Orchestration and Reconfiguration Control Architecture

D8.1: Dissemination and Communication Strategy and plan

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Abstract	This deliverable defines and describes the dissemination and communication strategy and set of activities that will be pursued by the ORCA partners so as to guarantee broad and effective visibility, promotion and up-take of the project's work and outcomes.
Keywords	Dissemination, communication, events, impact creation.

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* R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

OTHER: Software, technical diagram, etc

EXECUTIVE SUMMARY

The ORCA Work Package 8, WP8, is dedicated to "Dissemination, Communication and Exploitation" and aims at defining, maintaining and coordinating the appropriate mechanisms and tools ensuring broad visibility and impact of the project's work and results. The main objective is to promote the developed project's concepts and technologies, including the four main show cases the consortium's partners are focusing on. Furthermore ORCA Dissemination Plan will focus on the promotion of the five Open Calls, which will be launched within the project: three Open Calls for Experiments and two Open Calls for Extensions.

This document describes how ORCA is following a comprehensive and effective approach to dissemination and promotion activities so as to support project partners in their daily activities, by firstly elaborating on what are our main dissemination and promotion objectives.

Second, this deliverable presents the foundation of the dissemination and promotion strategy, which has been defined in the perspective of aligning the project's activities with the overall FIRE/FIRE+ (Future Internet Research and Experimentation) and Next Generation Internet (NGI) vision and programme-level community building and marketing activities led by the FIRE Dissemination Working Group (DWG). In relation to that, the deliverable goes on by presenting the set of tools, which have been identified for the specific target groups.

Then, the central part of this document presents the set of means and actions that are being implemented in the first four months of the project to guide and assist the partners in their dissemination and communication actions, including preparation of promotional material, participation and organisation to relevant conferences and workshops.

Finally, the planned work and activities for the reaming part of the project duration are presented. These are expected to be refined in D8.3 First Report on dissemination and communication activities, which will be released at the end of M12.

This document, which will evolve in line with the development of the overall project work and activities in close collaboration with all work packages, is written primarily as a guide for ORCA project partners and for key stakeholders in the FIRE context to have a clearer understanding of the intended dissemination and promotion activities.

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INTRODUCTION

1.1 Project Description

ORCA offers experimentation facilities to promote wireless innovation in several market segments, including manufacturing, automotive industry, healthcare, ambient assistant living, public events, home automation, and utilities. Within the manufacturing market, for instance, application requirements vary from very low latency, up to real-time 3D video-driven interaction between collaborative robots and humans, to non-time critical downloads of large data volumes for updating the software of machines. Different applications and services often have to share the wireless infrastructure and the spectral bands, making it very challenging to meet the diverging QoS requirements simultaneously. The control mechanisms that are provided today in wireless technologies are not adequate to deal with extreme (ultra-low latency, ultra-high throughput, ultra-high reliability) and diverging (low AND high data rate, time-critical AND non-time critical) communication needs. Interesting evolutions are happening at different levels, enabling the creation of parallel on demand wireless network slices optimized for a specific set of requirements. The overall ORCA objective is to bridge those interesting evolutions at different levels, making them mature enough to enable end-to-end networking experiments going from Software-Defined Radio (SDR), with Software-Defined Networking (SDN) to Dynamic Spectrum Sharing (DSS). We will open novel frequency bands, by proposing SDR technology at mmWave frequencies that is mature and fast enough to be included in end-to-end networking experiments. We will bridge SDR with SDN technology, enabling the creation of multiple virtual networks that operate on the same infrastructure but meet the most diverse and stringent application requirements. We will finally enable advanced reprogramming of the SDR infrastructure, needed for offering versatile testbed facilities, paving the way towards, ultimately, on demand wireless networking and experimentation.

1.2 Document purpose and intended audience

The main purpose of present Dissemination and Communication Strategy and Plan is creation of a reliable document and a solid plan for the efficient knowledge dissemination among the target groups. The deliverable defines the Dissemination Plan with clear guidelines for the dissemination activities including all operational elements of the dissemination. The main aim of the Dissemination Plan is defined throughout the objectives of the ORCA dissemination activities. Crucial target groups and bodies that are interested in the project and appropriate key messages are identified in the deliverable. Strategy envisages also all dissemination methods, tools and channels for the identified target groups. The dissemination time plan presents the overview of all planned dissemination activities and their realization. The monitoring of the dissemination activities provides evaluation of the progress and ensures that the set out objectives will be realized. This Deliverable is intended for internal and public usage. The consortium partners will benefit from a common and shared communication plan to guide the on-going work, while it will represent the plan of activities to be submitted to the European Commission for review and make public on ORCA's website.

1 DISSEMINATION STRATEGY

2.1 Objectives

The main objectives the ORCA dissemination and communication activities are pursuing can be summarized as follows:

- To **promote broad visibility** of the project's work and disseminate its results to the FIRE+ and NGI community and beyond, while contributing to promote the overall FIRE offering for increased uptake by innovative players.

- To **create and maintain the ORCA project web site**, the media communication channels and the planned dissemination tools to effectively promote the ORCA's work and guarantee broad visibility of the project within the whole scientific and innovation FI landscape.

- To **participate to and organize events** for increased and effective dissemination of information to target stakeholders and promotion of ORCA's Open Calls and project's results. Four workshops and hands-on tutorials will be organized, including an inception workshop (organized as a joint panel special session in cooperation with SOFTFIRE and 5GINFIRE projects) scheduled at M6, within the EuCNC event in Oulu, Finland.

- To assist in the **organisation and promotion of the ORCA Open Calls**, as a mean to broadly promote and validate the ORCA research outcomes and collect feedback from the work performed by the participants to the competition.

- To **establish liaisons with related initiatives and projects** both within the ORCA programme context and in related initiatives, including in particular the 5G-PPP, FIRE+ and NGI communities, for mutual exchange of know-how and broad visibility of the ORCA's work. Contribution to related Open Source initiatives and Standardisation activities, with a specific focus on 5GPP, ETSI working groups, WinnF and possibly IETF.

2.2 Strategic Approach

To ensure broad span and effective reach of all target stakeholders, all ORCA's project partners are involved in the Dissemination and Communication activities, under the lead of MARTEL, which, through consolidated experience and visibility within the overall FIRE and NGI landscape, is pursuing cohesive and coordinated efforts aligned with related initiatives spanning across the whole programme.

