

# Deliverable D6.1: Dissemination & Exploitation Strategy

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Lead Beneficiary Fraunhofer

Deliverable Type Report

Dissemination Level RE (Restricted to a group specified by the consortium)

Due Date 30.11.2015 (Month 6)

Pages 22

Version 3.0<sup>1</sup>

Project Acronym OPTEMUS

Project Title Optimised Energy Management and Use

Project ID 653288

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Horizon 2020 European Union funding for Research & Innovation

<sup>&</sup>lt;sup>1</sup> First digit: 0 for draft, 1 for quality board approval, 2 for coordinator approval, 3 Coordinator approved

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# **Version Log**

Rev#	Date	Author	Description
0.1	06.10.2015	Marcos Ierides (B&W)	1 <sup>st</sup> Draft
0.1	08.12.2015	Thilo Bein	2 <sup>nd</sup> Draft
0.1	15.12.2015	Alois Steiner	additional input
0.2	15.12.2015	Thilo Bein	3 <sup>rd</sup> Draft
1.0	18.12.2015	Alois Steiner	Inputs from Partners
2.0	22.12.2015	Alois Steiner	Inputs from Quality Board Members
3.0	23.12.2015	Alois Steiner	Coordinator approved

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## (1) Executive Summary

In this report, the dissemination and exploitation strategy for the OPTEMUS project is described, as an extended description of the dissemination plan described in the description of work.

The dissemination and exploitation measures described in the present document are aimed to achieve higher visibility of the project and its outcomes, to the most relevant target groups. Apart from the strategy, this document will serve as a project dissemination guideline for all project partners, who are expected to refer back to it whenever performing a dissemination action.

## (2) Introduction

Optimised energy management and use (OPTEMUS) represents an opportunity for overcoming one of the biggest barriers towards large scale adoption of electric and plug-in hybrid cars: range limitation due to limited storage capacity of electric batteries. The OPTEMUS project proposes to tackle this bottleneck by leveraging low energy consumption and energy harvesting through a holistic vehicle-occupant-centred approach, considering space, cost and complexity requirements. Specifically, OPTEMUS intends to develop a number of innovative core technologies (Integrated thermal management system comprising the compact refrigeration unit and the compact HVAC unit, battery housing and insulation as thermal and electric energy storage, thermal energy management control unit, regenerative shock absorbers) and complementary technologies (localised conditioning, comprising the smart seat with implemented TED and the smart cover panels, PV panels) combined with intelligent controls (eco-driving and eco-routing strategies, predictive cabin preconditioning strategy with min. energy consumption, electric management strategy).

During OPTEMUS a collection of results stemming from the integrated optimisation of efficient technologies will be prototyped, stimulated, and validated. In order to disseminate these results, a draft dissemination strategy is proposed that targets three core groups:

- OEMs and suppliers in order to promote inclusion of newly developed systems into future EV
- Personnel within OPTEMUS consortium organisations not directly involved in OPTEMUS to enhance knowledge sharing, awareness of design possibilities, and increase likelihood of technology adoption
- Automotive and scientific research community, and general public to stimulate future research by advancing SotA and changing the perception of consumers on the perceived performance limitations of EVs

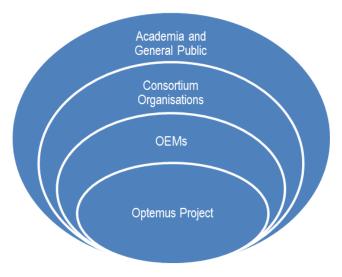


Figure 0: Structure of OPTEMUS' dissemination

## (3) Dissemination Rules

All OPTEMUS partners will follow dissemination rules as described in the General Conditions annex of the Grant Agreement, in the OPTEMUS consortium agreement.

Main rules to apply for any dissemination action:

- Any partner will provide a minimum 45 days notice prior to any dissemination action (including publications, presentations and posters at conferences, etc.). Such notification is to be sent to all project partners.
- The aim for this notification is to give the chance to partners to express any objections or comments regarding the publication of sensitive content or unsuitable messages regarding the project of the cluster of projects as a whole. Should no partners express any objections within this timeframe, the dissemination action is automatically considered as valid.
- According to EC rules, any dissemination activities and publications in the project, including the project website will (i) specify that the project has received community research funding and (ii) display the European emblem (Fig. 1). When displayed in association with a logo, the European emblem will be given appropriate prominence. All publications shall include the following statement (from GA art. II.30.4): "The research leading to these results has received funding from the European Community's Horizon 2020 Programme under grant agreement No. 653288 (OPTEMUS)."



