



## D6.6 – Plan for the Exploitation and Dissemination of Results (PEDR)

### PROJECT INFORMATION

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PROJECT WEBSITE	<a href="http://www.partial-pgms.eu">http://www.partial-pgms.eu</a>

### DELIVERABLE INFORMATION

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### DISSEMINATION LEVEL

PU	Public	✓
PP	Restricted to other programme participants (incl. Commission Services)	
RE	Restricted to a group specified by the consortium (incl. Commission Services)	
CO	Confidential, only for the members of the consortium (incl. Commission Services)	✓

## DOCUMENT LOG

Version	Date	Author	Description of Change
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## GLOSSARY OF ACRONYMS

Acronym	Extended definition
CRMs	Critical Raw Materials
DM	Dissemination Manager
DoA	Description of Action
D&E	Dissemination and Exploitation
EAB	External Advisory Board
EC-GA	EC Grant Agreement
EM	Exploitation manager
GPF	Gasoline Particulate
ISB	International Standardization Bodies
PC	Project Coordinator
PEDR	Exploitation and Dissemination of Results
PSC	Project Scientific Coordinator
PGMs	Platinum Group Metals
REEs	Rare Earth elements
TWCs	Three Way Catalytic converters

## 1 EXECUTIVE SUMMARY

The Plan for the Exploitation and Dissemination of Results (PEDR) presented here is one of the compulsory reports that H2020 projects are required to submit to the EC. The PEDR summarises the consortium's strategy and concrete actions to disseminate, exploit and protect the foreground generated by a project and should serve as a guideline to the Consortium for the Dissemination and Exploitation (D&E) activities to be carried out in the context of the PARTIAL-PGMs project.

**This report is the first PEDR release.** It gives an introduction of the dissemination activities at **M3** and the ones planned for the subsequent period and summary of most promising achievements, exploitable opportunities and identification of target segments for PARTIAL-PGMs project and perspective business opportunities of involved enterprises. The report it will be up-dated at **M21** and **M42**,

**For this reason, this deliverable is public - except for Chapter 4 sections dedicated to the** *Errore. L'origine riferimento non è stata trovata.***and to the** *Errore. L'origine riferimento non è stata trovata.***- whereas the following versions will be confidential.** The public D6.6 will be made accessible through the PARTIAL-PGMs project website and shall be used by anybody who wants to know the activities that have been undertaken to publicize the PARTIAL-PGMs project and make it effective in terms of utilization of results.

The **two key areas** addressed by this deliverable are the dissemination and the exploitation actions which are separately reported in **Dissemination Plan** and **Exploitation Plan**.

**Section A (Dissemination Plan)** describes the dissemination measures and its content will be made available in the public domain thus demonstrating the added-value and positive impact of the project on the European Union. Dissemination activities are going to be performed during the whole project lifetime. This deliverable aims at the presentation of a suitable dissemination plan for making the project known all over the European state, including a definition of the term and its interpretation for PARTIAL-PGMs for the next years. Based on the plan in the DoA, target groups for dissemination in PARTIAL-PGMs are identified and the subjects and matters of these actions are described. The management as well as the tools and activities are defined and the partner roles are shown. As the resources dedicated to dissemination are restricted, cost-effective ways were chosen to achieve a maximum of publicity for the project and its results.

**Section B (Exploitation Plan)** provides a summary of the progress done with regards to PARTIAL-PGMs's exploitable results and the potential routes for their exploitation that project partners have envisioned at the beginning of the project and which are being redefined as the project technically has progressed.. JM, as the Industrial leader of Exploitation activities, leads the development of the Master Plan for the industrialization of the newly developed technology. In the development of the corresponding tasks JM and project partners have collaborated in order to define their Individual Exploitation Plans and to develop the market analysis. In further steps, the reports will be complemented with the partners' support in order to evaluate the position in the market of the PARTIAL-PGMs's main results, to identify the risks of the project and to define the mitigation plan. The report clearly marks as non-publishable (confidential) the parts that will be treated as such by the Commission. Information under Section B that is not marked as confidential will be made available in the public domain thus demonstrating the added-value and positive impact of the project on the European Union.

Besides this executive summary, the deliverable is structured in **four chapters**: The introduction, Chapter 2 contains the information about the scope and objectives of the document. Chapter 3 presents the actions to be performed to disseminate PARTIAL-PGMs project. This section is divided in different subsections which illustrate the objectives of the dissemination, the target audience, the timing of the activities, the dissemination management policy and methodology, the tools and finally the dissemination plan, the future dissemination activities to be done during the next year. Chapter 4 focuses on the exploitation plan. This section illustrates the industrial vision of PARTIAL-PGMs, the exploitation scenarios, the preliminary

exploitable foreground and recaps IPR handling procedures stated in the Grant and Consortium Agreements. Chapter 5 is the references section containing some useful web links for the preparation of this deliverable. The Appendices contains functional additional material.

## 2 Introduction

### 2.1 PARTIAL-PGMs Project in a nutshell

To date, three way catalytic converters (TWCs) have been established as the most effective engine exhaust after-treatment system. However, TWCs not only fail to address the issue of particulate matter (PM) emissions but are also the main industrial consumer of Critical Raw Materials (CRMs) mainly Platinum Group Metals (PGMs) and Rare Earth elements (REEs), with the automotive industry accounting for 65%-80% of total **EU PGMs** demand. The enforcement of new limits on PM emissions (EURO 6c/7) will require higher TWC performance, hence leading to further increase the CRMs content in autocatalysts.

Addressing the necessity of CRMs reduction in catalysis, **PARTIAL-PGMs proposes an integrated approach for the rational design of innovative nanostructured materials of low PGMs/REEs content for a hybrid TWC/Gasoline Particulate Filter (GPF) for after-treatment systems with continuous particulates combustion also focusing on identifying and fine-tuning the parameters involved in their preparation, characterization and performance evaluation under realistic conditions.**

PARTIAL-PGMs approach is broad, covering multiscale modeling, synthesis and nanomaterials' characterization, performance evaluation under realistic conditions as well as recyclability, health impact analysis and LCA. The rational synthesis of nanomaterials to be used in these hybrid systems will allow for a reduction of more than 35% in PGMs and 20% in REEs content, either by increasing performance or by their replacement with transition metals. The compact nature of the new hybrid system not only will allow its accommodation in smaller cars but will also reduce cold start emissions and light-off times with performance aiming to anticipate both future emission control regulations and new advances in engines technology. Such R&D progress in autocatalysts is expected to pave the way to the widespread use of such low CRMs content materials in other catalytic applications.

#### S&T TARGETS

- Development of efficient hybrid TWC/GPF capable to meet future EC legislation (EU VII)
- Reduction of PGMs at least 35%
- Decrease of REEs at about 20%

### 2.2 Scope and objectives of this deliverable

**This deliverable is the first of three deliverables regarding the PEDR of PARTIAL-PGMs project.** The two subsequent reports shall be further elaborated, updated and published at midterm (M21) and at the end of the PARTIAL-PGMs project (M42).

**This first release (M3)** includes formulation of PARTIAL-PGMs project Dissemination and Exploitation (D&E) strategy and an action plan for D&E activities concentrated on the first and second year (April 2016 –April 2018) of PARTIAL-PGMs project with a view of the third year.

**The second release (M21)**, published by the end of the second year of PARTIAL-PGMs project, will include a detailed PEDR report of the D&E activities performed in the first half of the project and an updated D&E plan for the second half of the project. If necessary it also shall include an update of the D&E strategies in accordance with the findings gained during the first two years of the project. **The third and last deliverable (M42)** is planned to include the PEDR report for the entire project duration.

**The Dissemination plan in PARTIAL-PGMs project** represents the strategic vision of the Consortium in terms of communication of the PARTIAL-PGMs project itself, and of its achievements and outputs as well.

The main objective of the planned dissemination activities is to increase the visibility of the PARTIAL-PGMs project on selected communities and target groups at both European and International level and to further facilitate the realization of the impacts. In order to maximize impact, special attention will be given to approximate specific stakeholder groups such as (i) Policy makers (EC, EU, European raw materials' initiative – RMI, EPI, AECC - The Association for Emissions Control by Catalyst, EUCAR, CARS21, European Environment Agency etc.); (ii) Potential commercial end users and in particular vehicle manufacturers such as the European Association of Automotive Suppliers (EAAS) and the European Automobile Manufacturers' Association (ACEA) currently representing the 15 Europe-based car, van, truck and bus makers; (iii) consultation groups; (iv) academics; and (v) investors. Through this interaction, it is anticipated valuable feedback from stakeholders that will be interested in the PARTIAL-PGMs outputs, its exploitable results and – mainly – in future market products the PARTIAL-PGMs technology will uncover.

This deliverable outlines the PARTIAL-PGMs dissemination strategy in terms of identification and description of the **dissemination key elements**:

- i) the objectives of the dissemination (mission, vision),
- ii) the subjects of dissemination (what will be disseminated),
- iii) the target audience (to who it will be disseminated), as well as
- iv) the dissemination methods (how it will be disseminated),
- v) the distribution of responsibilities for dissemination (who will perform the dissemination) and rules for planning and performing of dissemination activities are described here.

The Consortium attaches great importance to dissemination. All partners will contribute to that effort and will strive to maximize use of all existing dissemination channels, such as high quality papers containing the best scientific achievements and oral and poster contributions to topical international and European conferences. Industrial partners regularly participate in workshops, fairs and showcases where technical achievements and prototypes can be shown to stakeholders.