The dissemination and communication strategy and guiding principles ORCA is pursuing include maintaining an ambitious and cohesive vision, while ensuring value to be delivered in an effective and efficient way building up on a strong and cohesive teamwork. This will be achieved by ensuring on the one hand continuity with a number of selected activities that the partners have been actively pursuing in the FIRE context and related R&D&I areas, and, on the other, by providing a cohesive plan of action in which a variety of powerful instruments will stimulate impact and engagement.
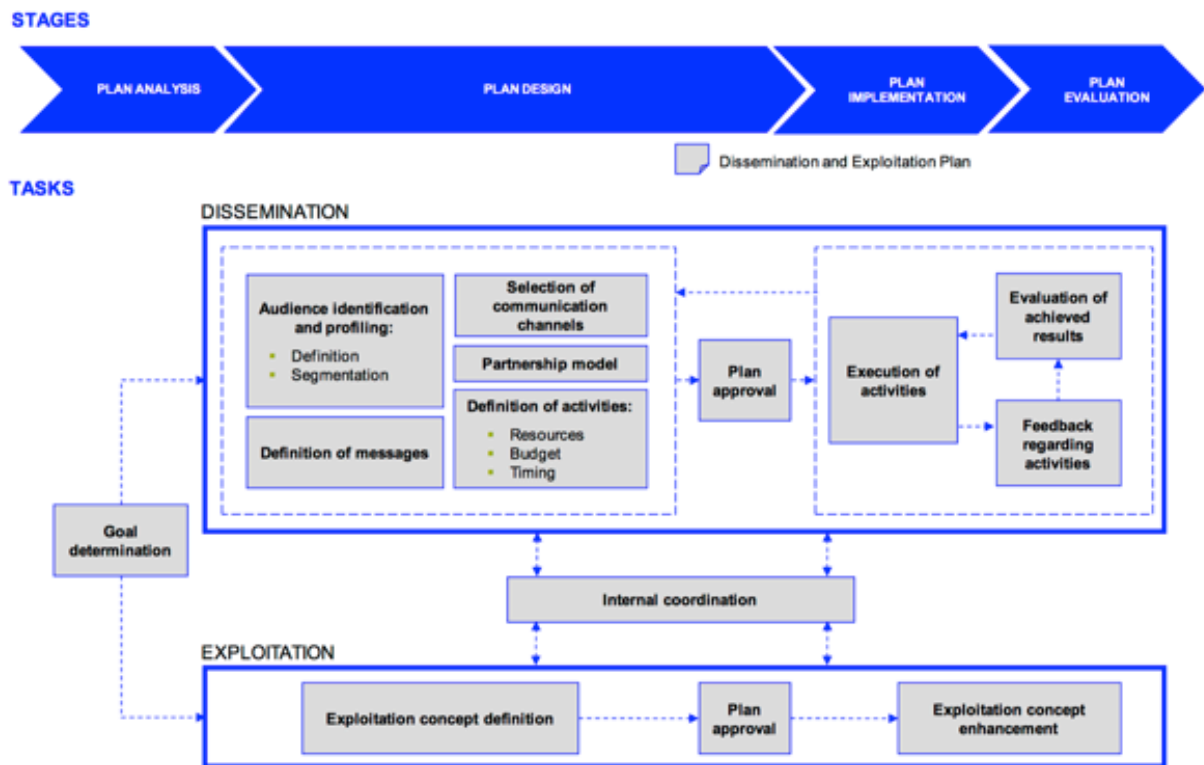
Figure 1: Dissemination and Communication Plan Strategy

2.3 Target Audience

We have identified the following main target groups.

- **New experimenters** that could potentially join FIRE+, especially Small and Medium-sized players, in the cognitive radio domain that could benefit from the ORCA concepts, technologies and testbeds to experiment, test and speed up the time-to-market for new applications and services.

- **Innovators and researchers** both in the academic and corporate R&D&I domains working on resources allocation and optimization in dynamic and densely populated wireless networking domains.

- **Industrial players**, including small to medium and large organisations, covering industry manufacturers, telecommunications operators and service providers, such as, but not limited to, the 5G-PPP members and associated members, and industrial organizations that have participated in FIRE programme.

- **The General public and the society as a whole** including citizens, students, public authorities, etc. that could benefit from enhanced wireless connectivity serving at social inclusion and engagement.

- **Standardization bodies** ORCA is uniquely situated to make contributions to open source initiatives and standardization. The partners involved in the project have already established good working relations with spectrum regulators through several years of related work.

- In relation to the selected showcases, target players are also industrial players, SMEs and researchers in the fields of smart factories, robots-to-human interaction, SDRs, SDN, service-aware wireless infrastructures that could **uptake and/or complement and extend the ORCA technologies**.

3 DISSEMINATION CHANNELS

A broad array of dissemination channels is used to effectively reach the targets groups and to maximize awareness of the overall project's work and outcome. The synergy of ORCA dissemination is generated through seamless connected online and offline communication activities. Both online (e.g. website and social media) and offline channels (e.g. events) will be used to disseminate ORCA related activities and project actions throughout Europe and beyond. In addition, all the networks and multipliers channels will allow the partners of ORCA to raise the visibility of the project achievements and to reach a critical mass of stakeholders, developers, contributors, integrators, researchers and relevant key players to an efficient implementation of the project work plan.

3.1 Dissemination Tools

The dissemination channels used to reach each target group are detailed in the table below:

Channel/Target Group	Next Experimenters	FIRE+ and ICT Industry	Innovators & Researchers	Standardization Bodies	General Public
Website	X	X	X	X	X
Social networks	X	X	X	X	X
Project Newsletter	X	X	X		
FIRE Dissemination Working Group	X	X			
Project events	X	X	X	X	
Third parties events	X	X	X	X	
Scientific Publications	X		X	X	
PR materials (e.g. Flyers)	X	X	X	X	X
General Media					X

Table 1: Channels per target group

The main tools identified to support the promotion of the project and its findings are:

- **Project website** with easy access to retrieve public material generated within the project activities: the project's website construction, hosting and maintenance. The website, accessible at https://orca-project.eu/, has been delivered as planned in the first month of the project: it

provides an accessible, simple and easy to find and use entry door / portal to the project activities. It will be continuously maintained and improved throughout the whole project's duration by publishing relevant news, available outcomes, including deliverables and scientific publications, and advertising stakeholders' engagement activities such as participation to relevant events, organisation of the ORCA workshops. The details related to the website development and design are outlined in Section 4.2

- **Social Media Channels**: social media channels are used to empower dissemination efforts and reach a wide audience so as to facilitate an interactive dialogue with relevant stakeholders. The project will establish its presence in a number of public social communities, and has started with a Twitter account. A LinkedIn Group and a YouTube channel that will be exploited to build a community around the project's work and activities are also being set.

- **Project documentation and ORCA videos**: During the lifetime of the project, a number of documents, deliverables, technical reports, posters, webinars, and presentations will be produced and be made publically available.

  - **Presentations/roll-up:** a short slide-based presentation has already been created as a mean to provide an overall overview about the project's focus and main objectives to be used at the EuCNC Conference 2017. This will be extended and updated as appropriate throughout the whole project's duration. A first roll-up will also being prepared for the EuCNC conference and booth.

  - **Project brochure**: ORCA will provide an extended flyer about the project, to be updated at least once, to reflect its evolution. The first version has already been developed and will be delivered and distributed both electronically and in paper copy at the upcoming conferences ORCA is attending.

