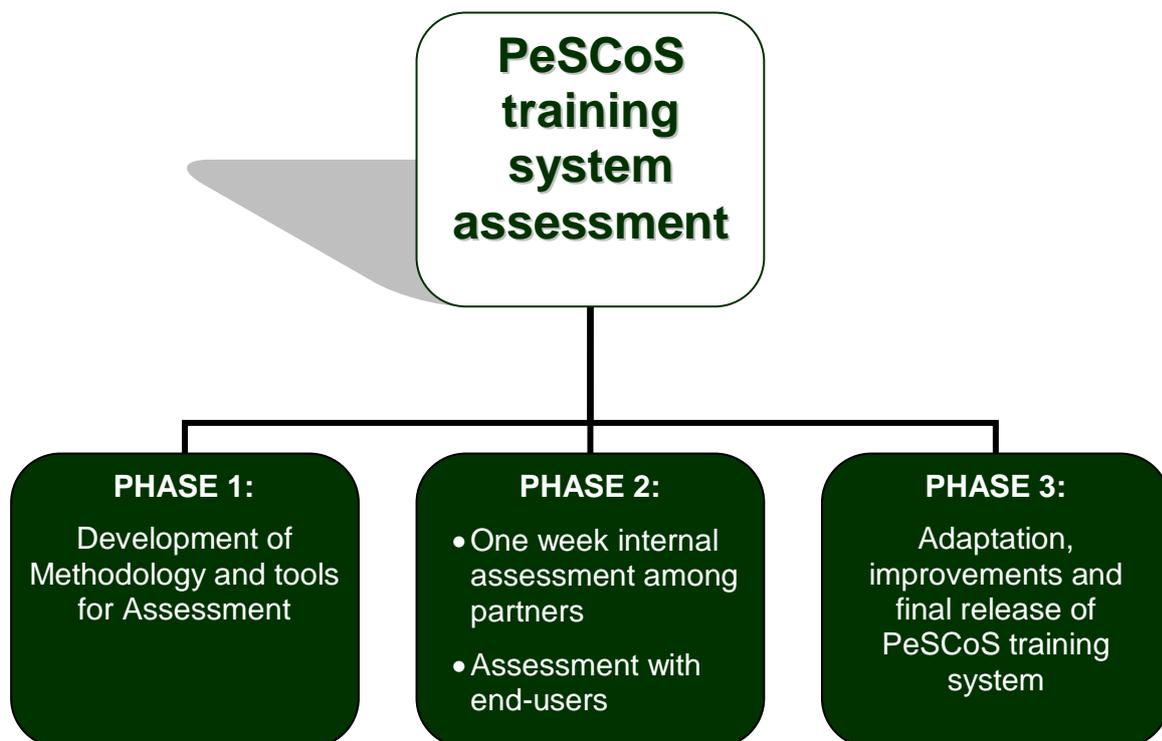
The **evaluation strategy** was designed on the bases that the PeSCoS platform should break any natural resistance SMEs will have on using the tool and build confidence in the SMEs that the outcome from following the personalised plans will be the desirable. The inputs provided by the needs identification were used for the design of the platform which was assessed by the target users in order to determine its effectiveness. Each SME used a step-wise approach to evaluating the platform during which it calculated its generic footprint and then focused on specific energy

reduction areas depending on its personal interest to reduce footprint attributed to specific energy areas. The expectation was that as soon as an SME witnessed the results (mainly in cost cutting) from reducing footprint in one energy area, it would then move to another in order to multiply the benefits to the environment and its business. The initial feedback from the **assessment exercises**, reflected in the **overall assessment survey** seems to be consistent with the expectation.

The methodology for assessment comprised two sequential steps:

1. Internal testing;
2. External assessment.

The phases involved are depicted graphically below:

