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Dissemination Plan - Update M19

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Tekes



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Electronic Components and Systems for European Leadership



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Summary

The RobustSENSE project is a research project co-funded by the European Union (EU). For the success of the project it is essential to inform stakeholders about the project's progress and results.

The deliverable D6.2 Dissemination plan is the work plan for the dissemination of the project. It contains detailed descriptions of the strategy and the means by which RobustSENSE communicates. The overall goal is to provide a basis for the consistent communication of the project's innovative character, its objectives and future results.

For the project partners this document summarises the planning of communication activities. It serves as a reference point for all information related to the communication and dissemination activities of RobustSENSE. The document describes procedures and templates to be used by all partners and explains roles and responsibilities.

This update of the Deliverable (v2.0) contains detailed plans for disseminating project results during the second half of the RobustSENSE project. It also defines the activities related to the exploitation of project results.

1 Introduction

RobustSENSE intends to be seen as an innovative European research project that sets the ground for automated driving in all environmental conditions. In order to achieve that, 15 European partners from 5 different countries work together and combine their expert knowledge and strong experience in all aspects of sensor technology and automated driving. The importance of the RobustSENSE project has to be communicated in a structured and coherent way. Therefore, this dissemination plan provides guidelines and instruments with regard to dissemination, its purpose and achievements. Dissemination activities will be performed by all partners who will distribute the project results.

The RobustSENSE dissemination plan addresses the following audience:

- RobustSENSE partners: DAI, AVL, AVLDE, BOSCH, CRF, CTAG, FICOSA, FOKUS, FZI, MODU, OPL, SICK, UULM, VTT
- General Assembly (GA): participation in dissemination activities and harmonisation of individual communication activities with the project's dissemination strategy.
- Work package leaders (WPLs) and the project management team (PMT): the dissemination plan guides through the communication standards and planned activities to mobilise the partners within their WP for dissemination activities.
- European Commission and independent technical reviewers: concept of the planned dissemination activities and reporting of activities.

Executed activities are reflected in the progress reports and documented in the document repository for WP6 on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/0/1138939278>

This version of the Dissemination Plan is an update, scheduled for M19. It takes into account new emerging dissemination opportunities and defines the activities related to the exploitation of results. As the dissemination plan is a public deliverable it is also available on the project website www.robustsense.eu.

2 Strategy

2.1 Main Focus and objectives of RobustSENSE

Today's driver assistance systems stop working under adverse weather conditions due to reduced sensor information quality. RobustSENSE wants to change that. Targeting the area of highly automated driving, the improvement of perception, decision and planning under conditions like sun-flare, rain and snow is one of the main challenges to be addressed.

The goal of RobustSENSE is to develop a new sensor platform for automated driving. This platform will make sensing systems able to operate in all conditions by combining several independent subsystems to an integrated and comprehensive solution. The project aims at enhancing the robustness of all sensing methods and algorithms required for advanced driver assistance systems and automated driving. Consequently, RobustSENSE will contribute to enhanced road safety with a more *robust* sensor platform. This means:

- **reliable** even in harsh environmental conditions (like sun-flare, rain and snow)
- **secure** by self-diagnosis and adaptation
- **trustable** on every level of assistance and automation systems.

With its concepts, RobustSENSE pursues a new methodological approach: the project will enable continuous system performance monitoring of all components. The key success factor for the project is to move from independent subsystems to an integrated approach: sensor performance will significantly increase by combining information from various sources.

2.2 Framework

The following areas of research, projects and actors describe the framework in which the RobustSENSE project is embedded. This will lead to a conclusion how RobustSENSE will stand out in this environment from a communication perspective which forms the basis for the RobustSENSE dissemination objectives.

- Automated driving

Automated driving has gained much attention recently through the successful demonstration of the autonomous Bertha Benz Drive or the Google prototypes lately. Automated driving has nevertheless been in the focus of science for quite a while. This is documented by the various activities in the PROMETHEUS programme and previous or running EU funded projects like CyberCars, CyberCars2 and the more recent V-CHARGE, eValet, HAVEit, interactive or Adaptive.

In late 2013, Daimler successfully completed an autonomous drive of 100 km from Mannheim to Pforzheim in Germany through cities, urban environment and country side. This project on the historic Bertha Benz Memorial Route was built on close-to-market sensors. However, automatic manoeuvres in complex scenarios are still highly challenging if the vehicle sensing system is not 100% reliable. RobustSENSE is not aiming at improving the performance of specific sensors. It develops a platform that enables these sensors to work better.

Another important reference point for automated driving is the Adaptive project. Its focus lies on enhancing automated driving functions. The project aims at presenting demonstrators to improve acceptance for automated driving and discuss the legal and regulatory prerequisites. Adaptive as a project will tackle every aspect of automated driving. Due to the broad approach, the results will clearly be interesting for RobustSENSE. Nevertheless, RobustSENSE has a more specific focus: it aims at increasing reliability of sensors for automated driving. It addresses the problem that these sensors currently stop working under harsh environment conditions like rain and snow.

- Environment perception

Different types of sensors are under discussion to enable a complete surveillance of the vehicle environment. This is ranging from laser sensors, over optical systems like mono-cameras as well as stereo cameras, radar and lidar systems to infrared or thermal sensors. Projects aiming at enhanced environment perception are for example RoCC, SAVE-U, MMEA, MOSARIM or PREVENT. However, available sensors that build on the dynamic surveillance of the vehicle environment provide neither the degree of reliability and robustness, nor the overall availability of the perceptual output that is required for safety-critical applications and automatic driving. This is addressed by RobustSENSE. The project's objective is to combine and adapt present sensor systems to a multisensory platform. Consequently, RobustSENSE aims at optimising and using the best of available new sensors and lasers. Key to success for this goal is to develop a data fusion concept which allows assessing and monitoring sensor performance even in less than ideal environment conditions.

- Vehicle-to-X (V2X) communication

First V2X projects focused on the implementation of different communications methods for vehicle-to-vehicle and vehicle-to-infrastructure communication. The focus then moved to functions, especially safety functions that could be implemented with the new technology as well as on the standardisation of system components and protocols. Projects were conducted nationally e.g. SCORE@F (France) or simTD (Germany) conducting large field test, and on European level e.g. Coopers, PRE-DRIVE C2X or DRIVE C2X. Especially DRIVE C2X needs to be mentioned here as a reference. The results of the project, particularly from environment perception and understanding of the travel environment ahead, will directly influence RobustSENSE. Moreover, the hints on driver behaviour, reaction on anomalies and hazards

ahead are key information. DRIVE C2X also delivered a communication platform which can be integrated in the RobustSENSE system. However, RobustSENSE shifts the focus of use of the technology. The goal is to introduce the communication of all relevant data up to sensor data between vehicles. This underlines the integrated approach of RobustSENSE.

There are many successful developments and projects in the above mentioned areas at present. However, there still is an important technology gap: the support of drivers or automated driving in all environmental conditions including for example sun-flare, rain and snow. To date, the feasibility and capabilities of automated driving was focus of work. Another important step on the route to automated driving is to make the systems robust enough and to improve sensor performance. Certainly, better detection is desirable but the problem how to deal with harsh conditions cannot be solved that way - it has to be tackled in a whole system approach. This makes RobustSENSE standing out in the current research environment: it sets the ground for automated driving in all environmental conditions.

