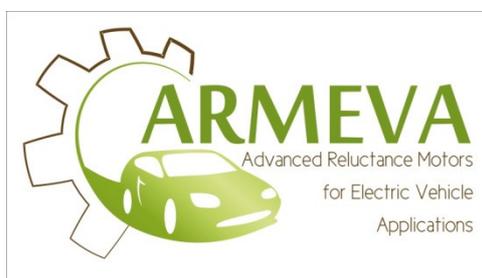


ARMEVA

Advanced Reluctance Motors for Electric Vehicle Applications

Project Number: 605195



Deliverable D6.1

Deliverable title: [Project Dissemination Plan](#)

Due date of deliverable	31/01/2014 (M3)
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Organisation name of lead beneficiary for this deliverable	UTC
Dissemination Level	PU
Start date of project	01 November 2013
Duration	30 months

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GLOSSARY

ARMEVA	Advanced Reluctance Motors for Electric Vehicle Applications
NVH	Noise, vibration, and harshness
OEM	Original Equipment Manufacturer
R&D	Research and development
SME	Small medium enterprise

1. INTRODUCTION

The dissemination of the research activities and results in ARMEVA will play an important role in overcoming the challenges of reluctance motors in order to become a viable rare earth-free alternative with huge potential for electric vehicles. The objective of ARMEVA is to develop new concepts of low cost/weight electric drives for new EV power train technology with the lowest life cycle impact, that will be also highly applicable for other segments of transportation modalities (light transport, busses, water transportation, railroad, etc.). In order to achieve this, the project will combine the know-how of strategic partners in motor design, power electronics, controls, acoustics and design optimization. The project consists of 7 institutions from 5 EU countries and includes 2 universities, one SME and 4 private large companies:

No	Name	Short name	Country
1	PUNCH POWERTRAIN NV	Punch Power	Belgium
2	LMS INTERNATIONAL NV	LMS	Belgium
3	TECHNISCHE UNIVERSITEIT EINDHOVEN	TU/e	Netherlands
4	PRODRIVE BV	Prodrive BV	Netherlands
5	TEKSHIFT GMBH	Tekshift	Germany
6	UNIVERSITATEA TEHNICA DIN CLUJ NAPOCA	UTC	Romania
7	LMS IMAGINE	IMAGINE	France

Table 1: Members of ARMEVA consortium

The timely and effective communication of project activities and results plays a crucial role in the success and overall impact of ARMEVA. Therefore, a well-developed dissemination strategy, identifying and addressing the needs of project communication, provides a clear and solid framework for the course of the project. Work package 6 is dedicated to dissemination and has the following objectives:

- Dissemination of the project achievements;
- Planning the exploitation activities regarding the use of the results that will be obtained as output of the R&D activity of the project;
- Promotion of the generic models developed in the project, through standardization activities.

This document presents the Dissemination Plan of ARMEVA project, including the strategy to be followed during the project in order to present to the public the results achieved by the consortium. The document includes also the dissemination activities the members of the consortium will participate. The plan will be updated periodically, in order to improve the visibility of the project.

The Dissemination strategy of ARMEVA will serve as main guiding document with the following aspects:

- Dissemination objectives and target audiences;
- Channels to address the audiences;
- Dissemination materials;
- Communication plan.

2. DISSEMINATION OBJECTIVES AND TARGET AUDIENCES

The dissemination objectives of ARMEVA take into consideration the communication goals of the project:

- to raise awareness of the new technologies to address the inevitable electrification of the passenger vehicle powertrain with important technological impact and socio-economic and environmental benefits;
- to influence specific standards or standard makers.

The target groups for dissemination of ARMEVA goals, achievements and results are divided into the following categories:

- Technology: Automotive industry OEMs, Tier-1 suppliers, technology suppliers/producers, other customers
- Science: Universities/Scientific institutions
- Standardization institutions
- General public: NGO, broader public, media

Each group will be target through appropriate dissemination means and activities, according to its specificity in terms of key message, level of operation (national, regional, European level), language to be addressed (English and/or native language), types of events to be used (conferences, workshops, seminars, etc.).

3. CHANNELS TO ADDRESS THE AUDIENCES

The key message for each identified target group will be transmitted using both general and specific dissemination channels. The dissemination materials, described in chapter 4, make use of the dissemination channels to reach the audiences.

