

GRASPINNO

Transnational model, strategies and decision support for innovative clusters and business networks towards green growth, focusing on green e-procurement in EE/RES for energy refurbishment of public buildings.

Deliverable: 4.2.2

Roadmap for wider uptake of the integrated eGPP platform

Prepared by ATLANTIS Consulting

Version 2.0
Date: October 2018

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1. Introduction

1.1 Scope and objectives of the deliverable

This report represents the "Roadmap for wider uptake of the integrated eGPP platform" deliverable for the GRASPINNO project and describes part of the work undertaken in WP4 "Transferring". Its main objective is the development of a roadmap for the wider uptake of the GRASPINNO integrated eGPP platform. This roadmap includes guidelines and recommendations, along with a generalized process for target groups, in order to take up the integrated eGPP platform, according to the findings collected by all pilots.

1.2 Structure of the deliverable

This deliverable is structured in 11 chapters:

Chapter 2, "**GRASPINNO elements to take up**", provides a brief description of the specific elements comprising the unified GRASPINNO platform, and which can be replicated as a whole or as separate elements.

In Chapter 3, "**GRASPINNO platform take up motivation**", we describe the incentives, which may motivate the identified stakeholders in taking up the GRASPINNO platform.

Chapter 4 "**Preconditions to facilitate uptake**", describes requirements, which in case they are met, could foster the GRASPINNO take up potential.

The non-technical barriers and the lessons learned about the GRASPINNO platform, during the pilot actions and the Technical Events, are described in Chapter 5 "**Non-technical barriers and lessons learned**".

Chapter 6 "**GRASPINNO platform requirements and resources**" includes a description of the technical and operational requirements along with the skills of the human resources needed for the successful deployment and operation of the unified GRASPINNO platform.

In Chapter 7, "**Take up requirements from pilot validations**" we array the platform take up requirements, as these requirements resulted from the pilot actions and the technical events held in Italy, Spain, Greece and Bosnia.

Chapter 8, "**GRASPINNO instance replication**" describes the various steps of the roadmap to be followed towards the wider uptake of the integrated GRASPINNO eGPP platform.

Chapter 9, "**Marketing & Promotion**" describes the communication and promotion activities to be conducted, in order to raise awareness about the GRASPINNO platform and facilitate the platform's uptake potential.

In Chapter 10, "**Sustainability issues**" we briefly describe main activities to be conducted in order to increase platform's sustainability potential.

Chapter 11, "**Legislative aspects to consider**" describes the main legislative aspects (i.e. GDPR, Ecolabel, EU Directives, etc.) that may affect the deployment of the GRASPINNO platform and should be taken into account by each entity/body, which may adopt the platform.

Finally, Chapter 12 "**References**" lists the main references consulted for the creation of the specific deliverable.

2. GRASPINNO elements to take up

2.1 General description

GRASPINNO eGPP unified platform is a web-based application developed according to the following web frameworks:

- PHP programming language. PHP is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language.
- UI kit framework. UI kit is a popular HTML, CSS, and JS framework for developing responsive, interactive and mobile projects on the web.
- JQuery. jQuery is a fast, lean, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax scripting much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.
- MySQL database.

The GRASPINNO integrated system is comprised of the following elements:

- Single sign-on module
- GRASPINNO platform Dashboard
- Data Bases
- eGPP and LCC tools
- Transnational Mediterranean Network (TMN)
- GRASPINNO Unified platform
- "Green" Public procurement criteria in hierarchical structure.

The abovementioned elements are described briefly in the following subsections.

2.2 Single sign-on module

This specific module allows the user to enter in the various platform's functions by signing in only once. This means that with only one username and password, each user can have access in the platform's databases, eGPP and LCC tool.

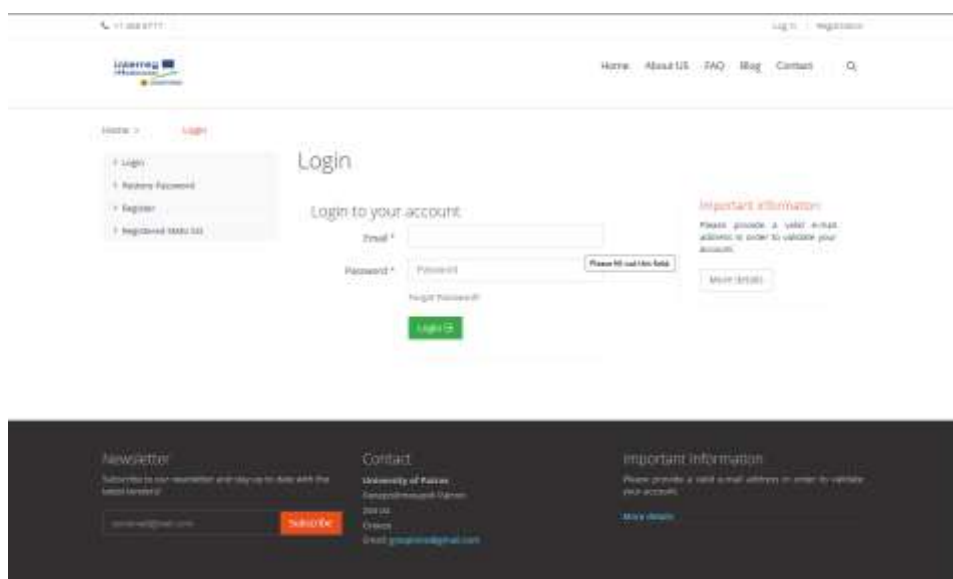


Image 1: GRASPINNO platform Single sign-on module

2.3 Dashboard

Through the Dashboard, the user may have access to various functionalities of the eGPP platform (based on his access rights), such as the eGPP tool, the management of products, search of published tenders, search on products, etc.

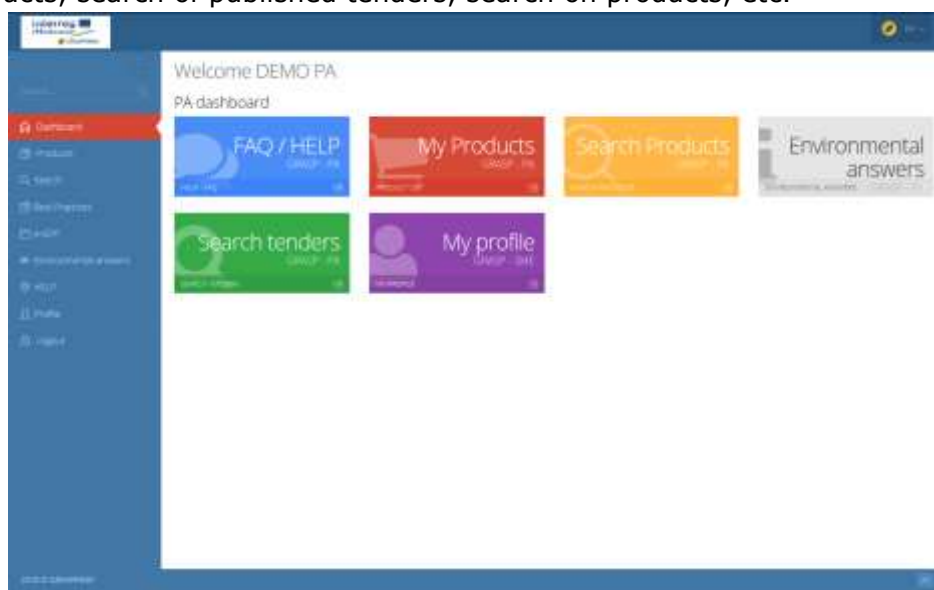


Image 2: GRASPINNO Dashboard

2.4 GRASPINNO Databases

The GRASPINNO database web platform has 3 different groups of users (Administrators, Public Authority Users and Small & Medium Enterprises). Each type of user can perform specific tasks:

Tasks for Administrators

- Add data to the GRASPINNO database
 - Add categories and subcategories

- Add type and subtypes
- Add key element / green criteria
- Manage products
- Database administration
- Manage PA accounts
- Manage SME accounts

Tasks for Public Authorities

- Registration
- Sign up
- Restore Password
- Product List page
 - General
 - Products per country
 - Search products
 - Compare products
- Environmental answers page
- Manage profile

Tasks for Small & Medium Enterprises

- Registration
- Sign up
- Restore Password
- Product List page
- Add product
- Search for key element – green criteria
- Search for tenders
- Search for product
- Environmental answers page
- Manage profile

The administrators can back up GRASPINNO databases using an embedded tool in the GRASPINNO web platform. They can also import the exported tables or transfer them to another database server by using this tool.

Add key element form

Criterion Name
enter criterion name here...

Criterion Description
enter criterion description here...

Criterion tender standard
A long description of the type here...

Criterion standard reference
http://www.researchgate.net/publication/301010101-grasp-green-globe...

Criterion value description
enter criterion value description here...

Category
Select category...

Sub-category
No

Enter criterion name here, not the same as category or type name

Enter criterion description here

International green standard that is referenced by the element

Enter the reference address of the green criterion, the website address the information came from e.g. <http://www.grasp-egpp.eu/>

Detailed description of the specific green nature of the criterion.

Select category field where this criterion is grouped

A green key element can be sub criterion to an existing key element, if yes select the appropriate here.

Image 3: Add "green" criteria

Add Product form

Product Name
enter product name here...

Category
Select category...

Type
Select type...

Product Brand name
enter product brand name here...

Product model number
enter product model number here...

Product full description
enter product most common known technical specs and general information here...

Product units measurement
Pieces

Product quantity per unit
enter product needed quantity here...

Product Price
enter product price here...