2.3 Dissemination objectives

The following objectives govern all RobustSENSE communication activities. Derived from the framework above, they lead the dissemination strategy as well as strategy implementation:

- Promote a new sensor platform for automated driving

For this objective, it is important to emphasise the new and innovative aspects of RobustSENSE. The functional range of today's driver assistance functions is limited to ideal weather, light and other environmental conditions because of limitations of sensor components. The new approach of RobustSENSE is to overcome these limitations with an integrated sensor platform. Hence, RobustSENSE goes for a different approach using innovative algorithms for sensor performance monitoring and sensor data fusion to extend the functional range of assistance systems for road vehicles.

RobustSENSE is the first project employing this kind of intelligence to enhance the sensing performance of existing sensors. This will be accompanied by equally novel approaches for scene understanding, situation prediction and behaviour planning.

New sensor concepts are existing which aim primarily at the aerospace sector such as flash lidar technology. These are not yet suitable for use in road vehicles because of size and costs and have inherent limitations as well. Therefore, even on the longer run, these new technologies will not solve the inherent performance problems of modern driver assistance systems.

- Communicate more reliable sensing performance compared to present systems

In this context, focus is on communicating reliability and safety of the technology which is developed in the project. The advancement of automated driving and advanced driver assistance systems (ADAS) is closely linked to the capability of environmental perception. The systems on the market today are already capable of various ADAS functions under good environmental conditions. However, in adverse weather and lightning conditions the picture changes dramatically. In situations with increased risk of accident as under harsh weather or bad lighting conditions, where ADAS systems can be particularly beneficial, human control is still needed.

To reach this goal, strong reliability is needed. The objective is to communicate how this will be provided by RobustSENSE. The project will introduce reliability measuring and self-monitoring across all levels of signal and information processing which has to be explained to the different target groups. The word “robustness” can serve here as a general communication term but it has to be completed by attributes like reliability as well as security and trust.

- Influence the technical advancements in the field of sensor technology

It is essential to explain the technical results to experts and the scientific community. This dissemination objective relates to the two key issues the project focuses on:

- Introduce adaptability to current weather and light conditions on every system level

The goal is here to communicate how RobustSENSE maintains full or at least adequate system functioning under conditions, where the state-of-the-art systems and components fail because of limited sensing performance. Today’s systems deny functionality when the underlying sensor sub-system shuts down. RobustSENSE overcomes this problem by introducing self-monitoring across all levels of systems. Every dataset communicated throughout the system will be paired with reliability measures to make computation across the system robust. Consequently, data from lower levels can be weighted and approaches appropriate for the current situation and performance level can be chosen. Again, this adaptation process is done on every level of the RobustSENSE system.

- Show the integrated system approach with added redundancy on sensor and processing level

Within this goal, it is important to communicate how RobustSENSE will improve the process inside sensing systems. If one sensor fails or degrades - which must be detected by adequate measures - the other one can compensate this loss to a given extent. In that case, the overall system performance will be reduced, and it must be ensured that the remaining performance is sufficient to reach a safe driving state under any condition. Similar examples can be given

for other combinations of sensor functionalities. Based on individual performance measures, RobustSENSE will develop redundancy concepts for a wide range of sensor setups, used for automated driving.

- Showcase robust sensors in real driving scenarios

The RobustSENSE platform will be realised in a prototype. Furthermore, it will be integrated in a number of demonstration vehicles providing automated driving functions. This is particularly important for dissemination as it provides feasibility to the project developments and results. News can be generated from the test tracks and especially the final demonstration allows to implement a variety of dissemination channels (which will be further detailed in chapter 3 - implementation).

- Exploit the results of RobustSENSE

In order to create a high impact of the project, D6.5 Exploitation plan will be delivered that reports the RobustSENSE project outputs as well as the future potential of these outputs. It contains input from all partners and will also be nurtured by the results of the exploitation workshop which is further described in chapter 3.6.1. The exploitation activities are also related to standardisation: RobustSENSE aims at influencing standards, taking the project developments into account.

2.4 Target Groups

RobustSENSE will address various target groups to exploit its activities and results:

- Industry

The results of RobustSENSE will be of most importance to the industry. RobustSENSE will present a new system design introducing self-monitoring and raw data access. The targeted companies include large industry to SME of the whole supply chain: OEMs, suppliers, component and device manufacturers. RobustSENSE carefully chose their partners along the complete supply chain reaching in all relevant industry.

- Industry associations

To promote the results and benefits of RobustSENSE, Industry associations act as a multiplier reaching a vast relevant target group. RobustSENSE will target especially Component Manufacturer Associations (EuroNCAP, etc.), Automotive Industry associations (EUCAR, ACEA, etc.). This target group can effectively be reached by the industry partners participating in RobustSENSE being part of the different associations.

- Standardisation bodies

The results of RobustSENSE will have impact on standardisation bodies and associations working on standard implementations of vehicle platforms. Candidates are ISO, ETSI, AUTOSAR etc. This target group can be reached through partners of the consortium involved in standardisation activities from industry and academia.

- Scientific community

The advancement of RobustSENSE will be of great interest to the scientific community thus the project will target research and academic organisations, scientific journals, working groups in fields related to the work, conferences and expert. This target group can be effectively reached by the Consortium's technical experts from leading academic organisations.

- Authorities

Same as in other cases of development of new innovative technologies, policy makers (e.g. European Commission and Parliament, National Government, Politicians) and public authorities (e.g. POLIS, which is the European Cities and Regions Networking for Innovative Transport Solutions or the Smart Cities and Communities initiative www.eu-smartcities.eu) should be informed about the project.

- General public

Environment perception of cars and the success factors of automated driving are concerning the general public as it relates to traffic safety and the future of driving. Consequently, RobustSENSE will also address the public audience interested in these topics. However, the project has a strong technical focus and resources to reach out to a very large audience are limited. It is planned to use especially the website and social media to inform the general public.

2.5 Key messages

Reliability, safety and trust are important attributes of the project which further define the framework for key messages to be communicated.

The messages are split into two categories: those arguments to describe the project in general as well as key messages per target group.

2.5.1 General project messages

- RobustSENSE advances the performance of sensors for vehicle environment perception.

This message stresses the fact that RobustSENSE advances the state-of the-art of sensor technology and introduces the main areas of RobustSENSE: improved sensor performance and environment perception of vehicles.

- RobustSENSE makes sensing systems more reliable to operate in all environmental conditions.

This message is more specific and emphasises on the reliability of sensing performance compared to present systems which may stop working under challenging or bad weather conditions. However, above message stays positive and does not use any negative associations like challenging, bad, harsh or adverse weather conditions. It also shows the ambition and confidence of the project to develop technology which represents a comprehensive solution that works in all types of conditions.

- RobustSENSE develops a new sensor platform that provides information “robust” enough for automated driving. “Robust” means more reliable, secure and trustable.

This message introduces the main achievement of the project: a new sensor platform for automated driving. As the term “robust” is introduced, it is important to explain it by using above attributes.

2.5.2 Key messages per target group

The following table illustrates arguments to be used for communication with the target groups.

Table 2.1: Key messages per target group

Target group	Messages
Industry & Industry associations	RobustSENSE takes environment perception to the next level by improving performance and reliability of current systems. RobustSENSE develops better sensing systems which set the ground for automated driving in all conditions .
Scientific community	RobustSENSE maintains functionality under conditions, where the current systems and components fail because of limited sensing performance. RobustSENSE enables adaptability to environment conditions by introducing self-monitoring on every system level . RobustSENSE will develop redundancy concepts for a wide range of sensor setups, used for automated driving.

Target group	Messages
Standardisation bodies	RobustSENSE will contribute to new standards for a sensor platform by combining several independent subsystems to an integrated and comprehensive solution.
Authorities	RobustSENSE will enhance road safety by making sensor technology for vehicles more reliable. It also sets the ground for safer and more secure automated driving.
General/ Interested public	Sensors that perceive the environment around a vehicle are the next step to assure safe driving conditions. RobustSENSE is a large European research project that improves the technology for these sensors.