**For any comments and/or suggestions please contact the Dissemination Manager (WG): Isella Vicini**  
[Isella.vicini@warrantgroup.it](mailto:Isella.vicini@warrantgroup.it)

The **Exploitation Plan (EP)** will be designed in order to multiply the impact of the proposed solutions and prepare the transition towards industrial and commercial uptake in order to fully achieve the expected impact. The EP will describe the activities to be undertaken (how and by whom) in order to ensure the exploitation beyond the project itself. The exploitation strategy will reflect and will be built-up as a result of sound analysis of the market trends potential users, and financial sustainability. The target users will be precisely identified and analysed in terms of specific needs and objectives. The exploitation activities will be coordinated by the Steering Committee in collaboration with the Exploitation Manager.

**For any comments and/or suggestions please contact the Exploitation Manager (EM): Kerry Simmance**  
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## 3 Section A: Dissemination plan

### 3.1 Dissemination strategy

The objective of the dissemination strategy is to identify and organise the activities to be performed in order to maximise the influence of the project and to promote commercial and other exploitation of the project results.

In more detail, **the objectives of the dissemination** are:

- i. To raise public awareness about the project, its expected results and progress within defined target groups using effective communication means and tools;
- ii. To exchange experience with projects and groups working in the field in order to join efforts, minimize duplication and maximize potential;
- iii. To disseminate the fundamental knowledge, the methodologies and technologies developed during the project;
- iv. To pave the way for a successful commercial and non-commercial exploitation of the project outcomes.

The dissemination strategy and activities will follow **principles and best practices** successfully tested by the partners in other projects and in line with the EC Guidelines for successful dissemination:

- All research results/reports will be duly reviewed and a copy will be sent to relevant partners involved in the project before these are published or disseminated. When appropriate, the reports will refer to other research projects and build on the existing results and literature.
- Research will be conducted following sound analysis and scientific practice principles, taking into account as much as possible policy requirements and needs.
- All partners who will contribute to the project activities will be duly informed about the final outcomes and the implications stemming from project results.
- All public results will be accessible from the project website and usable from all parties who may benefit from them.

The definition of the dissemination strategy is based on **the identification of the following milestones**:

- a. the subject of dissemination (what will be disseminated),
- b. the identification of target audience (who will most benefit from the project results and who would be interested in learning about the project findings),
- c. the definition of methods and tools (what is the most effective way to reach the target audience),
- d. the timing (when dissemination will take place),
- e. the dissemination management and policy (who is responsible of and how dissemination is ruled).

#### 3.1.1 Subject of dissemination

The following general subjects of dissemination have been identified:

1. PARTIAL-PGMs project itself (general scope, coverage, goals and milestones and plans to reach them)
2. interim results (reached objectives and achievements)
3. techniques and methodologies (in respect of IPR issues)
4. technologies (in respect of industrial IPR issues)
5. sustainability assessment results (from LCA and TA)
6. innovation aspects (in an “open innovation” perspective)

### 3.1.2 Target Audience

The overall aim is to maximize the utilization of the dissemination potential of PARTIAL-PGMs consortium. Dissemination activities then must be tailored in such a way to reach the audiences most efficiently through appropriately selected dissemination channels and dissemination tools.

**One of the key elements of the PARTIAL-PGMs dissemination strategy is the identification of dissemination target areas and audiences.**

#### **3.1.2.1 Dissemination within the PARTIAL-PGMs partners (Internal Dissemination)**

Ensuring effective internal communication and dissemination among the Consortium partners represents an important key success element for the PARTIAL-PGMs Project.

Partners' organizations are important for dissemination for two reasons. First they are potential users of PARTIAL-PGMS project results themselves and secondly they represent "influencers" because of their huge impact on the associated industrial sectors.

Particularly PARTIAL-PGMs consortium partners comprise important market players in various segments and this constitutes a natural channel for the dissemination of the project and its result to other potential users. In this respect, the dissemination activities rely on the effort and the possibility of each partner in exploiting opportunities to present the project and its result. Therefore, it is important to communicate information about PARTIAL-PGMs project and its results to partners' management, consultants and people responsible for their marketing and sales. Additionally, it is necessary to encourage them to share this information further to their customers and business partners.

Methods of internal dissemination can vary from providing links from partners' web pages to the PARTIAL-PGMs website, to seminars or workshops showcasing, to articles in partners' internal newsletters and publications etc.

The internal communication strategy also pursues the objective to maintain all partners fully informed about planning, work in progress and existing or potential problems. Besides the requested EC and Internal reporting, all partners are invited to actively communicate with WP Leaders about technical progresses and issues, as well as WP Leaders are invited to keep PSC and PC updated about the activities. All partners are invited to inform PSC and PC of any Administrative and Legal issues arising. PSC and PC are at the partners disposal respectively for any technical and administrative information/issue.

Documents and files for internal communication can be uploaded on the Project Collaborative space set-up on the ©EMDESK Platform.

#### **3.1.2.2 Dissemination beyond the PARTIAL-PGMs partners (External Dissemination)**

In order to structure the external dissemination activities in the dissemination plan and to be able to analyze the impact of dissemination on a comparable basis a more accurate division of the target audience was developed in the following table.

Table 1 Segmentation of PARTIAL-PGMs external audience

Type of audience	Motivations
<b>Academic and research community</b>	<p>This group targets all research communities interested in the PARTIAL-PGMs project's developments, results and innovation which can be beneficiary for their own research activities.</p> <p>Scientific contributions of PARTIAL-PGMs are particularly interesting for researchers working in the field of development of smart and innovative nanostructured automotive post-treatment systems by integrating TWCs on GPF and related modeling, characterization and LCA activities.</p>
<b>Industrial sector, Professional Associations</b>	<p>A major objective of PARTIAL-PGMs is to address and trigger the active involvement of industrial and user communities. PARTIAL-PGMS is of utmost relevance for organizations in various industry verticals. PARTIAL-PGMS has already attracted stakeholders from Automotive Sector whose potential for the exploitation of the Project results will be analyzed mainly in the frame of elaboration of the exploitation plan. That implies the necessity to approach them individually in the dissemination activities.</p> <p>At the end of the project we plan to elaborate PARTIAL-PGMs dissemination impact analysis where we will evaluate which industrial segments would be addressed and to compare the responses gained from the various segments. This will bring important information for further exploitation of PARTIAL-PGMs project results by particular consortium partners after the end of the project.</p> <p>It is expected that they will provide valuable feedback on the project, introduce challenging requirements to be considered and have a major impact on the project's sustainable development.</p>
<b>International Standardization Bodies (ISB)</b>	<p>ISB should be aware of PARTIAL-PGMs scope and objectives, owing the innovative character and of eco-efficiency of the developed technologies.</p> <p>In an advanced stage of the project ISB can be involved and provide consultative advice on pre-standardization procedures which may be carried out when the technology reaches a suitable readiness level.</p>
<b>Government bodies and policy makers</b>	<p>This is a wide group encompassing innovation driven local, regional authorities, representatives and associations, Ministries, parliaments and Public Administrations at national and international level.</p> <p>There are several significant goals that can be promoted. For instance:</p> <ul style="list-style-type: none"> <li>a) Development of efficient hybrid TWC/GPF capable to meet future EC legislation (EU VII)</li> <li>b) Rational design of materials through multiscale modelling</li> <li>c) Reduction of PGMs at least 35%.</li> <li>d) Decrease of REEs at about 20%</li> </ul> <p>Thus, PARTIAL-PGMs technologies will contribute towards expected EC sustainable emission targets.</p>

Type of audience	Motivations
<b>EU technology Clusters</b>	<p>This group refers to activities addressing external task forces that can be relevant to PARTIAL-PGMs and which will offer a quite big and reusable knowledge base for implementing the Project and solving commonly addressed issues by injecting knowledge and experience on topics such as practices, technologies, platforms, components, standards, etc.</p> <p>Relevant European technology clusters been identified, such as European Materials Modelling Council (EMMC), The European Cluster on Catalysis initiative, Critical Raw Material Cluster (CRM), European Materials Characterisation Council (EMCC).</p>
<b>EU projects working in similar domain</b>	The participation of project partners in other relevant projects offers the opportunity to establish quick links among parties through common participants.

External dissemination will address the defined target groups at national, European and international level.

As PARTIAL-PGMs is a project co-financed under the *Horizon2020 Programme of the European Community for research, technological development and demonstration activities*, the EU is naturally interested in the project results being disseminated world-wide. In fact, one of the most important objectives of this scheme is to develop European research and development potential to improve competitiveness of European industry with the aim to align levels and capacities of European research with research in countries outside EU (i.e. United States - PARTIAL-PGMs involves University of Delaware as beneficiary - and Japan: PARTIAL-PGMs is willing to involve a Japanese organization in the EAB). Dissemination at European level will require close interaction with the EC and with European initiatives.

PARTIAL-PGMs partners have interesting and significant links with European and international activities:

- Most of the PARTIAL-PGMs partners already participated, and currently participates, to EU projects which are related with PARTIAL-PGMs proposal. This will form adequate basis for transfer of significant knowledge and technology from former RTD projects by strengthening the exploitation of results and create potential spin-off.
- Some PARTIAL-PGMs partners are involved in the activities of European Clusters, industrial interest groups and standardization bodies.
- Some PARTIAL-PGMs partners are members of international committees/boards of important symposia which can ensure and facilitate the dissemination of PARTIAL-PGMs results.
- Finally, many PARTIAL-PGMs partners have consolidated pre-existing collaborations between each other (research or industrial), even in funded EU projects. This will certainly strengthen the cooperation within PARTIAL-PGMs proposal which is requested to successfully finalize the project.

