



# 5-Alive

## 5G: A Leadership Vision for Europe

### D1.1 Communication Report

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#### Abstract

*This document includes report on activities performed within the 5-Alive WP1 – Communication and Public Awareness, which includes establishment of a communication hub, creation of public messages about the European 5G, and design and creation of needed promotion material.*

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## Executive Summary

This document includes report on activities performed within the 5-Alive WP1 – Communication and Public Awareness, presenting its following three main activities:

- Establishment of a communication hub,
- Public messages about the European 5G, and
- Design and creation of marketing material.

The 5G communication hub has been established as planned and is fully operational, so that it can be used by projects of the 1<sup>st</sup> 5G PPP phase, in particular the Euro-5g project. The communication hub includes the 5G website, the NetWorld2020 ETP website, the European Future Internet Portal, a number of collaborative mailing lists and repositories. Also, a first contact point of the 5G PPP has been provided by establishment of the hub.

Furthermore, the public messages created and disseminated by the project significantly helped to widely promote the 5G PPP and attract a large number of consortiums to participate in the first call for project proposals by the 5G PPP.

Finally, a number of printed materials and a series of promotional videos have been designed, to support the 5-Alive project activities in promoting the 5G PPP.

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# 1 INTRODUCTION

This document includes report on activities performed within the 5-Alive Work Package 1 – WP1 “Communication and Public Awareness”. The WP1 consists of the following three main activities:

- Establishment of a communication hub, which includes a number of websites, mailing lists, repositories, etc. established and maintained, to support the 5G PPP programme and the overall European 5G Initiative,
- Creation and dissemination of public messages about the European 5G, and
- Design and creation of marketing material.

The communication hub is described in Chapter 2, where all its elements and their structures are described. This chapter also includes statistics from the supported websites.

Chapter 3 summarises scope of the main public messages created and distributed, including summary of the considered topics in the messages. The complete contents of the messages can be found on the 5G PPP website (<https://5g-ppp.eu/>). In this chapter, the main events where the prepared messages have been presented are listed, whereas a complete list of events, where 5-Alive represented the European 5G, is provided in the 5-Alive deliverable D2.2.

Printed promotion material and promotional videos, created by the 5-Alive project are presented in Chapter 4.

Brief conclusions on the 5-Alive WP1 activities are presented in the conclusions (Chapter 5).

## 2 COMMUNICATION HUB

The communication hub of the European 5G Initiative, which includes 5G PPP and 5G Infrastructure Association, has been established by the 5-Alive project through maintenance and further development of relevant websites, continuous maintenance of several mailing lists serving the 5G community at large, as well as provided repositories and other relevant tools to the community.

### 2.1 Supported websites

The 5-Alive project supported the following two community websites:

- The 5G Infrastructure Public Private Partnership: <http://5g-ppp.eu/> and
- NetWorld2020 European Technology Platform: <http://networld2020.eu/>.

Furthermore, the project also supported maintenance of the European Future Internet Portal at <http://www.future-internet.eu/> and established own webpages under the 5G PPP website.

#### 2.1.1 5G PPP

Structure of the 5G PPP website is presented in Figure 1.