  - **Five videos** are planned: a first video to raise awareness, to be developed at the inception workshop (joint panel) at EuCNC 2017, and the following ones capturing salient moments of the Open Calls, experimentations and project's workshops. They will be distributed via selected channels (e.g., YouTube FIRE and ORCA channels, VideoLectures.net, etc.) to target the relevant audience.

- **On-line education, tutorial and training material** will be made available and offered to the target stakeholders to facilitate uptake of the project outcomes by new stakeholders, in particular small and medium businesses and new constituencies for new types of innovation-driven experimentation. Specific training modules will focus on selected features of the ORCA offering,

- **Project Newsletter**: ORCA will create a quarterly e-newsletter, describing the evolution of the project framework, and announcing interesting news and initiatives. The first edition has been distributed by the end of April.

- **Project dissemination through publications and participation** to conferences, workshops and relevant scientific, industrial and EC-driven events: ORCA will disseminate its PR material and promote its outcomes to the relevant stakeholders in various ways, including invited talks, demos, presentations and/or teaching activities.

4 INITIAL DISSEMINATION ACTIVITIES M1-M4 (JAN-APRIL 2017)

Bootstrapping of dissemination and communication activities has successfully started as planned at the very beginning of the project, focusing first of all on creating a new logo and branding identity, setting up the project web site, a Twitter account and a LinkedIn Group, participating to the FIRE cross-level dissemination activities through regular interactions with the FIRE DWG, and creating first promotional tools including a slide-based presentation, a poster and a project's flyer that will be distributed both electronically and at several events in paper version.

At the time this report being written (M4), the project's partners are also following up on:

- The creation of the first ORCA newsletter, to be distributed by the end of month 4.

- The participation to several events in May-June 2017 in Europe and US (see Table 3)

- The organisation of the ORCA inception workshop (joint panel), which will be co-located with the EuCNC Conference taking place in June in Oulu, Finland will promote the project's work engage the audience into the planned ORCA Open Calls.

- The organization and dissemination activities of the ORCA joint booth (with eWINE and WiSHFUL projects) at the EuCNC Conference.

- The organisation of the first set of ORCA Open Calls.

4.1 Project's brand identity

Logos are a critical aspect of communication and marketing. To establish a clear and well-defined identity of the project, the ORCA logo was already created at proposal time and fine-tuned at the very beginning of the project (M1) and it appears and will appear in the website, the social networks, deliverables, presentations, promotional materials, etc. A well-designed logo can contribute to a quick identification of the ORCA's activities and, hence, to a better communication of the project's outcomes.

To create the ORCA's logo, the designer of MARTEL opted for a solid and rounded font family for the naming taking advantage of the prominent initial letter "O" which integrates the shape of an "orca". The logo is therefore highly distinctive, grounded while at the same time providing the feeling of movement and innovation thanks to the figure of the Orca crossing through the lettering. As regards the colour range, the designer selected a well-contrasted unsaturated blue and a dark grey (that can be distinguished also when printed in black and white) to transmit dynamicity and wisdom.

Following the style of the logo, templates for deliverables (for Word and LaTex) and presentations were created at the beginning to the project and all partners were informed and encouraged to use them in order to keep a consistent identity of the project.

Figure 2: ORCA logo

4.2 Website

As by the timeline defined in the Description of Work, a first release of the web site is public accessible since the first month of the project (M1) at http://orca-project.eu. The ORCA web site is the entry door to the project for the general public and in particular the broad Internet community, including all relevant R&D&I stakeholders active in the wireless networking domain. Web design experts within the project conceived its design and structure to promote the project outcomes to the relevant target groups.

Figure 3: shows the main landing page of ORCA's website

Basic facts: The ORCA website is available at https://orca-project.eu. MARTEL Media, which is MARTEL's department specialized in communication services, created the web site and will maintain it throughout the whole duration of the project, with active collaboration from all project's partners. The web site is based on WordPress (http://wordpress.org/), one of the most popular open source web Content Management System (CMS) and it is integrated to a powerful stats engine provided by the hosting company.

Technical aspects: The web site is hosted by Hostpoint (https://www.hostpoint.ch), the largest Swiss web hosting company and offering 24/7 support and disaster recovery. As early mentioned the web site is based on WordPress, which uses PHP to generate HTML code, pages are styled with CSS3 and stored into a MySQL database. The entire code of the website adheres to the standards of accessibility defined by the World Wide Web Consortium (https://www.w3.org/).

Design aspects: The design of the web site is strongly brand-oriented to consolidate the image of the project. The rest of the dissemination material produced within the project and for the interaction with social networks will use the site as term of reference, in order to have a consistent communication and an easy-to-recognise image/brand. To support multimodal access of the website, the website adopts responsive design principles aimed at providing an optimal viewing experience: the interface adapts the layout to the viewing environment by using fluid, proportion-based grids. The homepage banners are flexible and dynamic, so that they can be updated to highlight relevant information or sections according to the communication and marketing needs of the project.
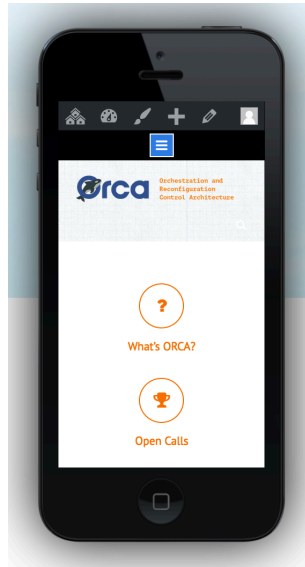
Figure 4: The ORCA website on smartphone. Responsive design

4.2.1 Website Contents and Functionalities

The ORCA website includes Web 2.0 features accessible through smartphones and tablets, and optimised for search engines. A Twitter and LinkedIn accounts have been created in order to boost the dissemination and communication activities. The website, as originally defined, contains the following sections:

ABOUT ORCA, including basic information about the project within the sub-sections:

- **The Project**: providing a high-level introduction to ORCA;
- **Overall objectives**: describing the objectives of ORCA and the approach to achieve them;
- **Consortium:** presenting the participants to the project;
- **Resources:** this is a key section of the website. This will provide different documents related to the work on ORCA (All items will be posted in PDF format available to download):
- **Publications:** presenting scientific and industrial publications realized in the project;
- **Deliverables**: listing all the public accessible deliverables produced by ORCA;
- **Open Calls**: presenting the Open Calls and providing links to live-demos and videos demonstrating the outcomes of ORCA;
- **Related links:** listing links of initiatives connected to the project.

NEWS: This section is built as a blog to publish news related to the ORCA project activities and results, or to project related topics. Most of the news entries are spread through our Twitter/LinkedIn channels to increase their visibility and their promotion. In the News section ORCA will publish also the events related to the project with basic information about them and the involvement of ORCA will be made available. Finally, in the News section, users can subscribe to the quarterly ORCA newsletter.

CONTACT, visitors can send their questions or comments through a secure contact form to the project coordinator.