Visible to other SME
No

Product name, e.g. WD Caviar Blue 500GB

Product category, e.g. Portable Computer

Product type, e.g. HDD (Hard Disk Drive) 500GB

Product brand name, e.g. Western Digital

Product model #, e.g. Scorpio Black

Product full description, e.g. The Western Digital Scorpio Black hard drive has a spacious storage capacity that can store all your important data. With a spindle speed of 7200 RPM, provides improved connectivity with other devices.

Product measurement #, e.g. pieces

If you want your product to be visible

After you filled all required information click continue

Image 4: Add products

2.5 eGPP and LCC tools

The eGPP tool offers Public Authorities an easy way to collect “green” specifications that can be used during tender preparation. The LCC tool with LCC tool as part of the GRASPINNO platform, supports the purchaser in calculating life cycle costs and evaluating the most economical offer under consideration of energy relevant criteria.

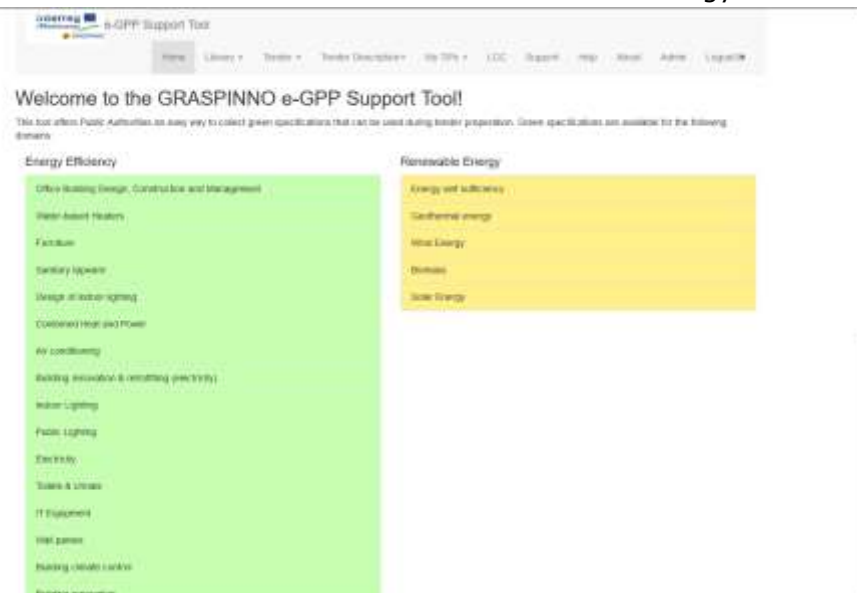


Image 5: GRASPINNO eGPP Support Tool

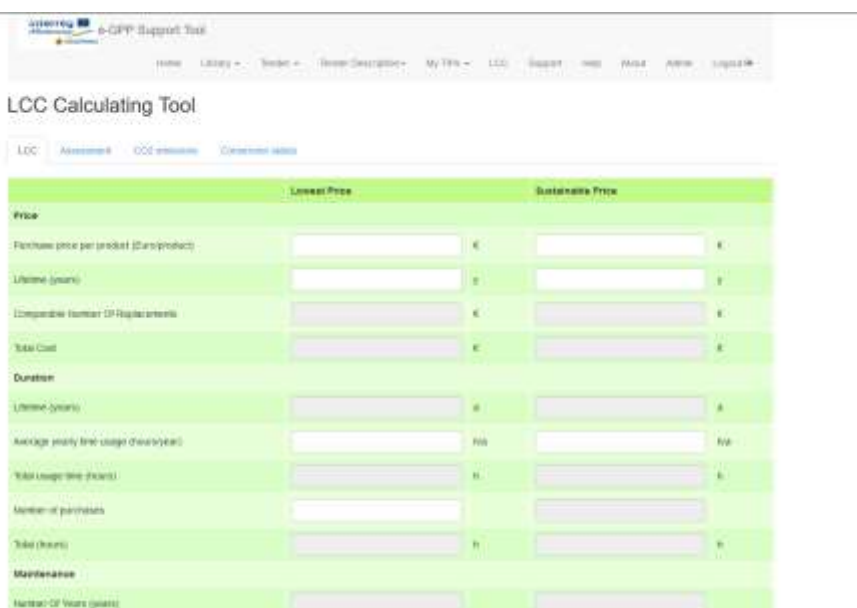


Image 6: GRASPINNO LCC tool

2.6 Transnational Mediterranean Network (TMN)

Transnational Mediterranean Network (TMN), is an online network of public and private operators involved/interested in procurement. The key players and active agents in the field of energy efficiency, renewable energies, e-procurement, green procurement can be for example, local, regional or National public procurement services, energy agencies, energy efficiency services providers, renewable energy

suppliers, energy efficiency and renewable energy research bodies, Universities, Chambers of Commerce, Chambers of Crafts, business associations, local government, regional government, any other type of relevant organizations in MED countries.

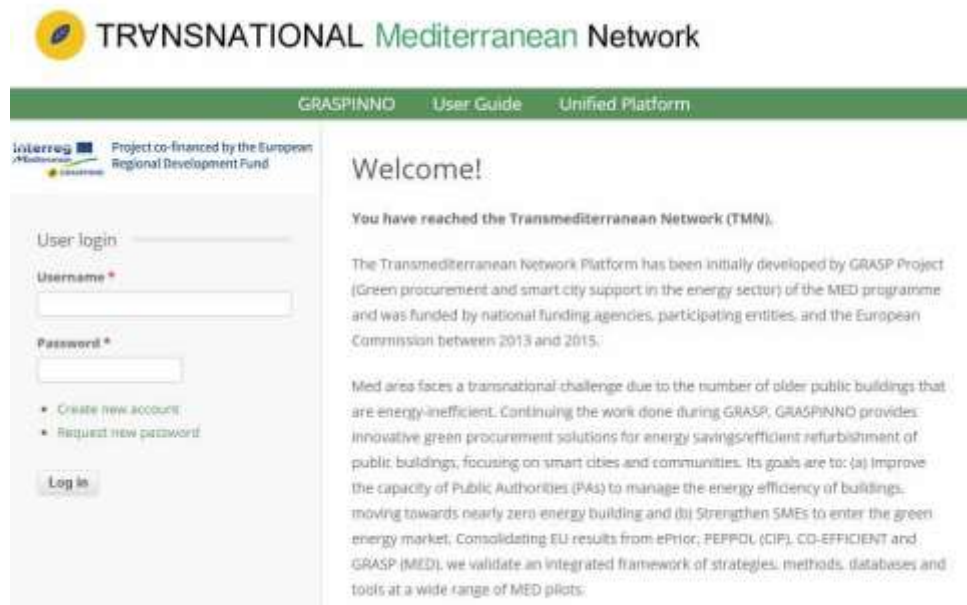


Image 7: TMN Home Page

2.7 GRASPINNO Unified Platform

The GRASPINNO Unified Platform (<http://www.graspinno.eu/index.php/unified-platform>), provides access in the 3 main tools of the GRASPINNO project, the GRASPINNO DataBases, GRASPINNO eGPP Support Tool and GRASPINNO LCC tool.



Image 8: GRASPINNO Unified Platform Home Page

2.8 GPP “green” criteria in hierarchical structure

GRASPINNO has identified specific main categories (Indoor lighting, Office Building Design/Construction/Management, Combined Heat and Power, Furniture, Toilets & Urinals, Wall Panels, Water-based heaters and Sanitary Tapware) related to buildings’ refurbishment. For each of these categories, EU “green” criteria were identified in hierarchical structures, in order to support their introduction and management in the platform’s databases.

Category – Level 1: Energy Efficiency					
Subcategory – Level 2: Indoor Lighting					
Subcategory – Level 3: Lamps					
Subcategory – Level 4: Existing installations					
Subcategory – Level 5: Energy Class					
Energy class “green” criteria					
n.	Name	Description	International Standard	URL of standard	Value Description
1	Energy class for replacement lamps of existing installations (Tungsten halogen lamps)	Tungsten halogen lamps energy class	Commission Directive 98/11/EC (Annex IV)	http://ec.europa.eu/environment/gpp/index_en.htm	Minimum energy class C
2	Energy class for replacement lamps of existing installations (Fluorescent lamps without integral ballast)	Compact fluorescent lamps without integral ballast	Commission Directive 98/11/EC (Annex IV)	http://ec.europa.eu/environment/gpp/index_en.htm	Minimum energy class B
3	Energy class for replacement lamps of existing installations (reflector/chandelier type fluorescent lamps with integral ballast)	Globe shaped, pear shaped, reflector type or chandelier type compact fluorescent lamps with integral ballast	Commission Directive 98/11/EC (Annex IV)	http://ec.europa.eu/environment/gpp/index_en.htm	Minimum energy class B
4	Energy class for replacement lamps of existing installations (All lamps other than halogen lamps with colour rendering index Ra>=90).	All lamps other than halogen lamps with colour rendering index Ra>=90	Commission Directive 98/11/EC (Annex IV)	http://ec.europa.eu/environment/gpp/index_en.htm	Minimum energy class B
5	Energy class for replacement lamps of existing installations (All other fluorescent lamps with integral ballast).	All other compact fluorescent lamps with integral ballast	Commission Directive 98/11/EC (Annex IV)	http://ec.europa.eu/environment/gpp/index_en.htm	Minimum energy class A
6	Energy class for replacement lamps of existing installations (15W T8 tubular fluorescent lamps, and miniature tubular fluorescent lamps).	15W T8 tubular fluorescent lamps, and miniature tubular fluorescent lamps	Commission Directive 98/11/EC (Annex IV)	http://ec.europa.eu/environment/gpp/index_en.htm	Minimum energy class B
7	Energy class for replacement lamps of existing installations (Circular lamps).	Circular lamps	Commission Directive 98/11/EC (Annex IV)	http://ec.europa.eu/environment/gpp/index_en.htm	Minimum energy class B

Image 9: Indicative EU "green" criteria for indoor lighting

More information and detailed analysis of the green criteria hierarchical structures is provided in the GRASPINNO deliverable D.3.2.1

3. GRASPINNO platform take up motivation

The target groups, which can, potentially, take up the GRASPINNO platform have been identified as follows:

- State administration structures, Ministries and Universities interested in “green” tenders;
- local and regional authorities/procurers involved in adopting innovative solutions in the energy sector;
- other public and semi-public bodies and key agents in their territories such as:
 - Chambers of Commerce, Business and Industry, Technology and Innovation Agencies,
 - Universities, especially those with competence in renewable energy and energy efficiency;
 - Private sector bodies, SMEs and associations.