At national level, PARTIAL-PGMs Project will be disseminated among:

- all industrial sectors identified
- academia
- relevant local public bodies, since they are important regulators
- relevant professional associations, as they can inform their members and contacts on PARTIAL-PGMs project and its results, being therefore important local influencers.

During the project, all PARTIAL-PGMs partners will be encouraged to identify and approach the most important local groups of interests.

### 3.1.3 Dissemination activities timing

Dissemination activities are planned in accordance with stage of the development in the project as planned in the Description of Action (DoA).

Although a number of dissemination activities will take place during the first 24 months of the project, the most significant dissemination activities will take place as final research results will be available and the project will go to the next industrial development phase.

The dissemination activities are to be performed according to the following logical schedule:

- 1) **Initial awareness phase (month 0-3):** this especially includes establishment of PARTIAL-PGMs project website, analysis of relevant information resources in terms of identification of dissemination opportunities and creation of basic dissemination tools including graphical identity of the project (i.e. project logo, templates for project documents and for project presentations).
- 2) **Targeted dissemination phase (month 4-36):** the consortium will enrich the website, publish a project brochure, issue the first press release and attend selected events. Preliminary project results will be presented to the target audiences.
- 3) **Pre-launch phase (month 36-42):** this represents the period closely before the end of the project, when PARTIAL-PGMs consortium partners will start preparation of own utilization and business plans for the industrialization of PARTIAL-PGMs project outputs. This phase will be focused on informing the target audience of the PARTIAL-PGMs exploitable outputs. Important communication themes in this phase will also be the references gained from the realization of PARTIAL-PGMs demo results.

### 3.1.4 Dissemination management

#### 3.1.4.1 Distribution of responsibilities

According to the Article 29.1 of the EC-GA “Each beneficiary must – as soon as possible – ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).” Therefore, every possible opportunity will be embraced by individual partners or on collective basis through joint appearance by more than one partner to make PARTIAL-PGMs known among technicians and general public as well.

**All partners of the consortium must contribute to the dissemination according to their foreseen role and effort and using all available tools**, thus for instance by participating and giving presentations at conferences, publishing papers, holding press conferences, networking and similar activities and will strive to maximize the existing dissemination channels for the purpose of project result adoption and successful future commercialization of PARTIAL-PGMs outputs.

In order to manage the external communication and the publication of PARTIAL-PGMs related text/images/videos in whatsoever form (magazines, newspapers and papers for conferences, workshops and seminars, etc.) the Consortium avails itself of a Dissemination Manager (DM).

**The Dissemination Manager is the central contact point for external communication.** The DM coincides with the PC and has been officially appointed during the Project kick-off meeting. Full name and contacts are mentioned on the website and on any document where it appears to be relevant.

The contact details to be currently mentioned are:

Isella Vicini, Dissemination Manager  
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**WG and DEMOKRITOS, as Coordinator Board, are the central contact point for internal communication.**

The contact details to be currently mentioned are:

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**Each partner has nominated an internal contact point who is responsible for dissemination issues and reporting** (Annex B: Dissemination contact points).

#### **3.1.4.2 Dissemination policy and rules**

Dissemination activities in PARTIAL-PGMs project are deeply wedded with the intellectual property (IP) rights protection which is clearly stated in EC-GA Articles 23a. Practical application of IP rights protection agreed among PARTIAL-PGMS project partners is adjusted in the Consortium Agreement (CA) in Section 9.

The main aspects of IP rights protection are the following:

- Common agreement on publication of other partners' confidential information or any other information subjected to their IP rights.
- Setting up the dissemination rules and procedures to avoid any potential breach of any partner's IP rights, especially rules and procedures for PARTIAL-PGMs project results publications.
- Understanding the difference between the interests of academia and industry partners of PARTIAL-PGMs project. The academia partners tend to publish all information they have at disposal which is caused by academia common motivation systems while the industrial partners' decision whether, when and where to publish depends on commercial considerations.

The basic regulation of the dissemination activities in the CA states that:

*Dissemination activities* including but not restricted to publications and presentations shall be governed by the procedure of **Article 29.1 of the GA** subject to the following provisions.

*"A beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.*

*Any other beneficiary may object within — unless agreed otherwise — 30 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests."*

For the avoidance of doubt, **no Signatory Party shall have the right to publish or allow the publishing of any data which includes Foreground, Background or Confidential Information of another Signatory Party**, even if such data is amalgamated with the Signatory Party's Foreground, or other information, document or material without the other Signatory Party's prior written approval.

Where publications relate to jointly-developed results, each Signatory Party involved must be asked for its consent to publish and such consent not to be unreasonably withheld, delayed or conditioned.



**All draft articles must be sent to the PC, the PSC and to the DM before publication or production for reporting and archiving purposes.** This will allow checking if they fulfil the dissemination requirements or whether they conflict with other existing papers. Moreover the Coordination Board will decide whether it is appropriate to make the document accessible on the Project website.

A **common graphic identity** has been defined (see Section 3.1.5) to allow for better visibility and recognition as well as branding of the PARTIAL-PGMs project. Therefore, all dissemination tools and activities must refer to or include:

- the name of the project: PARTIAL-PGMs,
- to the project's website URL (<http://www.partial-pgms.eu/>)
- to the PARTIAL-PGMs project logo (described in Section 3.1.5.1.),
- acknowledgements to EC public funds. The **official EC logo, with the Horizon 2020 indication below**, will be used for any (internal or external) deliverable, report and dissemination tool.

**All publications based on work funded by EC within the activities of the PARTIAL-PGMs Project should acknowledge their affiliation to PARTIAL-PGMs and bear recognition of the EC funding.**

This is generally accomplished by adding the following sentence in the acknowledgements section:

***"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 686086."***

#### 3.1.4.3 Dissemination monitoring and reporting

All consortium partners are encouraged by the partner responsible for dissemination (WG) to report the results of each dissemination activity immediately after they are presented. The reports shall include feedback gathered by the respective partner from the target audience (if applicable), eventually gained contacts to be listed in the contact repository used for further dissemination purposes.

**This must be done through the PARTIAL-PGMs Project collaborative space which contains a specific dissemination section** (see the ©EMDESK Platform described in the "D7.2 Project Collaborative Space").

All partners are invited to publish the dissemination material on the Consortium private website (this can be a paper, a conference presentation or the audio file of an interview for example). Dissemination documents and files (text, audio, video, etc.) shall be uploaded on the Project Collaborative space.

**For monitoring purposes, the dissemination activities will be reassessed regularly by the DM during the project progress meetings that will take place every 6 months.**

The information gathered during the entire lasting period will be analyzed by WG and this analysis will be incorporated to the interim PEDR report. This document includes dissemination report of the first two years of PARTIAL-PGMs project in the form of overview of activities performed in this period. The results of the evaluation will be then projected in the dissemination plan for the upcoming period.

The Final Report to be delivered to the EC at the end of the project will include the final PEDR compiled by the Dissemination and Exploitation Manager on the basis of the contributions of all partners.

#### 3.1.4.4 Evaluation

For the purposes of evaluation of PARTIAL-PGMs dissemination activities, quantitative indicators and associated metrics were set up where applicable (**Errore. L'origine riferimento non è stata trovata.** Below table).

A numerical target has been estimated as a cumulative estimate based on individual partners' inputs. These targets will be periodically reviewed by the DM in collaboration with the whole Consortium.

Table 2 Indicators and associated metrics for evaluation of the dissemination activities

Communication tool/channel	How to measure	Objective	Contingency plan
<b>PARTIAL-PGMs Web site</b>	Number of monthly visits	700	Promoting the web site in Social Networks, e.g. Linked-in groups / Newsletter to target groups
	Duration of visits	2 min average	Re-organize the website to make it easier to find relevant items. Upload more attractive content
	Number of downloads per month	35 for posters, flyers and newsletters 50 for public reports	Foster downloads from partners
	Number of references from external web pages	20 (excluding partner institutes)	Contact more stakeholders and initiatives to agree on the promotion of the site
<b>Social Media:</b> i.e. Facebook , Twitter Linkedin, You Tube Google Plus	Number of members	100/200	Share the group dedicated to the project in already active forums about European projects.
	Number of follower	1200/1300 Followers	Increase the number of the “following” in order to increase the number of the “followers”
	Number of fans	500/600 Fans	Share the Fan Page on already active and existing Fan Pages belonging to projects partners and send subscription requests individually.
<b>Publications</b>	Number of submitted scientific papers	8	Encourage partners to publish papers peer-reviewed and indexed journals, Find appropriate events.
	Number of articles in industry magazines	12	Search for additional channels
<b>Attendance of events</b>	Number of attended conferences with presentations of posters	16	Find alternative events, contact organizers.
	Number of attended congresses - oral communication	20	Find alternative events, contact organizers
	Number of flyers to be distributed	400	Ask for permission to distribute leaflets during additional events
	Number of attended fairs	4	Identify further industrial fairs of interest to the project.
<b>Organization of events</b>	Number of workshops organized	2	Responsibilities and budget have been assigned. Supervise training team
	Number of registered people in the workshop	>30	Responsibilities and budget have been assigned. Invite partner teams to assist
	Number of organized conferences	3	Responsibilities and budget have been assigned. Invite partner teams to assist
	Number of registered people in the conferences	100-150 pax	Invite European Commission to publish the conference programs
	Number of flyers to be distributed	450	Reedit flyer to explain the achievements of the project



The project dissemination effectiveness will be internally evaluated using the questionnaire provided in *Annex C: Internal evaluation questionnaire*. It will allow the members of PARTIAL-PGMs Consortium to check the quality of the project's dissemination plan and policy and the DM to implement further actions to improve the dissemination plan. This questionnaire will be submitted to all the partners periodically together with the PEDR draft release (from that one foreseen at month 21 onwards), and before the related Deliverable submission to the EC.