2.6 Main channels of dissemination

In conclusion of the RobustSENSE objectives, target groups and messages **three main channels** need to be outlined for RobustSENSE dissemination.

2.6.1 Online channels

Embedded into the project identity, the RobustSENSE website is the key medium and first address that will be used by stakeholders, target groups and other interested audience to be informed continuously. The website will be the central and most vivid information platform of the project; the consequent aim is intelligent link building. Project news will mainly be announced and distributed via this website.

In addition, the social media channels Twitter and LinkedIn are used to enhance project visibility and credibility. Social media can reach all target groups and it is an effective way to quickly spread project information. More details will be provided in chapter 3.2.

2.6.2 Technical dissemination

Conferences are ideal platforms for presenting the RobustSENSE project, especially with regard to dissemination of interim results. Events like the ITS Congresses are crucial to the success of the project as they are platforms to inform about the project's technical aspects. The scientific community, policy makers and other relevant target groups of the RobustSENSE project attend those conferences on transport, EU projects and technology. There, it is important to present details and results about RobustSENSE based on presentations, brochures, posters, factsheets etc. The partners are encouraged to attend relevant conferences and inform the stakeholders about the project and its progress. Chapter 3.3 will further define which conferences are considered relevant for RobustSENSE. This list is to be updated constantly and it is available on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r1286468069>

All partners are encouraged to add there additional conferences and events.

In addition, the technical dissemination relies on articles in scientific publications. Therein, technical aspects could be explained in detail and their outcomes for different stakeholders can be emphasised. All partners are emboldened to participate in publications.

The internal processes of the dissemination request before presenting RobustSENSE content need to be considered. Also, it is mandatory to complete the activity report and upload the presented material. More detail is provided in chapter 4 Organisation.

2.6.3 Events

The impact of RobustSENSE will be specifically nurtured by two main events during the project: an exploitation workshop and the final demonstration. Both activities are related to the exploitation activities which are further described in chapter 3.6.

The RobustSENSE exploitation workshop is planned to discuss industry needs and sensor technology trends. It is used to disseminate the technical progress, interim results as well as to map out research development and commercial potential of new solutions. Beside partners, selected external experts will be invited to provide business-, field- and market-related knowledge as well as technological expertise from other sectors.

At the final demonstration, the demonstrators built in WP5 are presented and the business potential of improved ADAS is to be discussed. The overall design of the final event includes a storyboard for demonstrations and promotion activities prepared. The complete final event will be planned, organised and realised together with the consortium ensuring a wide visibility of the project's results.

More details on the RobustSENSE events are provided in chapter 3.6.

3 Realisation/ Implementation

3.1 Project Identity

Both the project logo and the project name are crucial for the project's identity and thus for the value of brand recognition. The logo can be seen as a visual benchmark that is closely related to RobustSENSE's most important components and objectives.

The project logo visualises RobustSENSE's vision of a robust and reliable sensor platform. It combines a shield, symbolising robustness, with sensor waves, symbolising the sensing aspect.

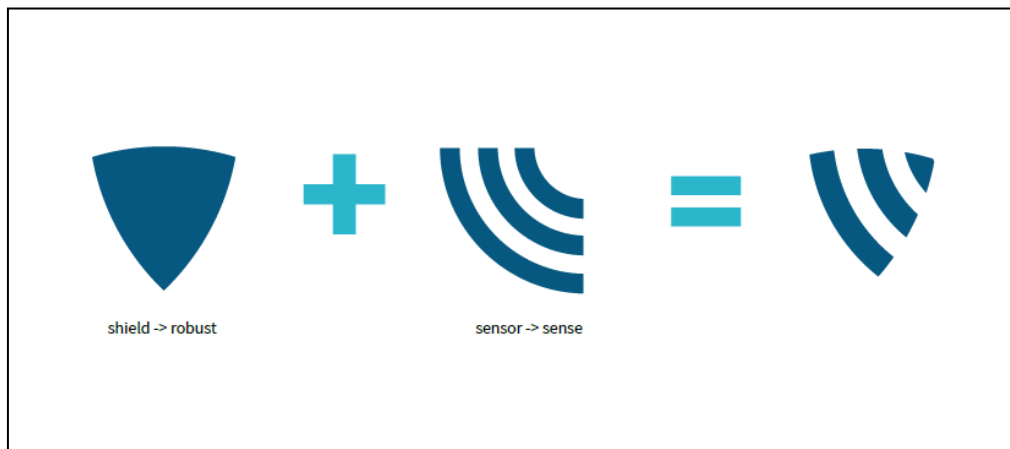


Figure 3.1: Logo story

The following logo is derived from this logo story:



Figure 3.2: RobustSENSE logo

The logo can be used in different environments:



Figure 3.3: Logo in different environments

The main colours of the project are blue, green-cyan and magenta. While blue and green-cyan represent the technical aspect, magenta is added as an accent colour to give more contrast to the overall appearance and make RobustSENSE communications highly visible. Nevertheless, magenta as colour should be used decently to avoid too much distraction from the content.

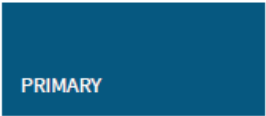
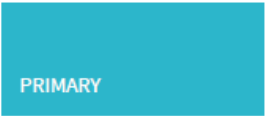

			
	PRIMARY	PRIMARY	SECONDARY
Colors	Dark Blue	Green Cyan	Magenta
CMYK:	100-15-0-50	70-0-20-0	10-90-0-0
RGB Office :	0-89-131	38-184-205	216-49-138
Web:	#005983	#25B8CD	#D8318A

Figure 3.4: Primary and secondary brand colours

For all kinds of design material, the logo and headline font “Play” and the text font “Source Sans Pro” should be used. These are timeless, sans-serif fonts which are modern and simple,

while well-readable and detectable. Moreover, they are open fonts which make them easy and cost-effective to be implemented. The design fonts can be downloaded:

“Play” (body and headlines): <https://www.google.com/fonts/specimen/Play>

“Source Sans Pro” (text): <https://www.google.com/fonts/specimen/Source+Sans+Pro>

For all kinds of internal written communication like reports and presentations the font “Trebuchet MS” should be used. This font is corresponding to the above mentioned design fonts.

3.2 Project media

Essential for all target groups and RobustSENSE participation in the communication framework is coherent project information, provided as digital media in the internet and as printed material for physical networking. Therefore, all RobustSENSE media are embedded in the project identity described above. This is enforcing the visibility and recognition of RobustSENSE.

However, different types of online and offline media will help to promote the project. As there is different information that will be communicated to the target groups on different occasions, diversified content has to be compiled. Nevertheless, all project media in RobustSENSE are connected: printed material is referencing to the website and all public material will also be available for download.

The following project media are planned. They can be used by all partners for their communication purposes.

3.2.1 Online media

3.2.1.1 Website

The domain www.robustsense.eu functions as the main communication platform for RobustSENSE. The project website D6.1 is intended to reach the identified target audiences and to inform them about the project’s objectives, structure and progress. It will present the latest project news in a compact and comprehensible way. All important files which are intended for the public and the scientific community can be downloaded from the platform. Integration with social media is easy and natural.

The following guiding principles can be derived from the dissemination strategy:

- **Professional appearance:** the overall look and feel should match the mostly professional target groups

- **Information-oriented:** purpose is to inform and educate about the RS Sensor Platform in an interesting way. However, it is important not to overload the content.
- **High usability:** the website should be easy-to-use and structured in a coherent way. Target groups need to seamlessly obtain the information they need.
- **Modern but serious design:** modern/ appealing visual elements need to meet the serious/ professional overall appearance. Nevertheless, it is important to use the latest responsive website design which is fitting to all types of screens/ devices/ browsers.