Figure 1: Horizon 2020 logo with the European emblem

- All partners are strongly requested to use the material templates produced for the project dissemination, as described in this document.
- All partners should notify their project coordinator and/or dissemination responsible of all dissemination actions they perform and provide them with the final, published dissemination materials for archiving. All dissemination actions will be listed within this report and will be outlined in the periodic reports.

## (4) Target Groups

The objective of the OPTEMUS project is to communicate the results to a wide range of target groups. Due to the importance of this spread of knowledge, all OPTEMUS partners are involved in this work. To reach the goals of the various dissemination activities, the audience targeted has been defined as follows:

#### Industry

- Automotive OEMs (mainly R&D departments)
- Automotive suppliers

#### **SMEs**

- SMEs in the area of EVs, electric power management, battery technology
- SME's in the new member or associated states

#### R&D Community (RTO, Universities,...)

- Personnel within OPTEMUS consortium organisations not directly involved in OPTEMUS to enhance knowledge sharing, awareness of design possibilities, and increase likelihood of technology adoption
- R&D institutions or groups in the area of power management software, thermal management of battery systems, energy management of vehicles
- other related projects of FP7 / GCI and H 2020 / EGVI
- undergraduate / graduate students

#### **European and National Institutions**

- European Commission
- National Contact Points
- National agencies and ministries
- Policy makers in national and EU levels

#### **Associations and Representative Organisations**

#### **Press**

#### **General Public**

The major part of the targeted audience is the automotive industry. In order to effectively communicate with the automotive industry, a proper communication with the industry representative organisations such as EUCAR, CLEPA and EARPA has been established. Communication was and will be ensured by partners of OPTEMUS being also members of the representation organisations. These representative organisations are envisioned as information providers and can forward the projects infor-

mation to their members. In doing so, a large group of the target audience can be reached through one channel. Additionally, those organisations also coordinate other European projects creating a close link between related projects. Through the representative organisations information can be exchanged, cooperation be established and synergies across projects be realised.

Of course, OPTEMUS targeted audience includes the research community actually performing the road vehicle research, research on energy and thermal management on a wide scope. Researchers in the wider scope of OPTEMUS have a scientific interest in the results of the project. For them it is important to get access to the project results and outcomes. All partners of the consortium will participate in forums, workshops and conferences presenting results and discussing OPTEMUS objectives & results with other participants. These activities will also include the publication in relevant national and international magazines.

Beside the scientific community, the general public and policy makers should be considered in the dissemination activities. On the one hand, OPTEMUS's objectives also contribute to the implementation of several European policies on direct and indirect levels. Informing the general public of the latest results and technologies will help in implementing the projects results and will increase the awareness of lightweight related problems and the potential of the considered high technology. Informing the public is again closely linked to the training activities of the project.

## (5) Corporate Identity

#### **Project Logo**

The project logo represents the project identity and it must appear in all documents together with institutional logos. The overall aim was to create a unique, highly recognisable image of the project and to present OPTEMUS as a well-coordinated effort to project outsider. The design of the logos was guided by the following principles:

- Symbolic representation of the content of the different projects
- Symbolic representation of the cross-linking of the cluster projects
- Memorability
- Appealing design

It shows the shape of a typical A-class vehicle with the project name in it (Figure 2). The project logo is also described in deliverable D 6.2.



Figure 2: OPTEMUS project logo

#### **Report and Presentation Templates**

Common templates for written deliverables (MS Word, see format of this report) and OPTEMUS presentations (MS PowerPoint) are to be used throughout the project. The deliverable and presentation templates have been developed by ViF and are available through the "projectplace" website. All partners are requested to use this template when presenting OPTEMUS results within and outside the project.