On the Home page and the side bar area we show a widget with the latest tweets of our account and the links to follow us in Twitter, LinkedIn.

4.2.2 Update process

The website will be maintained and enriched by MARTEL according to the project's course of action,

ongoing project's activities and ensuring the collection of relevant material and information from all partners. Via the bi-weekly conference calls and the project's meetings, MARTEL will poll for new outcomes, events and material that the project should disseminate online. Accordingly, it will coordinate the publication on the web site and on the connected social media tools in a dynamic and proactive way, also according to related events and initiatives in the FIRE community. This process may result in adding new sections to the web site.

4.2.3 Intranet

To facilitate the partner collaboration, IMEC set-up – within the first month of the project in line with the DoW timeline - a private on-line workspace dedicated to the project management, including reporting and non-public information. The intranet is accessible at https://myminds.be/. The ORCA intranet has been created as part of the IMEC intranet MyMinds and is designed to be the main interface of the project towards the consortium and will assist the communication between project partners. The ORCA workspace is available only for registered users and is hosted and maintained by IMEC. This private area provides different tools to facilitate the project management as the files repository, calendars, discussion area and a dedicated wiki. The ORCA private workspace will play an important role as the main internal repository for the project's Consortium. The structure of the private space is flexible and dynamic and is adapted to each step of the project. As a collaborative on-line tool all partners can add information, discuss different subjects, create new spaces according to the evolution of the project and follow up the advancement of the Work Plan as well as the deliverables.

The private space is also the collaborative tool for reporting. Each partner is invited to complete his quarterly, dissemination and expenditure report directly through a dedicated space that will be develop on the wiki of MyMinds. Work package leaders have also a dedicated space for each Work package to communicate and store useful information for the concerned persons involved.
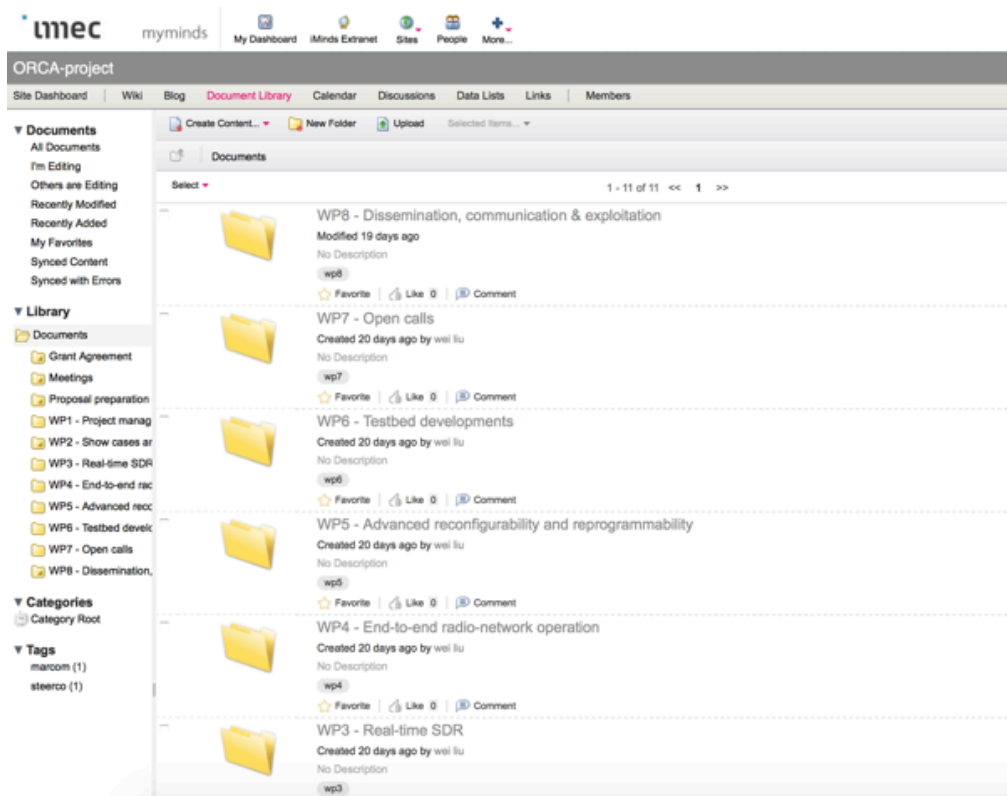

Figure 5: ORCA Intranet provided by IMEC

4.3 Social Media

The social media activity has been concentrated on Twitter and LinkedIn as the most appropriate networks for ORCA. These social medias are a powerful tool to disseminate the most relevant information about the project reaching specific audiences. A twitter account (@ORCA_project_) was set up at the beginning of the project (M1) at the same time as for the LinkedIn group (https://www.linkedin.com/groups/8589461). A YouTube account will be established to allow the distribution of the demos, training and e-learning videos produced throughout the project. During the first steps of the project the activity on both social networks is quite low as expected, but we are actively tweeting, re-tweeting and posting in order to build and grow a community around the project. We foresee an increased activity once the first outputs of the project will be available and promoted. Also participation to the EuCNC Conference and other upcoming events shall contribute to raise awareness and increase participation to the social media channels.
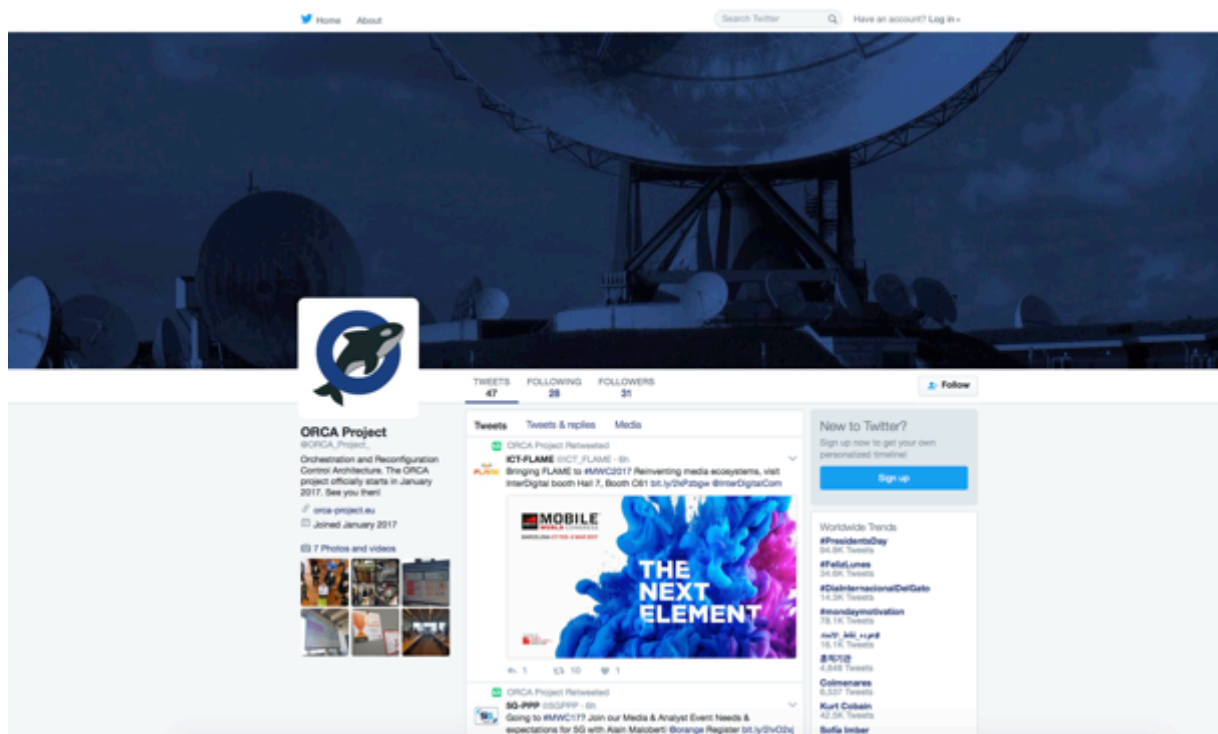