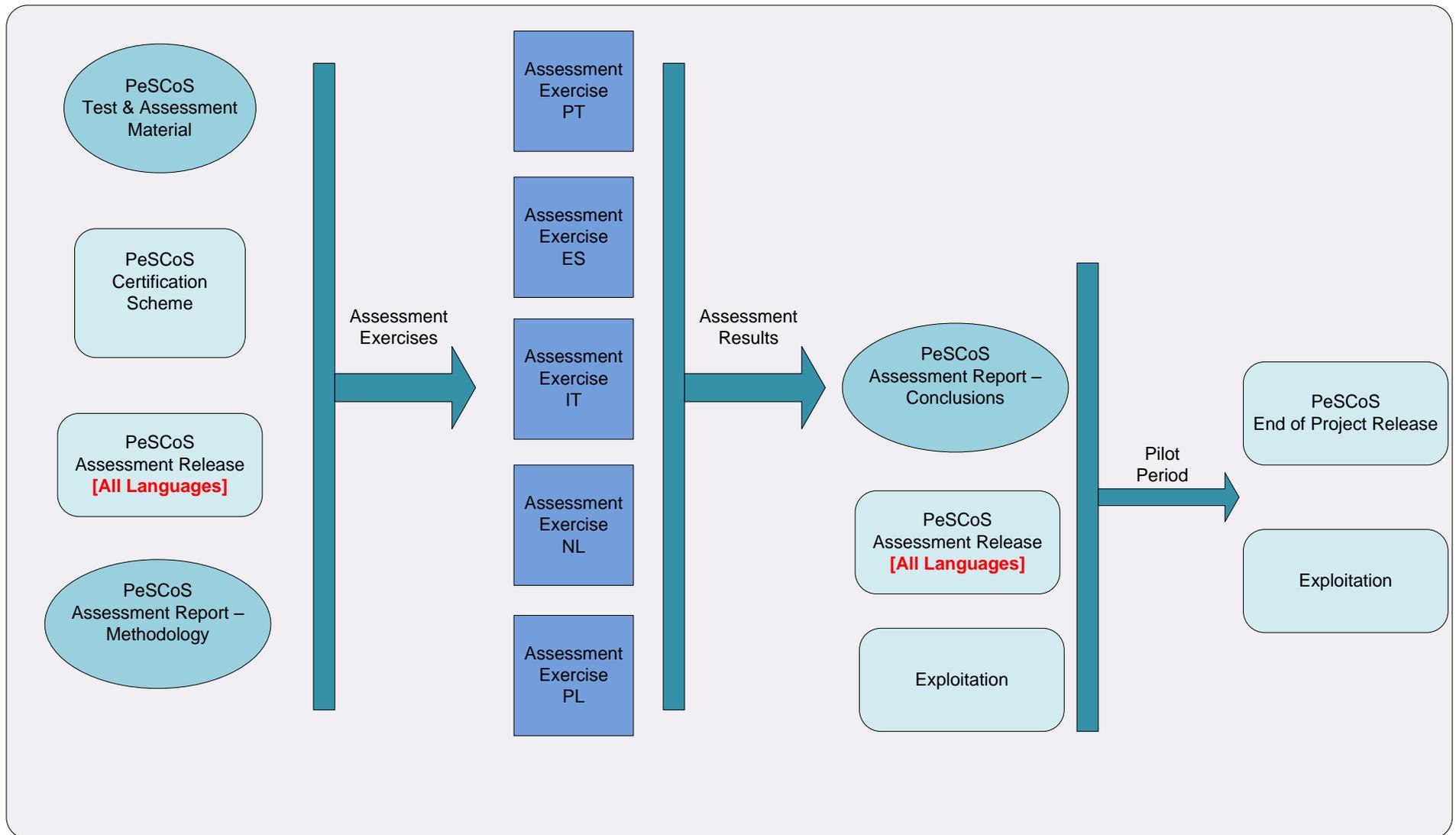


PHASE 1 was facilitated by the elaboration of an assessment methodology and the tools to facilitate the assessment including the recording of the results for processing later.

PHASE 2 comprised an internal assessment to serve as a final check and trial for the actual assessment end-users which will follow and the assessment with the end-users.

PHASE 3 covered the period past the execution of the assessment exercises and the elaboration of the conclusions during which period the partners may decide to make final adaptations and improvements to the PeSCoS platform based on the outcome of the assessments.

The complete process is graphically depicted in the figure below:



All partners delivered at the end of the assessment exercises and pilot period **national (regional) reports** providing short information on the implementation of the methodology for the assessment in their countries (number of participants, organisation of the courses, time dedicated by the participants etc.) and the statistical analysis of data collected during the evaluation phase.