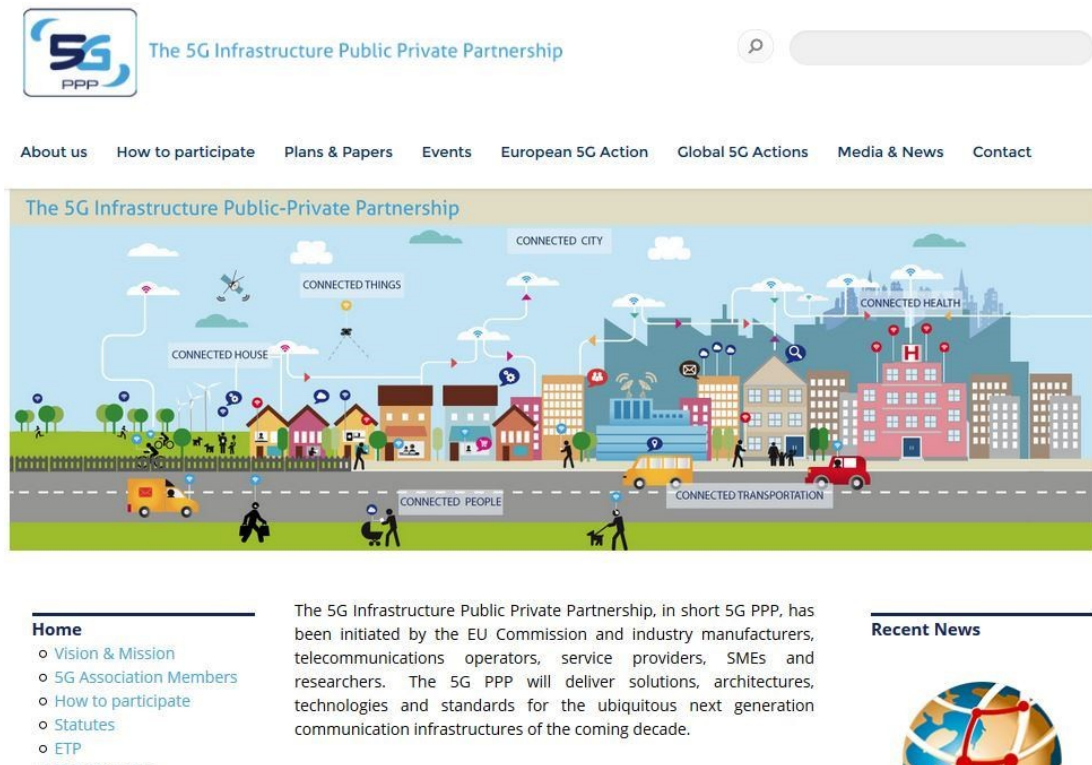


Figure 1: 5G Infrastructure Public Private Partnership website structure



Under the menu item 'About us' you find general information about the 5G PPP such as the Phase 1 projects, the history, the vision and mission and the association members. The menu item 'How to participate' gives information on how to join the PPP, propose a project, or receive Networkworld 2020 support. The section 'Plans & Papers' contains coverage plans, visions and roadmaps, white papers, programme participation hints, and the recommended consortium agreement. In the 'Events' section we can find upcoming and past events. Under the menu item 'European 5G Action' there is information about 5G research in Horizon 2020, FP7, National Initiatives and other European Initiatives. The 'Global 5G Actions' site informs about the involvement of association members in global 5G actions. The section 'Media & News' contains news, 5G PPP press releases, the 5G PPP video channel (see example in Figure 2), a call of the IEEE Magazine on 5G Ran, and the 5G PPP logo.