Choosing the proper dissemination channel has a fundamental impact upon the success and outcomes of communication activities. The dissemination channels that will be used by ARMEVA include:

- The project website (section 3.1)
- Professional networks and organisations (section 3.2)
- Print media (section 3.3), such as various journals and newsletters
- Interpersonal channels using various types of events (section 3.4)
- Social media (section 3.5), including Research Gate and LinkedIn

Each dissemination channel has its strengths and weaknesses and it has to be used according to the communication goal and target group.

Using online media channels (project website and social media for example) a potentially large audience will be reached in a short amount of time. This gives the opportunity for ARMEVA's results to be distributed to a large number of stakeholders, especially the broader public and offers also an indication of the project's visibility and prominence.

Professional networks and print media are used for targeting technology users, scientists, experts, and practitioners working in the field of electrical machines and drives, automotive industry, Tier 1 suppliers. These channels are the most relevant to ensure the awareness of ARMEVA amongst technology suppliers and users, the scientific community, and standardization institutions.

The interpersonal channel (face-to-face meetings and events) addresses a smaller audience than the ones mentioned above, but has several advantages like direct involvement of stakeholders, promotion of exchange and dialogue and thus increasing the chances of the communication message's uptake.

The selected dissemination channels are described in more detail in the following sections.

3.1. Project Website (Task 6.2)

A first preliminary version of the ARMEVA project website containing all basic information was available in M4. However, the fully official website was prepared in parallel and launched at mid of M6. The official project website provides an overview on the project and up-to-date information on its activities and results, as well as contact details, partner information and information on events. The website can be viewed with a standard web

browser and will be kept alive throughout the project period and at least one year afterwards.

The ARMEVA project website (Figure 1) is available under the following link: <http://www.armeva-project.eu>. The project website serves as the most versatile information and communication tool, because on the one hand it provides the opportunity to provide information for a worldwide audience and on the other hand enables a working platform for the project team members.



Figure 1: Screen shot of the project website

Apart from the public website, there is a password-protected platform reserved for project participants in order to share project-internal data. Only registered partners are able to enter it and can benefit from the options offered there. These include a calendar for appointments and meetings, a forum for information exchange concerning special topics, a Wiki function to post and/or deal with articles, mailing lists for reaching special mailing groups as well as archives of the mailing lists.

The official websites of the consortium members will also contain information on the ARMEVA progress and results.

Website	Description of the main ARMEVA related information	Partners involved
www.armeva-project.eu	The official website of the ARMEVA project	All
www.punchpowertrain.com	The official website of Punch	Punch
www.lmsintl.com	The official website of LMS	LMS
www.prodrive-technologies.com	The official website of PRODRIVE	PRODRIVE
www.tekshift.de	The official website of Tekshift	Tekshift
www.lmsintl.com	The official website of Imagine	Imagine
www.tue.nl	The official website of TU/e	TU/e
www.utcluj.ro	The official website of UTCN	UTCN

Table 2: Websites of the consortium members

3.2. Professional networks and organisations

ARMEVA partners are members of or are in contact with members of professional networks and organisations (clusters, professional associations, networks of similar projects, etc.) that can be used to disseminate project results. Either at regional, national, or European level, these professional networks and organisations help to organize joint activities, create awareness of innovation and share information. Networks of professionals like AGORIA (www.agoria.be), IEEE (www.ieee.org), Flanders Drive (www.flandersdrive.be), AGIR (<http://www.agir.ro/>) bring together experts under the umbrella of different national or European actions on innovation and its transfer from research to market.

Apart from these networks and organisations, each partner is encouraged to make use of her/his professional contacts as well as those of the institution where she/he works for the dissemination of announcements, results, newsletters, etc. through direct emailing to contacts in the partners databases.

3.3. Print media

Printed media represents another important dissemination channel, complementing digital media by giving a more permanent record of the project’s messages. Therefore, each ARMEVA consortium member has to identify the journals and magazines that are read by the relevant target groups. A list of the national and international journals that are relevant for ARMEVA will be delivered by M12. ARMEVA will try to publish notes, news, and articles in these journals.

3.4. Events

The face-to-face communication plays an important role for dissemination; either through the organisations of events or visits or through the participation of the ARMEVA consortium members to workshops, conferences or seminars.