Figure 6: ORCA Twitter Account

4.4 Newsletter

As anticipated earlier in this document, the first newsletter will be released at the end of April. The tool identified to support the distribution to the subscribers is mailchimp (http://mailchimp.com). The planned content will include a short presentation news item about the project's work and planned activities, a news corner including planned events' participation, an introduction to the planned ORCA Inception workshop (joint panel) in Oulu, and mention the upcoming ORCA's Open Calls (See Annex 1).

4.5 Project Leaflet

While the project will privilege electronic communications, motivated by a better scalability (ease-of-update) and respecting the environment, off-the-shelf flyers and other printed material will be used as well. In this context, a project flyer has been produced and in case will be updated at different stages of the project including the Open Calls details, once defined. It was designed for mass circulation at fairs, conferences and workshops. A roll-up (2 meters high and 85 centimetres wide) will be designed according to the project style. The dimensions of these roll-ups can be adjusted, if required, and they can be used for displays at press conferences, workshops and similar events. In addition, a refreshed version will be created in the second year and a different project roll-up might be created to be displayed during specific type of events.
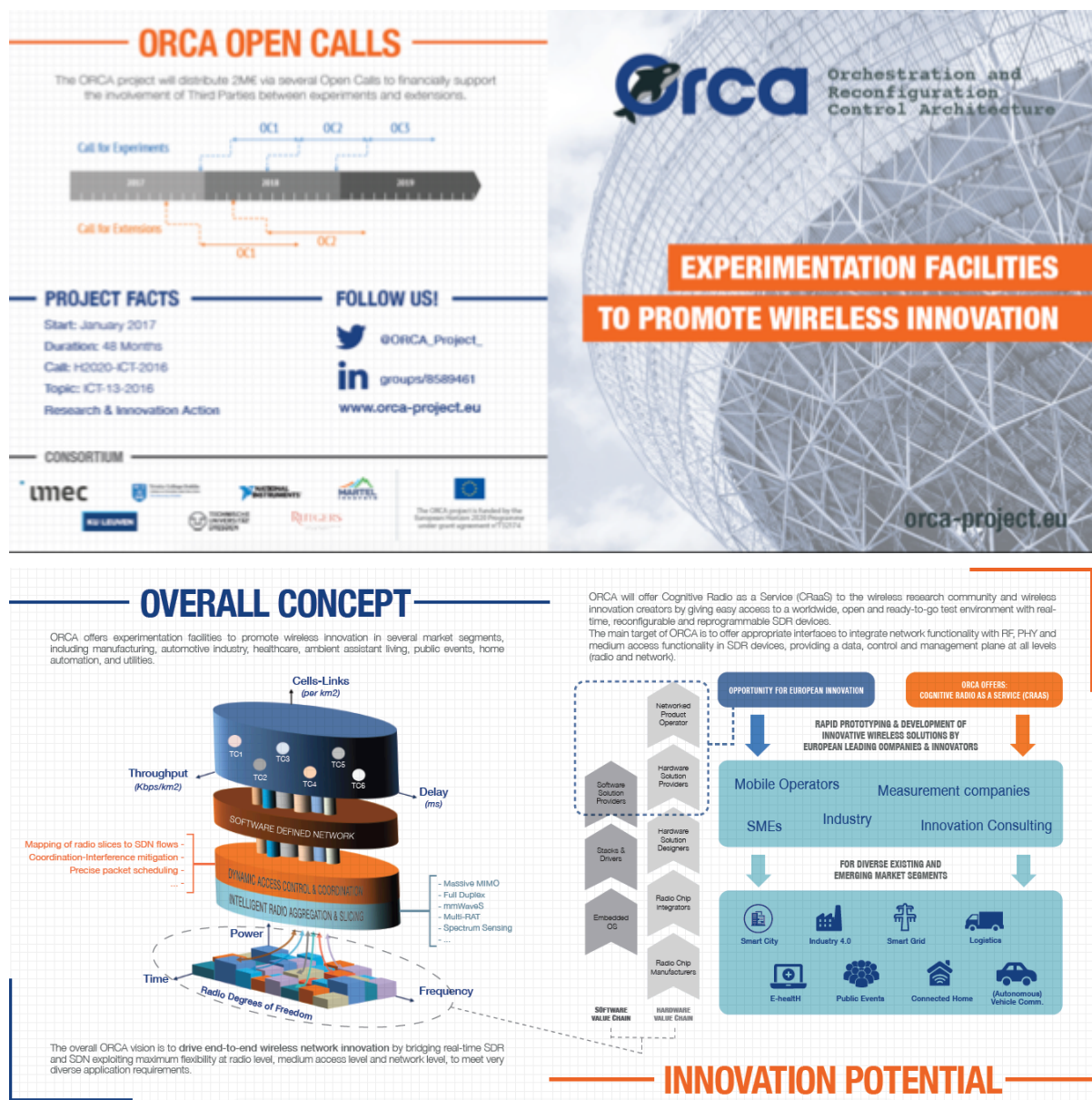

Figure 7: ORCA Flyer Front and Back Cover

4.6 Workshops & Conferences

- Joint Panel at EuCNC 2017 "Emerging trends for 5G experimental environments".