There are numerous incentives, which will motivate these target groups in taking up the GRASPINNO platform. These incentives are briefly presented below.

It is expected that public bodies and organizations will benefit, both directly and indirectly, from the adoption of the GRASPINNO platform in the real-life procurement procedures that they follow. In general, Green Public Procurement (GPP) can play a significant role in efforts to influence public authorities towards more sustainable products and services.

By taking up the GRASPINNO platform, the public authorities will have a range of positive impacts that can include environmental, social and economic benefits. Firstly, by introducing the platform to their daily procurement processes will reap all the benefits that stem from the use of such a system (i.e. time and money savings, less bureaucracy, increased transparency, supply of energy efficient products/services etc.). Green Public Procurement (GPP) often leads to savings over the whole life-cycle of a purchase- both for public authorities and for society in general. For example, purchasing more energy-efficient electrical equipment can save money in many different ways: lower electricity use and easier recycling or reuse at the end of its life. Similarly, a more energy and water-efficient building may cost more up-front but will save money in the long run.

Moreover, they will benefit from the efficient way, provided by the platform, to collect information about the “green” specs of the products/services to be procured in a tender. By adopting the GRASPINNO platform the public bodies will increase their competitiveness and potential of organizing and deploying smart and green e-Procurement processes with focus on energy efficient solutions. This will be achieved through the use of the advanced green electronic procurement platform. The outputs of GRASPINNO platform are expected to be demonstrated/assessed at more regions. As application areas increase, a critical mass of stakeholders will lead to regional changes in procurement policy, increasing the PP percentage that are electronic, green and transparent. Additionally, since there may be further piloting of the platform, there will be questions from the users which can then be documented and

given to future users as FAQs manual. Therefore, there will be another step of interaction between SMEs & Public Authorities.

With more outputs demonstrated and assessed, the number of case studies with green procurement solutions will increase. This will lead to more integrated energy plans ready for implementation, offering non-users a range of examples from which to learn. This will lead to a larger percent of green energy procurement, in coherence with local and EU policies. In the long term, the change in procurement policies and integrated energy plans will lead to impacts on social needs, ie. pollution reduction, preservation of natural resources, health improvement.

The take up of the GRASPINNO platform will, also, support SMEs to promote “green” products/services through effective matching between demand and supply sides. The existence of the GRASPINNO platform will motivate SMEs to develop “green” products that will become the new standard on the market. New demands from the Public Authorities for green products will lead to repetition of this cycle and again lead to more demand for green products/services. This means that the platform can be seen as a dynamic tool to promote the production of “green” products, and subsequently boost the region’s economy.

In other words, by taking up such a platform, would give important incentives for local industry to develop ‘green’ technologies and products and promote them in the market place. In particular, small- and medium-sized companies may profit from environmental procurement, as it offers an opportunity to find markets for their innovative solutions and products.

Moreover, the GRASPINNO platform may act as a leveraging factor for promoting eco-innovation by supporting the demand for “green” products/services while in the same time, reducing the “innovation gap”. It is often difficult getting new innovative products on the market because the developing company is awaiting the demand while at the same time the potential buyer is awaiting market introduction of the product. GPP can close this gap because the public demand is large and the public institutions may accept a higher price – within reasonable limits – for a greener product. This mechanism can support the manufacturer moving from the demonstration phase to the scale up phase, reducing some of the company’s risk in the introduction phase. In such a case the benefits are twofold for both the Public Authority and also the developing company. The Public Authority will be able to acquire the appropriate “green” products/services and the companies will be able to introduce innovative “green” products/services in the market and strengthen their economic position, enhancing in this way a region’s local economy.

Last but not least, since the platform is updated with new/updated national guidelines and EU Directives regarding “green” products/services, this offers to SMEs the opportunity to have instant and reliable information regarding “green” products/services criteria, while Public Authorities will have a clear view of what is needed for the procurement of specific “green” products/services. This means, that the GRASPINNO platform offers a straight-forward procedure and enabling tools in

order the Public Authority to organize the process of defining a Tender Information Package (TIP) based on "green" procurement criteria.

4. Preconditions to facilitate uptake

In order to facilitate GRASPINNO platform uptake, there should be some proper preconditions for knowledge transfer to the target groups and stakeholders, so as to maximize the platform's uptake potential:

- The interested parties should have active involvement in "green" public tendering demand-supply cycles. Public bodies and SMEs should be font of increasing their potential of organizing and deploying smart and green e-Procurement processes with focus on renewable energy and energy efficient solutions. Towards this, the GRASPINNO platform will support them to implement their transnational activities taking into account related EC directives, Regulations and products/services "green" criteria, as well as of national regulations of the participating MED countries, on Public Procurement.
- Selection and installation of GRASPINNO platform elements. There should be a selection of specific elements of the platform that should be installed, according to the needs and the level of involvement in "green" tendering procedures of the stakeholders. For instance, a Public Authority may need to install only the GRASPINNO Databases and the eGPP Support tool, in case it is interested, only, in collecting information about "green" specs of products/services to be procured.
- Each Public Body or SME, interested to uptake GRASPINNO platform, should have access to IT infrastructures in order to install GRASPINNO platform elements. Since, the platform is an intelligent online supply/demand management instrument, the stakeholders should have the required infrastructure to deploy it.
- Follow up and update the platform's databases with new/updated "Green" Public Procurement criteria. The platform's databases should be updated regularly, according to the new/updated criteria published be the EU or by competent national / regional bodies. By updating the platform's databases, each public body using the platform, will have constant access to the most updated criteria regarding products and services with low environmental impact.
- Liaise with SMEs offering "green" products/services in order to use the GRASPINNO database to introduce their offerings. There should be activities to overcome market constraints and increase SMEs potential, especially with respect to their innovation and development capacities. The aim will be to urge SMEs involved with "green" tenders and operating in the fields of renewable energy and energy efficiency to introduce their offered "green" products/services in the platform's databases. The SMEs will fill in data about their products/services and the relevant green specifications. They will also have access to general (public) information and see their products as published in the platform.

- Disseminate and promote GRASPINNO platform benefits and demonstrate use cases in order to establish the GRASPINNO operation in a specific economic territory. This platform addresses procurement needs of public authorities with its feature for publishing tenders, while ensuring the integration of certain ecological/green criteria that serve the Horizon 2020 priorities for reducing CO₂ emissions and increasing the use of Renewable Energy Sources (RES) in the total energy consumption balance. The anticipated response of suppliers could be further stimulated by networking and dissemination activities. Target groups such as local and regional SMEs involved in eco-innovation will be have associated with the GRASPINNO project and participate in the Transnational Mediterranean Network (TMN) of GRASPINNO stakeholders.
- Raise awareness and cooperate with “green” innovation stakeholders, including SMEs, in order to increase the acceptance levels of the new practices of “green” e-procurement. The expected impact of such activities is to **trigger interest** in the GRASPINNO platform, and more importantly to **attract participation** in the e-procurement procedure from all interested parties. This means that the **Databases can be frequently updated** with new products, product categories, services by green SME product and service providers, and the Public Bodies will accordingly update content with standards, green criteria and key elements. Finally, both the dissemination and awareness-raising activities, will contribute to the **sustainability of the platform**.
- Plan for specialized human resources for the operation and support of the GRASPINNO platform elements. The interested party should plan an **allocation of resources** to support the GRASPINNO platform (i.e. proper allocation of human resources that is administrators, technicians, and PA users from the public body’s procurement department). Regarding the **deployment of the platform**, the public body may consider two options. The first option is to proceed using resources within the public body and assign this task to the respective IT department. The second option is to assign it to a third party, possibly to one of SMEs of the IT sector.
- Organize workshops and offer practical training in all aspects of the new GRASPINNO platform elements. The main objective of the workshops could be to give a complete and accurate overview of the GRASPINNO platform in terms of implementation of technical solutions and harmonization of standards, with a look on future steps. Moreover, during the workshops there could be a presentation of the Transnational Mediterranean Network (TMN), the databases and the platform’s tools (eGPP, LCC). Discussions may take place with the focus being on solving problems regarding the use of the platform and highlighting its benefits. Finally, special seminars for training public and private organizations, such as SMEs and public procurers, on the use of the modern platform for green electronic procurements can be organized.
- Become aware of and be prepared to cope with any legislative aspects related to eTendering, “green” procurement, data protection etc. Such aspects are

archiving (public bodies need to keep and maintain records of the tender process in the event of litigation; this applies to both paper based and electronically formed contracts following the tender process), security (i.e. there is a need to address the integrity, confidentiality, authentication and non-repudiation in e-tendering communications), personal data protection (i.e. GDPR), etc. All these aspects are present in the GRASPINNO platform elements, which means that when an interested party takes up the platform, should be ready to address this kind of legislative aspects, in case needed. Moreover, the personal data safety and security policy, should be visible to the end users/visitors before registering to the platform.

5. Non-technical barriers and lessons learned

5.1 Pilot actions / Transferring methodology - Brief description

Before the pilot actions, each project partner implementing a pilot organized a training course in his territory, in order to train the potential stakeholders involved in the pilots (Public Authorities, SMEs, clusters, networks, etc.) to use the GRASPINNO platform. After these training courses the pilot actions took place, with the participation of the abovementioned stakeholders. Benefiting from the pilots were the public building stakeholders and target groups such as public procurers, SMEs and energy clusters directly involved in the “green” tenders. In addition, all participating partners became familiar with the sectors of optimal green refurbishment solutions, considering regional legal framework and local-geography energy potential.