### 3.1.5 Dissemination tools

#### 3.1.5.1 Graphic Identity LOGO

The logo includes the name of the project (PARTIAL-PGMs), its main concept intends to clear and to capture the attention of the audience. The shape of the vehicle from which come green leaves reminds the main idea of the Project: PARTIAL-PGMs proposes an integrated approach for the coherent development of smart and innovative nanostructured automotive post-treatment systems by integrating TWCs on GPF, capable to meet future regulations, with reduced PGMs and REEs, leading to development of 2nd generation GPFs. The automotive catalysts of the future will need to be more active, work at lower temperatures, respond rapidly to the change in operating mode of the vehicle, remove pollutants as soon as the engine is switched on and also address the PM emissions

Figure 1 PARTIAL-PGMs official LOGO



The PARTIAL-PGMs logo will be used for any (internal or external) deliverable, report and dissemination tools.

#### 3.1.5.2 Project Leaflet

The main objective of the project leaflet is to provide our audiences with an attractive and written project overview and a summary of the main project objectives and characteristics. To assist the dissemination effort, the attractive and professionally made leaflet, prepared by WG, is published on the project website. The leaflet presents the goals of the project and the main (expected) findings. The text is designed taking into account not only experts, but also an interested non-specialist. It introduces the main idea, the approach and the goals of the PARTIAL-PGMs project. Furthermore, it includes the website address and provides basic information on PARTIAL-PGMs Consortium. All partners' logos are also displayed.

A second version of the leaflet will be implemented after month 18. This version will contain an updated content, with an overview of preliminary results, and a new layout for making it more attractive.

The leaflet can be circulated in printed form, e.g. it can be handed out at conferences or other events; on the other hand also an electronic version (e.g. PDF file) can be circulated. The leaflet can be also downloaded from the project website. Some leaflets may be translated into other languages than English

by the Partners, based on a master template which will be provided to the partners. The content of the leaflets has to be clear and easily understandable by the target end users.

**Link for leaflet download:** <http://www.partial-pgms.eu/wp-content/uploads/2016/06/PARTIAL-BROCHURE-2016.pdf>

Figure 2 PARTIAL-PGMs Leaflet page 1

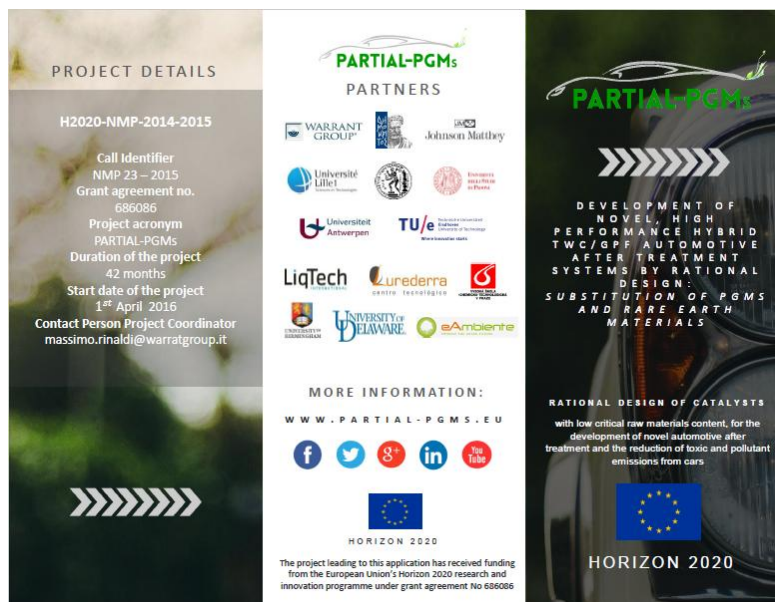
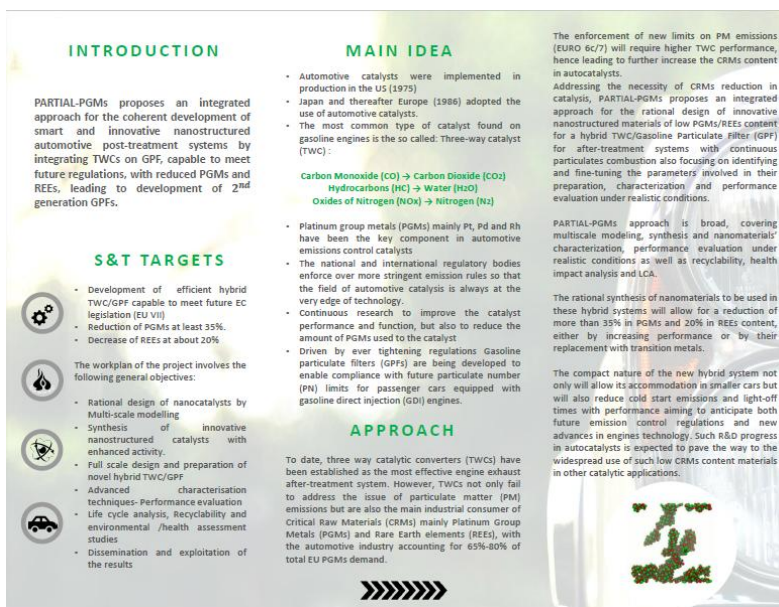


Figure 3 PARTIAL-PGMs Leaflet page 2



### 3.1.5.3 Project Poster

The main purpose of the poster is to catch the audience attention. The poster focuses on the visual aspects. The content of the poster is clear and easily understandable by the target end users. With regard to the layout and design, the poster shows the PARTIAL-PGMs project's logo and the colors emphasizing the link to the project's graphic.

From the content point of view, the poster of the PARTIAL-PGMs project illustrates its objectives and include basic information on the project and on the Consortium, including all partners' logos. It is possible to download it from the PARTIAL-PGMs website.

The PARTIAL-PGMs poster will be published 3 times within the PARTIAL-PGMs project by WG:

- once at the initial phase (month 3), to convey the project approach and objectives;
- then at Month 18, to highlight project achievements in the first half of the project, and
- finally, at Month 36, to include industrial scale results and demo activities (the poster will be presented at the final PARTIAL-PGMs conference).

Posters may be translated into other languages than English by the partners located in the different member states and attending local or national events.

Link for poster download: <http://www.partial-pgms.eu/wp-content/uploads/2016/06/PARTIAL-POSTER-2016.pdf>

Figure 4 PARTIAL-PGMs Poster



### 3.1.5.4 Website

Project websites are one of the main communication tools of projects funded under the EU H2020 Programme. To ensure maximum visibility to the PARTIAL-PGMs objectives and results, it has been set up a project website registered in the "eu" domain and with an intuitive URL to increase hit rates:

<http://www.partial-pgms.eu/>

The design of the website builds upon the following criteria and taking into account suggestions given in the EU Project Websites – Best Practice Guidelines (EC, 2010):

- i. **visual communication:** use of colours and/or photos, web pages are easy to browse, information is kept short and links are included to websites, publications, and so on.
- ii. **verbal communication:** the website uses simple phrasing, no jargon is used in order to attract the widest possible audience, e-devices are user friendly.
- iii. **visibility:** maximum use of free or affordable methods to increase page ranking on search engines, Webmaster Tools provided by search engines to check indexing status, good cross-linking between the different pages of your site and other sites, add keywords to the web page metadata; use frequently used keyword search phrases both in the metadata and in the contents pages.
- iv. **regular update of contents:** the website is maintained by WG and the update will be regularly done by the Webmaster upon inputs of the DM and of partners.
- v. **monitoring tools:** the website will include a counter of visitors or other statistical tools that will be used to measure the number of visits.

### 3.1.5.5 Public Website

The public section of the PARTIAL-PGMs website:

- provide a brief project summary highlighting the objectives, the contents and the structure of the PARTIAL-PGMs Project including the composition of the PARTIAL-PGMs Consortium.
- provide a short profile of each of the PARTIAL-PGMs Partners and a link to its web sites;
- provide access to the project Public Deliverables and abstracts of selected non-Public Deliverables;
- provide copies of publications and presentations done at external conferences in various formats (pdf, MSWord, etc.);
- feature a *news* section with the latest information related to the project, and an *events* section where PARTIAL-PGMs events (such as PARTIAL-PGMs meetings, workshops, Conferences, etc.) and external events are presented.
- **HOME:** the home page of the website shortly introduces the PARTIAL-PGMs project and gives the important relevant information. The EU co-funding is duly acknowledged, also by the inclusion of the relevant logos (i.e. EU, H2020), and claiming that " This project has received funding from the **European Union's Horizon 2020 research and innovation programme under grant agreement no. 686086.**".