# **Title of Presentation**

Author 1, Author 2, Author 3



#### Section 1



22 June 2015 OPTEMUS 3

Figure 3: Presentation template

## (6) Dissemination Materials

#### **Project Website**

The OPTEMUS website (<a href="www.optemus.eu">www.optemus.eu</a>) will be the project's main point of reference and communication tool to obtain detailed information on its objectives, partners, results, recommendations and project deliverables. The homepage is composed of a general description of the project and its objectives, participating partners and information on the research performed and results obtained as far as they are for public use. At a later stage links will be given to organisations, public bodies and projects connected to OPTEMUS. The project newsletter will also be available through the website, which will be updated on a continuous basis. With release of the 1<sup>st</sup> newsletter a subscribe function will be implemented on the OPTEMUS website.

A detailed description of the project's website is given in deliverable D 6.3.



Figure 4: Project's website - start page (current version)

#### **Project Intranet**

In order to ensure proper communication, planning and knowledge management, a projectplace (<a href="www.projectplace.com">www.projectplace.com</a>) account has been set up. The projectplace platform is used for the following:

- **planning:** a detailed plan of the project with deliverables and milestones is visualised, and updated continuously
- knowledge management: all relevant documents such as deliverables, presentations, DoW, information exchange memos, etc. are to be uploaded by partners in the relevant folders

 communication: partners can use the platform for posting questions or generally communicating to the whole consortium, or to a specific group of people. Additionally, the platform holds the project's biweekly teleconferences

#### **Project Leaflet**

A general, representative OPTEMUS leaflet has been developed addressing all relevant stakeholders such as: European policymakers, national and local authorities, business developers, industrial end-users or media representatives. The leaflet includes project initial motivation, objectives, approach, and expected impact (see also deliverable D 6.2). The partners are asked to use the leaflet to increase the awareness of the project. The leaflet will be available on the project intranet.



Figure 5: OPTEMUS leaflet

#### **General Project Presentation**

A general presentation of the project will be developed by ViF, and shared on the intranet. It will contain general project information such as project objectives, approach, expected impact, and it will be used as the basis for partner presentations of the OPTEMUS project at conferences, meetings, and other events. Partners are asked to further customise the presentation according to their audience. The general presentation will also be become available on project's website in a non-editable format (pdf) once a mature version is available.

## (7) Dissemination Measures

OPTEMUS has defined a consistent set of dissemination measures that are well coordinated between each other so that the impacts of the project are not only realized through the project consortium but also spill over to other European actors outside the consortium. Each of these measures has a clear line of activities for each identified target group, and has been made measurable by defining some quantified performance indicators. In the following, the different dissemination measures are described comprehensively.

#### **Newsletter and News on Website**

The news section of the website will be updated whenever relevant news about the project are available. The news story will be developed by the relevant partners, and uploaded on the website by ViF.

Apart from the website's news section, a newsletter will be published at the end of each project year, summarising the most important actions carried out, and most important milestones reached. The newsletter will include input from all partners, and will be compiled by ViF.

The newsletter will also be distributed through a mailing list generated in course of the first years based on existing contacts with the target groups.

#### Scientific and Trade Media Publications

Publications in the specialized and general press will increase the potential of the project to reach out target groups in Europe and beyond. OPTEMUS foresees the publication of 5-10 articles in renowned magazines and journals and presence in main industry-specific conferences and fairs. Additionally, OPTEMUS will ensure that it will be listed and described in the EC Research Synopsis and the relevant general publications made on the European Green Vehicle Initiative (EGVI). Furthermore the OPTEMUS project will be listed and described in the database of transport research & innovation portal. However, only information will be provided that does not negatively affect European competitiveness in this topic.

The universities and research centres in OPTEMUS will take the lead in drafting the scientific contributions to publications such as listed in Table 1. Table 1 is to be updated continuously throughout the project.

Table 1: List of possible publications

#	Name	Due Date
1	ATZ/MTZ magazines	2016
2	Finite Elements in Analysis and Design	2017

3	International Journal of Vehicle Design	2017
4	Automotive Engineering International (SAE publication)	2018
5	Automotive engineer	2018
6	Automotive Design (also SAE)	2018
7	Applied Thermal Engineering	2018
8	International Journal of Refrigeration	2018
9	IEEE Transactions on Industrial Electronics	2018

### Workshops, Exhibitions and Conferences

Next to the self-organized in-house workshops and seminars, the OPTEMUS partners will strive to have their activities and results presented at relevant external events and conference across Europe. In addition to promotion of project results at relevant association conferences, OPTEMUS foresees participation in the major industry and scientific conferences. Assuming an average 2 participations per partner, project activities and results will be presented in more than 40 events. The preliminary identified events are listed in Table 2, but as events are announced on a continuous basis, partners will be frequently asked to update the list accordingly.