The methodology for each pilot action varied according to national legislation and eGPP of each partner, but in general the steps followed were: audits of the pilot sites, identification of their needs, definition of optimum refurbishment “green” solutions, preparation of “green” tender(s), publication/execution of tender(s), application of suggested solutions and pilot data collection.

The GRASPINNO platform offered to interested Public Authorities the chance to prepare “green” tenders for the refurbishment of public buildings. The results obtained from the pilot actions were analyzed in order to be promoted and to raise awareness amongst the parties involved in adopting eGPP. Technical events were organized, by partners carried out a pilot, in order to identify encountered difficulties and deficiencies of the pilot results, methodology and eGPP platform. The non-technical barriers and the lessons learned by the execution of the pilot action, their results’ analysis and the technical events are briefly presented in the following sub-sections.

5.2 Non-technical barriers / Lessons learned

The overall evaluation of the GRASPINNO platform during the pilot actions was positive, since the participating stakeholders expressed their opinion that the platform offers good and complete information and examples, facilitating the public procurement process, especially on the products, services and “green” criteria information. The following chart presents the participant’s experience in using the GRASPINNO platform:

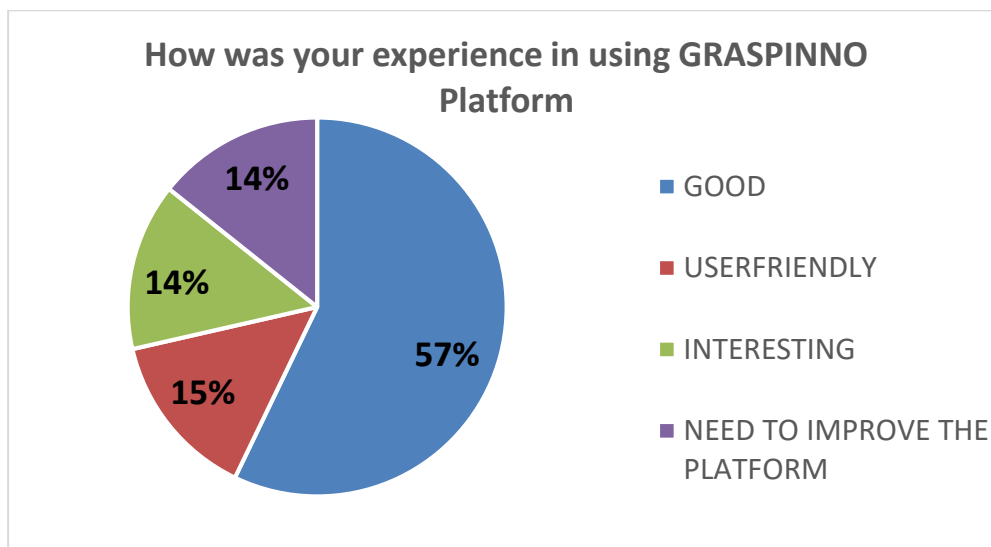


Figure 1: Experience in using the e GPP platform

Nevertheless, some non-technical barriers were identified, and lessons learned during the pilots, which should be taken into account in case of the GRASPINNO platform uptake:

- The GRASPINNO platform should be connected with other national/regional procurement platforms in order to increase efficiency of operation. GRASPINNO platform does not intent to substitute already used procurement platforms. This would, also, be against national/regional laws governing public procurement. Many national public e-procurement platforms provide Public Authorities Users with the option to allocate technical specifications to the tenders and then publish them. However, **they lack the innovative “green” characteristic of the GRASPINNO platform**. More specifically, they usually lack the option for the Public Authorities (PA) User to insert green specifications and green criteria to products/services to be procured. **They also lack the knowledge feature of the GRASPINNO platform related to technical characteristics and specifications of products and services that a potential supplier can provide in advance.**

This last feature is considered important, as it informs PA users about the availability of different products and services in the procurement market. It is also important because it **minimizes time and cost that would be otherwise spent in product/service searching by the PA user**. In this sense, the GRASPINNO platform has innovative and sustainable features (knowledge and solutions database), which can increase the information capacity of the national/regional e-procurement platform in products and services.

- The fact that platform elements are available only in English, constitutes a barrier for uptaking by experts with limited linguistic skills. For this reason, the platform elements should be translated in the language of the country in which will be deployed, in order to overcome such barriers and facilitate the uptake potential.

- Reluctance of SMEs to publish certain type of data of their products/services in relation to a highly competitive environment. Moreover, important reasons that prevent SMEs from participating in a GPP are firstly the lack of coordination between regional and national public administrations, and also the insufficient demand for green products and/or services.
- SMEs need time, effort, motivation and familiarization in order to keep up with a high level of commitment. In order to keep the SMEs committed to the platform, it should be updated with new/updated national guidelines and EU Directives regarding "green" products/services, which will offer to SMEs the opportunity to have instant and reliable information regarding "green" products/services criteria. Moreover, training courses should be organized on a regular basis, in order the SMEs to get familiarized with the platform and its features.
- Public Authorities need training in order to familiarize with platform elements operation. The efficiency of this approach passes through an appropriate sensitization of both PAs (customers) and SMEs (suppliers) operators, supported, if needed, by specific training activities, able to use the platform to make comparisons with the traditional purchasing methods. In specific cases and in particular territorial contexts a linguistic personalization of the platform could be necessary taking also in account national and/or regional procedures that regulate the PAs purchases.

6. GRASPINNO platform requirements and resources

6.1 Technical and Operational Requirements

GRASPINNO as an IT integrated system is composed of the following subsystems:

- The WEB Site, which can be accessed via the URL <http://www.graspinno.eu/index.php>
- The Unified Platform, accessible via the URL <http://www.graspinno.eu/index.php/unified-platform>
- The Dashboard, accessible via the URL <http://grasp-egpp.eu/admin.php>
- The eGPP tool (only for Public Authorities), accessible via the URL <http://www.grasp-egpp.eu:8081/egpp/home>
- The Transnational Mediterranean Network portal, accessible via the URL <http://www.grasp-tmn.eu/>

Detailed documentation for all the subsystems is provided in the respective project deliverables.

The following paragraphs outline the technical and operational requirements for each one of the above subsystems:

6.1.1 GRASPINNO WEB Site

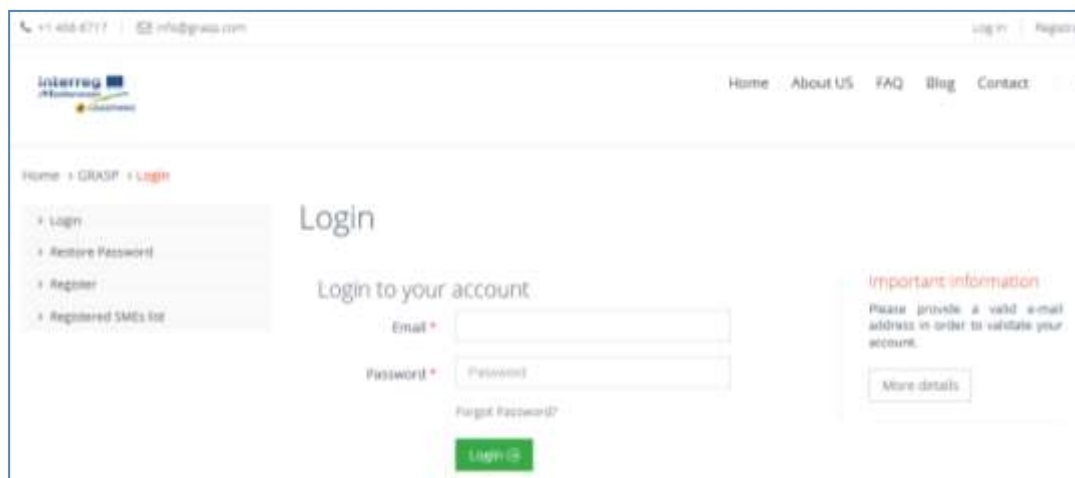


The WEB Site provides an overview of the project (scope, objectives, outputs/results, partnership), links to project's newsletters, contact forms, link to access the unified platform, etc. In order to operate, it requires:

- An Apache WEB Server (currently version 2.4.9, Win64)
- A PHP server configured to listen @ port 80 (currently version 5.5.12)

6.1.2 GRASPINNO Unified Platform

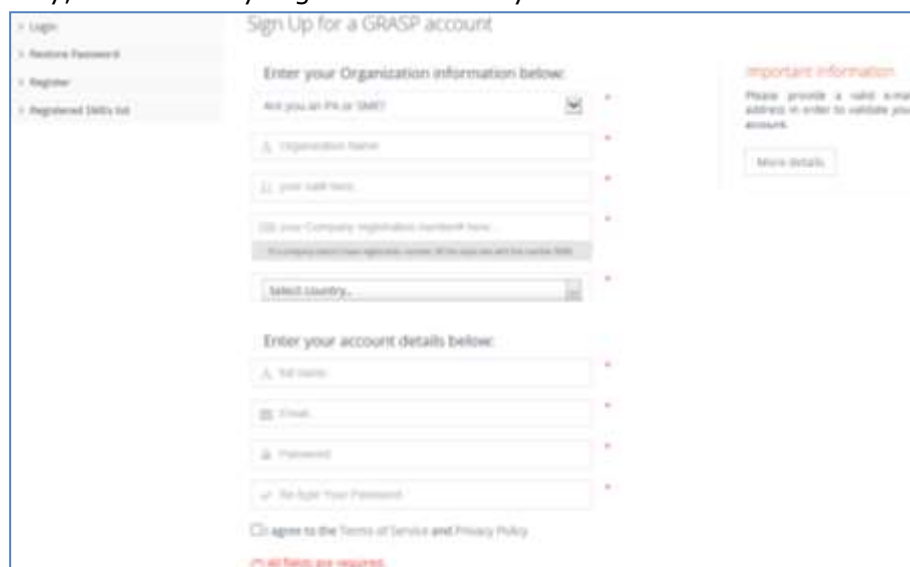
The Unified Platform provides a single sign-on point of reference for the Dashboard and the eGPP tool.