National reports were be collected for the development of the **overall evaluation** of PeSCoS evaluation, comprising:

- The results of the partners' internal assessment;
- The results of the assessment exercises with final beneficiaries;
- A general overview of assessment feedback;
- The list of lack/inconsistencies arose from the evaluation;
- Proposals for improvements and adaptation of the PeSCoS system in all its parts: technical, training contents, user-friendliness, usefulness.

The **dissemination strategy** relied also on the use of participative – Web 2.0 technologies which peaked as soon as the test release of the PeSCoS platform was made available and the partners had something more concrete to demonstrate. The reason is off course that participative technologies can only be used once to generate awareness and it is all about choosing the right point in time to use them as a target user will join a group and read about the project once initially invited in order to satisfy his/her curiosity, but then it is highly doubtful that in today's fast moving world will return to see the progress on the mission statements of the project. Hence, it is more effective to engage users when there are concrete results to show.

Equally important elements of the dissemination strategy employed were:

- ❖ The **project information kit** which comprised a series of project related information and visuals such as:
  - Short project presentation;
  - Press releases;
  - Brochure in all languages, assigned to QA codes for easy access;
  - Newsletters;
  - Information regarding project related Web 2.0 groups;
  - Photos from project related events;
  - Publication and media material including the introductory animation to the PeSCoS platform;
  - Project visuals comprising:
    - Logos
    - Website badges
    - etc.
- ❖ The Web 2.0 look and feel **project website**, acting as a single entry point to all project related information.
- ❖ The PeSCoS **introductory animation** which proved very successful in introducing SMEs to the platform and became viral through social media generating a lot of visibility for the project.
- ❖ The ENTER network: <http://www.enter-network.eu/index.php?id=120> which provided access to 576 members from 35 countries making it a powerful networking tool
- The ADAM – Leonardo da Vinci Projects and Portal (<http://www.adam-europe.eu/adam/project/view.htm?prj=6838>) which was regularly updated and

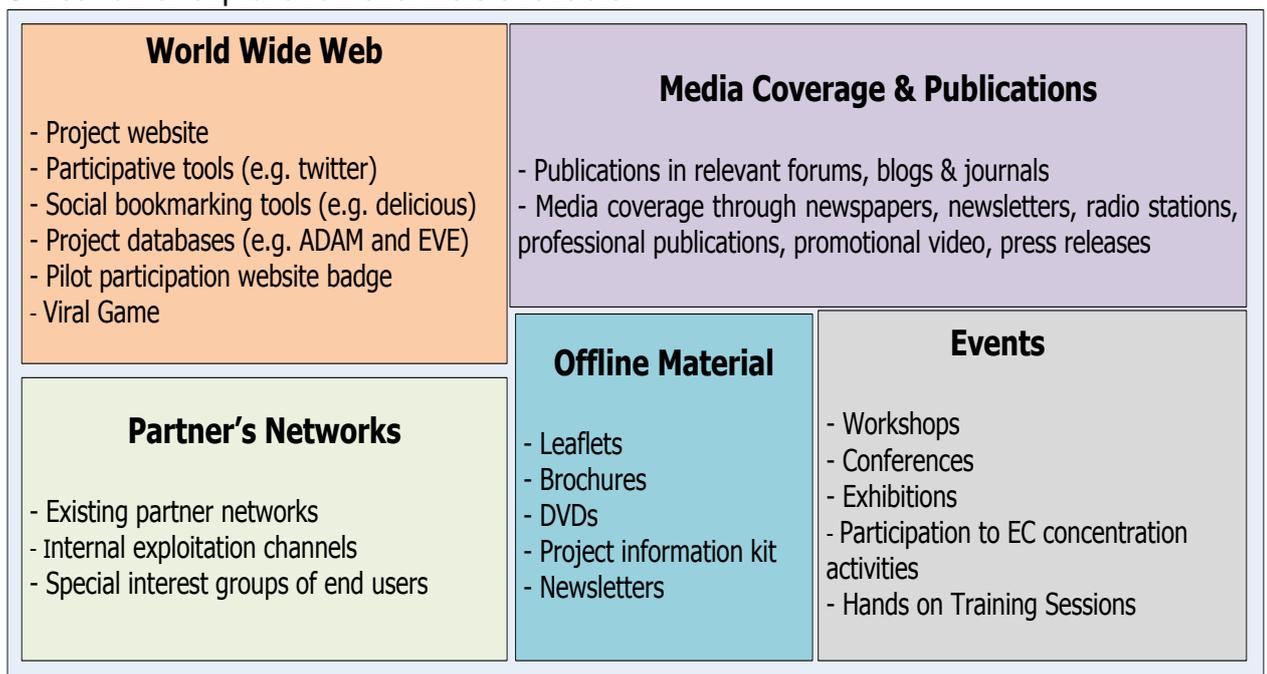
made accessible through the project home page via an http link directing to the project.