The Homepage contains links to all the following subpages (at least):

- **Home:** on this pages are described the challenge being addressed, the project objectives, an outline of the methodology, and the expected results and impacts by placing the project in a broader scientific and societal context to help the outside world perceive its relevance.
- **Background:** useful background information for the implementation of the project.
- **Partners (Consortium):** this webpage section presents a brief description of the project partners, their logos and the links to the respective websites.
- **Networking:** this section contains links to other project, clusters and relevant initiative.
- **Events:** this provides a calendar that presents future and past events. It provides dates and a contact point, especially if an event is of public nature, lists conferences and special sessions during which the project will be presented, and considers web streaming of events or the upload of eventual conference videos.
- **Contacts:** this section enables people to easily get in touch with relevant contact people of the project Consortium.
- **Social Networks buttons:** direct access to the social media (Twitter, Facebook, Youtube – see next section for details).



### 3.1.5.6 Private area

On the PARTIAL\_PGMs website homepage there is a link allowing to access the @EMDESK platform **collaborative website** used for partnership internal communication and project management. The collaborative website is totally private and a password is mandatory to gain access to it.

The @EMDESK platform supports the following activities:

- Project progresses controlling
- Resources and Costs controlling and reporting
- Report management and preparation
- Deliverable monitoring and management
- Document management
- Project Calendar management
- Contacts management, electronic mailing (to individuals or mailing lists) and messaging.

### 3.1.5.7 Web 2.0 – Social Media

Web2.0 tools are the emerging platform for innovative creation, sharing and tracking of citizens' needs and wishes on public awareness. Web 2.0 applications, including social networks, are changing and improving the way of how user interacts within the World Wide Web.

In order to reach a broad target audience while establishing two-ways communication channels, the presence of the PARTIAL-PGMs project in social media will be one of the key actions for dissemination activities.

PARTIAL-PGMs will be registered in standard platforms like:

#### RSS feeds

Automatic updates from the project website

#### Facebook and Twitter

A Facebook page has been created as one dissemination instrument for reaching the general public (<https://www.facebook.com>). Relevant Facebook groups will be identified and approached for taking part in PARTIAL-PGMs activities. The integration between Facebook and Twitter (<https://twitter.com>) will be achieved by connecting the two social network entries: this will aid in achieving the viral dissemination the PARTIAL-PGMs project is pursuing.

#### LinkedIn

A LinkedIn group (<http://www.linkedin.com>) has been created as one dissemination instrument for reaching stakeholders and industry professionals.

#### YouTube and Google+

To accompany the website and ease the publication of videos produced within the course of the project, e.g. videos of related conferences or workshops, the consortium will create a dedicated channel on the YouTube video platform. The channel will be publicly available at <http://www.youtube.com/> and <https://plus.google.com> and contains videos that are also embedded into the project main website. Further videos will be put online by the partners as new results and demonstrators are being presented.

**The website will have direct access to these social networks by clicking over the icons situated on the footer part of the website.** In this way, it will be easy for every user to participate in this when the website is visited.

### 3.1.5.8 Electronic newsletter

PARTIAL-PGMs news will be issued periodically **every 6 months** on the project website and provides:

- Project-related news (e.g. launch and meetings)
- Announcements of the project's progress
- Dates, details, comments regarding project related conferences, meetings, events or publications

- Lectures, talks, and trainings opportunities
- Etc.

The eNewsletter will address target groups and end-users (internal partners, industrial, scientific, standardization organizations, project beneficiaries) in a style and language appropriate to them. Subscription to this newsletter is open to everyone, using the webpage RSS feeds.

### 3.1.5.9 Press kit

The **Press kit** provides a rapid way for media organizations to access all the PARTIAL-PGMs project information. The Press kit will be available either in digital format on the website that and in paper format to be distributed before and during relevant events. It will include information about:

1. the project coordinator and his contact details;
2. the project graphic identities, such as the PARTIAL-PGMs project logo;
3. the project summary and objectives;
4. the participants' profiles.

Further public materials will be added as new project results become available.

The official **Press Release** is a formal announcement to the national or specialised/technical press in order to present a short overview of the PARTIAL-PGMs project to the public. Press releases will be published at strategic times when major achievements have been made. They will include e.g. information on PARTIAL-PGMs events or PARTIAL-PGMs milestones, as well as interviews with experts. All press releases will be archived on the PARTIAL-PGMs project website.

The press contacts addressed by press releases are included in PARTIAL-PGMs contacts repository. The primary contact for Dissemination scopes is the DM.

## 3.2 Dissemination activities

### 3.2.1 Dissemination Plan

All partners will contribute to that effort and will strive to maximize use of all existing dissemination channels, such as high quality papers containing the best scientific achievements and oral and poster contributions to topical international and European conferences. Industrial partners regularly participate in workshops, fairs and showcases where technical achievements and prototypes can be shown stakeholders. A list of major events will be already included in the first release of the PUDF.

**Table 3** PARTIAL-PGMs dissemination tools and target audience

DISSEMINATION TOOLS	TARGET AUDIENCE		
	Scientific Community	Industry and SMEs	Public at large
Project website	X	X	X
Project material (leaflets/brochures/audio-visual publications on pen drives that will be distributed at topical events)	X	X	X
Newsletters (via project website)	X	X	X
Scientific Publications	X	X	-
Participation in topical national/international scientific conferences, technical, industrial fairs and other relevant events	X	X	-
General audience articles (CORDIS news, magazines, etc.)	-	X	X
Radio/television broadcasting (local/national level)	-	X	X
Press conference and press releases	-	X	X

### 3.2.2 Target Publications

The Industrial and academic partners will individually and in collaboration publish and present scientific advances in technical papers as well as in journals (peer reviewed or not) and magazines. Scientific publications are an effective way to disseminate high level project information and to attract the interest of representatives of the various target groups. Publications in specialised magazines, papers sent to related events will attract the attention of technicians and researchers as well as to give the opportunity to collaborate within the purposes of PARTIAL-PGMs. In order to support this activity, whenever possible, project publications will be archived or linked on the PARTIAL-PGMs website.

The following journals and magazines are especially relevant for the communication strategy of the project:

**Table 4** PARTIAL-PGMs target publications

Kind of publication	Details (Reference partner if applicable)
<b>Scientific/Technical Journals:</b>	<p>Angew. Chem. Int. Ed, Phys. Chem., Chem. Com</p> <p>Nano Letter</p> <p>ACS Catalysis</p> <p>Advanced Materia</p> <p>Applied Catalysis B – Environmental</p> <p>Applied Catalysis A- General</p> <p>Catalysis Today</p> <p>Journal of Catalysis, Applied Catalysis B, Catalysis Today, Applied Catalysis A (Elsevier, <a href="https://www.elsevier.com">https://www.elsevier.com</a>) -</p> <p>Material Chemistry, Journal of Physical Chemistry C, Journal of the American Chemical Society, ACS Catalysis, Chemical Review, ACS <a href="http://pubs.acs.org/">http://pubs.acs.org/</a> -</p> <p>Chemical Society Reviews, Journal of Material Chemistry A, Catalysis Science &amp; Technology, Chemical communication, <a href="http://pubs.rsc.org/en/journals">http://pubs.rsc.org/en/journals</a> -</p> <p>Applied Catalysis B: Environmental -</p> <p>Catalysis Today</p> <p>Chemical Engineering Journal</p> <p>Chemical Engineering Journal</p> <p>Microporous and Mesoporous Materials</p>
<b>Selected Industry Magazines</b>	<p>Il Sole 24 ore (WG)</p> <p>L'Usine Nouvelle : <a href="http://www.usinenouvelle.com/">http://www.usinenouvelle.com/</a></p> <p>Sciences et Avenir : <a href="http://www.sciencesetavenir.fr/">http://www.sciencesetavenir.fr/</a></p> <p>SAE Technical Papers</p>

### 3.2.3 Publications (M1\_M3)

**Table 5** PARTIAL-PGMs publications

N°	Suggested from	Main author	Title of the periodical or the series	Number, date or frequency	Place of publication	Relevant page
1						
2						
3						
4						
5						

### 3.2.4 Target Conferences and events

PARTIAL-PGMs promotes project presentation at scientific conferences targeting relevant domains for the project. The impact of presentations at this kind of events is very high because of the attendance of

scientists and industrial experts. National and international conferences are an excellent opportunity to share the results with experts in the field and, therefore, to achieve an effective dissemination of the project. Workshops, meetings and other large events (exhibitions, trade fairs, showcases) represent relevant opportunities for dissemination. The goal of these events will be to disseminate both the techniques developed during the project and the preliminary results of the project to the targeted beneficiaries of the PARTIAL-PGMs project.