The screenshot shows the login interface of the GRASPINNO Unified Platform. At the top, there is a header with the Interreg Mediterranean logo, contact information (+39 466 67117, info@grass.com), and navigation links (Home, About US, FAQ, Blog, Contact). Below the header, a sidebar on the left contains links for Login, Restore Password, Register, and Registered SMEs list. The main content area is titled 'Login' and 'Login to your account'. It features input fields for Email and Password, a 'Forgot Password?' link, and a green 'Login' button. On the right, there is a section for 'Important information' stating that a valid email address is required for account validation, with a 'More details' link.

This means that the user (visitor who wants to register with the system, a registered SME user, a register PA user) may login and being authenticated once, and could subsequently access any of the modules of the Unified Platform.

Alternatively, a visitor may register with the system:



The screenshot shows the sign-up interface of the GRASPINNO Unified Platform. The title is 'Sign Up for a GRASP account'. The form is divided into two main sections: 'Enter your Organization information below' and 'Enter your account details below'. The organization section includes fields for 'Are you an PA or SME?' (with a dropdown), 'Organization Name', 'your call name', 'your Company registration number here' (with a placeholder example), and 'Select Country'. The account details section includes fields for 'Full name', 'Email', 'Password', and 'Re-type your Password'. At the bottom, there is a checkbox for 'I agree to the Terms of Service and Privacy Policy' and a red note stating '(*) all fields are required'. On the right, there is a section for 'Important information' stating that a valid email address is required for account validation, with a 'More details' link.

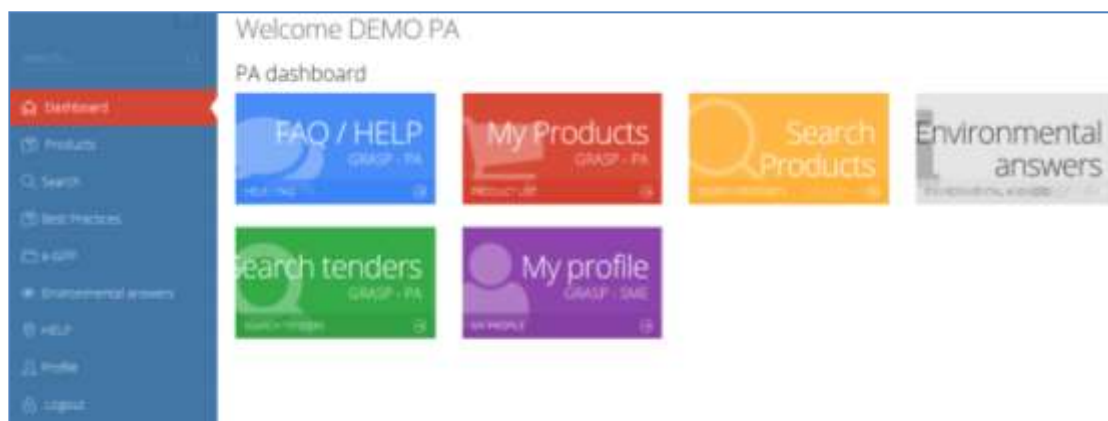
Once registration or login is successful, the user is directed to the main screen of the Unified Platform:



The Unified Platform is the main point of entrance for the GRASPINNO Database, the eGPP tool and the LCC tool (i.e. integrated within the eGPP tool). In order to operate, it requires:

- An Apache WEB Server (currently version 2.4.9, Win64)
- A PHP server configured to listen @ port 80 (currently version 5.5.12)
- A relational RDBMS, MySQL (currently version 5.6.9)

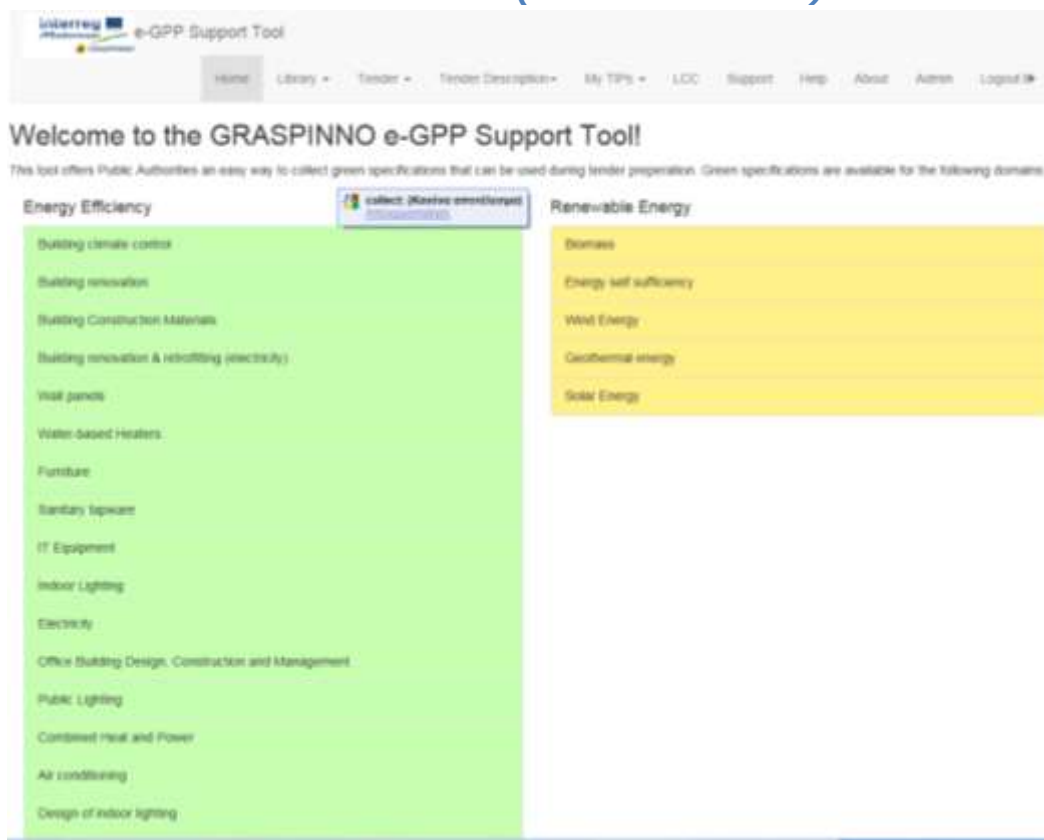
6.1.3 GRASPINNO Dashboard



The Dashboard provides a variety of options to the authenticated user in order to search for products in the GRASPINNO database, to review GPP best practices, to seek for environmental answers, to access the eGPP tool, etc. In order to operate, it requires:

- An Apache WEB Server (currently version 2.4.9, Win64)
- A PHP server configured to listen @ port 80 (currently version 5.5.12)
- A relational RDBMS, MySQL (currently version 5.6.9)
- The MySQL Workbench (currently version 6.0)

6.1.4 GRASPINNO eGPP tool (incl. the LCC tool)



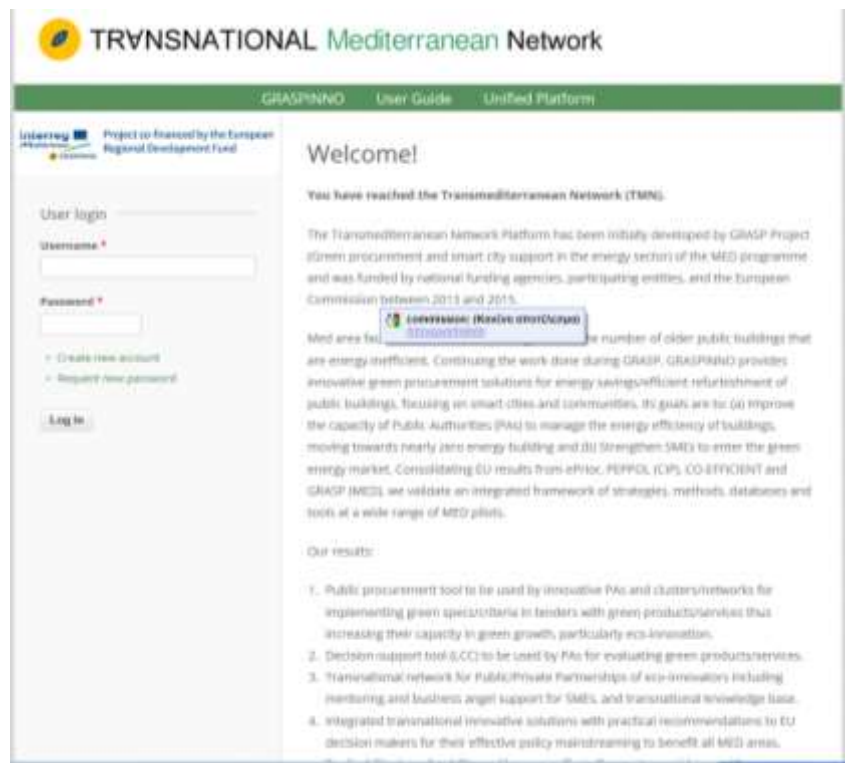
The eGPP tool is the main project tool offering to **Public Authorities** an easy way to retrieve and formulate **green specifications** that can be **used during tender preparation** in the fields of Energy Efficiency and Renewable Energy. The main results of the tool are the following:

1. **Integrated tender dossier** containing products/services to be procured and the respective "green" specs;
2. **"Green" specs** of specific products/services in the domains of Energy Efficiency and Renewable Energy.
3. **Basic tender description** (i.e. responsible authority, tender documents, indicative tender budget, etc).