Several conferences are envisaged by the project team to be attended, with an active or passive participation. The participation in conferences and workshops is considered active if the ARMEVA project partner is in role of an organizer, speaker, presenter or moderator. Events of interest to the ARMEVA project partners include amongst others:

Event	Date	Location
The International Conference on Electrical Machines (ICEM)	September 2-5, 2014	Berlin, Germany
EcarTek	October 21-22, 2014	Munich, Germany
IEEE Vehicle Power and Propulsion Conference (VPPC)	October 27-30, 2014	Coimbra, Portugal
The annual European Electric Vehicle Congress (EEVC)	December 2-5, 2014	Brussels, Belgium
The annual CTI Symposium “Innovative Transmissions and Electric&Hybrid Drives”	May 18-21, 2015	Greater Detroit, Michigan, USA
SAE 2015 Hybrid&Electric Vehicles Technologies Symposium	February 12-13, 2015	San Diego, California, USA
SAE World Congress	April 21-23, 2015	Detroit, Michigan, USA
The International Electric Vehicle Symposium and Exhibition 2015	May 3-6, 2015	Goyang, Korea
Conference on the Computation of Electromagnetic Fields (COMPUMAG)	June 23-July 2, 2015	Montreal, Canada
International Conference on Power Electronics, Machines and drives (PEMD)	April 2016	United Kingdom
International Conference on Optimization of Electrical and Electronic Equipment (OPTIM)	t.b.c	t.b.c.
International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM);	t.b.c.	t.b.c.

Project Workshops

Two workshops (Task 6.4) will be organised to obtain input from the vehicle and motor stakeholders for the development of the ARMEVA concepts and present the final results to the community. ARMEVA will use organization of workshops to facilitate the collection of the users' requirements and to keep informed the potential users, concerning the progress and achievements of the project

Workshop	Location	Date
Interactive Workshop 1: - 'EV & PHEV Electric Machine Requirements & Challenges'	t.b.c.	End 2014
Interactive Workshop 2: - 'ARMEVA – Project Results & Proof of Concept'	t.b.c.	Beginning 2016

At the end of the project, the results will be presented at an ARMEVA event in Belgium to which all relevant stakeholders will be invited. Intermediary project results will be communicated to the stakeholders through the national platforms or stakeholder forums.

Outreach activities addressing the young people and the general public are also envisaged. The first group of outreach activities will address the young people, school and university students, for encouraging and motivating them to pursue careers in science in general and in the field of research and development in automotive engineering in particular. The second set of outreach activities will raise awareness of the general public about the new challenges that the European automotive industry and transport has to face in the coming years and how the R&D community is involved in addressing these challenges. The general public, as consumers, will be informed of the multiple options, advantages and practical aspects of these types of vehicles through popular presentations in the media and at public engagement events.

4. DISSEMINATION MATERIALS

As part of Task 6.3, ARMEVA dissemination strategy defines appropriate dissemination materials, including digital and print materials for each target group. All materials will be available for download on project website.

Specific activities to developing the basic marketing materials, awareness-raising presentations at different trade and specific events are envisaged. Therefore, the main activities of this phase are the following:

Setting up a common project design, such as the ARMEVA logo, templates for documents and presentations

- In order to improve the visibility of the ARMEVA project, a logo was designed. The logo is used on all internal templates as well as on all kinds of external dissemination tools.