Since M03, static information was available at www.robustsense.eu. The fully functional website was launched on M08.

The website is embedded into the project design, addressing the professional target groups of the project and it has been optimised for mobile devices such as smart phones and tablets as well as other displays. It supports different browser types and versions and uses latest Contao 3.5.6 LTS Content Management System (Open Source).

Project material including factsheets, roll-up, project presentations, papers as well as abstracts of the already submitted non-public deliverables, can be downloaded from the site. Public deliverables will be published here as well.

The website is regularly updated. Several news items have been published on the website since the launch of the page.

After the project, the website will still be available for at least 3 years in static mode.

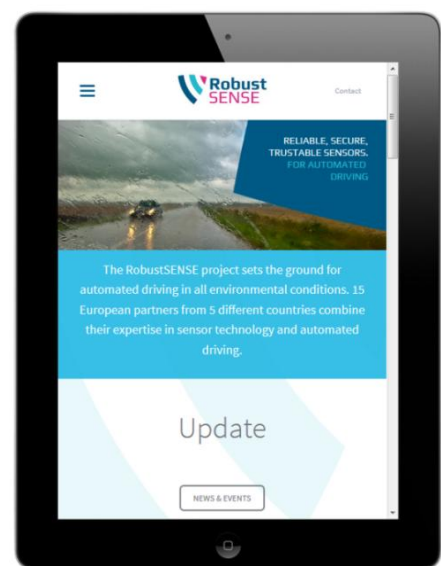


Figure 3.5: Project website

3.2.1.2 Social media channels

In addition to the website, RobustSENSE uses social media channels to promote project activities and to facilitate direct conversation with target groups and stakeholders. The following social media channels were chosen:

- **LinkedIn:** this is social networking site where professionals from both industry and research are connecting, exchanging views and latest developments in their business and research areas.
- **Twitter:** while this site is also very important for research and business, it addresses all target groups, including authorities and the general public.

While LinkedIn can be used for more in-depth connections between professionals, Twitter has the potential of establishing communication and collaboration throughout various user communities. A combination of both is seen as the best way to

- spread information about the project,
- disseminate results,
- maintain a professional and up-to-date profile,
- share and advertise interesting scientific and industrial developments and events to the community,
- support the liaison with other projects and initiatives.

After setting up the social media accounts in M08, they both have been used actively to publish and promote latest news about the project. Among RobustSENSE followers are e.g. MEMS journal with 15,000 followers and ECSEL Joint Undertaking (JU).

RobustSENSE can be followed on Twitter:

<https://twitter.com/RobustSENSE>

The LinkedIn group can be joined on:

<https://www.linkedin.com/groups/7039920>

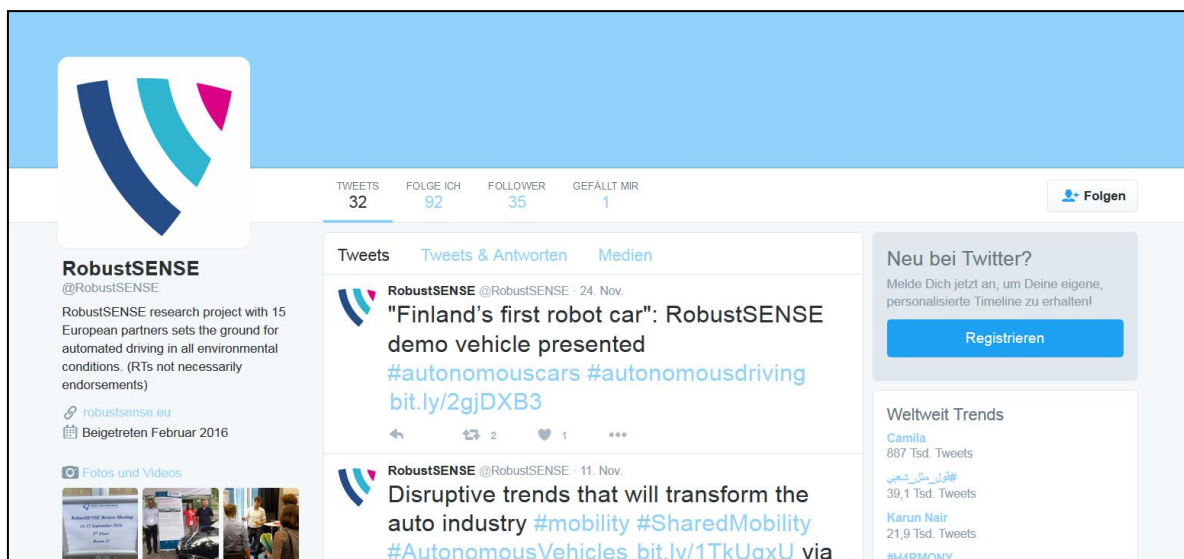


Figure 3.6: RobustSENSE Twitter account

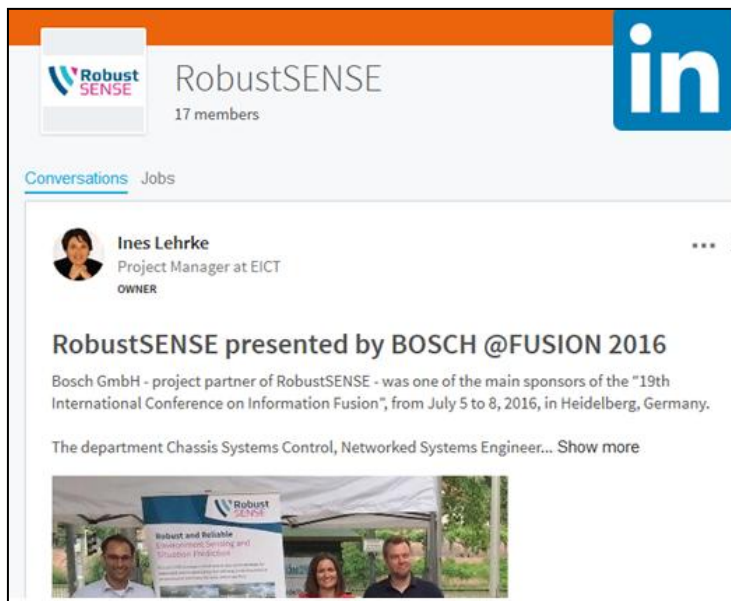


Figure 3.7: RobustSENSE LinkedIn group

All partners are asked to contribute to social media discussions and also to use their established communication resources to support social media activities. Social Media activity is expected to increase towards the end of the project when communicating about the project findings.

3.2.2 Offline media

The following information material supports the partners with the communication of the project results offline:

- Project presentation

An accurate and clear project presentation is essential in terms of arousing the target groups' interest. As a standard presentation it imparts the most important project facts.

The project presentation is available to all partners on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r1222364357>

The presentation includes a project introduction, explanations of the concept, and the main innovations of RobustSENSE as well as structure, milestones, and project facts. It can be used for external presentations on different events and conferences. However, the presentation should be adapted for each conference by the speaker/ partner in line with the central theme. Speakers are also asked to add the latest results of RobustSENSE when presenting the project at a conference.

The project presentation is updated regularly to reflect latest results and new developments.