Table 2: List of relevant exhibitions and conferences

#	Event	Location	Dates	Type <sup>2</sup>
1	<u>eCarTech</u>	Munich (DE)	20-22/10/15	TF
2	World Mobility Summit 2015	Munich (DE)	20-22/10/15	GC
3	EAEC-ESFA 2015	Bucharest (RO)	25-27/11/15	GC
4	EEVC 2015	Brussels (BE)	01-04/12/15	GC
5	Thermal Management Conference for EV/HEV	TBC (DE)	16-18/02/16	GC
6	VEHITS 2016	Rome (IT)	23-24/04/16	SC
7	Batterietagung 2016	Münster (DE)	26-27/04/16	GC
8	Electric Vehicles: Everything is Changing	Berlin (DE)	27-28/04/16	TF
9	EEHE 2016	Wiesloch (DE)	08-09/06/16	SC
10	<u>Urban Transport 2016</u>	Crete (GR)	21-23/06/16	GC
11	ECCE 2016	Karlsruhe (DE)	05-09/09/16	SC
12	Automotive Battery Management Systems	Berlin (DE)	19-21/09/16	GC

<sup>&</sup>lt;sup>2</sup> SC: Scientific Conference, GC: General Conference, TF: Trade Fair

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13	European Battery, Hybrid and Fuel Cell Electric Vehicle Congress	Geneva (Sui)	14-16/03/17	GC	
14	IEEE Industrial Electronics Conference (IECON 2016)	Florence (IT)	23-27/10/16	SC	

#### **Public Deliverables**

Beside the confidential results (restricted deliverables) a number of public deliverables are planned in the OPTEMUS consortium. Such deliverables will be made available through the project website, and physical meetings and other events.

Additionally, the consortium plans to publish executive summaries for deliverables that are confidential/restricted, but are of interest to the general public. The partners responsible for such confidential deliverables will be asked to provide an executive summary that will exclude any confidential information, and will be approved by all involved partners, in way that it can be publicly published.

The list of public deliverables is summarised in Table 3.

Table 3: List of public deliverables

#	Deliverable	Date
D1.4	VP-System – Demo, VP-3D immersive-Demo	31.08.2018
D1.5	VP-System – Design Exploration	28.02.2019
D 2.3	Assessment of the SotA and fundamental concepts for thermal passenger comfort	30.04.2016
D6.1	Dissemination and exploitation strategy	30.11.2015
D6.2	Project brand and project marketing basics	30.11.2015
D6.3	Project website	30.11.2015
D6.4	Newsletter 1/3 describing new developments and results from the project	30.09.2016
D6.5	Newsletter 2/3 describing new developments and results from the project	30.09.2017
D6.6	Newsletter 3/3 describing new developments and results from the project	30.09.2018
D6.7	Final report on dissemination activities	28.02.2019

#### Facilitating interaction and synergies within the OPTEMUS consortium

Another important part of the dissemination strategy of the OPTEMUS project is internal dissemination to members of OPTEMUS organisations not directly involved in the OPTEMUS project. Between all the partner organisations in OPTEMUS, the consortium accounts for more than 600,000 employees worldwide, including, 78 re-

search & development departments and approximately 800 new projects being started every year. If the new technologies and ideas arising from the OPTEMUS project are communicated effectively within the consortium members, it will increase dramatically the reach of those advances and the capacity of the consortium partners to spread them outside the consortium (see dissemination to OEMs and dissemination to the automotive research community and general public).

The dissemination strategies may be divided in two parts; direct and indirect. Direct actions represent dedicated dissemination activities targeting persons in the company that are identified as key persons to spread the results of OPTEMUS project. Each company will be responsible to provide a list of department, groups or persons of high relevance. In line with this, both internal and common workshops will take place to disseminate the content to these key people, for example through an annual organisation internal conference. The following table 4 the details the organization of these workshops will be described, since they are the basis of the internal communication. Indirect actions on the other hand, will take the form of sending internal email newsletters, or posting project advances on the organisations intranet and website.