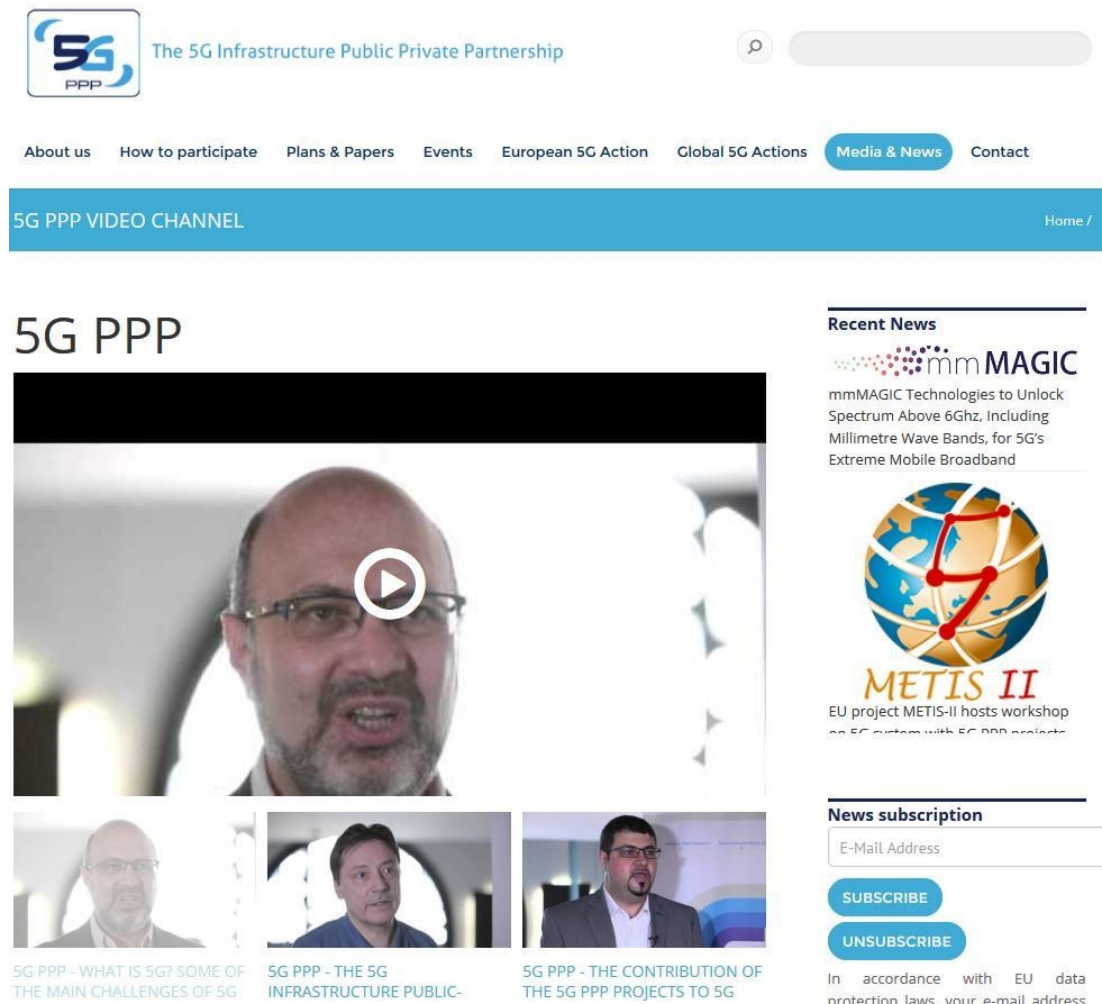


Figure 2: 5G PPP Video Channel

Furthermore, there are the mandatory webpages with contacts, the imprint, and the disclaimer.

## 2.1.2 NetWorld2020

The NetWorld2020 website is regularly updated with information and news of interest for the NetWorld2020 members (Figure 3).