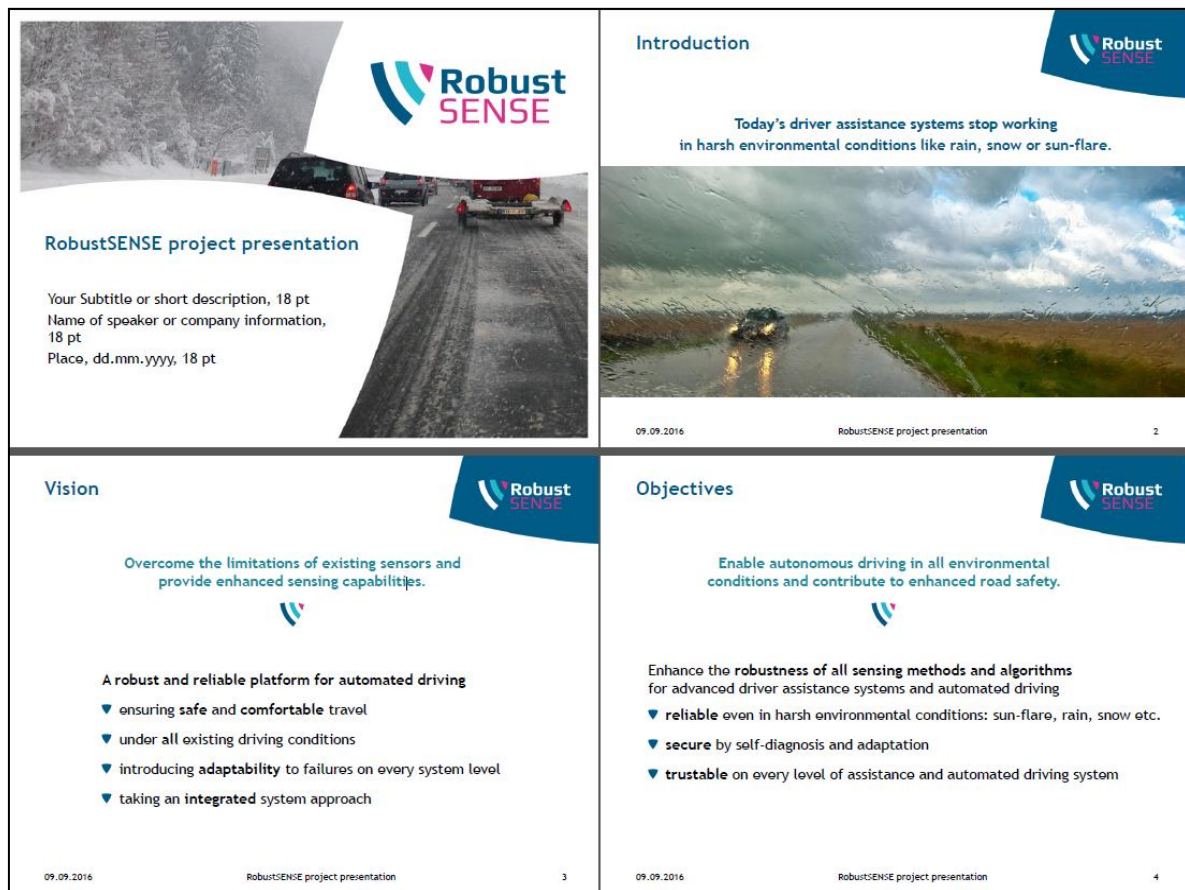


Figure 3.8: Project presentation

- Project factsheet and brochure

In order to assure the appropriate representation of the RobustSENSE project two kinds of dissemination documents will be available: a factsheet and a brochure as printed and digital versions. The factsheet gives a short and concise overview of the project goals and activities.

There have been two kinds of factsheets created:

- RobustSENSE general factsheet
- RobustSENSE ECSEL factsheet

Both are available to download on project website:

<https://robustsense.eu/publications.html>



Figure 3.9: RobustSENSE ECSEL factsheet



Figure 3.10: General factsheet

The more detailed brochure will be designed as a representative and clear calling card for the target groups and interested readers.

In the brochure, the objectives and paradigms as well as the thematic and technical background of RobustSENSE are revealed. In addition, it provides an overview of the consortium, the strengths of the partners and the structure of the project. As this item should be used to present interim results at leading conferences it will be used at a later stage of the project.

The brochure will be produced during 2017 and distributed at RobustSENSE events, exploitation workshop and final event, as well as other major event and conferences. All partners are asked to use both the factsheet and the brochure to increase the awareness of the project.

- Project posters, rollups and magnets

For special activities, e.g. conferences, exploitation workshop and final event, general information posters and roll-ups will be provided to the consortium. If a partner wants to present the RobustSENSE project, posters and roll-ups are very adequate and illustrative options to sum up the project's system concept and its objectives.

There is a general project roll-up available to be used in different events. A digital version can be downloaded on the RobustSENSE website:

<https://robustsense.eu/publications.html>

Beside, an ECSEL project poster has been produced as well as other project related posters in collaboration with the partners.

For demonstration purposes, RobustSENSE magnets and stickers with the project logo have been produced and used on demonstrator vehicles. This allows a better visibility of the project on pictures to be shared and used on any online and offline media.



Figure 3.11: Project dissemination material

- Give-aways

In order to support events and conferences and to facilitate one-to-one discussions with stakeholders, appropriate give-aways will be developed. They have to be in line with the RobustSENSE project identity. In addition to workshop material like pens and notepads, it is planned to produce one high-quality giveaway to establish sustainable connection to the project.

The give-aways will be produced in the second half of the project so that they will be available for the RobustSENSE exploitation workshop and final demonstration.

3.3 Conferences and publications

Conferences are ideal platforms for presenting the project and its technical aspects, especially with regard to dissemination of interim results. The research community, industrial players and other relevant target groups of RobustSENSE attend those conferences. Thus, it is important to present details and results based on presentations, brochures, posters, factsheets etc. The partners are encouraged to attend relevant conferences and inform the stakeholders about the project and its progress. Therefore a list of upcoming conferences is prepared on Projectplace and regularly updated by the WP6 leader:

<https://service.projectplace.com/pp/pp.cgi/r1286468069>

It is recommended that the partners first write their papers or prepare presentations and technical posters and then choose the appropriate conference and apply for.

Before presenting RobustSENSE results to project external audiences or publishing them, the processes for approval of dissemination requests, as agreed by partners, have to be followed (see chapter 4). For every dissemination activity it is necessary to complete the dissemination form (see Annex 1), to inform the dissemination manager and to upload the presented material to Projectplace:

<https://service.projectplace.com/pp/pp.cgi/0/1159967578>

Dissemination activities are regularly tracked. For important events also online news are posted on the project website and in the social media channels.

The list of visited conferences and events can be found below.