- ❖ Various **blogs and news services** utilised.
- ❖ The captivating design of the PeSCoS **brochure and marketing material**.

The **exploitation strategy** for the project's results was initiated with the introduction on sustainability into the requirements for the PeSCoS platform and the development of the tool in distinct components that can be used as components for future tools. So, not only the tool itself will continue to exist after the project life as a tool to demonstrate the effect of personalised and industry specific calculators, but also the experiences and technology developed in the course of the project will be used for the development of future tools, especially in the area of personalisation.

The elements of the exploitation strategy followed in the context of the project comprise:

1. Determination of the target markets (customer base);
2. Identification of the potentially exploitable project results;
3. Assignment of exploitation responsibilities to partners, based on skills and competences, for pursuing the exploitation opportunities for the identified project results (exploitation matrix);
4. Utilisation of exploitation channels available:



5. Exploitation of additional funding streams.
6. Measure of progress through the specification of quality metrics for exploitation and application in the context of regular project reporting.

### 3. Project Outcomes & Results

The outcomes of the project comprise

- The **State of the Art** in calculating carbon emissions used for the design of an SME footprint calculator that takes into account industry characteristics and locality.
- The **sustainability survey** designed, implemented and exposed through Survey Monkey (<https://www.surveymonkey.com/s/PESCOS>). The base questionnaire is available through the project website: [bit.ly/seX9P5](http://bit.ly/seX9P5). It provides insight into the needs of SMEs with regards to environmental sustainability issues and their expectations from relevant training tools.
- The **sustainability needs report** documenting the needs of the SMEs targeted by the project used to guide the design of training programme and functionality of the PeSCoS platform.
- The **methodology** for producing **personalised withdrawal plans** powering an action based training tool for the SMEs.
- The energy area **specific questions** to drive the creation of the personalised withdrawal plans.
- The **CO2 reduction actions per energy area** which are an integral part of the training content along with the **Read More About content** guiding the SMEs to the implementation of the chosen actions.
- The design of the PeSCoS platform in the form of **business use cases** describing the intended functionality.
- The **environmental "Genie"** manifesting in the form of questions feeding data into a footprint calculator capable of separating between CO2 emissions attributed to each energy area.
- The **personalisation engine** linking the output of the environmental "Genie" with the CO2 reductions actions creating thus a **personalised unsustainable ways withdrawal plan** for SMEs
- The **PeSCoS platform** integrating the **environmental "Genie"** which powers the **personalisation engine** with the **training content** and the **reporting tool** providing insight into achieved progress and handles the awarding of the **website badge**.

Additional results comprise:

- The **project quality plan** guiding the execution of the project and establishing the quality assurance procedures for monitoring progress in terms of quality through the application on major deliverables (milestones) of specific **quality metrics** and the overall establishment of a **best practices and lessons learned programme**.
- The **dissemination plan** for the project describing the key elements of the dissemination strategy to be employed in the context of the project for

achieving the necessary visibility to ensure reach to an adequate number of SMEs from the targeted industries.

➤ The various **dissemination tools** employed for achieving the dissemination strategy:

- QR enabled Project Brochure;
- Newsletters;
- PeSCoS introductory Animation;
- News Items;
- Presentations;
- Press releases;
- Project Information Kit;
- Participative technologies groups:

- Twitter: @pescos\_doi



- Delicious tag bundle: <http://delicious.com/mat2775/pescos>

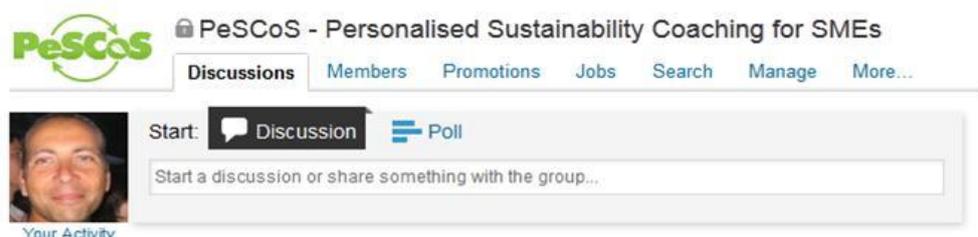


#### TAG BUNDLES

PeSCoS

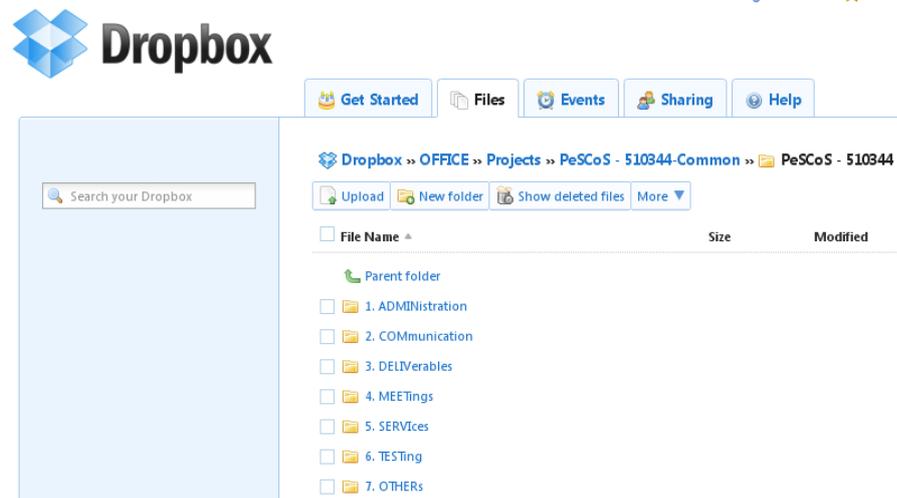
- LinkedIn:

[http://www.linkedin.com/groups?gid=4133263&trk=myg\\_ugrp\\_ovr](http://www.linkedin.com/groups?gid=4133263&trk=myg_ugrp_ovr)



- Events and info days.

- The project **collaborative working space on DropBox** structured according to ISO and used for facilitating the **knowledge repository** enabling the maximum exploitation of project results by facilitating the **Consortium Agreement**:



- The **exploitation plan** depicting the exploitation strategy for the project through the identification of potentially exploitable results and the allocation of exploitation responsibilities to partners with regards to these results (exploitation matrix).

All aforementioned results, depending on their dissemination level (public or otherwise), are either available under the public deliverables space of the project website (<http://bit.ly/UT52Nu>) or else under the private area for registered users with additional privileges giving access to all project results.

Three project meetings have taken place:

1. Kick Off Meeting in Athens – Greece on 16/11/2010;
2. Content Meeting in Barcelona – Spain on 29<sup>th</sup> and 30<sup>th</sup> of September 2011;
3. Assessment Meeting in Milan - Italy on 29<sup>th</sup> and 30<sup>th</sup> of May 2012.

Comparing the results achieved thus far against the envisaged major outcomes of the projects, reproduced below:

- A **carbon footprint calculator** capable of utilizing regionally specific datasets.
- **Training material** covering energy reduction in the areas of recycling and heating systems, electricity, paper consumption and transportation.
- A tool for the automated creation of **personalised unsustainable ways withdrawal plans** geared to SMEs.

- A set of **best practices** for the application of energy saving materials, tools and procedures for SMEs to embrace new, greener habits.

It is fair to claim that the project has met the objectives in full and in some cases has extended further than the original objectives which is quite an achievement considering the initial delays experienced in the project from the withdrawal of a key beneficiary from the partnership on the eve of project kick off meeting (one of the partners failed to participate in the project kick off and did not participate in the project until it was replaced by a similar partner after the first 6 months in the project following an amendment request).