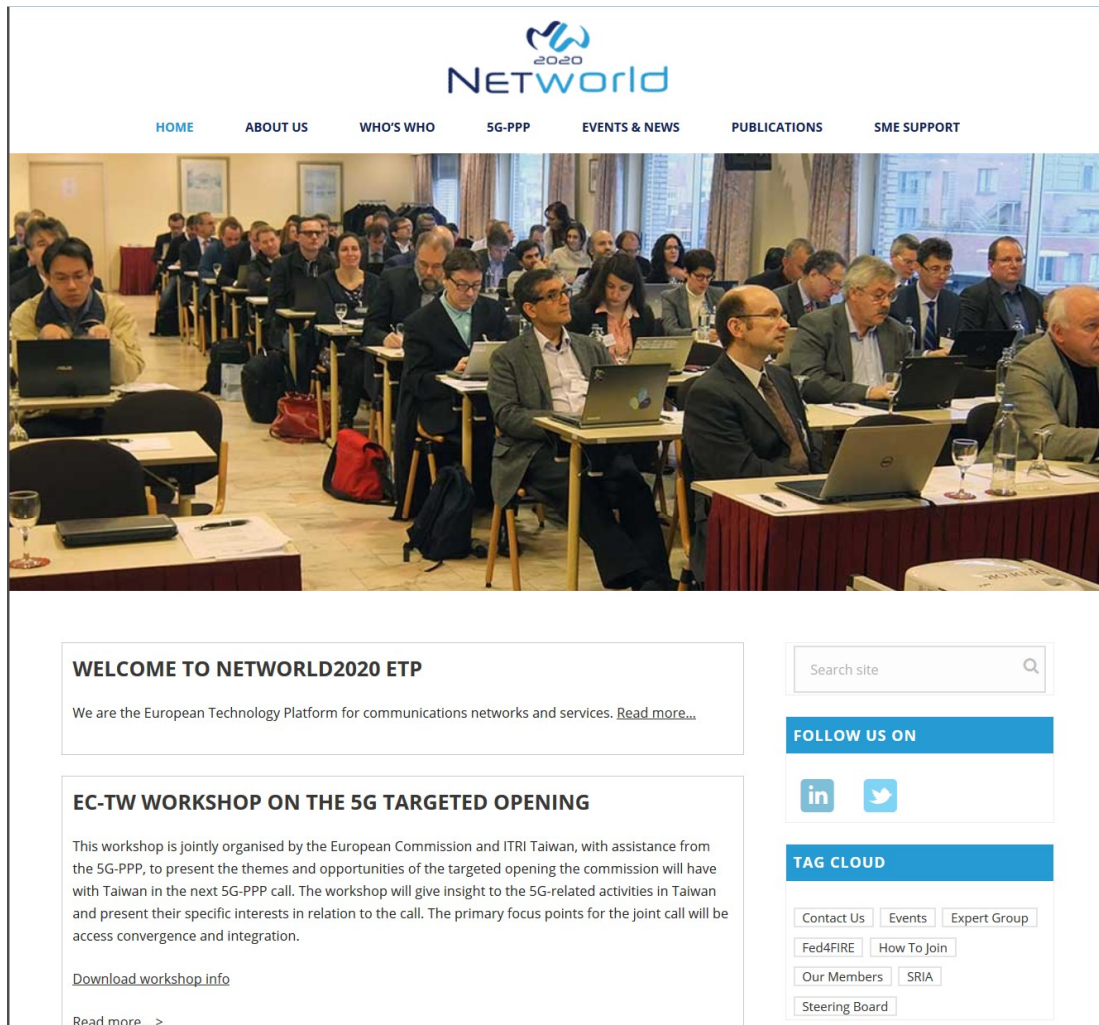


Figure 3: NetWorld2020 website

The structure of the webpage consists of seven navigation buttons. Most of the navigation buttons have sub folders.

Folders under About Us:

- Overview
- Vision&Mission
- Our Members
- How to join
- Governance Structure.

Who's who folders:

- an overview of Who is who, e.g. General Assembly, Steering Board, Executive Group, and Working Groups,

- Steering Board including SB members
- Working Groups.

Under 5G-PPP is the Relationship to 5G-PPP described.

Events & News folders:

- NetWorld2020 Events
- Sector Events
- Past Events
- News

Publications folders:

- SRIA and Whitepapers
- Brochures & Flyers
- Videos
- Position Papers and Contributions.

The last folder is dedicated for a special support for SMEs.

### 2.1.3 Web Statistics

Table 1 presents statistics for the two main websites, 5G PPP and NetWorld2020, supported by the 5-Alive projects during its life time.

**Table 1: Statistics from main websites supported by 5-Alive**

Parameter	5G PPP	NetWorld2020
Visits	48,811	10,655
Average visit duration	3 minutes, 13 seconds	2 minutes, 56 seconds
Average actions (page views, downloads, outlinks and internal site searches) per visit	2.9	3.1
Page views	128,714	27,890
Unique page views	100,858	21,683
Total searches on the website	1.101	111
Unique keywords	641	87
Downloads	5,745	3,684
Unique downloads	5,286	3,345

## 2.2 Mailing Lists

5-Alive project maintained a large number of mailing lists, established in the following domains:

- 5g-ppp-eu – for the 5G PPP community purposes,
- Networld2020.eu – for the NetWorld2020 ETP community, and
- Future-internet.eu – overall European Future Internet Community/Portal.