Table 4: Type of workshops

Workshop Type	Description	Frequency
Informative work- shop	The aim of this workshop type is to let the attendants know about the news arising from the project. Discussions will take place about where this technologies can be implemented and how can they be further communicated	Harmonised with organisations' annual major internal conferences, approx. 1 per year.
Creative workshop	The aim of this workshop type is to allow brainstorming and discussions about new applications and business opportunities arising from the development of the OPTEMUS' new technologies.	Harmonised as part of organisations' quarterly strategic meetings at division level.

#### Clustering and liaising with other relevant RDI projects

OPTEMUS has joined the so called "GV2-cluster", where at the moment two other projects (XERIC and JOSPEL) are also part of. The first GV2-cluster-event already took place on the 24. November in Kaiserslautern. There, the two mentioned projects and OPTEMUS were presented and further discussion about future collaborations (joint dissemination actions etc...) were discussed. Among others it was agreed upon to organise joint dissemination activities, joint participations at industrial fairs as well as the organisation of training activities. However, joint activities still need to be detailed in follow-up workshops. As such, this section will be updated accordingly in course of the project.

## (8) Exploitation of Project Results and Management of IP

#### Management of Knowledge and Exploitation Plans

OPTEMUS will define a set of measures to manage knowledge acquired by partners within the project. A clear IPR allocation will be settled, and transparent leadership will be assigned to project partners that are best positioned to exploit the results. The approach is summarised in Table 5.

Table 5: Management of project related IPR

Result	IPR	Exploitation Approach
Knowledge in energy reduction solutions resulting from the holistic design approach (i.e. systems interactions from cabin, smart seat and driveability simulations)	Consortium owner- ship	Applied in future product development projects within the participating industrial partner, starting from 2020 on small production volumes and, after moving upon the learning curve, in mass volume compact vehicles from 2025 on.
Results of smart (heat and cooled) seat.	EPS-MU CRF	Use in training of students. Follow-up R&D-projects. Use in internal product development projects from 2020 on.
Vehicle simulation modules	Consortium owner- ship	Use in development projects within participating industrial partners, targeted at new models to be launched by 2020. Use in training by academia. Use in external consulting activities by the participating Research Institutes.
Thermal management systems design architecture and software	Consortium owner- ship	Applied in future product development projects within the participating industrial partner, starting from 2020 on small production volumes and, after moving upon the learning curve, in mass volume compact

		vehicles from 2025 on.
Eco-driving and eco-routing soft- ware and design architecture	IFPEN	Use in follow-up R&D- projects. Use in external consulting activities
New RSA design, 3D simulation, and prototype	SSSUP, Marelli.	Use in Marelli internal product development projects from 2020 on.
Preconditioning strategy, HMI software	DNDE	Use in internal product development projects from 2020 on.
TMECU	To be defined	Use in internal product development projects from 2020 on.
CRU design, simulation, and prototype	CRF, DNTS, DNDE	Use in internal product development projects from 2020 on.
Battery thermal mount, materials design simulation, prototype	IKA, LBF, Conti	Use in follow-up R&D- projects (external & inter- nal). Use in external con- sulting activities. Use in training of students.
Smart cover panels, materials properties simulations, and prototypes	IKA, LBF, CRF	Use in follow-up R&D- projects. Use in external consulting activities. Use in training of students. Use in internal product development projects from 2020 on.
PV block using MPPT technology & new solar energy incidence prediction algorithm	UNISA	Use in training of students. Follow-up R&D-projects

## Monitoring of Exploitable Results

The coordinator of OPTEMUS will have a continuous overview of exploitable results, and will be responsible for collecting all information required for periodic and final reporting. The reporting format of is presented in Table 6.

Table 6: Report format of exploitable results

Exploitable Knowledge	Exploitable Products	Timing for Commercial Use	Partners or Other IPR Protection	

#### Individual exploitations plans

All partners will carry out individual exploitation according to their contributions and shared results. A brief summary of each partner group's exploitation directions is presented below:

#### OEMs:

**CRF** will exploit the full conceptual results of OPTEMUS for future EV design with the aim to implement holistic energy management designs to the market by 2020 (see route to market section below). In bringing technology to the market CRF will exploit simulation models and software developed in OPTEMUS to rapidly validate and prototype design options and configurations in the process of delivery to market. The ability to use in house simulation tools will contribute to minimising development lead times and costs.