Table 3.1: List of visited conferences and events

Event	Place	Date	Dissemination activity	Involved partners	Title/ Scope
IEEE Conference on Intelligent Transportation Systems (ITSC)	Rio de Janeiro, Brazil	01.-4.11.2016	Paper presentation in conference	VTT, FOCUS and DAI	LIDAR Sensor Development for Harsh Weather Conditions
IEEE Conference on Intelligent Transportation Systems (ITSC)	Rio de Janeiro, Brazil	01.-4.11.2016	Paper presentation in conference	FZI	Robust Environment Perception for the Audi Autonomous Driving Cup
Tekniikka 2016 trade show & exhibition	Jyväskylä, Finland	01.-3.11.2016	Exhibition stand & presenting demonstrator vehicle	VTT, SICK	Presenting Lidar development results
National media event: "See and feel with us future technology!"	Espoo, Finland	20.09.2016	Presenting demonstrator vehicle to media representatives	VTT	Presenting Lidar development results
EUCAR Programme Board Meeting Safe and Integrated Mobility	Brussels, Belgium	14.09.2016	Project presentation & liaison	EICT and DAI	RobustSENSE - Robust and Reliable Environment Sensing and Situation Prediction for Advanced Driver Assistance Systems and Automated Driving
19th International Conference on Information Fusion	Heidelberg, Germany	05.-08.07.2016	Roll-up & demonstrator vehicle presentation	BOSCH	General project introduction
2016 IEEE Intelligent Vehicles Symposium	Gothenburg, Sweden	19.-22.06.2016	Paper & poster presentation in conference	FZI	Functional System Architectures towards Fully Automated Driving
2016 IEEE Intelligent Vehicles Symposium	Gothenburg, Sweden	19.-22.06.2016	Paper presentation in conference	FZI	Understanding Interactions between Traffic Participants based on Learned Behaviors
"Research meets Business" networking event	Tampere, Finland	24.05.2016	Project poster & liaison	VTT	Project objectives and VTT's test vehicle functions

Event	Place	Date	Dissemination activity	Involved partners	Title/ Scope
FZI Open House	Germany	09.02.2016	Project presentation & roll-up	FZI	General project introduction
Tech Center a-drive event	Ulm, Germany	18.01.2016	Presentation	ULM	General project introduction

The dissemination on conferences and events is closely connected to articles in scientific publications. Publishing is crucial in order to reach the scientific and research community, and to make an impact in the research world. This comes more important towards the end of the project when highlighting the findings of the RobustSENSE.

A preliminary list of scientific journals for potential publication is

- IEEE Transactions on Intelligent Transportation
- IEEE Transactions on Signal Processing
- IEEE Intelligent Transportation Systems Magazine
- Journal of Field Robotics
- IEEE Transactions on Antennas and Propagation.

All partners are emboldened to participate in publications. For this, all procedure and documentation aspects have to be considered (see chapter 4).

To underline the central role of knowledge and innovation in generating growth, the EU strives to improve access to scientific information and to boost the benefits of public investment in the research funded under the EU Framework Programme for Research and Innovation Horizon 2020 (2014-2020). This includes RobustSENSE. Therefore, each beneficiary must **ensure open access to all peer-reviewed scientific publications** relating to its results.

In order to comply with this requirement, beneficiaries must, at the very least, ensure that their publications **can be read online, downloaded and printed**. However, as any additional rights such as the right to copy, distribute, search, link, crawl, and mine increase the utility of the accessible publication, beneficiaries should make every effort to provide for as many of them as possible. Any costs associated (often referred to as Article Processing Charges, APCs) are usually to be borne by the university or research institute to which the researcher is affiliated.

For more information on the EU open access policy, please contact the dissemination manager sarah.metzner@eict.de.

3.4 Standardisation activities

Because standards on the level of enabling technologies are fundamental for the project, standardisation bodies need to be informed about the advantages of RobustSENSE's sensor platform. The RobustSENSE system design will be based on standard-compliant components as much as possible and only deviate from this goal if there is a justified need for it, e.g. when the relevant standards are not yet completed. The expected impact is harmonisation of standards, enabling the easier certification and cost reduction of new systems.

RobustSENSE partners participate in the standardisation activities through their working groups. The plan is to reach these bodies via partners of the consortium which are already actively involved in ongoing standardisation activities.

Based on project management team discussions, a relevant standardisation body for the project, CEN TC 278, a technical committee of Comité Européen de Normalisation (CEN) was identified.

The CEN TC 278 is responsible for managing the preparation of standards in the field of Intelligent Transport Systems (ITS) in Europe. The standardisation work of CEN/TC 278 is restricted to application of telematics for Road Transport and Traffic only. It is defined as a group of services utilising information technology and telecommunications, in vehicles and infrastructure, to improve (mainly) road transportation from the points of view of safety, efficiency, comfort and environment. The practical standardisation work of CEN TC278 is undertaken in several working groups.

The work of the RobustSENSE partner VTT with Finnish Traffic Safety Agency regarding the CEN TC 278 is planned to be utilised for the standardisation processes.

Further relevant standardisation bodies for RobustSENSE are:

- International Standardization Organisation (ISO)
- European Telecommunications Standards Institute (ETSI)
- Institute of Electrical and Electronics Engineers (IEEE)
- AUTomotive Open System ARchitecture (AUTOSAR)

In addition, the Car-2-Car Communication Consortium (C2C-CC) may serve as a platform for discussing standard contributions. C2C-CC is an industry driven association of European vehicle manufacturers, suppliers and research organisations to increase road safety and efficiency by means of cooperative intelligent transport systems (C-ITS) with vehicle-to-x communication. C2C-CC supports the standardisation of European vehicle-to-x communication in close cooperation with ETSI. The RobustSENSE partners Daimler AG, BOSCH, EICT, FZI, FOKUS and University of Ulm are C2C-CC members.

3.5 Exploitation activities

The results of RobustSENSE will mainly lead to the implementation of new sensor platforms and sensors improving reliability and robustness in the automotive sector. With a consortium that incorporates the whole automotive supply chain, a wide development of enhanced automotive solutions is supported. The strong focus on industry is reflected in the RobustSENSE consortium with CRF and Daimler AG as OEMs and Bosch, Ficos and AVL as

important suppliers. Moreover, the research institutes included in RobustSENSE (CTAG, EICT, Fraunhofer, FZI, University of Ulm, VTT) can develop new knowledge, which can be used or brought as an asset into a partnership with external partners. RobustSENSE has also included sensor specialists from related fields namely Modulight, Oplatek and SICK. With the input from all these partners an exploitation plan will be developed to create a high impact of the project.

Identifying the potential of RobustSENSE results for consortium partners and European Industry is the key task for the exploitation activities. It seeks for business opportunities accompanying the RobustSENSE development process.

The aspired market push for enhanced ADAS based on the RobustSENSE sensor platform needs a closer look on market requirements to estimate the potential exploitation of the system and its components. It is foreseen to accompany the technical work with gathered market insights and to provide the basis for assessing the business potential of the various industry players. The intention is to provide the groundwork for future market development of the solutions.

To this end, following activities are planned:

- Conducting a short survey among project participants, representatives from marketing and business development departments of the automotive industry, and external sensor and automotive development related experts. Analysing the survey results and discussing them in a workshop including external experts.
- Organising a workshop among project participants and external stakeholders to discuss exploitation matters based on demonstrator and prototype vehicles, developed software, software modules and hardware samples. The objective is to identify indicators and recognise trends for the aspired market push, to summarise the commercial potential of the project results, gather ideas for possible implementation and business model opportunities. The core group of the industry partners of the consortium will be complemented by selected external experts and stakeholders who will contribute to the evaluation of business potential by providing business-, field- and market-related knowledge as well as technological expertise from other sectors. See more closely chapter 3.6.1.
- The results of the workshop will be fed into an overall exploitation outlook for the sensor platform, which will be further refined during the course of the project, and summarised in a final exploitation plan at the end of the project.

The deliverable D6.5 Exploitation plan, (due in M36, responsible: EICT) will present the project outputs and the corresponding potential exploitation. It is planned to give an

overview of the project outputs per project partner and describe and analyse the potential exploitation plan for this output.

3.6 Major events

Events as well as meetings or workshops will bundle resources and create visible highlights within the project life cycle. The advantages of such physical face-to-face occasions are the demonstration of the RobustSENSE developments in real life. The target groups will directly experience the project's work and give feedback. This will support the dissemination objectives and facilitate user acceptance. For this reason, the RobustSENSE major events are a core part of the dissemination activities.