There are around 120 mailing lists under the 5G domain, which were also established by previous initiatives and projects as well as by the Euro-5g project (5G PPP Support Action for the 1<sup>st</sup> phase), which have been maintained by the 5-Alive project during its life time. The mailing lists have been used to support various discussion groups within the European 5G Initiative, the 5G PPP, the 5G Infrastructure Association to support their constituency and particular working groups established within these organizations. The mailing lists have been also created to support establishment of the 5G PPP communication hub and its contact e-mail addresses. Furthermore, several mailing lists have been created to support 1<sup>st</sup> phase 5G projects in their preparation work before formal start of the projects and for inter-project communication on several issues, such as the 5G PPP collaboration agreement. Finally, several mailing lists have been established to support work of different groups writing white papers on requirements form vertical sectors on the 5G infrastructure.

Around 25 mailing lists have been maintained to support work and community interactions within the NetWorld2020 ETP, which included e.g. the Expert Group mailing list and further discussion groups.

The global future internet mailing list, with more than 5,000 subscribers, has been maintained together with other sub-lists from the same domain, to reach a broader European community and inform them about major 5G related activities, when needed.

## 2.3 Further Collaboration Tools

Beside the mailing lists, the 5-Alive project established secured BSCW based document repositories for various groups within the 5G Initiative and the NetWorld2020 ETP, as required by members of these initiatives and their working groups as well as by inter-sectorial discussions on verticals for 5G, etc.

Furthermore, a tool for running electronic voting and elections where votes can be submitted via the web browser has been developed. The request for developing this tool has been made by the NetWorld2020 Steering Board. The main objective has been to enable participation in the elections of the NetWorld2020 SB to the more than 1,000 members without the need to travel to the Annual General Assembly or to find a trustworthy proxy. The tool development has been completed in August 2015. The tool will be officially used for the first time for electing the Vice-Chairs for the 5G PPP Steering Board and Technology Board in October 2015.

### 3 PUBLIC MESSAGES

The 5-Alive CSA supported the preparation of public messages from 5G PPP, which were used in documents and public presentations. A major 5G Infrastructure Association publication is the 5G Vision White Paper (<http://5g-ppp.eu/wp-content/uploads/2015/02/5G-Vision-Brochure-v1.pdf>), which was published in a press event at Mobile World Congress 2015 in Barcelona on March 3, 2015. Commissioner Oettinger and CTOs from nine global companies (Alcatel-Lucent, DoCoMo, Ericsson, Nokia, Huawei, Intel, Orange, Samsung, SES) attended the press event and provided views on 5G.

The Vision Paper is describing the 5G PPP view on

- key drivers for 5G,
- 5G disruptive capabilities,
- design principles,
- key enabling technologies,
- spectrum considerations and
- 5G timeline

5G PPP is getting much attention globally. Therefore, 5G PPP is receiving invitations to present the joint research effort in Horizon 2020 in many international meetings. The 5-Alive CSA has supported several of these presentations in order to place 5G PPP as a major player on the global 5G research landscape. Messages were developed and publicly presented on

- 5G PPP overview, organisation and governance,
- 5G PPP vision based on the Vision Paper,
- international cooperation, the ongoing major activities and established MoUs between the 5G Infrastructure Association and international counterparts,
- time plan of 5G,
- 5G PPP Phase 1 research project portfolio,
- cooperation with vertical sector and
- exploitation of results

The following international meetings and invited presentations were supported by 5-Alive:

- IEEE WCNC 2015, New Orleans, USA, March 9 – 12, 2015, organisation and chairing of a panel session on 5G vision and requirements.
- NGMN Industry Conference & Exhibition 2015, March 24 and 25, 2015, Frankfurt, Germany.
- Argela Workshop SDN, NFV, Cloud RAN & other enabling technologies on the path towards 5G, March 31, 2015, Istanbul, Turkey.
- Building America's 5G Ecosystem, April 14, 2015, Light Reading / Heavy Reading event, New York, USA.
- WWRF meeting #34, April 21 – 23, 2015, Santa Clara, California, USA.
- EU Commission, 5G PPP Project workshop, May 27, 2015.