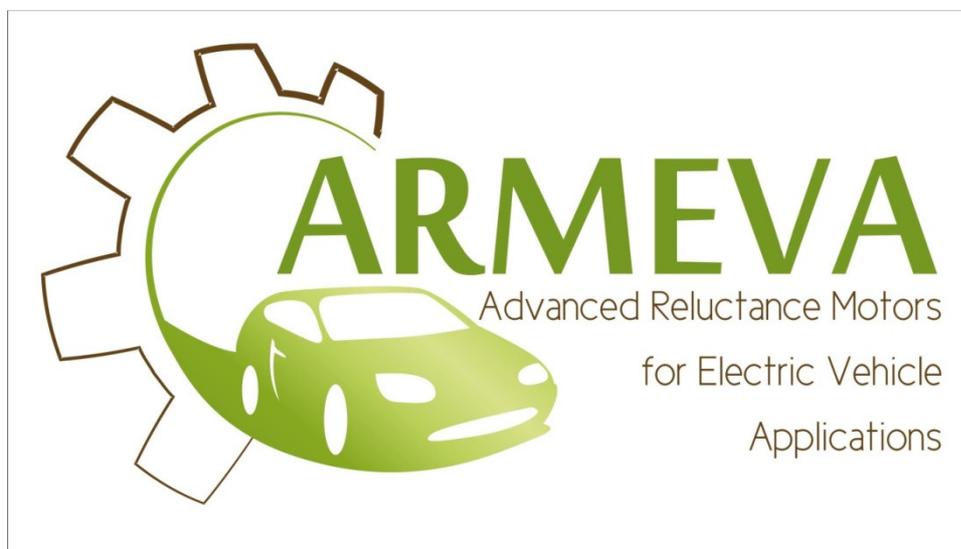


Figure 2: ARMEVA Logo

- The official ARMEVA folder will be prepared and it will be a four-page informative and graphically appealing A4 flyer, highlighting the objectives and the work programme of ARMEVA. It can be used for distribution at conferences or certain other events in order to provide further visibility to the project.
- ARMEVA posters (roll-ups) present the project, its partial and final results. The posters will be used to inform about the goals and the results of the project as well as about the current status. Different posters will be created for different target audience. Roll-ups could be used as alternative to posters. The printable versions of the posters will be accessible on the internal website. The posters should be placed in a visible place in the offices/buildings of each partner to disseminate the project activities and results towards other Departments of the institution and external visitors. Some copies of the posters could be distributed among potential beneficiaries and/or general public (schools, universities, etc.).

PowerPoint presentations (English, Dutch, German, French and Romanian):

- WHAT is ARMEVA doing?
- WHY are we doing it (motivation)
- WHO is doing what
- HOW are we doing it (methods)
- WHEN are we doing it

Designing the project information materials (such as a brochure, a leaflet and an introductory off-the-shelf presentation), which can be distributed later on. These materials will also be available in the project web page.

Presentations of the research-oriented theoretical results of the ARMEVA project at international conferences, seminars and workshops.

The project partners will be encouraged to publish project results under peer-review in high impact international scientific journals. The aim is to publish about 6 articles in A1 journals (available on Web of Science®). Relevant journals for the field that will be targeted include (in random order):

- IEEE Transaction on Energy Conversion;
- IEEE Transaction on Vehicular Technology;
- IET Electric Power Applications.

Project results are expected to be presented at about 10 to 15 selected conferences over the course of the project.

- The ARMEVA project will provide material for use in academia as part of university workshops, lectures, seminars, student's these and other material for higher education. The location, date and beneficiary of the material, as well as the partner who will provide it will be updated periodically.
- Publishing and dissemination of press releases following the finalisation of important project milestones. The press releases are intended to be circulated among representatives of the international press focusing on automotive manufacturing. There are several internal consortium guidelines for publishing project results. All partners who are preparing an item for publication (scientific paper, conference abstract, press release, etc.), will notify the Project Manager of these preparations and give the Project Manager insight in the final draft version at least two weeks before the intended publication of the item. Full details of this arrangement, which aims to safeguard the interests of the individual partners while disseminating as much information as possible, are described in the Consortium Agreement.
- Compilation of the manuals for the ARMEVA users as well as to the design and production of a tutorial concerning the approach and principles of the ARMEVA system (Production of training material Task 6.6).

5. STANDARDIZATION ACTIVITIES

As part of Task 6.7, the ARMEVA partners will suggest new standards related to the measurement of energy efficiency for reluctance motors. At the same time the partners will actively monitor for additional opportunities. The project works with the various standards and methodologies common in the development of electric drive systems e.g. functional