3.6.1 Exploitation workshop

The exploitation workshop is a platform for discussion to actively involve stakeholders to get their feedback and to talk about the RobustSENSE developments. It is planned to gather external market insights and to discuss on the desired sensor performance, the technical and economic feasibility and the already existing developments at this stage of the project.

The workshop will be held during the fourth quarter of 2017. Exploitation matters will be discussed based on concrete examples taken from the project research and development work e.g. demonstrator and prototype vehicles, developed software/software modules and/or hardware samples.

The objectives of the workshop are to:

- show the first interim results of the project and to discuss on the research development,
- summarise the commercial potential of the project results,
- identify indicators and recognise trends for the aspired market push,
- gather ideas for possible implementation and business model opportunities.

These are the targeted parameters for the participants of the workshop:

- Total of about 30 attendees
- Representatives from each partner - researchers, technical experts and additionally marketing and/or business development professionals
- Inviting selected external experts that ...
 - have insight in technological challenges,
 - can provide market related perspectives,

- are not in a direct competitor situation.

In preparation of the workshop, to trigger the exploitation discussion and business case development, an online questionnaire will be prepared. The replies will be analysed and discussed at the event.

See below a preliminary timetable for the workshop preparation and the related exploitation activities.

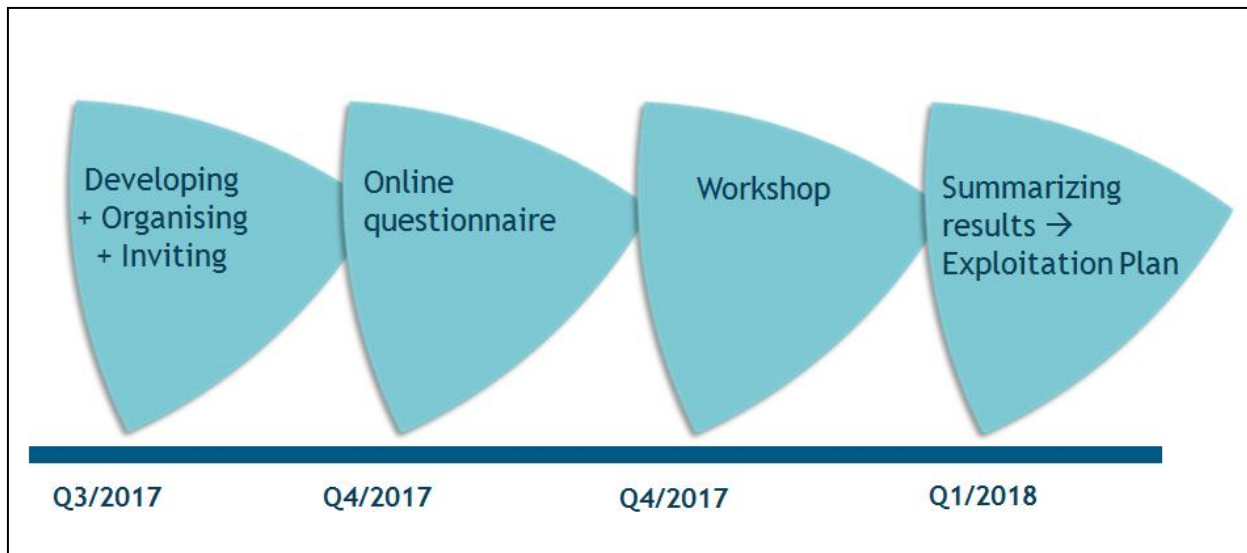


Figure 3.12: Timetable of exploitation activities

The results of the workshop discussions will be reported and analysed to be used for the deliverable D6.5 “Exploitation plan”.

3.6.2 Final event

The final event presents the demonstrators built in WP5 to experts and the interested public. Based on the technical results as well as on the results of the exploitation workshop, WP6 investigates detailed exploitation opportunities for the RobustSENSE sensor platform and analyses the potential commercialisation of the project results.

At the final event, the business potential of improved ADAS will be discussed. The overall design of the final event will be developed and a storyboard for demonstrations and promotion activities will be prepared. The complete final event will be planned, organised and realised together with the consortium ensuring a wide visibility of the project’s results.

At the event, a broad international audience will be updated on the progress of the project, informed on the project’s objectives and experience the benefits of the implemented system. Finally, aligned with the exploitation workshop, a sensor-specific platform is created

to push for technology transfer and cross-sectoral collaboration, thus contributing to the competitiveness of one of the pillars of European industry in a key technology field.

The following figure illustrates the project events and a selection of important conferences.

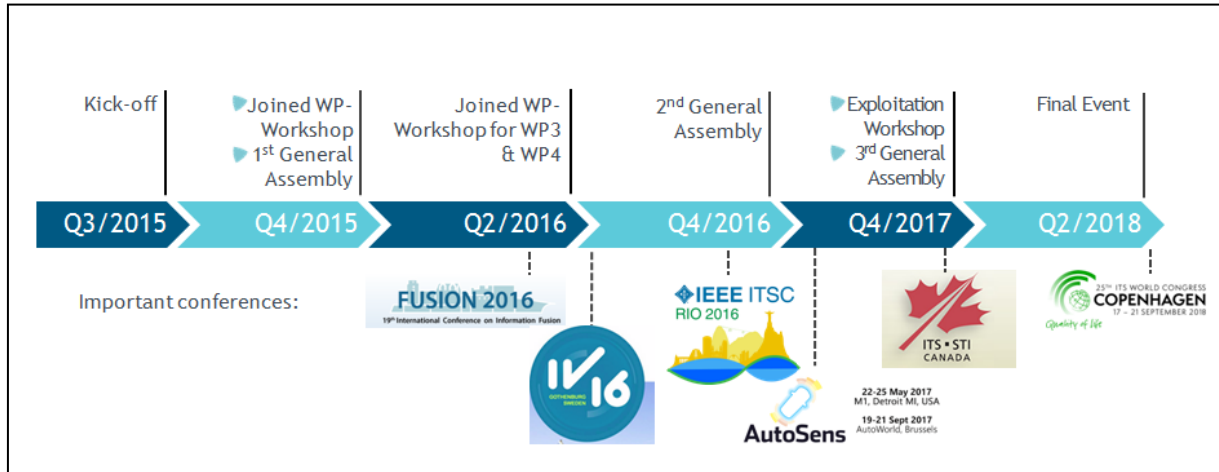


Figure 3.13: RobustSENSE project events

4 Organisation

Responsibilities in RobustSENSE have been defined to ensure high quality dissemination of results. All partners have resources such as scientific expertise, stakeholder contacts or networks with political and business influencers. As multiplier, all project partners will disseminate the project achievements in their networks and at relevant events. Public relations departments of major projects partners will also reinforce external communications. It is under discussion to form a specific group of partners for that.

This chapter sets the roles and responsibilities of all and of particular partners within the project.

4.1 Organisational structure of dissemination

The dissemination is included in WP6 within the RobustSENSE project. EICT as work package leader develops the tools and procedures and coordinates the work.

The following persons and groups are continuously working for dissemination purposes. Other groups will be established according to the project needs e.g., PR-expert group for media activities or a final event group.

Table 4.1: Roles and responsibilities for dissemination

Name, organisation and role	Responsibilities
Werner Ritter, Daimler Project Coordinator	Monitors all dissemination and exploitation activities. Approves dissemination activities. Disseminates project achievements. Serves as spokesperson for the project: The spokesperson of the project will actively use his contact to the scientific community and expert groups to contribute to the shaping of future research and development agendas. Responds to media requests, managed by the Dissemination Manager (DM) if there is a need for detailed, sensitive or sector-related questions to be answered. Any other external requests are addressed to the DM, who together with the Coordinator forwards questions to the experts from within the consortium.
Sarah Metzner, EICT Dissemination Manager	Leads Task 6.2 “Dissemination” Develops and executes a detailed dissemination strategy and associated plans. Organises final event in close cooperation with all partners and coordinates participation in relevant conferences and events. Coordinates project dissemination activities and material. Monitors and reports technical dissemination (conferences and publications).