- Wireless Russia Forum: 4G, 5G & Beyond. May 20 and 21, 2015, Moscow, Russia.
- IMT-2020 Promotion Group General Meeting (Summit) 2015, Beijing, China, May 28 and 29, 2015.
- IWPC – The International Wireless Industry Consortium. June 15 to 17, 2015, Bonn, Germany.
- EuCNC 2015, June 30 to July 2, 2015, Paris, France, Session “Introducing the 5G-Infrastructure PPP – Launching the 5G Initiative”.
- ITU GSC-19, Global Standards Coordination 19 meeting, July 15 and 16, 2015, Geneva, Switzerland.

In second half of 2016 external events were supported by the Euro-5G CSA.



## 4 PROMOTION MATERIAL

In the production of promotional material, 5-Alive carried on the work already started in the NetSoc project (<http://networld2020.eu/netsoc/>).

The promotional material produced by the 5-Alive project looked at explaining the objectives of the different 5G related projects in a consistent manner, showing the achievements, and the potential achievements, for 5G from the 5G PPP as a whole.

The 5-Alive project produced a series of printed material and videos, in line with the design of the previous material already produced within the NetSoc project.

### 4.1 Printed Material

The promotion material in printed form<sup>1</sup> was prepared for two main occasions, the Mobile World Congress 2015 (MWC 2015) in Barcelona, 2-5 March 2015', and ICT event 2015, in Lisbon on 20-22 October 2015. Of course, the prepared material was used for promotional activities at other occasions as well.

#### 4.1.1 Promotional material for the MWC 2015 Event

In the scope of preparation of promotional material for the MWC 2015 event, the following has been designed:

- Journalistic presentation of the 5G Vision – 5G the express train to your smart interconnected world – as flyer;
- Consolidated information on results from European 5G research presented at the MWC 2015 at various stands – as flyer;
- Brochure with the full 5G Vision text;
- Flyer with the 5G Vision Executive Summary.

The journalistic presentation of the 5G Vision (Figure 4) was targeting a broader less technically aware audience and was prepared in cooperation with professional journalists working in the ICT area for long time. It was design as a standard three-fold flyer.

The 5-Alive project produced a 6 pages flyer (Figure 5), summarizing the results from European 5G research presented at the MWC 2015. In this brochure, the following European 5G Research projects explained their demos shown at the various stands and at the EC stand:

- MIWEBA Project;
- CREW/EVARILLOS Project;
- 5GNOW Project;
- METIS Project;
- iJOIN Project.

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<sup>1</sup> The printed material created by 5-Alive is available on the website at <https://5g-ppp.eu/5-alive/>.





In addition to the above material, an eight-page brochure with the full 5G Vision text and a four-page A3 flyer with the 5G Vision Executive Summary were produced (Figure 6 and Figure 7).



Figure 6: Vision brochure and 5G flyer at MWC



Figure 7: Cover page of Vision publication and its executive summary

### 4.1.2 Promotional material for the ICT2015 Event

The 5-Alive project released a 28-page brochure providing a public description of all 5G PPP Phase I projects (Figure 8 and Figure 9), so as to advertise the work being initiated within the 5G PPP. The brochure includes:

- Introduction on the 5G PPP as a programme;
- 1 editorial page from the 5G IA, signed by Werner Mohr, Chairman of the Board of the 5G Infrastructure Association;
- 1 editorial page from the European Commission, signed by Mario Campolargo, Director, Net Futures European Commission Directorate General for Communications Networks, Content and Technology
- 1 page description per project (19 projects)