## 4. Partnerships

The partnership comprises:

- An **independent software house** based in Athens - Greece, which provides consulting, informatics and engineering services which implemented and supports the PeSCoS platform.
- A **university faculty of process and environmental engineering** in Lodz – Poland with vast experience in environmental impact assessment that led the requirements analysis and state of the art work and led the design of the footprint calculator that powers the PeSCoS platform. The university also developed the training material for reducing carbon footprint attributed to the heating source of energy.
- An experienced **consultancy active in the area of energy efficiency** with a large network in Italy and access to industrial SMEs in Italy that contributed to the requirements/needs analysis and the assessment of the platform by the target groups while in parallel ensured the valorisation of the project's results.
- An **environmental engineering agency** based in the area of Alentejo – Portugal which comprises a network of 16 municipalities and has considerable experience in energy related projects. The Agency contributed to the requirements/needs analysis and assessment of the platform utilising its access to regional SMEs, develop the training content for reducing carbon footprint through recycling and ensured the valorisation of the project's results.
- A **technology foundation** based in Barcelona – Spain working closely with public administrations and active in many energy related projects where it plays a leading role in the development and implementation of environmental policies, green tech based projects and SME services. The foundation contributed to the requirements analysis by gathering input from SMEs belonging to the target groups and situated in the Barcelona region and led the design of the training courses by the other content providers. The foundation also contributed to the assessment of the platform by SMEs from the targeted industries and ensured the valorisation of the project's results.
- A **strategic communication consultancy** based in Nicosia – Cyprus that has experience in marketing communications and applies a solid product-based quality assurance methodology. The consultancy ensured the quality of the outcomes and introduced sustainability into the platform's requirements in order to ensure the further exploitation of the project's results after its life. The consultancy also worked on the assessment of the platform and the “reward” scheme for SMEs that follow the PeSCoS plans and reduce their footprint. The consultancy also put in place the best practices programme.
- An **environmental consultancy** based in Amsterdam – The Netherlands which conducts (EPA – U) energy scans, calculates carbon footprint for SMEs from the target groups and supports them in their quest towards achieving environmental neutrality. The consultancy participated in the requirements/needs analysis by organising focus groups with SMEs from the targeted industries, provided its experiences for the design of the platform, developed the training content related to the reduction of carbon footprint attributed to transportation, guided the assessment of the platform and contributed to valorisation of the project's results.

The partnership covers 7 countries with similarities (MED region), but also great differences in some major aspects such as:

- The impact and importance of targeted SMEs to the national economy.
- The landscape and climate surrounding the targeted SMEs and vastly affecting the end energy consumption from different sources.
- The types of energy consumed by the industries of interest to the project and their origin (e.g. solar energy, wind power, nuclear, petrol, gas, etc.).
- The state of play with regards to environmentally friendly technology and the sensitivity of SMEs in environmental issues.

The geographical coverage and the multi-disciplinary nature of the partnership are of utmost importance to the project since it aimed to achieve personalisation of the delivered training. The different regions have different characteristics with regards to terrain and climate, characteristics which affect the energy consumption behaviour of the targeted SMEs. Hence, these characteristics represented an ideal set of inputs to drive the data entry process for the PeSCoS footprint calculator and the subsequent personalised plans.

Then, with regards to the carbon reduction actions to be suggested to the SMEs, the partnership works as a vehicle for the transfer of technology and carbon reduction methods from country to country. Up to now, the partners have benefited a lot from the Dutch experiences where environmental sustainability seems to be a step ahead and SMEs are more environmentally conscious than their counterparts in the other countries covered by the partnership. Hence, the project presents an opportunity for transfer of good practices both on approaching the SMEs to pass the message of sustainability, but also on carbon reduction techniques that produce results (“quick wins”).

Another fact that helps progress are the ties that some of the partners have to industries of interest to the project and their experiences from other energy related projects in the context of which they developed networks which they now have personal contact with and hence direct access.

## 5. Plans for the Future

The potentially exploitable project results have been identified and have led to the following exploitation prospects which are currently being pursued or investigated:

- **Sustainability Coaching:** The set of actions for reducing carbon emissions and the accompanying content for implementing the actions comprise a training curriculum for SMEs that can be trained on how to reduce their footprint. The partners may use this personalised training system for SMEs to motivate them to eliminate their unsustainable ways and embrace new, greener habits. Using the content partners can offer personalised training to SMEs. The training material is designed to offer businesses practical advice for cutting down energy and reduce their environmental impact.
- **Industrial Footprint Calculator:** The calculator that powers the PeSCoS Genie can be used as a stand alone module, offered for free under a EUPL license model to be used by everyone that is in a need of a footprint calculator. Additionally, the partners are considering the possibility to offer the calculator as a web service so that external web sites that offer footprint calculation services can use it.
- **Personalised Unsustainable Ways Withdrawal Plans:** This refers to PeSCoS complete package. Even though the tool is offered for free as a service to anyone accessing the PeSCoS website, it could indirectly generate revenue through increased website popularity (pay per click, Google Adwords model) and through targeted marketing. For the later, there is an idea among the partners to create a contacts database holding the contact details of the PeSCoS registered users in order to follow up on their progress. Then, depending on their needs they may receive offers from companies offering services relevant to their footprint reduction needs. Off course, registered users will have to agree on their footprint data and personalised footprint reduction plan being used for the purpose of receiving custom offers for the implementation of parts of their footprint reduction plan.
- **Personalised eLearning Engine:** The core of the PeSCoS personalised training system for SMEs is a highly customisable “Genie” that can be used at the back end of any online or computer assisted training system to empower it with personalisation features. The code will be offered for free under a EUPL license model. So apart from the partners, practically everyone will be able to use, extend and contribute to the code further promoting it past its lifetime and constituting the “Genie” output very sustainable.
- **Consulting Services:** This refers to a more general service provision cashing in also on the footprint reduction actions/instructions, but also on the Best Practices and Lessons Learned in order to act as a typical environmental consultancy that will enter the premises of a client and apply a footprint reduction methodology (Re-engineering of current processes: AS-IS state towards the TO-BE state) according to the needs of the client. In reality this implies the extension of current service provision for the partners already offering environmental sustainability consulting services leading to a more powerful toolbox.

- **Development of Extension Modules:** This covers the implementation by partners of entirely new modules needed to cover specific business requirements based on PeSCoS modules or cashing in on the experience acquired through the PeSCoS project. One such development that is expected to be popular among prospective clients is the development of custom calculators very specific to the industry, location, size and needs of the clients.

At this stage it is worth mentioning some of the exploitation actions already implemented or currently being implemented:

Num	Product	Partner	Exploitation Context
1.	Sustainability Coaching	P3 - EM	Set of actions for reducing carbon emissions utilised in the context of other projects.
2.	Sustainability Coaching	P7 - WZK	Set of actions for reducing carbon emissions & accompanying content for implementing the actions utilised as consulting services (SME auditing)
3.	Footprint Calculator	P1 - AT	Contributed as OSS, free to use under EUPL license
4.	Footprint Calculator	P1 - AT	Currently developing a web service allowing integration of the calculator to third party websites for free at the "cost" of advertising messages managed by P1
5.	Footprint Calculator	P2 - TUL	Used as proof of concept for the calculation model designed by the partner
6.	Footprint Calculator	P2 - TUL	Utilised in the context of CO2 footprint calculation education of students
7.	Footprint Calculator	P7 - WZK P6 - FC P1 - AT	Contacts database holding the contact details of the PeSCoS footprint calculator users to be used in a "direct marketing approach" under the concept of following up on their progress
7.	Withdrawal Plans	P7 - WZK	Has direct access to target groups due to its sustainability consulting business and the withdrawal plans have made their way to the consulting portfolio
8.	Withdrawal Plans	P2 - TUL	The footprint reduction actions and accompanying content are used in extending existing curricula and giving them a more hands on and practical approach allowing them to be put immediately into practice by the SMEs with minimum assistance. In cooperation with BKPPT (Belchatow-Kleszczow Technology Park)
9.	Best Practices and Lessons Learned	P7 - WZK	Has direct access to target groups due to its sustainability consulting business and the BP/LL program has made its way to the consulting portfolio
10.	Best Practices and Lessons Learned	P4 - ATejo P5 - FT	Used them in the context of helping public entities from their areas to reduce their footprint
11.	Best Practices and Lessons Learned	P6 - FC	Used the methodology for BP/LL in the context of studies and bids
12.	Footprint reduction methodology (Re-engineering of current processes: AS-IS state towards the TO-BE state)	P3 - EM P5 - FT P7 - WZK	The methodology, as elaborated in the context of the project, has impacted the existing methodologies of the partners with regards to sustainability auditing. Until now existing methodology was not action-based with regards to achieving the "To-Be" situation. The results from an action based methodology seem promising.
13.	Genie Tool	P1 - AT P6 - FC P7 - WZK	Working on the submission of a joint Transfer of Innovation proposal extending the tool also to cover the calculation of the water footprint.
14.	Genie Tool	P7 - WZK P6 - FC P1 - AT	Experimenting with the SME behaviour towards completion of the questions and subsequent follow up of the withdrawal plans for the purpose of targeted advertising by relevant suppliers in the vicinity of the SME. Depending on their needs they may receive