#### Tier 1 suppliers:

Conti, DENSO, and Marelli will exploit OPTEMUS results through their enhanced technology offerings across future EV, ICE, and CNG vehicles. Suppliers will strive to enhance technology market entry by delivering software developed and tested in the demonstration vehicle to OEMs. Results from demonstrated savings from components and integration will be exploited by lending credibility to Tier 1 supplier's service and part offerings. In close cooperation with OEMs exploitation of OPTEMUS project results will enable suppliers to deliver OEMs with parts and components that contribute to overall driving range enhancement.

**Conti:** Continental will exploit the advance in technology of the EV's battery and thermal controller developments. The practical and theoretical experience gained with respect to OPTEMUS technologies will contribute to Conti's market position as a leading supplier, and exploited through their ability to supply leading battery and thermal control technologies to OEMs in the market.

**DENSO:** The knowledge generated by the project will be used to approach customers (OEMs) for promoting DENSO as a Tier 1 supplier capable to provide support in all stages of vehicle development w.r.t compact and modular thermal systems. Specifically the company will use the know-how gained during the project to promote the firm as a leading supplier in the area of innovative thermal systems for EVs and PHEVs. Improved competence will increase competitiveness of the company to par-

ticipate in partnerships to supply OEMs with innovative cost, time, and maintenance reducing pre-fabricated thermal systems.

**Marelli** (Sistemi Sospensioni): Results and knowledge obtained during the project will be exploited in order to design RSAs suitable to be installed into compact passenger cars, and further suitable for mass production application to all vehicle segments. Having never before been offered by a Tier 1 supplier, the RSA technology will represent a significant exploitable result. The position of Marelli as a Tier 1 supplier, coupled with the RSA innovative development, positions Marelli in an ideal value proposition to deliver the RSA to OEMs in the market.

#### Industry partners

**ESI:** Industry partner ESI will exploit results by using the holistic design methodology and demonstrator as the basis for customised services, know-how transfer, and training to support the European Transport industry in efforts to develop the next generation of electric vehicles. ESI will further exploit the combined simulation environment (upgraded platform) by using it to support industry in addressing the electrification challenge – transferring lessons learned and design concepts across applications and thereby supporting competitive industry in Europe.

#### Research and Development Institutes (RDI's)

Vif, FhG, IFPEN, and SSSUP will primarily exploit results by the ability of enhanced service offerings in the field of automotive research and development. All have substantial track records and are well positioned to use OPTEMUS project results for future development across the market of manufacturers' and suppliers' components and design concepts, testing, and validation. This will enable RDIs to assist and support technology developers prepare for mass production of next generation technology for EVs.

**Vif:** Will exploit the simulation of CRU and thermal model to develop their know-how in this concrete field and promote themselves as experts in the topic. This will allow to publish research papers as well as to start collaboration projects with industry partners interested in taking profit from these new technologies.

**FhG:** OPTEMUS is fully in line with current strategic investments and R&D efforts regarding electro-mobility and battery technologies which are identified as a key market for the FhG-LBF in the coming years. Within this strategy – among others – battery housing and battery integration (addressed e.g. in the R&D projects SmartBatt and Fraunhofer System Research on Electromobility) as well as the electromechanical testing of battery systems are considered. For the latter a new facility for testing of battery systems has been opened in 2015. OPTEMUS will now expand the existing know-how towards the thermal management of battery systems and vehicles in general. Particular for the 2012 into the FhG-LBF integrated division on plastics OPTEMUS offers the possibility to transfer their know-how on novel plastics with expanded properties towards automotive applications regarding thermal management