The following events are especially relevant for the communication strategy of the project

**Table 6** PARTIAL-PGMs target conferences and events

	Details (Reference partner if applicable)
<b>Relevant Congresses, Conferences and events</b>	<p>NanoInnovation Italy 2016, 20/23 September 2016 Rome, Italy (WG)</p> <p>EuroNanoForum 2017, La Valletta, Malta (WG, DEMOKRITOS)</p> <p>Congress on Catalysis and Automotive Pollution Control – CAPoC – (JM)</p> <p>European Simulation and Modelling Conference</p> <p>Effects of Surface Heterogeneity in Adsorption and Catalysis on Solids</p> <p>Europacat, International Conference on Operando Spectroscopy</p> <p>Characterisation of Porous Solids</p> <p>International Workshop “Characterization of Porous Materials: From Angstroms to Millimeters”</p> <p>Netherlands Catalysis and Chemistry Conference (Tu/E)</p> <p>International Conference on Environmental Catalysis</p> <p>13th European Congress on Catalysis</p> <p>27 August - 1 September 2017</p> <p>Florence, Italy: <a href="http://www.europacat2017.eu/">http://www.europacat2017.eu/</a> (UL)</p> <p>The 16<sup>th</sup> International Congress on Catalysis, July 3-8 2016, Beijing China, <a href="http://www.icc2016china.com/en/">http://www.icc2016china.com/en/</a> (UL)</p> <p>9th International Conference on Environmental Catalysis. Newcastle, Australia   10th-13th July (UL)</p> <p>ChemReactor-22, London, 19-23 September 2016 <a href="http://conf.ict.nsc.ru/CR_22/en">http://conf.ict.nsc.ru/CR_22/en</a> (VSCHT)</p> <p>Society of Automotive Engineers (SAE) World Congress, Detroit, 4-6 April 2017, <a href="http://www.sae.org/congress/">http://www.sae.org/congress/</a> (VSCHT)</p> <p>North American Catalysis Society Meeting NAM-25, Denver, 4-9 June 2017, <a href="http://www.nam25.org/(VSCHT)">http://www.nam25.org/(VSCHT)</a></p> <p>ImagineNano (Bilbao) April 2017 (LUREDERRA)</p>
<b>Relevant fairs</b>	<p>Automechanika Frankfurt</p> <p>European Raw Materials Information and Brokerage Event</p> <p>Researchers Night</p> <p>9th International Conference on Environmental Catalysis. Newcastle, Australia   10th-13th July <a href="http://www.iccc2016.org">http://www.iccc2016.org</a> (UL)</p>

### 3.2.5 Conferences and events (M1\_M3)

**Table 7** PARTIAL-PGMs conferences and events already attended

N °	Type of activity <sup>1</sup>	Main leader (s)	Title, Link	Date Period	Place	Type of Audience <sup>2</sup>	Size of audience	Countries addressed
1	Conferences (Poster)	WG	Industrial Technologies 2016, <a href="http://www.industrialtechnologies2016.eu/">www.industrialtechnologies2016.eu/</a>	22/24 June 2016	Amsterdam	Industry, scientific community, civil society	1100	Europe

<sup>1</sup> Available options: conferences, workshops, exhibitions, showcases, demo, media briefing

<sup>2</sup> Available options: Scientific Community (higher education, Research), Industry, Civil Society, Policy makers, Medias, Other ('multiple choices' is possible).



N°	Type of activity <sup>1</sup>	Main leader (s)	Title, Link	Date Period	Place	Type of Audience <sup>2</sup>	Size of audience	Countries addressed
2								
3								
4								
5								

### 3.2.6 Target Networking opportunities

One of PARTIAL-PGMs priorities are networking activities with other National, FP7 and H2020 projects with relevant objectives. An official request of collaboration will be made to the leading partners of the relevant projects at the start of the PARTIAL-PGMs project and the organisations that will respond will be given access to the project networking facilities. The working experience and knowledge gained by similar projects will be a valuable tool for guidance of the project actions, and will enhance the expertise of the project teams.

**Table 8** PARTIAL-PGMs target networking activities

	Details (Reference partner if applicable)
Policy makers (at EU, National, local level)	<i>Tbd</i>
European Clusters	<i>Critical Raw materials Cluster – CRM – (DEMOKRITOS)</i> <i>European Material Modeling Cluster - EMMC - (WG, DEMOKRITOS)</i> <i>European Materials Characterisation Council – EMCC (DEMOKRITOS)</i>
Industry	Chemical industries
Research Communities	Chemistry: Société Chimique de France : <a href="http://www.societechimiquedefrance.fr/">http://www.societechimiquedefrance.fr/</a> (UL) EFCATS : <a href="http://efcats.org/">http://efcats.org/</a> (UL) IACS (UL)
Scientific Communities	Division Catalyse de la Société Chimique de France (UL)
Working Groups	Groupe d'Etude en Catalyse (GECat) : <a href="http://www.gecat.fr/">http://www.gecat.fr/</a> (UL) National Organisation NanoSpain (LUREDERRA)
SMEs and large companies	Modeling and characterization companies (WG) PSA, Renault SA, Volvo Powertrain, Solvay, IFPEN, CEA, CTI, Umicore, JM, BASF, Axens, Evonik (UL) Toyota (JM) Different potential users of nanopowders, nanodispersions and ready-to-use nanoproducts which attend meetings in the centre (LUREDERRA)
Wider Audience	<i>Tbd</i>

### 3.2.7 Networking opportunities (M1\_M3)

**Table 9** PARTIAL-PGMs networking actions already carried out

N°	Type of networking activity <sup>3</sup>	Main leader(s)	Name of partners or network, link	Date, Period	Place	Planned cooperation activities	Countries addressed
1	Cluster	DEMOKRITOS	<i>Critical Raw materials Cluster – CRM –</i>	Before project starting date	/	Meeting participant, Dissemination	Europe

<sup>3</sup> Networking activity: Clusters, memberships, associations, European Technology Platforms, other EU projects, etc.

N°	Type of networking activity <sup>3</sup>	Main leader(s)	Name of partners or network, link	Date, Period	Place	Planned cooperation activities	Countries addressed
2	Cluster	DEMOKRITOS	European Material Modeling Cluster - EMMC - <a href="https://emmc.info/">https://emmc.info/</a>	April 2016	/	Meeting participant, Dissemination	Europe
3	Cluster	WG DEMOKRITOS	European Materials Characterisation Council – EMCC <a href="http://www.characterisation.eu/">http://www.characterisation.eu/</a>	May 2016	/	Meeting participant, Dissemination, Safety analyses	Europe
4							
5							

### 3.2.8 Training Activities

Training activities should contribute to professional development through advanced training of researchers and other key staff, research managers, industrial executives, and potential users of the knowledge generated by the project. In PARTIAL-PGMs, training is envisaged as that given by and for personnel working in the project.

Different training approaches will be adopted at various levels:

- Organisation of one training event (“**PARTIAL-PGMs school**”) for high-degree students and young researchers of the institutions involved (both academia and enterprises) with well-defined focus which is in line with the progress of activities. At the beginning of the project a training plan will be prepared by NCSR D and shared with the partners. Scientific coordination of such “schools” will be carried out at NCSR D while WG will be in charge of logistics (secretariat). Training costs will cover the salary costs of those providing the training (if in conformity with Article II.14 of ECGA) but not the salary costs of those being trained as mentioned in Article II.16.6 of ECGA.
- Staff exchange between partner’s institutions, especially of young researchers. This (short) mobility plan includes in particular personnel exchange between involved academia/research institutes and enterprises; this will facilitate extensive transfer of knowledge and technology transfer at later stages. This will open job opportunities for young trained students (PhD, post-docs) in the industry and
- Periodic technical meetings will be also an opportunity of training, cross-fertilization.

Organization of a final workshop conference: periodic technical meetings will be also an opportunity of training, cross-fertilization. Organization of a final workshop conference: “**High Performance hybrid TWC/GPF Automotive after treatment systems by rational design**”.

### 3.2.9 Training Activities (M1\_M3)

Table 10 PARTIAL-PGMs training activities already carried out

N°	Type of training activity <sup>4</sup>	Names of partners involved	Character (brief description)	Date/Period	Place	Planned training activities	Countries addressed
1							
2							

<sup>4</sup> Training activity: PhD/ post doc fellowship, researcher mobility, seminal events, courses, seminars, etc.



N°	Type of training activity <sup>4</sup>	Names of partners involved	Character (brief description)	Date/Period	Place	Planned training activities	Countries addressed
3							
4							
5							

## 4 Section B: Exploitation Plan

### 4.1 Exploitation plan

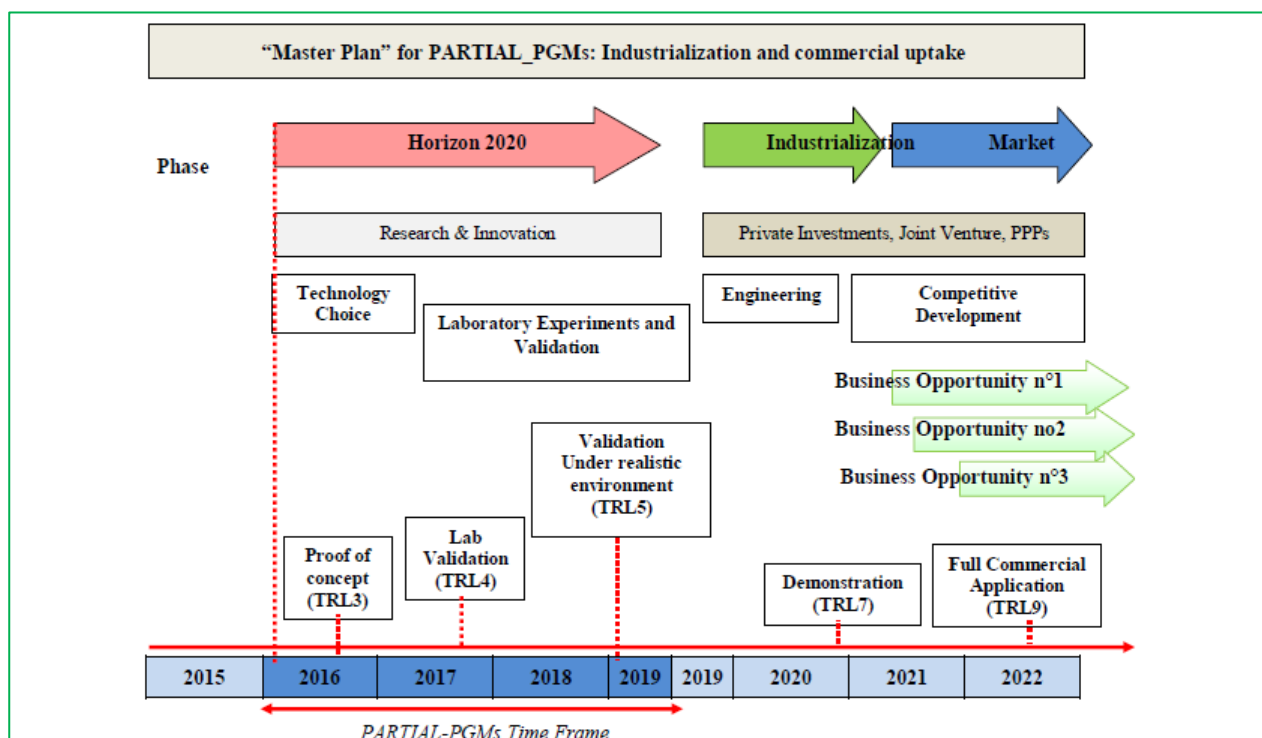
The Exploitation Plan (EP) will be designed in order to multiply the impact of the proposed solutions and prepare the transition towards industrial and commercial uptake in order to fully achieve the expected impact. The EP will describe the activities to be undertaken (how and by whom) in order to ensure the exploitation beyond the project itself.