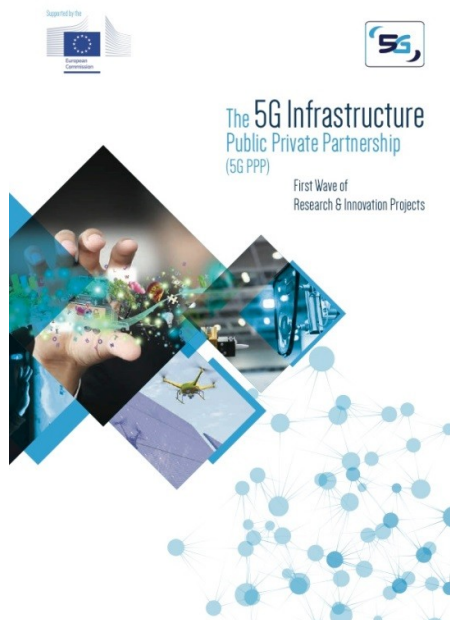


Figure 8: 5G phase I projects brochure – cover page

CONTENTS		PROJECTS	
INTRODUCTION	4	5G-ENSURE	8
EDITORIAL	6	5G-EXCHANGE (5GEX)	9
FOREWORD	7	5G NORMA	10
		5G-XHAUL	11
		CHARISMA	12
		COGNET	13
		COHERENT	14
		EURO-5G	15
		FANTASTIC-5G	16
		FLEX5GWARE	17
		METIS-II	18
		MMAGIC	19
		SELFNET	20
		SESAME	21
		SONATA	22
		SPEED-5G	23
		SUPERFLUIDITY	24
		VIRTUWIND	25
		XHAUL	26

Figure 9: 5G phase I projects brochure – Table of content

In addition to the above material, the 5-Alive project, in collaboration with the Euro-5G project, prepared postcard for announcing the workshop “5G: Serving Vertical industries”, which will be held on November 9th, 2015 in Brussels (Figure 10).



**Figure 10: Announcement of the workshop “5G: Serving Vertical industries”**

## 4.2 Videos

During the EuCNC event (Paris, 30 June - 2 July 2015), the 5-Alive project interviewed 16 persons from the EC, the 5G IA, and from the 5G PPP Phase I projects, to present and advertise the various projects, their vision of 5G, their objectives and the importance of the 5G PPP as a whole.

As results, a set of interviews were published in the 5G PPP YouTube channel: <https://www.youtube.com/channel/UCY8mTTwrDoMI35vGkiKq1Eg> and are also relayed on a dedicated page on the 5G PPP web site at <https://5g-ppp.eu/video/> (Figure 11).