of the entire vehicle, a market not considered so far by this division. Overall, OPTEMUS will expand the expertise of the FhG-LBF strengthening the competence in battery technologies and vehicle design towards thermal management. In combination with the new test centre for battery systems and the existing large research infrastructure (e.g. test facilities for power electronics, wheel accelerated lifetime testing and full vehicle test facilities) this will enable new engineering services on system level for the national and European industry or SMEs as well as laying the basis for new, innovative collaborative projects in the context of electromobility. Furthermore, the concept of function integration is also relevant for other markets beside automotive such as aeronautics and rail (FhG-LBF is partner in Clean Sky I & II, applying for associated partnership in Shift 2 Rail). As such, it is expected that the results of OPTEMUS directly impact the FhG-LBF turnover according to the Fraunhofer model (1/3 industrial contracts, 1/3 public funding) resulting in a significant return on invest made in OPTEMUS. Besides, the FhG-LBF has a good track record in scientific publications, hosting and training PhD students as well as in teaching activities at universities and within Marie Curie programs. The results of OPTEMUS will be exploited in this direction as well.

FhG-ENAS will exploit the results mainly in bilateral contracts with industrial partners by application oriented process development, prototyping, and low volume production, and by transfer activities like licensing and training. In particular, FhG-ENAS widely and intensively co-operates in research contracts with small and medium sized enterprises (SME) in Europe to bring in its latest scientific and engineering results on sensor systems, process and reliability methodologies into their development of new technologies and products at earliest point in time.

The lifetime models and tests created and verified within the OPTEMUS project will cover all major aspects of manufacturability, reliability, and safety for the proposed architecture of the innovative heat recuperation system design. Furthermore, new knowledge will gained in the field of optimizing heat recuperation systems by employing novel sensor concepts and control strategies. This knowledge will help FhGENAS to establish and expand its core competence in this new and highly innovative field of research, which will also be useful for subsequent developments. Furthermore, the project will strongly contribute to strengthen the competences of FhGENAS in the area of industrialization, i.e., to understand and to meet the actual needs of industrial partners in the field of electric mobility and smart systems integration even better. In that way and after the end of this project, the FhG-ENAS will have an enforced position to support the European industry.

Based on the results of OPTEMUS, FhG-ENAS will be able to contract new research work with industrial partners in a volume of 250 k€ per year in 2016 and 2017. In addition, FhG-ENAS will expand its activity in offering courses at Chemnitz University of Technology. A series of five lectures on reliability, safety, and quality control will be given to master students from 2015 on. Furthermore, students will directly be involved in the research work (internships and/or graduation works).

**IFPEN:** Predictive eco-drive technology and results will be exploited by upgrading the GECO application (www.geco-drive.fr), possibly with a different business model. Energy management strategies and results will complete IFPEN know how on the control of electric vehicles and will be exploited either through direct collaborations with automotive industry or via a commercial partner to be identified.

**SSSUP:** The results of the project will be exploited by SSSUP in two different ways. On one hand SSSUP will be able to assist technology developers in the mass production of regenerative shocks with the aim to propose their use in electric, hybrid and traditional vehicles. On the other hand SSSUP will participate in a number of international conferences and scientific events, once the technologies are patented, to disseminate the advancements in the field of energy harvesting. The established know-how will be also fostered with papers to be published on ISI journals for transferring and for using the innovative approaches for energy harvesting in other fields of application.

#### Academic Institutions

Academic partners EPS-MU and UNISA's existing research directions provide an ideal platform to exploit OPTEMUS results by facilitating the advanced future research of STOA technology applications in energy management and harvesting for EVs.

**EPS-MU:** EPS-MU will exploit development of the heated and cooled smart seat by publishing scientific papers about it and promoting their image as a pioneer institution in this particular topic and in general as pioneers in technology innovation.

**UNISA:** UNISA will exploit research on net incident solar irradiance on complex surfaces and high performances solar modules, with high performances built-in MPPT capabilities, by presenting the results in international conferences and publishing them on international journals. Moreover the projects results will be popularized on websites, newspapers and diffused via newsletters.

**IKA:** Will exploit the assessment of fundamental concepts and smart cover panels by publishing scientific papers and applying their knowledge in their portfolio of projects with industry-partners. They will also take advantage by promoting themselves as topic experts and innovation pioneers using OPTEMUS as an opportunity to showcase their new advanced materials test facility opening in 2015.

#### SME and Consultancies

**Bax & Willems** will exploit its results by offering consultancy services to its automotive clients regarding economics of certain technologies and production process choices both in terms of investment and production costs as well as in terms of cost benefit analysis and total costs of ownership.