At the time of writing this document ORCA is working to organize a joint panel (as inception workshop) in cooperation with 5GinFIRE and softFIRE Projects, at EuCNC 2017 in Oulu, Finland (12-15 June 2017). The joint panel Emerging trends for 5G experimental environments shall focus on the following: The trend for 5G future networks is clearly dominated by softwarization at all levels, starting from Software Defined Radio (SDR) including Dynamic Spectrum Sharing (DSS), Software Defined Networking (SDN), Network Function Virtualisation (NFV) up to a software defined holistic environment for technical and business innovation integrating networking, computing and storage resources into one programmable and unified infrastructure. ORCA's project coordinator, Dr Ingrid Moerman would be representing ORCA's project focusing her intervention on the project's research and expected outcomes. On the radio access network segment new wireless innovations are emerging, responding to extreme requirements, (e.g. for ultra-low latency, ultra-high throughput and ultra-high reliability) as well as diverse communication needs. In order to meet at the same time diverging QoS requirements over wireless networks, control mechanisms are being introduced that allow the configuration and deployment of optimised network slices combining radio innovations with the SDN paradigm. The panel aims at promoting the development of the ORCA project, the event will be broadly advertised via all our communication channels to the FIRE players, but also to the 5G-PPP ecosystem and the overall R&D&I community working on wireless networking. From this panel we expect important feedback to be collected and retro-fed into the project activities for refinement and improvement of the work and in parallel to gather a community of potential participants to the ORCA Open Calls.

The event's promotion has started in mid April 2017, in cooperation with 5GinFIRE and softFIRE projects, through the publication of the news on ORCA's website, on the first ORCA newsletter and through a dedicated Twitter campaign. Further promotion will be developed all through May and early June 2017 to assure high visibility and participation to the joint panel at the EuCNC.

Live tweets from the event, photo and video coverage will document the activity and support further community engagement.

- Joint Booth at EuCNC 2017

At the time of writing this document ORCA received the acceptance for the joint booth (in cooperation with eWINE and WiSHFUL projects) at the EuCNC 2017. The booth presence will give the opportunity to introduce the project, network and present ORCA upcoming Open Calls. The booth will be broadly advertised through ORCA website and social channels to promote visits and networking. The stand will be animated by ORCA's partners supported by the communication materials: the roll-up (currently under development) and the project's flyer. Live tweets from the booth and the photo coverage will document the activity and support the community engagement.

5 PLAN OF ACTIVITIES M5-M24 (MAY 2017- DEC 2018)

This section provides an initial outline of planned activities for the dissemination of the project results and engagement of stakeholders for the remaining periods of the project (M5-M24). While a detailed plan at this point in time is not yet available, activities will embrace additional formats beyond the ones described in Section 3. In particular, the project will host five Open Calls to stimulate the uptake and adoption of ORCA technology and will liaise with relevant standardization bodies building on the project outcomes.

- **Scientific dissemination:** The purpose is to ensure that scientific achievements and experimental findings of the project will be known and exploited by the larger research community in FIRE/FIRE+ and beyond in all related scientific domains. ORCA will carry out knowledge transfer activities in order to inform both the scientific and industrial communities, as well as the various identified target stakeholders, of advances marked by the ORCA activity. This work will be carried out through conference papers, peer-reviewed articles, whitepapers, webinars, videos and demonstrators. Some conferences that will be targeted include the NetFutures Conference, EuCNC (European Conference on Networks and Communications), WiNTECH (ACM International Workshop on Wireless Network Testbeds, Experimental Evaluation and Characterization, held every year with ACM Mobicom), CoNEXT (International Conference on emerging Networking EXperiments and Technologies), IEEE WCNC (IEEE Wireless Communications and Networking Conference), ICACCI (International Conference on Advances in Computing, Communications and Informatics), EWSN (European Conference on Wireless Sensor Networks), IPSN (ACM/IEEE Conference on Information Processing in Sensor Networks). Relevant journals for publishing ORCA results are: IEEE Communication Magazine, IEEE Transactions on Computers, IEEE Transactions on Vehicular Technology, and IEEE Transactions on Mobile Computing, IEEE Network, and Telecommunications Policy.

- **Input to standardization:** ORCA is uniquely situated to make contributions to regulation and standardization. The partners involved have established good working relations with spectrum regulators through several years of related work. The planned work will provide in-depth insights into the needs of a broad range of wireless network development needs, allowing partners in the ORCA project to interface with standardization bodies, regulation bodies, technology forums, and other industry special interest groups in order to cover the full range of activities performed during the project.

5.1 Workshops and Conferences

The project events will facilitate awareness rising of the project achievements, networking, engagement with the industry and stakeholders and the creation of innovation partnerships for the project in ICT and FIRE+. The project will implement the following major events:

ORCA will organize dedicated workshops targeting primarily individuals and small enterprises; medium to large size enterprises, and academic researchers.

- An **inception workshop** will take place at around M06, co-located with EuCNC2017, and will focus on presenting the ORCA project and its planned work to collect feedback from the different target audiences on their expectations and requirements for experimentation. Different types of feedback from the various audiences are expected: demands from individuals and small enterprises will be largely driven from product innovation and domain specific applications, while on the other hand, academic researchers will rather focus on longer-term research problems for more intelligent management and control of cognitive radio networks. This will drive the internal developments for the software platforms and experimentation tools, and be reflected in (1) the high-level specifications and requirements

- for the ORCA software platforms and experimentation tools, and (2) the showcases that will be implemented by the ORCA partners to promote the capabilities of the ORCA infrastructure and software platforms.
- **Two engagement workshop(s)** and hands-on tutorials will be organized in order to ensure engagement of a large number of stakeholders into the adoption and deployment of the ORCA concepts, technologies and platform(s). Timing of these events will be synchronized with the planned launch of the Open Calls, indicatively a couple of months before the opening of the first and second wave of calls (see the Open Calls timeline in Figure 8) and with major conferences and events to co-locate with such as Globecom, EuCNC, EWSN, NIWeek Conference. Tentatively the First Engagement / Hands-on Workshop will be collocated with CrownCom, at M09, in Lisbon 20-22 September 2017. This will allow the creation of an informed audience of potential third party participants, but also contribute to the broad dissemination of project results (initial intermediary and final) to foster uptake and increase exploitation opportunities on a large scale. These workshops will typically involve ORCA partners as main presenters (demos will also be organized especially in order to provide details on the latest technical progress of the project), but will also aim at inviting a couple of selected experts, including members of the ORCA Advisory Board and dedicate a good portion of the event to an interactive session giving the opportunity to the participants to play an active role in round table discussions guided by the ORCA leaders.
- **A final assessment workshop** will take place, towards the end of the project, at around M34, and will be dedicated to present and showcase the most successful experiments, applications, services and products tested and/or originated within the context of the ORCA project to the broad audience and overall FIRE+ community. This will contribute to demonstrate the value of the work done within the context of the project for all European ICT innovators, especially in related initiatives such as the 5G PPP; and to increase visibility about the FIRE+ initiative and its offering in both the European and international R&D scene. These workshops will be possibly co-located with other major related events and will be broadly advertised via all project's communication channels to guaranteed broad participation.

The impact of these project events will be further amplified as the researchers, business leaders and policy makers attending will be encouraged to serve as advocates, "ambassadors" and spokespeople to spread awareness about ORCA project and related Open Calls in their respective research and business communities.