Name, organisation and role	Responsibilities
	First contact for media requests.
WPLs	<p>Plan and collect dissemination activities within sub-projects with WP partners.</p> <p>Provide WP news to DM for dissemination purposes via website, twitter and LinkedIn.</p> <p>Contribute to dissemination material on IP level, give feedback and inform DM about dissemination on sub-project level.</p> <p>Responsible for WP quality and management. Assure communication flows (partners/ other WPs/ IP management). Define common approaches with other WPs (WPL meetings).</p>
Partners	<p>Actively initiate and realise dissemination activities using the resources of their organisation. Follow the IP design and process guidelines.</p> <p>Deliver all published material and all media material such as articles related to RobustSENSE to DM for archiving purposes.</p> <p>Provide and review contents for dissemination material.</p> <p>Provide pictures and illustrations ready to use for dissemination to the DM.</p>

4.2 Approval process for dissemination activities

The following dissemination process has been agreed upon based on the Consortium Agreement. To facilitate the management of the dissemination activities for all consortium members, the list is arranged according to the type of activity:

Table 4.2: Dissemination process

Type of dissemination activity	Step1	Step2	Step3	Step4
Journal publication, conference paper	Get internal partner approval if applicable	Minus 4 weeks prior to activity: inform DM via dissemination form (see 4.4) and ask for approval. DM asks the PMT for approval	Proceed with dissemination activity	Plus 2 weeks after activity: Send material to DM for archives
Conference presentation, presentation to workshop, event etc.	Get internal partner approval if applicable	Minus 4 weeks prior to activity: inform DM about activity via dissemination form (see 4.4) and ask for approval. DM asks the PMT for approval.	Proceed with dissemination activity	Plus 2 weeks after activity: Send material to DM for archives Send approval for website publication

All partners should use the dissemination form that can be found here on Projectplace when sending the material:

<https://service.projectplace.com/pp/pp.cgi/0/1070460201?op=wget#folder/1159967578>

The following figure illustrates the process:

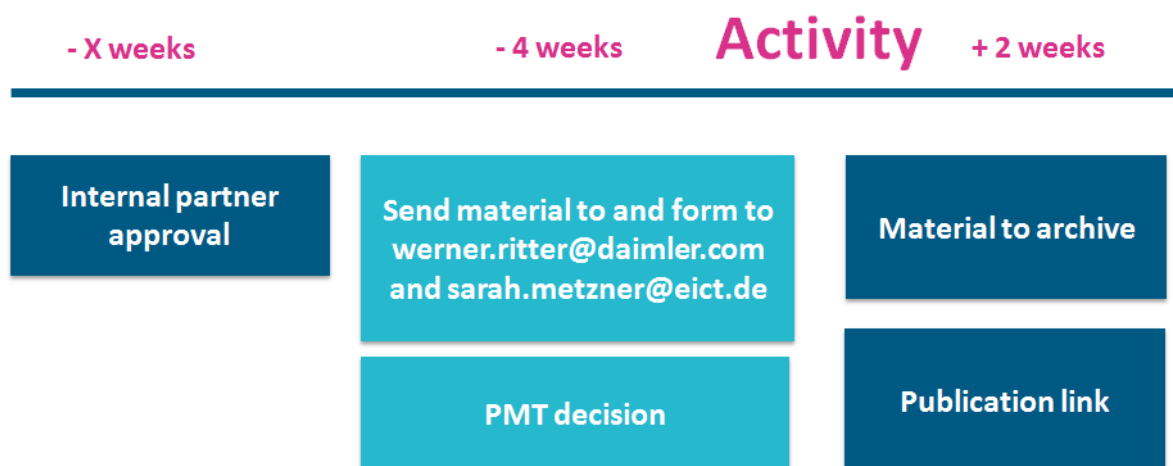





Figure 4.1: Approval process












4.3 Use of partner logos

The following organisation names, logos and classifications should be used when communicating externally about RobustSENSE. The logo files are available on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/0/1070460201?op=wget#folder/1160722835>

Table 4.3: Partner logos

Organisation	Logo	Category
DAIMLER AG		OEM
AVL Austria		Automotive supplier
AVL Germany		Automotive supplier
BOSCH		Automotive supplier

Organisation	Logo	Category
CRF		OEM
CTAG		Research
EICT		Management & Research
FICOSA		Automotive supplier
FOKUS		Research
FZI		Research
MODULIGHT		Automotive supplier
OPLATEK		Automotive supplier
SICK		Automotive supplier
UNIVERSITY OF ULM		Research
VTT		Automotive supplier

4.4 Documentation

A detailed documentation of all RobustSENSE dissemination activities is essential for:

- Each project partner,
- The external communication, e.g. news at project website,
- The European Commission, especially concerning the technical review.

Projectplace will be used as the project's main documentation platform. Any document relevant to dissemination activities, e.g. press releases and presentations, is uploaded there. All members are encouraged to make use of it.

On Projectplace all files related to dissemination requests should be uploaded in this documentation folder:

<https://service.projectplace.com/pp/pp.cgi/0/1159967578>

All related files, e.g. abstracts, papers and presentations, have to be stored in an individual folder.

For every dissemination activity the lead partner fills in the **dissemination form** which is available in the following folder and in the Annex:

<https://service.projectplace.com/pp/pp.cgi/r1207408220>

The lead partner sends this form together with all related material to the dissemination manager who stores it in a separate folder.

4.5 Templates

Templates for PowerPoint etc. are prepared forms to support an easy and fast daily business within the RobustSENSE project. The use of templates ensures a unique and recognisable project design.

The templates are developed and provided by EICT.

Templates include:

- Deliverable
- Peer review
- PowerPoint presentation
- Minutes
- Agenda

- Action list
- Dissemination form (see Annex 1)
- Non-European travel form

In cases of questions and needs of adaption the WP6 leader has to be contacted. The templates are available on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/0/1137022609>

Annex 1 Dissemination form for RobustSENSE | <Partner>

Use this form to communicate your activity to the DM (sarah.metzner@eict.de) and document when, where and how you present the RobustSENSE project or publish an article/ paper on it. Please eventually update it with facts after your activity and upload this and all related documents (presentation, pictures) to Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r1207408220>

General Information	
Lead organisation	
Name of lecturer(s)/ author(s)	
E-mail(s)	
Date, place and title of venue/ journal (+ URL)	
Form of presentation (ppt, discussion, paper etc.)	
Permission to disseminate the activity on the RobustSENSE website & social media	Yes/ No
Open access to the publication	Yes/No (please contact the DM for any questions)
Motivation (Please describe in about 3 or 4 sentences why you have decided to submit a paper, to distribute dissemination material or to represent the RobustSENSE project at a conference, meeting, workshop etc. Why do you consider it important for RobustSENSE?	
(Expected) outcome for the project (Please specify what size and type of audience that attends the event or reads the publication, e.g. scientific community, industry, civil society, media, policy makers). Feel free to also update this section in case you received interesting feedback during the event or afterwards and inform the DM.	
Thank you very much!	

List of abbreviations and acronyms

Abbreviation	Meaning
ADAS	Advanced driver assistance systems
DM	Dissemination manager
GA	General assembly
ITS	Intelligent transport systems
OEM	Original equipment manufacturer
PMT	Project management team
TOC	Table of content
WP	Work package
WPL	Work package leader