The exploitation strategy will reflect and will be built-up as a result of sound analysis of the market trends (WP7), potential users, and financial sustainability.

All partners of PARTIAL-PGMs are interested in the results exploitation in different manners. Research partners are more oriented to transfer knowledge and technology to interested stakeholders while the industries are strongly focused on industrialization and future commercialization of the research products.

As a main result PARTIAL-PGMs is expected to output a “Master Plan” for the industrialization of the newly developed technology and a business plan for future commercial exploitation.

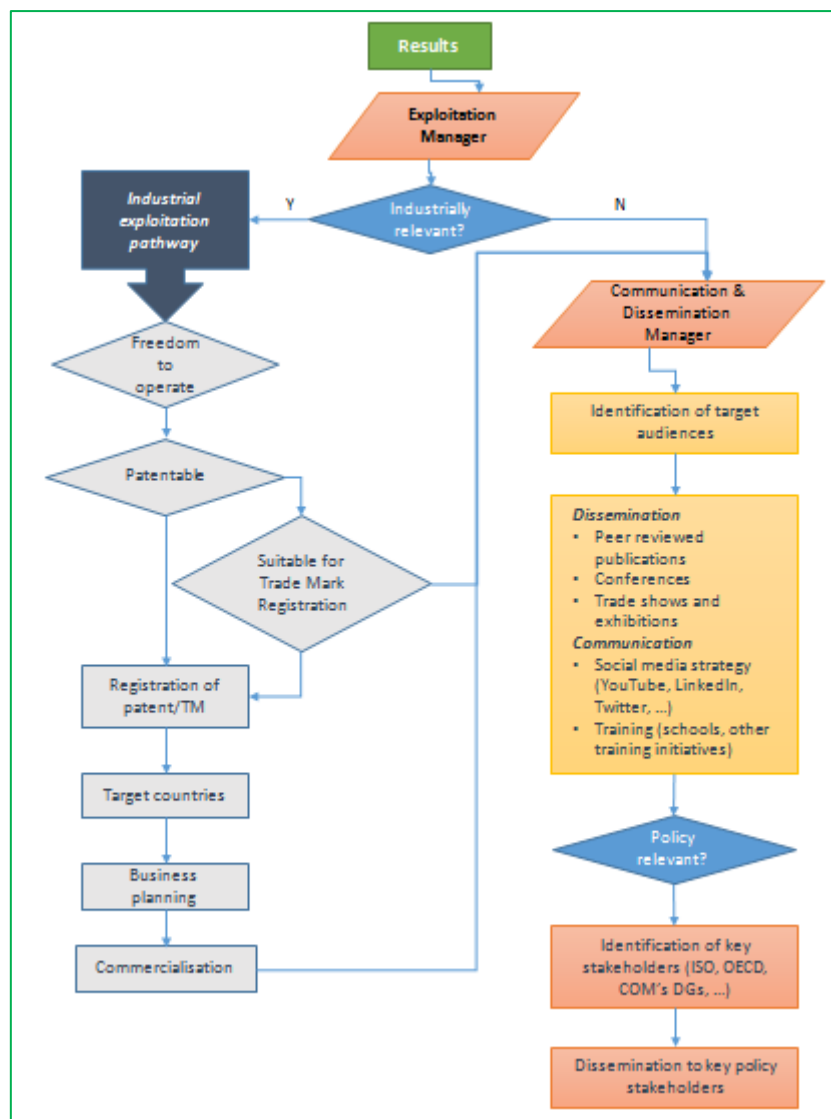
**Figure 5** Master plan of PARTIAL-PGMs technology development and industrial exploitation: i) Business Opportunity n°1 Porous Filters (SiC or other ceramic), ii) Business Opportunity n°2: Close coupled TWC + GPF system, iii) Business Opportunity n°3 Hybrid TWC/GPFs



This is the base for a draft business plan for future commercial exploitation. If the results will be successfully on-target, **JM has declared its interest in the industrialization of the PARTIAL-PGMs solution.** The company already holds relevant background IP and more foregrounds will be generated during the project in order to protect the know-how.

The exploitation approach will follow the following pathway.

Figure 6 PARTIAL-PGMs exploitation pathway



## 4.2 Exploitation Management

The **Exploitation Manager (EM)** as the responsible for the exploitation of the Project's results. The Exploitation Manager is a JM Representative (Kerry Simmance) and has been officially appointed during the Project kick-off meeting on the 11th - 12th April 2016 Bologna (Italy).

The Exploitation Manager shall:

- Coordinate and implement exploitation activities;
- Propose IPR and exploitation strategies and (eventual) associated updates to the CA;
- Prepare the master plan for the exploitation;
- Contribute to proper exploitation of the results by helping industrial Partners to prepare adequate business plans and/or to get, if required, auxiliary funds for further industrialization of products and processes;
- Monitor the use of resources for exploitation issues.

The **Exploitation Manager (EM)** will support the PC on exploitation related issues. The potential outcomes of PARTIAL-PGMs in terms of industrial application are very relevant and strategic for all the industrial partners involved in the Consortium, for this reason the EM should keep in mind the strategic viewpoint of the enterprises (both industries and SMEs) and, whenever required, present such vision to the SC. The EM has to be always updated on the S&T progresses of the project and of current IPR scenario in order to detect potentially exploitable results. An additional responsibility of the EM is to make sure that technological progress remains consistent with the industrial perspective and assist the PC to evaluate the impact of the project from an industrial point of view.

The contact details to be currently mentioned are:

Kerry Simmance, Exploitation Manager

[kerry.simmance@matthey.com](mailto:kerry.simmance@matthey.com)

Tel: +44 1189242283

#### 4.2.1 IPR Management

**The management of IPR is strictly ruled by the Consortium Agreement (CA)** which includes all provisions related to the management of IPR including ownership, protection and publication of knowledge, access rights to knowledge and pre-existing know-how as well as questions of confidentiality, liability and dispute settlement.

In the CA the Partners have identified the background knowledge included and excluded.

**The CA regulates the ownership of results (Section 8 of the CA).**

The knowledge acquired in the course of the project shall be considered as a property of the contractor generating it, and in this sense the originator is entitled to use and to license such right without any financial compensation to the other contributors. If the features of a joint invention are such that it is not possible to separate them, the contributors could agree that they may jointly apply to obtain and/or maintain the relevant rights and shall make effort to reach appropriate agreements in order to do so.

**The CA also regulates the transfer of results ownership (Section 8.2 of the CA).**

Each Signatory Party may transfer ownership of its own Foreground following the procedures of the Grant Agreement Article 30.

Each Signatory Party may identify specific third parties it intends to transfer the ownership of its Foreground to in Attachment to the CA. The other Signatory Parties hereby waive their right to prior notice and their right to object a transfer to listed third parties according to the Grant Agreement Article 30.1

The transferring Party shall, however, at the time of the transfer, inform the other Parties of such transfer and shall ensure that the rights of the other Parties will not be affected by such transfer.

Any addition after the signature of the CA requires a decision of the Coordination Board and the Steering Committee.

##### 4.2.1.1 IPR Background (**CONFIDENTIAL**)

#### 4.2.2 Exploitable results (**CONFIDENTIAL**)

#### 4.2.3 Characterisation of potentially exploitable results from PARTIAL-PGMs project (**CONFIDENTIAL**)

This section will be updated for each beneficiary during the second and final release of the PEDR .