Event Name	Date, Place	Type of Audience	Approx size of Audience	Activity run	Partner
Inception Workshop Joint Panel with 5GINFIRE and SOFTFIRE: "Emerging trends for 5G experimental environments"	EuCNC, Oulu Finland, 12-15 June	Researchers, Policy Makers, Industry	30	Project and Open Calls Overview	IMEC, MARTEL, NI

IEEE ICC 2017	Paris, 21-25 May	Researchers, Industry	1000	Demo	NI, TUD
Joint Booth with eWINE and WISHFUL projects	EuCNC, Oulu Finland, 12-15 June	Researchers, Policy Makers, Industry	1000	Demo	IMEC, MARTEL, NI
5G Summit Dresden	Dresden Germany, 19.09.2017	Industry, Researcher	500	Demo	TUD, NI
First Engagement / Hands-on Workshop CrownCom	20-22 September 2017, Lisbon	Researchers, Industry	30	Joint ORCA, eWINE, WiSHFUL tutorial. ORCA demo, and Open Calls announcement	IMEC, TCD, KUL
Second Engagement / Hands-on Workshop	M15	Researchers, Industry	30	Present project results	TBD
Final Assessment Workshop	M34	Researchers,	30	Present and showcase the most successful experiments, applications, services and products tested and/or originated within the context of the ORCA	TBD

Table 2: Planned ORCA's Workshops

5.2 Presentations or Talks

We will participate to both online and physical selected events as a way to increase awareness of ORCA's work, outcomes and Open Calls. The main objective is to ensure participation to the most relevant ones in order to better inform potential newcomers and engage all relevant stakeholders to the ORCA technologies, with specific focus on small and medium sized players. ORCA will ensure its presence with technical papers, presentations, demonstrations, and/or talks (e.g. panels) at relevant international conferences, workshops, technical events, industrial forums (see list of events below,

scientific dissemination) and cooperation with key European (and possibly international) stakeholders. Moreover, ORCA will participate in joint FIRE+ workshops/sessions, which include for instance the FIRE Forum, the annual editions of the Net Futures and the European Conference on Networks and Communication, EuCNC, and ensure FIRE+ presentations and exhibition booths at major event, including the ICT 2017 event, the annual edition of the Mobile World Congress and events organised by then ETSI RRS. This task will also consider attendance to selected market driven events, exhibitions and fair trades as relevant to the work done in ORCA, organised for instance by the ETSI RRS. ORCA will take any valuable opportunity to contribute to the project dissemination giving presentations, talks, teaching activities, demos and training in third parties' conferences, workshops, and relevant scientific, industrial and EC-driven events. Each participation will be reported and given visibility through the online ORCA's communication channels: website, newsletter, Twitter and Linkedin accounts. The below table shows a pre-selection of events to be attended in 2017.

Event Name	Date, Place	Type of Audience	Approx size of Audience	Activity run	Partner
QED Conference on 5G	31 January 2017, Brussels	Policy Makers, Researchers, Industry	50	Presentation	KUL
IEEE Symposia on New Frontiers in Dyspan Spectrum Access Networks	6-9 March 2017, Baltimore, (US)	Policy Makers, Researchers, Industry	50	Demonstration	KUL
FEC1	14-16 March Ghent (Belgium)	Researchers, Industry	100	Flyers Distribution	IMEC, MARTEL
IMEC Technology Forum	16-17 May Antwerp (Belgium)	Researchers, Industry	2000	Demonstration of initial results	IMEC
ICC	21-25 May, Paris (France)	Scientific community, Industry, policy makers	1,000	Demonstration	NI, KUL, TUD
EWSN	17-19 May Dresden (Germany)	Scientific community, Industry	150	ORCA Demonstration	IMEC
IoT Week	6-9 June 2017, Geneva,	Scientific community, Industry, Civil	100	Flyers Distribution	MARTEL

	(Switzerland)	Society			
EuCNC	12-15 June	Researchers, Policy Makers, Industry `	400	Joint booth with eWINE and WiSHFUL projects, "Emerging trends for 5G experimental environments" ORCA paper submitted	IMEC, TUD, TCD, MARTEL, KUL
ns-3 workshop	13-14 June	Researchers, Industry	50	Flyers Distribution	NI
Digital Innovation Networks Forum	27 June 2017, Brussels	Scientific community, Industry, Policy Makers	100	Invited Presentation	MARTEL, IMEC
Net Futures 2017	28-29 June 2017	Scientific community, Industry, Policy Makers	100	Flyers Distribution	MARTEL, IMEC
CrownCom	20-22 September 2017, Lisbon	Scientific Community, Researchers, Industry	100	Joint ORCA, eWINE, WiSHFUL tutorial. ORCA demo, and Open Calls announcement	KUL, IMEC
IEEE Globecom	4-8 Dec, 2017 Singapore	Scientific community, Industry, Civil Society	100	5 papers submitted	TCD, KUL

Table 3: External Events

5.3 Open Calls

ORCA project will launch five Open Calls: three Open Calls for Experiments and two Open Calls for Extensions.

Through the Open Calls for Experiments ORCA wants to promote the uptake of state-of-the-art SDR solutions in the early design phase of innovative wireless solutions, while through the Open Calls for Extensions Third Parties will be involved for extending ORCA SDR platforms with missing functionalities indentified by the consortium.

The two Open Calls for Extensions will happen early enough in the project, so that the Open Calls for experiments can still benefit from the added functionalities.
All Open Calls will be organized on a 6-monthly base. The timeline is shown in figure 8.
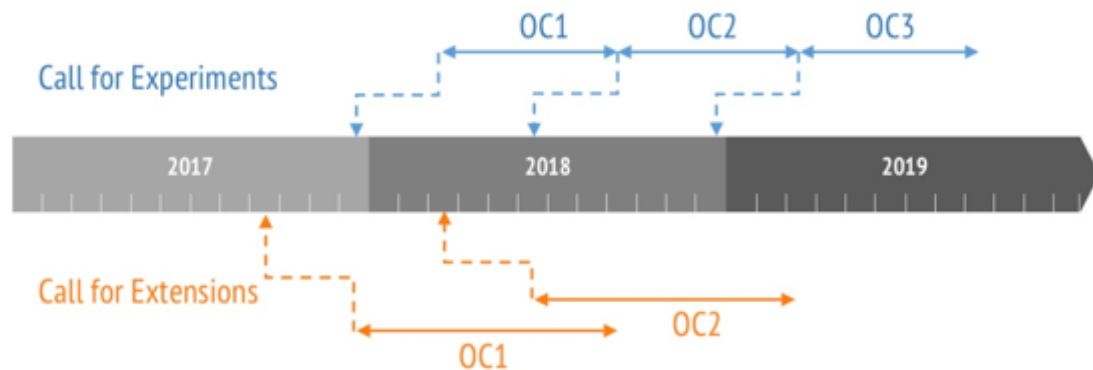
Figure 8: ORCA Open Calls timeline

The ORCA Open Calls will be broadly advertised:

- Publication of the Open Call to ORCA website;
- Publication of the Open call to all relevant FIRE web sites and project web sites, such as: www.ict-fire.eu;
- Dissemination through ORCA social channels, partners and community social channels;
- Dissemination through FIRE mailing list;
- Flyer to be distributed online and offline;
- A dissemination kit (visual/copy/link) will be distributed to major community websites to further multiply the visibility;
- ORCA will also organize two dedicated workshops in M10 and M15 to introduce the Open Calls to the research community: academics, fresh graduates, SMEs, wireless networking professionals, developers;
- Focused presentations will be given at conferences and third parties workshops to promote the Open Calls opportunity.