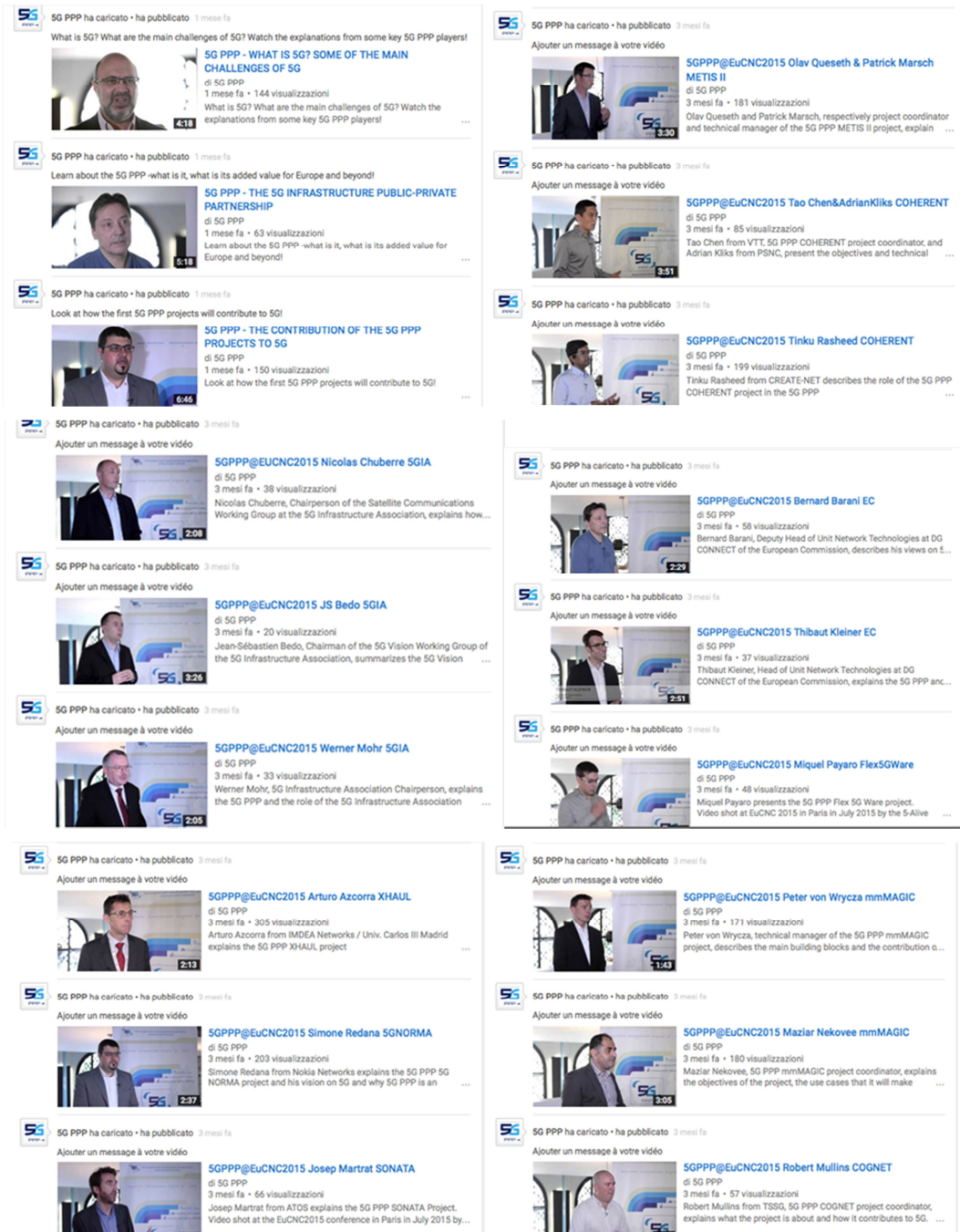


Figure 11: Published video interviews from EUCNC 2015

Besides the interview of individuals representing the 5G PPP Call 1 projects, three additional videos were also edited and released, in order to provide the audience with a more comprehensible and less technical approach on the three following topics:

- What is 5G? What are the main challenges of 5G?
- What is the 5G PPP?
- What is the general contribution of the 5G PPP Call 1 projects to 5G?

As of end of October 2015, all the videos have been broadly viewed, with a record 327 views for the XHAUL video. Most of the projects videos have been viewed tens or hundreds of times, although it could be assumed that most of the viewers are part of the projects. More interestingly, the “What is 5G?” video has been viewed 175 times, which is probably the sign that an external audience looking at understanding 5G also viewed this specific video. The general “5G PPP” video, which was released before the launch of the 5G PPP video channel, was incorporated also into the channel and ended up being viewed 86 times since then.

## 5 CONCLUSIONS

The 5G communication hub has been established as planned and is fully operational, so that it can be used by projects of the 1<sup>st</sup> 5G PPP phase, in particular the Euro-5g project (1<sup>st</sup> phase 5G PPP support action project). The communication hub includes the 5G website, the NetWorld2020 ETP website, and European Future Internet Portal. Furthermore, the communication hub maintains a number of collaborative mailing lists and repositories as well as ensures a first contact point of the 5G PPP for a wide public. The communication hub also maintains communication among various entities within the European 5G.

The public messages created and disseminated by the project significantly helped to widely promote the 5G PPP and attract a large number of consortiums to participate in the first call for project proposals by the 5G PPP. Moreover, the project established an efficient way to identify and establish the needed public messages, which will be continued during the 1<sup>st</sup> 5G PPP phase by the Euro-5g project.

Finally, a number of printed materials and a series of promotional videos have been designed, to support the 5-Alive project activities in disseminating values and opportunities of the 5G PPP.