Num	Product	Partner	Exploitation Context
			offers from companies offering services relevant to their footprint reduction needs.
15.	Genie Tool	All	Elaborating versions of the final report generated by the platform, customised to be more compliant to various energy reports relative to participant countries. For example in Greece there is now a law requiring an energy consumption certificate to be issued every time a property of more than 50 square meters is rented or sold. In the case of property used to house SMEs, it would be very beneficial if the report was compliant to some of the features of the energy consumption certificate. Ideally, there will be a customised report per country.
16.	Genie Tool	P2 - EM P6 - FC	Working towards utilisation of the concepts of the Internet of Things and smart metering combined with the further involvement of public entities funded under a programme such as the Intelligent Energy Europe, but also further continuation of specific results of the project, such as the personalisation engine which could be customised for delivering other kinds of training such as the set up of a bee keeping business contributing at the same time to the preservation of the diminishing bee population under Life+.
17.	Genie Tool (extension of electricity consumption calculations)	P7 - WZK	Extended and specialised the electricity consumption calculation for the switch my lights services. Used the model under the switch my lights service ( <a href="http://www.switchmylight.com">www.switchmylight.com</a> )
18.	Genie Tool (extension through custom calculations, industry specific)	P1 - AT	The R&D of the partner is investigating the extension of the Genie tool through development of custom calculators very specific to the industry, location, size and needs of the clients. Extension of current calculator to cover more industries and provide the flexibility to the administrator to insert new industries via XML and without the need to code.
19.	Genie Tool (extension of the personalisation engine)	P6 - FC	Used as the back end used at the back end of any online or computer assisted training system to empower it with personalisation features. To this end, the "Genie" workflow will be used and further extended in the context of a Leonardo Development of Innovation project called "PECOS4SMEs" (527562-LLP-2012-GR-LEONARDO-LMP). The personalisation workflow will be extended in order to context-independent and used for personalisation of training regardless of context.
20.	Genie Tool (Javaca platform extension)	P1 - AT	Use of the personalisation engine for bringing the online help of two of the companies flagship products (SCM and Vetting Manager) to the next level. Provision of highly personalised learning tours of the products based on the information about the specific use of the product and the product aspects that present the most interest for the user. Such information will be provided by the user during the creation of his/her profile and subsequently used by the personalisation tool

The framework for the exploitation actions mentioned above is facilitated by a Consortium Agreement between the partners defining roles, rights and responsibilities of each party.

## 6. Contribution to EU policies

The main contribution is towards Directive 2009/28/EC for the support of renewable energy sources, demanding the increase to the consumption of energy from renewable sources to approximately 20% by 2020.

With regards to more specific objective of the LLP, PeSCoS:

- Supports the development of innovative ICT-based services through the implementation and deployment of the PeSCoS platform.
- Contributes to the development of quality lifelong learning through the best practices and lessons learned programme that accompanies the operational management of the project and the introduction of sustainability into project requirements.
- Promotes innovation and a European dimension in systems and practices in the field through the cooperation of entities from 7 EU countries and the development of a regionally and industry specific footprint calculator.
- Allows participants to acquire knowledge and skills to facilitate personal development with regards to environmental sustainability.
- Increases the volume of co-operation between enterprises and other relevant bodies throughout Europe. The partnership covers 7 countries and the partners have extended networks that may well lead to additional co-operations.
- Complements the objectives of KA3 ICT by addressing priority 2: ICT as a catalyst for innovation and creativity in lifelong learning by promoting personalised and phased learning, in contexts where learners are able to immediately apply their knowledge to practice.
- Facilitates useful environmental sustainability concepts for SMEs and raises the confidence of SMEs interested in receiving environmental training so that they won't feel they are wasting their precious time with inappropriate training material and methods.