5.4 Journals and Conference Publications

The table below presents the list of publications planned for the first year of the project.

Publication title/topic	Submission to	Leading Partner
"Adaptive In-band Full-Duplex Collision Detection for Balancing Sensing and Collision Costs", B. Reynders, T. Vermeulen, F. Rosas, S. Pollin,	EuCNC Conference	KUL
"Prototyping of Real-Time 5G Software Defined Networks"	ns-3 workshop	NI
"A Study on the Physical Layer Performance of GFDM for High Throughput Wireless Communication"	Eusipco2017	TUD
"Wireless Technology Recognition based on RSSI Distribution at Sub-Nyquist Sampling Rate for Constrained Devices"	IEEE Access	IMEC
"WiSCoP - Wireless Sensor Communication Prototyping Platform"	EWSN2017, the International Conference on Embedded Wireless Systems and Networks	IMEC
"Time Agnostic MAC on reconfigurable Zigbee transceiver"	IEEE Access	IMEC
"Sense and Abort: a Real-Time In-Band Full Duplex Collision Detection Network" Vermeulen T., Pollin S.	The 23rd Annual International Conference on Mobile Computing and Networking (MOBICOM)	KUL

Table 4: Planned Publications M1-M12

5.5 Synergies with related projects and initiatives

ORCA will be actively reaching the target stakeholders to generate interest and demand for the ORCA testbeds and tool, create potential synergies and collaboration opportunities both within the FIRE+ ecosystem and within related initiatives such as the 5G PPP and provide support for the promotion of the Open Calls for extensions (first one in Q4 year 1) and the Open Calls for experiments (first one in Q1 Year 2). Objectives of cooperation:

- Foster connections with other communities that would be difficult to reach otherwise;
- Create long-term research collaboration;
- Increase ORCA project visibility;
- Maximize ORCA project impact;

- Share knowledge on ORCA's related topics;
- Share experience on technical challenges encountered;
- Networking;
- Support and enhance participation to the ORCA's technology research.

ORCA will also foster liaisons at international level with relevant projects and initiatives as appropriate in relation to international contact that various ORCA partners have established to similar initiatives in US, China, Brazil, Japan, China and South Korea. This will be done by closely coordinating activities also with on going FIRE+ projects actively involved in international cooperation.

6 IMPACT ASSESSMENT

By implementing the ORCA's Dissemination Plan we expect to communicate relevant outcomes to each of the target groups, as well as to attract their interest and generate engagement that will influence the overall impact of the project. To assess the impact of ORCA, the Dissemination Plan includes appropriate metrics that can be categorised in:

- Quantitative indicators such as Key Performance Indicators (KPIs) and online metrics; and
- Qualitative indicators such as a proactive community, press coverage and long-term influence.

These types of indicators are detailed in the following sections.

6.1 Quantitative Indicators

The Dissemination and Communication Plan includes relevant Key Performance Indicators (KPIs), as described in the DoA, geared to measure its progress as detailed in the table below.

Measure	Indicators	Target number	Source & methodology
Brochure	N. of brochures (updated once a year) distributed (by the end of the project)	>1500	Distribution via participation to and organization of dedicated events. Electronic distribution via the project web site.
Project Website	N. of unique visitors to the website (average per year)	>2000	News, Publications, Videos, Newsletter, Technical blogs
Social networks	N. of followers in LinkedIn, Twitter, YouTube (average new followers per year)	>100	Keeping ORCA profiles on such networks active via regular posting and monitoring
Newsletter	N of subscribers (by the end of the project)	>200	Recording of subscribers to the electronic newsletter
Publications	N of peer-reviewed publications in journals, conferences and workshops	>4 per year	Articles and papers presented and published in high-quality venues
Webinars	N. of webinars N. of participants	1-2 per year 15 participants per webinar	Advertisement of offered webinars via project website and social media channel
Inception, Engagement and Final Assessment Workshops	Average number of participants per workshop	At least 30 participants per workshop	Attendance proof, presented material, photos, animation of social media channels, events reports

| Videos | N. of videos published on ORCA Youtube channel and average number of views | At least 5 videos and 300 views per video | Introduction, informative and educational videos to support awareness creation and stakeholders engagement |
| Standardisation | No of contributions to standardizations fora | At least 2 per year | Attendance proof, presented material |

Table 5: Dissemination and Communication Plan's Quantitative Indicators

6.2 Qualitative indicators

Additionally, there are other positive results that cannot be easily measured since they cannot be quantified. Thus, in order to better measure the overall impact of the dissemination plan we will use the following qualitative indicators:

- **Proactive online community.** Social networks dissemination efforts will ensure an interesting outcome in terms of discussions, feedback and content sharing and engagement.

- **Press/media coverage**. Distribution of press releases and publication of articles are geared to achieve press/media coverage about the project.

- **Long-term influence**. Sometimes the impact takes longer than just an immediate reaction. Therefore, it is expected that the "seed" scattered at the beginning will be "harvested" quite later. This will be considered when monitoring the impact of the project.

7 CONCLUSIONS

This document presents the ORCA dissemination and promotion plan and describes a number of key activities that the project's partners are focusing on, and will follow up in the next months and for the whole project's duration, in order to guarantee broad visibility of the project's work and results in the FIRE+ domain and beyond so as to engage target stakeholders and produce relevant and durable impact.

From the very beginning of the project, the ORCA partners have already been active in several ways and pursued various promotional activities, including:

- o Creation of the ORCA project website, including as internal communication and information exchange platform.

- o Set up of the ORCA Twitter account and LinkedIn Group.

- o Contribution to the FIRE and NGI community in the form of information about upcoming events, organised workshops/sessions and available material.

- o Diffusion of ORCA and overall FIRE and 5G related news via the project's communication channels, as well as the various partners' individual social communication means.

- o Planned participation at various events, starting from the EuCNC 2017 Conference.

- o Creation of a slide-based presentation of ORCA, as well as an introductory project's flyer and poster that will be released at project month 4.

The work of WP8 will continue to be intensive in the upcoming months as several efforts are planned in order to support the broad and effective promotion of various ORCA driven activities including the ORCA inception workshop planned to take place in M6 and the launch of the first wave of Open Call for Extensions in M9.

APPENDIX A

1st ORCA Newsletter- April 2017