The main requirements for the operation of the eGPP tool, are the following:

- An Apache WEB Server (currently version 2.4.9, Win64)
- An Application Server configured to listen @ port 8081, TomCat (currently version 7.0.73)
- A relational RDBMS, MySQL (currently version 5.6.9)

6.1.5 GRASPINNO TMN



The Transnational Mediterranean Network portal is the main networking tool of the project, bringing together a wide international network of MED (and beyond) stakeholders in the areas of public procurement, suppliers of products and services, consultancy, etc. The network offers free registration and access to networking info, through intuitive interfaces.

Association
 Foundation
 Chamber of industry / Commerce / Agriculture
 Other business support organization
 Dev. Agency / Dev. Public structure / Public organization
 Public-private organization
 Economic operator
 Ministry
 Region
 Province /Departement
 Prefectures
 Municipality and association of municipalities
 Port / Maritime authority / Logistic
 Technical /and research /science park
 SME
 Large enterprise
 University
 Non profit organisation

The main requirements for the operation of the TMN service , are the following:

- An Apache WEB Server (currently version 2.4.9, Win64)
- A PHP server configured to listen @ port 80 (currently version 5.5.12)
- A relational RDBMS, MySQL (currently version 5.6.9)
- The MySQL Workbench (currently version 6.0).
- A Content Management System (CMS), Drupal (currently version 7).

6.2 Skills for required human resources

GRASPINNO as an IT integrated system requires some minimum human resources in order to be deployed and supported during its public operation:

1. **Database expert and system administrator:** basic knowledge of WEB applications, fair knowledge relational databases, good knowledge of the MySQL RDBMS and the MySQL Workbench, fair knowledge of PHP and Java Servlets.

2. **eGPP business expert:** good knowledge of public tendering procedures, fair knowledge of GPP, fair knowledge of the EU directives on green specs (e.g. EU Directives 2004/17/EC, 2004/18/EC).

7. Take up requirements from pilot validations

7.1 Introduction

This chapter presents the results from the pilot actions and the discussions held in the various Technical Events for cross-fertilizing knowledge on pilots' results. These Technical Events aimed at exchanging info and data on pilots' results, lessons learned, knowledge/experience gained and problems identified. The assessment of the pilots' results provided important conclusions, for the current roadmap for the wider uptake of the GRASPINNO platform.

Below, we present the findings (take up requirements) collected by all pilots, which were used during the Technical Events, in order to identify guidelines/recommendations and a generalized process for the target groups to take up the GRASPINNO platform.

7.2 Main pilots' findings per country

Below we array the findings obtained by specific pilot actions in Spain, Italy, Greece and Bosnia [GRASPINNO deliverable D4.2.1].

7.2.1 Spain

After the execution of the pilots and technical events in Spain (Terrassa), the following take up requirements were identified:

- The platform elements should be translated and in other languages, except English, in order experts with limited linguistic skills to easily use the platform.
- The SMEs should be visible, along with their product details.
- Extend the use of the platform to all kind of "green" purchases where the energy efficiency improvement is the objective; not only for public authorities and not only for "public" procurement.

7.2.2 Italy

During the pilot actions held in Italy, the main take up requirements identified were the following:

- The platform elements should not be available only in English.
- Regularly update the platform's databases with new/updated "green" criteria, in order Public Authorities and SMEs to have instant and reliable information regarding "green" products/services criteria.
- The LCC tool should be more comprehensive, in order the users to use it even more frequently.
- Possibility to harmonize online and offline procedures for tenders.
- SMEs should be active in the field of "green" public procurement (GPP), in order to harmonize with the constant new challenges in the field of GPP.
- The GRASPINNO platform should be connected with MEPA and START (italian procurement platforms).
- Even more Italian Public Authorities should be encouraged to use the GRASPINNO platform in order to collect information about the "green" specifications of products/services to be procured in future tenders.

7.2.3 Greece

The main take up requirements, obtained by the pilot actions and Technical Events in Greece were the following:

- More information should be available by the platform, when preparing a tender.
- Encourage more SMEs to access the platform and introduce in the platform's databases their "green" products/services along with their characteristics, helping in this way the matching between offer and demand.
- It is important for SMEs to have access to the platform, because they want to be aware of the information, which is shared with the Public Authorities.
- The platform should have incorporated links with the Greek National Procurement Platform.
- Bidders (SMEs) should respect all the "green" tender criteria.
- Public Authorities should be encouraged to add "green" criteria in their tenders and be informed about the significance of having such kind of criteria in the tenders to be published.
- The GRASPINNO platform should be harmonized with the Greek national framework (RES).

7.2.4 Bosnia

During the pilots and technical events, which were held in Bosnia the main outcomes regarding the GRASPINNO platform were the following:

- There is a need for additional promotion of the platform, massive involvement of new users, especially Public Authorities. Through this, a high potential for the future uptake of the platform will be created.
- Additional promotional and training activities should take place, not just for the stakeholders to learn how to use the platform, but also inform the procurers about the existing minimum "green" criteria and Green Public Procurement, in general.
- It is important to involve companies in such "green" innovation tools and processes, to make them as simple as possible. Additionally, it is crucial to make them useful and attractive for business entities and highlight the platform's benefits.
- Additional training activities and guidelines should be available for SMEs, in order to prepare and motivate them to use the platform.

8. GRASPINNO instance replication

8.1 Replication brief description

The pilot actions and the technical events followed, were used to collect findings, identify similarities, differences, difficulties faced, and deficiencies of the pilot results, methodology and GRASPINNO platform in general. All these elements were combined in order to identify a roadmap for the uptake of the integrated GRASPINNO platform. This roadmap includes a generalized step by step process so as to make the platform's elements directly applicable and replicable by the identified user groups outside of the current partnership.

The effective uptake of the GRASPINNO platform requires an effective management system of the platform to:

- a) ensure systematic support and supervision of the GRASPINNO platform;
- b) provide straightforward rights and responsibilities for the platform's users;
- c) effectively monitor the operation of the platform and address possible problems that may occur during its operation;
- d) ensure continuous improvement of the platform (i.e. introduction of user friendly updates, update of platform's databases with updated "green" criteria of specific products/services, continuous population of platform's databases with new products/services, etc.).

8.2 GRASPINNO platform uptake roadmap

Below a generalized step by step procedure for the wider uptake of the GRASPINNO platform by the target groups and stakeholders is presented.

Step 1: Reinforce political commitment

All EU countries are complying with the two directives (Directive 2014/24/EU, Directive 2014/25/EU) regarding "green" public procurement, providing in this way significant support to tools and procedures, such as the GRASPINNO platform. In order to further strengthen the platform's impact and facilitate its uptake potential, a reinforcement of the political commitment is required. The previous experience from related initiatives has shown that without the appropriate political backing, innovative tool's and initiatives such as the GRASPINNO platform, may fail.

Step 2: Targets setting

There should be an identification of the targets to whom GRASPINNO platform is aiming at. There should be two different types of targets: a) operational targets, and b) targets related to purchasing actions. The first type is related to operational targets regarding the operation of the platform (e.g. procurement staff/relevant senior managers & finance officers, 50 public authorities and/or SMEs will receive training on GRASPINNO platform, within 1 year after the platform's deployment). The second type of targets is related to the core purchasing activities (e.g. proportion of Tender Information Packages (TIPs) extracted by the platform and finally led to specific "green" products/services, value of contracts with ambitious environmental criteria, as a proportion of the total spending on the product/service group).

Step 3: Tendering activities to be covered

Identification of the appropriate environmental purchasing requirements, following market sounding (i.e. assessing the capability and capacity of the market to meet the purchaser's requirements), according to the identified EU "green" criteria for specific products/services; identification of specific opportunities for joint procurement in order to reduce cost and environmental footprint.

Step 4: Development of the marketplace

In order to develop the platform's marketplace in the first place, the platform should adapt to national/regional/local requirements and try to foster trust among the users, since building user confidence is a key factor for the establishment of a marketplace. Moreover, the platform should attract the most valuable and significant buyers (public authorities) and sellers (SMEs, individuals, etc.). The innovative elements of the GRASPINNO platform (i.e. single sign-on module, most updated EU "green" criteria, matching between specific criteria and products/services, LCC tool, TMN, etc.) helps towards this direction of attracting valuable procurers and suppliers.

Step 5: Initiation of GRASPINNO platform preparatory activities

As mentioned in a previous chapter (see Chapter-4 above "Preconditions to facilitate uptake"), specific preparatory activities should be initiated, in order to facilitate GRASPINNO platform uptake:

- Identification of bodies (public/private) which are active in the field of "green" public procurement;
- Update of the platform's databases with the most updated "green" criteria;
- Communication with SMEs in order to introduce in the platform's databases their "green" products/services;
- Gathering information on specific legislative aspects (i.e. GDPR, Ecolabel, etc.) related to the deployment and operation of the GRASPINNO platform.

Step 6: Communication

The efficiency of the GRASPINNO platform will be enhanced if there is a clear understanding, among all stakeholders, of what it stands for, the benefits it offers and the innovation it introduces. During this step the following activities may be included:

- Promotion of the GRASPINNO platform's benefits and demonstration of specific best practices in order to establish the operation of the platform in new regions.
- Raise awareness activities for all stakeholders (i.e. workshops, seminars, newsletters, brochures, flyers, info days, etc.).
- Communication activities (i.e. seminars for informing the suppliers about the "green" requirements of products/services to be procured in the future) in order to cultivate specific intentions to suppliers prior to the actual procurements. By conducting such kind of activities, the suppliers are offered the required time and information to adapt to the new "green" requirements of products/services.