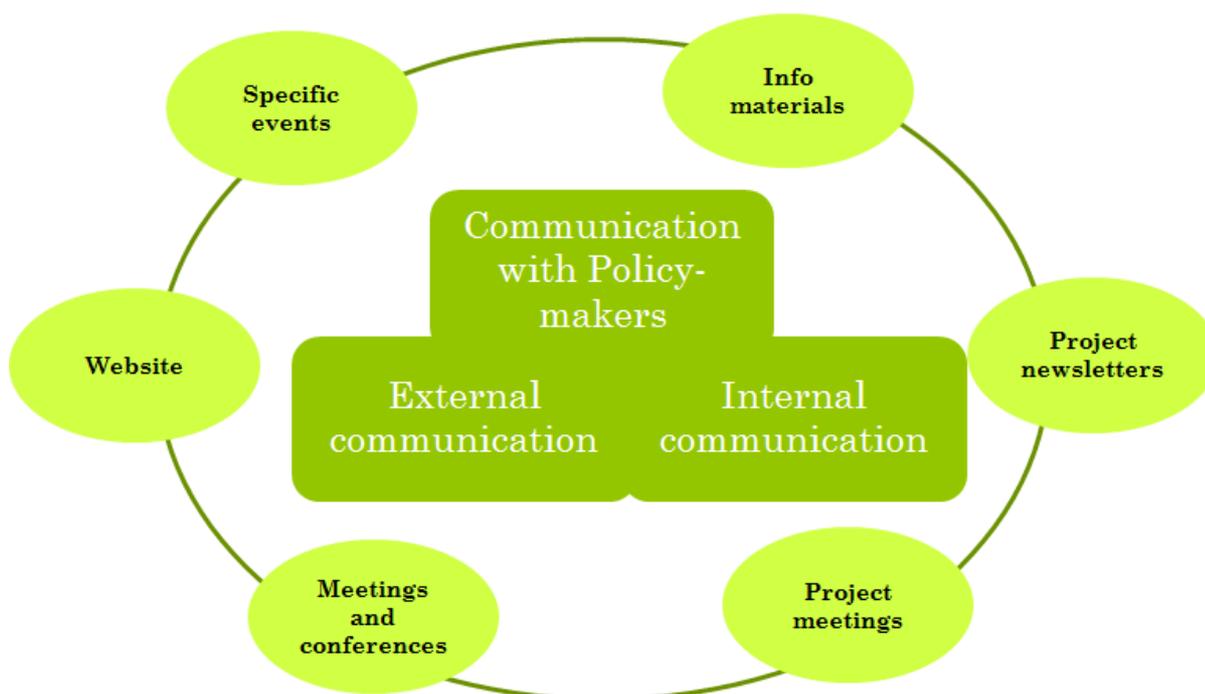
safety for automotive electronic and electrical safety-related systems (ISO – 26262). If possible, ARMEVA will contribute to standards in the area of measurement procedures for reluctance motors. Standards on measuring motor characteristics are available for other motor types (e.g. induction motors: IEEE 112, IEC 60034-2 and JEC-37), but no such standard exists specifically for reluctance motors.

6. COMMUNICATION PLAN

Communication between the members of the consortium (internal communication) and between the project and other actors and stakeholders is an important part of the dissemination strategy. Thus, the communication plan focuses on the following main directions:

- Internal (between the members of the consortium)
- External (between the consortium and academia, industry actors or other projects, as well as general dissemination through conferences, journals, etc.)
- Policy focussed (as input oriented to law and policy actors and stakeholders):
 - With stakeholders
 - With the general public
 - With policy-makers.

The integrated dissemination and communication plan map is presented below. The main communication channels are fitted to the scope and audience, using the dissemination means presented in the paragraphs above.



The communication activities aim to achieve the following objectives:

- To facilitate the communication between the members of the consortium;
- To communicate the new knowledge, methodologies and technology developed in the project;
- To create and facilitate the two-way dialogue with the general public, stakeholders and policy makers;
- To facilitate the interaction and dialogue with the scientific community, European Commission, regional and local communities;
- To disseminate the results and outcomes of the project.

Different communication methods will be used by the members of the consortium:

- Communication with other scientists and industrial actors through the participation to scientific conferences and workshops and publications in scientific journals. The new scientific knowledge, methodologies and technology emerging from ARMEVA project will be communicated.
- Communication with other projects dealing with similar issues, via personal communication, personal exchange of information and through links on websites;
- Communication with the general public via newsletters in local languages, information flyers/folders tailored to the need of the public to be addressed, workshops, open days, etc.

7. CONCLUSION

The ARMEVA dissemination plan defines and describes the strategy, tools and materials that are being used in ARMEVA communication and dissemination. It also includes the guidelines on how to disseminate the results of the projects and the knowledge gathered during the process. The ARMEVA dissemination plan is a living document, which will be periodically updated throughout the project implementation.