Table 11 Characterisation of potentially exploitable results

<b><u>Exploitable Result/Product</u></b>					
Innovativeness introduced compared to already existing Products/Services					
Unique Selling Point (competitive advantages)					
Product/Service Market Size					
Market Trends/Public Acceptance					
Product/Service Positioning					
Legal or normative or ethical requirements (need for authorisations, compliance to standards, norms, etc.)					
Competitors					
Prospects/Customers					
Cost of Implementation (before Exploitation)					
Time to market					
Foreseen Product/Service Price					
Adequateness of Consortium Staff					
External Experts/Partners to be involved					
Status of IPR: Background (type and partner owner)					
Status of IPR: Foreground (type and partner owner)					
Status of IPR: Exploitation Forms (type and partner owner) e.g. direct industrial use, patenting, technology transfer, license agreement, publications, standards, etc.					
Which partner contributes to what (main contributions in terms of know how, patents, etc.)					
Partner/s involved expectations					
Sources of financing foreseen after the end of the project (venture capital, loans, other grants, etc.)					
<b>Related Projects</b>					
Acronym	Programme Acronym Subprogramme	Status (Execution / Completed) Timing	Total contribution	Why is linked to the exploitable results	Web Link

<u>Exploitable Result/Product</u>					
Related Patents (European Patent Office Esp@cenet as well as Thomson Innovation)					
Patent Publication number		Owner	Features		
Owner					

#### 4.2.4 Market analyses (**CONFIDENTIAL**)





## 5 References and usefull links

[1] European Research – A Guide to Successful Communication, Luxembourg (2004)

[http://ec.europa.eu/research/conferences/2004/cer2004/pdf/rtd\\_2004\\_guide\\_success\\_communication.pdf](http://ec.europa.eu/research/conferences/2004/cer2004/pdf/rtd_2004_guide_success_communication.pdf)

[2] Science in Society

<http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=1221>

[3] European commission, Communicating EU research (2008)

<http://ec.europa.eu/research/science-society/science-communication/pdf/communicating-eu-research.pdf>

[4] IPR Helpdesk:

<http://www.iprhelpdesk.eu/>

[5] CORDIS FP7 homepage

[http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html)

[6] Research Participant Portal – H2020 Documents:

[http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference\\_docs.html](http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html)

[7] PARTIAL-PGMs website:

[www.partial-pgms.eu](http://www.partial-pgms.eu)

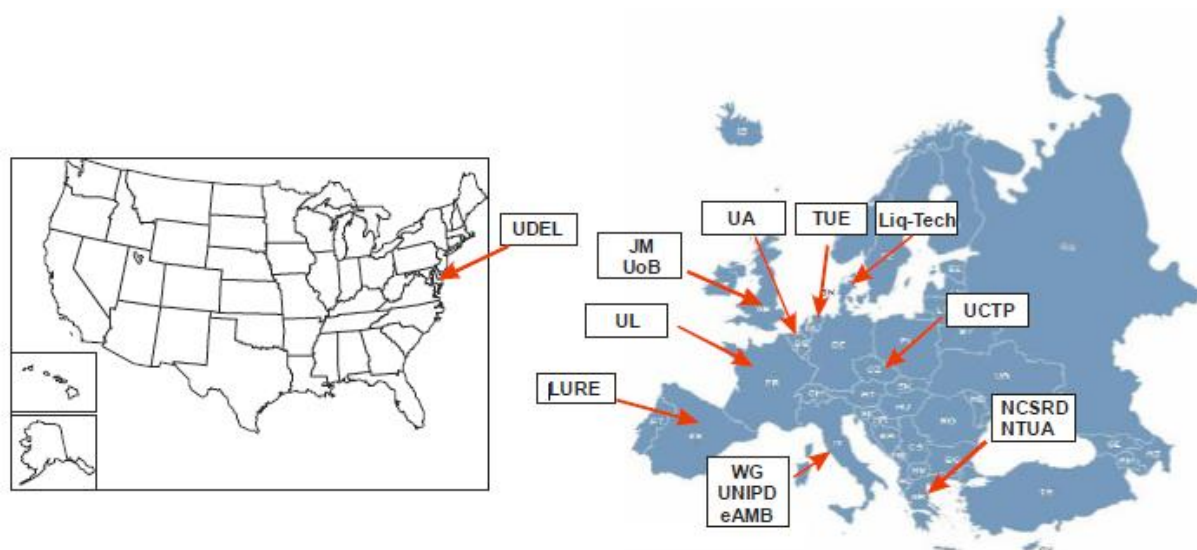
[8] PARTIAL-PGMs collaborative platform:

<https://emdesk.eu/cms/?p=145>



## 5.1 Appendix: Annex A: Consortium

Participant N°	Participant organization name	Short Name	Country
1 (Coordinator)	Warrant Group (SME)	WG	Italy
2	National Center For Scientific Research "Demokritos" (RTD)	NCSRD	Greece
3	Johnson Matthey (IND)	JM	UK
4	University of Lille (RTD)	UL	France
5	National Technical University of Athens (RTD)	NTUA	Greece
6	University of Padova (RTD)	UNIPD	Italy
7	University of Antwerp (RTD)	UA	Belgium
8	Eindhoven University of Technology (RTD)	TU/e	The Netherlands
9	LiqTech (SME)	LiqTec	Denmark
10	University of Birmingham (RTD)	UoB	UK
11	Centro Tecnológico L'Urederra (RTD)	LURE	Spain
12	University of Chemistry and Technology, Prague (RTD)	UCTP	Czech Republic
13	University of Delaware (RTD)	UoD	USA
14	eAmbiente (SME)	eAmbiente	ITALY



## 5.2 Appendix: Annex B: Dissemination contact points

Partner Identification and Basic Information	
Partner name	<i>Warrant Group S.r.l. (WG)</i>
Partner number	<i>1</i>
Full name ( <u>nominated responsible for dissemination activities</u> )	<i>Isella Vicini</i>
Email	<i>isella.vicini@warrantgroup.it</i>
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Partner Identification and Basic Information	
Partner name	<i>National Center For Scientific Research "Demokritos"</i>
Partner number	<i>2</i>
Full name ( <u>nominated responsible for dissemination activities</u> )	<i>Fotis Katsaros</i>
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Partner Identification and Basic Information	
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Partner Identification and Basic Information	
Partner name	<i>Johnson Matthey</i>
Partner number	<i>3</i>
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Partner Identification and Basic Information	
Partner name	<i>University of Lille (USTL)</i>
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Partner Identification and Basic Information	
Partner name	National Technical University of Athens (RTD)
Partner number	5
Full name ( <u>nominated responsible for dissemination activities</u> )	Nikos Papayannakos
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Phone	/

Partner Identification and Basic Information	
Partner name	University of Padova (RTD)
Partner number	6
Full name ( <u>nominated responsible for dissemination activities</u> )	Antonella Glisenti
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Phone	049 8275176

Partner Identification and Basic Information	
Partner name	University of Antwerp
Partner number	7
Full name ( <u>nominated responsible for dissemination activities</u> )	Pegje Cool
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Phone	0032 3 265 23 55

Partner Identification and Basic Information	
Partner name	Eindhoven University of Technology (TU/e)
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Partner Identification and Basic Information	
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Phone	<i>/</i>

Partner Identification and Basic Information	
Partner name	<i>University of Birmingham (UoB)</i>
Partner number	<i>10</i>
Full name ( <u>nominated responsible for dissemination activities</u> )	<i>Professor Athanasios Tsolakis</i>
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Phone	<i>+44 121 414 4170</i>

Partner Identification and Basic Information	
Partner name	<i>Centro Tecnológico L'Urederra</i>
Partner number	<i>11</i>
Full name ( <u>nominated responsible for dissemination activities</u> )	<i>Tamara Oroz</i>
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Phone	<i>/</i>

Partner Identification and Basic Information	
Partner name	<i>University of Chemistry and Technology, Prague (UCT)</i>
Partner number	<i>12</i>
Full name ( <u>nominated responsible for dissemination activities</u> )	<i>Petr Kočí</i>
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Partner Identification and Basic Information	
Partner name	<i>University of Delaware (UoD)</i>
Partner number	<i>13</i>

Full name ( <u>nominated responsible for dissemination activities</u> )	<i>Vlachos, Dionisios G</i>
Email	<a href="mailto:vlachos@udel.edu">vlachos@udel.edu</a>
Phone	/

Partner Identification and Basic Information	
Partner name	<i>eAmbiente S.r.l.</i>
Partner number	<i>14</i>
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Phone	<i>+39 0415093853</i>



### 5.3 Appendix: Annex C: Internal evaluation questionnaire

No.	Quality criteria	Evaluation score	Comments and suggestions
1	All relevant dissemination subjects are clearly outlined in the dissemination plan		
2	The dissemination activities address all the relevant target groups		
3	Dissemination policy of the project is well elaborated		
4	The individual target groups are addressed by means of proper communication channels and tools (e.g. addressing research community via papers at workshops and conferences etc.)		
5	The number of dissemination activities towards research community is sufficient (i.e. the number of papers in journals, workshop and conference proceedings etc.)		
6	The number of dissemination activities towards the industrial community is sufficient (i.e. number of presentations at industrial events)		
7	The number of dissemination activities towards the general public is sufficient (web activities, articles, papers, presentations)		
8	The consortium communicates and interacts with relevant standard organisations		
9	The web presence of the project (including language versions of the project web site) is of good quality, providing useful content to all the identified target groups (measured by the number of visitors and feedback provided by them)		
10	The press kit is complete and adequate for wide dissemination purposes		
11	Dissemination activities are carried out timely, in accordance with the schedule of principal project outcomes		

**Use the following scale for answering the evaluation questions:**

0 - Not applicable or don't know

1 - Strongly disagree

2 - Disagree

3 - Neutral

4 - Agree

5 - Strongly agree