- Marketing activities towards the general public, in order to influence them to adapt a “greener” and more environment-friendly consumer behavior.

Step 7: Deployment of the GRASPINNO platform

This step includes technical activities, required for the successful deployment and smooth operation of the GRASPINNO platform. More specifically, it includes:

- Access to appropriate IT infrastructures to install the selected platform elements.
- The selection and installation of specific GRASPINNO platform elements (i.e. eGPP tool, LCC tool, GRASPINNO Databases, etc.).
- Appointment of specialized personnel (human resources) for the operation, maintenance and support of the GRASPINNO platform.

Step 8: Training

It is of paramount importance, to ensure that the platform users will receive appropriate training on the platform’s functionalities. More specifically, practical training workshops in all aspects of the GRASPINNO platform elements should be organized in order the procurers to familiarize with the platform’s technical aspects; the procurers and the financial staff of the public authorities with the life-cycle costing; the suppliers on the use of the platform and the sustainable use of products and services.

Step 9: Monitoring of the GRASPINNO platform operation

The entity, that will adopt the GRASPINNO should apply monitoring activities (to the extent possible) related to the platform operation, such as through internal audit functions. More specifically, indicative KPIs should be measured on annual basis in order to assess the platform’s operation. An indicative (but non-exhaustive) list of such KPIs, include:

- Total number of TIPs extracted
- Total number of “green” products/services available in platform’s DBs
- Total planned spending on “green” products/services
- Ratio of planned vs actualized spending on “green” products/services
- Total planned spending per product/service group
- Ratio of planned vs actualized spending per product/service group
- Number of “green” units/scope of “green” services to be purchased

9. Marketing & Promotion

9.1 Methodology

The following paragraphs describe the strategic planning of the communication activities for the uptake of GRASPINNO platform, and also the different methods and categories of the promotion activities. The main aim with dictates the design and formulation of the dissemination strategy is to ensure that the diffusion activities to be carried would have the maximum time-span, impact and effectiveness.

The promotion and communication activities are related to strategies to showcase the GRASPINNO platform. Specifically, the communication activities are related to the creation of the appropriate dissemination tools, so as to diffuse information about GRASPINNO platform in the most efficient way. In order to make the promotion strategy to work efficiently, there should a clear definition of the promotion/communication activities that must be carried out and a definition of the target groups, to whom the platform is addressed. The identified target groups are:

- Local and regional authorities
- State administration structures, Ministries and Universities
- Relevant European institutions
- Other public and semi-public bodies
- Universities (especially those with competence in renewable energy and energy efficiency)
- Private sector bodies – SMEs and associations
- Individuals

Moreover, there should be a definition of the type of the activities to be carried out in order to ensure that the platform will be disseminated to the widest possible audience, following an approach targeted at the identified key actors and stakeholders (e.g. public authorities, SMEs, SMEs associations, etc.).

The main aim of these activities is to use alternative modes of presentation and dissemination of the key-messages to be outreached. The proposed activities include approaches, which have as their chief target the awareness of as many people from the target groups, as possible. The awareness of all target groups is a very complicated task, which should be prepared very carefully and in detail, and accompany all the promotion/communication actions.

The planned activities have as their main target:

- The tangible and artistic communication of the GRASPINNO platform to all interested parties.
- To raise awareness of the majority of the members of the target groups.

9.2 Categories of promotion/communication activities

Based on the specific characteristics of the GRASPINNO platform, and its particular communication needs, the dissemination activities of the platform may be categorized as follows:

- Initial Actions.
- Information Actions.
- Actions for Publicity and Promotion.
- Dissemination Actions.

Furthermore, during the first months of the promotion/communication period, our proposed strategy suggests the setting up of a User Group (in each participating country) which could be used, not only for getting feedback but also for direct promotion and dissemination. This User Group should be representative in terms of occupation, relations with energy efficiency and public procurement, etc.

9.2.1 Initial actions

This category of dissemination activities refers to actions taking place for the initial notification of the platform to the wide audience. A very important element of the publicity of a project result, which dovetails with the most dissemination activities, is the creation of the result's "corporate identity". It is, also, important for the better promotion of the project result, a reference to this "identity" to be strongly associated with the overall project and its results. This "corporate identity" is comprised of:

- The logo and the "motto" of the project and subsequently of the project result(s).
- The central messages of the project and its results.
- Development of dissemination/communication instruments, starting from translating related project instruments (presentations, newsletters, invitations to register, brochures, flyers, promotion website, social media accounts, articles in local/national newspapers-electronic/traditional, etc.).

9.2.2 Information actions

Equally important for the publicity of the GRASPINNO platform, is its promotion through electronic and printed means to the general public audience and business community. These information actions are planned to be implemented in various ways, including:

- *GRASPINNO platform's WEBSITE:* central and very important role in the successful diffusion of the platform, plays the WEBSITE of the platform. The platform's website is developed so as to promote the platform to the Internet community. Moreover, it is interconnected with the corresponding nodes of the project partners, and it is also planned to be linked with other information multipliers' websites.
- *Display information about GRASPINNO platform in other WEBSITES:* the constantly increasing use of the Internet, offers significant benefits in terms of disseminating a project. It gives the opportunity to inform public audience about the objectives of the GRASPINNO platform, both through the partners' websites and through other relevant websites and information multipliers. At this point, we should note that depending on the profile of each GRASPINNO partner, their websites aim at different target groups, thus covering a wide range of potential users.
- *Creation of printed promotion and information material:* the effective dissemination of GRASPINNO platform, is accomplished through the creation

and publication of printed promotion and information material, such as flyers, triptych, brochures and newsletters. This material will be available:

- During various events (i.e. commercial fairs and exhibitions, scientific conferences, technical events, etc.) where the partners and stakeholders may participate.
- During specialized events that the stakeholders and project partners plan to participate/organize. These events will be a unique opportunity, to demonstrate the GRASPINNO platform to a wide audience and promote the platform, identify opportunities for future platform takeup in other countries and regions, and also get feedback from main actors and stakeholders for platform improvements.
- Through periodic and massive e-mail notifications, sent to partners' client base so as to inform them about the GRASPINNO platform.
- *Other information activities:* this category includes actions such as the creation of press releases from the project partners, where there will be information about the GRASPINNO platform, directed towards the public audience and the stakeholders. Moreover, there could be bilateral meetings with SMEs Associations, Chambers of Commerce and other collective organizations for leveraging the GRASPINNO platform uptake by such kind of stakeholders. Finally, targeted campaigns for SMEs may be organized in order to promote the unified platform.

10. Sustainability issues

10.1 Overview

Despite continuing policy efforts, penetration of energy efficiency measures in public and private organizations in EU is limited. Where policy initiatives and funding programmes are instituted to support implementation of such measures, these are often not sustained after the end of a supporting programme. Where energy efficiency actions prove successful for a public organisation, these are not easily transferred to other public agencies. This is particularly the case in MED countries, where a large number of non-technical barriers (NTBs) hamper transnational information and demonstration of new energy-efficiency technologies (EET).

The 2000–06 EU Action Plan for energy efficiency identified several potential NTBs preventing sustainability and transferability of efficient energy technologies (Flash Eurobar. 2007). Responding to debate following Green Paper on energy efficiency (Comm.2006), stakeholders claimed that funds would be better spent on demonstrating the potential of current technology. Lack of information and high adjustment cost is a key NTB, especially for public agencies and SMEs lacking human capital and expertise to support adoption and sustained use of these technologies. Lack of readily available information and of demonstration of transferability potential increase the cost to invest in such technologies due to: increased transaction/search costs making up for lack of human capital; increased uncertainty on the investment because of incomplete information; and the risk of locking-in a technology that is not appropriate for an organization owing to transferability limitations and lack of attention to specific local and regional needs that would make it sustainable.

This can be improved with e-procurement methods, as they stimulate the flow of increased information and thus reduce search, administrative and adjustment costs related to EETs adoption. More specifically e-procurement may fulfill conditions addressing the organisations' specific local needs and move outwards their performance frontier encompassing good practices, rule-enforcement and user-friendly implementation. By emphasising the need to address specific local and regional requirements, e-procurement can increase the transferability of energy efficiency policies. Furthermore, by improving information and reducing search, administrative and adjustment costs, it can increase the sustainability potential and likelihood of long-term adoption of EETs. In addition, the GRASPINNO e-procurement platform is based on a common basis of identified stakeholders needs and a common procurement model, with different cultures, economies and practices; thus increasing significantly the transferability potential.

10.2 Activities to ensure GRASPINNO platform sustainability

One of the most important activities in order to ensure the sustainability of the GRASPINNO platform, is the engagement in actions to secure political support and availability of funding for enabling operation and maintenance of the new GRASPINNO platform elements. Indicative actions/initiatives may be the following:

- **Smart Specialization – RIS3:** Since March 2014, all EU national and regional authorities interested in participating in EU Cohesion policy programmes must have designed and have in place Smart Specialization strategies. Currently, these strategies are either in place or they are being drafted. Hence, it is important to present those features of the GRASPINNO platform that are relevant, and possibly even instrumental, to regional authorities in implementing their Smart Specialization strategies.

Since Smart Specialization focuses on innovation and smart city planning and development, it may be possible to build cooperation between stakeholders that will be working on green energy topics, on the grounds of the GRASPINNO platform.

For this reason, a future sustainability plan may include the action to suggest a possible inclusion of the GRASPINNO platform to Smart Specialization sub-projects of various public bodies. This can be done at the events planned to attract the interest of other local and regional authorities in the future.

- **INTERREG MEDITERRANEAN programme:** The most significant key for a possible integration of the GRASPINNO platform to a new project proposal at next INTERREG MEDITERRANEAN calls, is the explicit mention to the spread transfer of outputs and results from former projects to regional and national programmes, funded from the European Regional Development Fund (ERDF); as well as the highlighting of the involvement of more end users in the dissemination process. Key target groups for these actions will be: Public authorities, research structures, enterprises, NGOs/civil society structures (with an end user role).
- **EU Strategy for the Adriatic-Ionian Region (EUSAIR):** The possibility of partnership participation, built on the long cooperation at the GRASPINNO project, in view of a project proposal to be submitted to the forthcoming EUSAIR calls has the potential to offer significant added-value for the long-term sustainability. A project proposal that would seek to widen the impact of the introduction of an innovative procurement platform, in all likelihood, will be positively evaluated because of its relevance to the priorities set for the macro-region of the Adriatic Ionian.

A proposal that would put forward the GRASPINNO platform would cover possible priority axes related to smart and innovative regions and innovative governance. More specifically, the availability of a platform that allows green specifications and knowledge transfer to be integrated into electronic public procurement procedures is an essential tool for innovation in public administration services. The GRASPINNO platform could attempt a wider integration of the Green electronic procurement platform with regional and national public procurement structures.

- **Community building:** Another activity towards the sustainability of the GRASPINNO platform uptake potential, is the **establishment of an eGPP community of stakeholders** and their engagement in actions to foster active participation. For the community's establishment, steps such as the following could be considered:
 1. *Identification of the eGPP community stakeholders and getting to know their interests/needs:* Start by considering groups/stakeholders that have already expressed their interest in eGPP and GRASPINNO project results. The community member should be linked by:
 - eGPP issues/topics that they are interested in;
 - identity defined by prior experience on eGPP, public procurement, etc.;
 - interaction through social relationships.
 2. *Choice of the engagement strategy:* having identified the eGPP community stakeholders, prioritize the most important and, for those selected, choose whether to focus on specific elements of GRASPINNO platform and eGPP, in general.
 3. *Plan of the engagement process, by selecting suitable practices:* If, for example, stakeholders just need more information to dispel confusion about GRASPINNO platform and/or eGPP, plan "investment" techniques like flyers, user guides or general information material. If the community wants to get more closely involved, embark on "integration" practices like joint working groups or training courses.
 4. *Make community engagement permanent:* For successful engagement, it's necessary to have continual improvement – and to share lessons learned. The best practices to be obtained during Technical Events and training courses should be disseminated in the community, in order to further support the platform's uptake potential and widen the stakeholder's community.
- **Evolve as you grow:**
 - i) The GRASPINNO platform has, also, to keep up with the **evolving "green" standards** in order to keep the GRASPINNO databases updated, accordingly. Such kind of activities will facilitate the platform's sustainability since all the stakeholders using the platform will have continuous access to the "green" criteria of specific products/services, in force at that specific period.
 - ii) The GRASPINNO platform has to continuously improve its interfacing with national/regional online public procurement platforms and tools. To attract interest of the National Procurement Authorities in the GRASPINNO platform, it is suggested to have a collective plan of action drafted by all GRASPINNO stakeholders keen to uptake the platform.

11. Legislative aspects to consider

"Green" Public procurement is governed by EU Directives, regulations and national legislation. For smaller contracts under certain thresholds there is more flexibility in the awarding of these contracts which are subject only to national rules and EU principles. In general, 4 main legislative aspects should be taken into for the uptake of the GRASPINNO platform, which are briefly described in the following subsections:

11.1 General Data Protection Regulation (GDPR)

Public procurement stakeholders (i.e. Public authorities and bidders) need to be aware of how data protection changes introduced by GDPR will affect public procurement. Government contracts which relate to the processing of personal data are subject to data protection legislation. Data protection law was changed significantly on 25 May 2018 when the EU General Data Protection Regulation



(GDPR) came into force. The procurement policy note requires government buyers to take immediate action with current suppliers and to ensure that future procurement contracts comply with GDPR.

11.1.1 GDPR brief description

GDPR is a regulation which provides a greater degree of protection for individuals' personal data and imposes stricter obligations on organizations/bodies that process such data. GDPR lays out responsibilities for organizations/bodies to ensure the privacy and protection of personal data, provides data subjects with certain rights, and assigns powers to regulators to ask for demonstrations of accountability or even impose fines in cases where an organization/body is not complying with GDPR requirements.

The GDPR key requirements are:



- *Lawful, fair and transparent processing:* The bodies that process personal data are asked to process the personal data in a lawful (all processing should be based on a legitimate purpose), fair (responsible bodies take responsibility and do not process data for any purpose other than the legitimate purposes) and transparent (responsible bodies must inform data subjects about the processing activities on their personal data) manner.
- *Limitation of purpose, data and storage:* the bodies are expected to limit the processing, collect only that data which is necessary, and not keep personal data once the processing purpose is completed.

- *Data subject rights:* The data subjects have been assigned the right to ask the organization/body what information it has about them, and what they do with this information. In addition, a data subject has the right to ask for correction, object to processing, lodge a complaint, or even ask for the deletion or transfer of his or her personal data.
- *Consent:* As and when the organization/body has the intent to process personal data beyond the legitimate purpose for which that data was collected, a clear and explicit consent must be asked from the data subject. Once collected, this consent must be documented, and the data subject is allowed to withdraw his consent at any moment.
- *Personal data breaches:* The organizations must maintain a Personal Data Breach Register and, based on severity, the regulator and data subject should be informed within 72 hours of identifying the breach.
- *Privacy by Design:* organizations/bodies should incorporate organisational and technical mechanisms to protect personal data in the design of new systems and processes; that is, privacy and protection aspects should be ensured by default.
- *Data Protection Impact Assessment:* to estimate the impact of changes or new actions, a Data Protection Impact Assessment should be conducted when initiating a new task, activity or product. The Data Protection Impact Assessment is a procedure that needs to be carried out when a significant change is introduced in the processing of personal data. This change could be a new process, or a change to an existing process that alters the way personal data is being processed.
- *Data transfers:* The controller of personal data has the accountability to ensure that personal data is protected and GDPR requirements respected, even if processing is being done by a third party. This means controllers have the obligation to ensure the protection and privacy of personal data when that data is being transferred outside the organization, to a third party and / or other entity within the same organization.
- *Data Protection Officer:* When there is significant processing of personal data in an organization/body, the organization/body should assign a Data Protection Officer. When assigned, the Data Protection Officer would have the responsibility of advising the entity about compliance with EU GDPR requirements.
- *Awareness and training:* Organisations must create awareness among employees about key GDPR requirements and conduct regular trainings to ensure that employees remain aware of their responsibilities with regard to the protection of personal data and identification of personal data breaches as soon as possible.

11.1.2 GDPR and GRASPINNO platform

Since the GRASPINNO platform handles personal data (i.e. forms with users' data, IP addresses recorder in logs, etc.) this means that it must comply with GDPR. In order to comply with GDPR the following steps might be followed:

- Carry out a Privacy Impact Assessment to identify which personal data are being handled and the risks related to this operation.

- Chart the information flows, so as to know which personal data is processed where. The suppliers (SMEs, individuals) may also be taken into account.
- Since personal data are being handled, a data protection officer (DPO) should be appointed.
- Keep an active documentation, so that actions and measures taken can be checked by management and supervisors, even if a DPO is not appointed.
- Decide which technical and organizational measures you must take to ensure an appropriate security level.
- Implementation of these measures.
- Make sure that the measures are properly implemented and effective, for example through security scans or security audits. This maintains a continuous improvement cycle.
- If compliance fails, analysis of the fail reasons and formulation of an appropriate response. Measures take up to reduce impact as early as possible: temporarily turn off the online environment and display an error page to users.
- Reporting of data breaches to the authorities, and, if necessary, the affected persons, in time.
- Use of the prior experiences to learn and to further improve the security of personal data.

11.2 EU Directives for “green” criteria

From February 2014, EU has adopted two directives aimed at simplifying public procurement procedures and making them more flexible. The old directives (directive 2004/18/EC - the ‘classical public sector directive’ - and directive 2004/17/EC - the ‘utilities directive’) are being replaced with the following:

- Directive 2014/24/EU on public procurement, and
- Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors.

These Directives seek to ensure greater inclusion of common societal goals in the procurement process. These goals include environmental protection, social responsibility, innovation, combating climate change, employment, public health and other social and environmental considerations.

11.3 Treaty of the EC

In addition to the Procurement Directives, a number of other sources of EU Law govern procurement and thus affect the manner in which (e)GPP should be implemented.

The basic principles of free movement of goods, services, capital and people are set out in the Treaties, along with a prohibition on discrimination based on nationality. From these basic principles a number of more specific principles applicable in the field of procurement have been developed, primarily through the case law of the European Court of Justice. These are the principles of transparency, equal treatment, proportionality and mutual recognition.

It is important to note that these principles are of broader application than the Directives - procedures which are excluded from or fall below the thresholds for application of the Directives must still be awarded in accordance with the principles. Public authorities need to observe these principles when implementing (e)GPP, as in all areas of procurement.

11.4 Ecolabel

The products/services should have eco-labeling and meet specific environmental criteria. The EU has created a specific "green procurement" toolkit (http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm) which includes energy criteria for the following: Copy and printing paper, cleaning products/services, office IT equipment, constructions, transport, furniture, electricity, catering services, textiles, gardening products/services, glass, insulation, hard floor coverings, walling, cogeneration of heat and electricity, roads and road markings, street lighting and signaling, cell phones and interior lighting. Therefore, if for the product/service requested environmental criteria were set, then the technical specifications should include these statutory criteria. The use of criteria from voluntary or mandatory energy/eco-label certificates in tenders may lead companies to produce greener products globally. Indicative energy labels are the following:



Image 10: Energy/"Green" labels

12. References

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