# D9.2B Dissemination and communication plan

Document Summary Information

<table>
<thead>
<tr>
<th>Grant Agreement No</th>
<th>Acronym</th>
<th>5G-SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>856691</td>
<td>5G-SOLUTIONS</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Full Title</th>
<th>5G Solutions for European Citizens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date</td>
<td>01/06/2019</td>
</tr>
<tr>
<td>Duration</td>
<td>42 months</td>
</tr>
<tr>
<td>Project URL</td>
<td><a href="https://www.5gsolutionsproject.eu/">https://www.5gsolutionsproject.eu/</a></td>
</tr>
<tr>
<td>Deliverable</td>
<td>D9.2B</td>
</tr>
<tr>
<td>Work Package</td>
<td>WP9</td>
</tr>
<tr>
<td>Contractual due date</td>
<td>M20</td>
</tr>
<tr>
<td>Actual submission date</td>
<td></td>
</tr>
<tr>
<td>Dissemination Level</td>
<td>Revision M29</td>
</tr>
<tr>
<td>Nature</td>
<td>Report</td>
</tr>
<tr>
<td>Dissemination Level</td>
<td>Public</td>
</tr>
<tr>
<td>Lead Beneficiary</td>
<td>CTTC</td>
</tr>
<tr>
<td>Responsible Author</td>
<td>David Pubill (CTTC)</td>
</tr>
<tr>
<td>Contributions from</td>
<td>D. Pubill, S. Kahvazadeh, A. Antonopoulos, Ch. Verikoukis (CTTC)</td>
</tr>
</tbody>
</table>

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Grant Agreement No 856691.
Revision history (including peer reviewing & quality control)

<table>
<thead>
<tr>
<th>Version</th>
<th>Issue Date</th>
<th>% Complete(^1)</th>
<th>Changes</th>
<th>Contributor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>15/12/2020</td>
<td>0%</td>
<td>Initial Deliverable Structure</td>
<td>D. Pubill (CTTC)</td>
</tr>
<tr>
<td>V2</td>
<td>29/12/2020</td>
<td>50%</td>
<td>Initial input for all sections</td>
<td>A. Antonopoulos, S. Kahvazadeh (CTTC)</td>
</tr>
<tr>
<td>V3</td>
<td>14/01/2021</td>
<td>80%</td>
<td>Update all sections</td>
<td>S. Kahvazadeh, D. Pubill (CTTC)</td>
</tr>
<tr>
<td>V4</td>
<td>21/01/2021</td>
<td>100%</td>
<td>Final revision of all sections</td>
<td>D. Pubill, Ch. Verikoukis (CTTC)</td>
</tr>
<tr>
<td>V5</td>
<td>26/01/2021</td>
<td>100%</td>
<td>Internal review of document</td>
<td>A-M Bosneag (LMI)</td>
</tr>
<tr>
<td>V6</td>
<td>28/01/2021</td>
<td>100%</td>
<td>Final version</td>
<td>D. Pubill, S. Kahvazadeh, Ch. Verikoukis (CTTC)</td>
</tr>
<tr>
<td>V7</td>
<td>22/10/2021</td>
<td>100%</td>
<td>Revision after the Project Officer comments</td>
<td>D. Pubill, S. Kahvazadeh (CTTC)</td>
</tr>
<tr>
<td>V8</td>
<td>28/10/2021</td>
<td>100%</td>
<td>Internal review of document</td>
<td>Albert Torres (IRIS), A-M Bosneag (LMI), Christos Skoufis (EBOS)</td>
</tr>
<tr>
<td>V9</td>
<td>28/10/2021</td>
<td>100%</td>
<td>Final version</td>
<td>D. Pubill, S. Kahvazadeh (CTTC)</td>
</tr>
</tbody>
</table>

Disclaimer

The content of the publication herein is the sole responsibility of the publishers and it does not necessarily represent the views expressed by the European Commission or its services.

While the information contained in the documents is believed to be accurate, the authors(s) or any other participant in the 5G Solutions consortium make no warranty of any kind with regard to this material including, but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Neither the 5G Solutions Consortium nor any of its members, their officers, employees or agents shall be responsible or liable in negligence or otherwise howsoever in respect of any inaccuracy or omission herein.

Without derogating from the generality of the foregoing neither the 5G Solutions Consortium nor any of its members, their officers, employees or agents shall be liable for any direct or indirect or consequential loss or damage caused by or arising from any information advice or inaccuracy or omission herein.

Copyright message

© 5G Solutions Consortium, 2019-2022. This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has

\(^1\) According to 5G Solutions Quality Assurance Process:
1 month after the Task started: Deliverable outline and structure
3 months before Deliverable’s Due Date: 50% should be complete
2 months before Deliverable’s Due Date: 80% should be complete
1 months before Deliverable’s Due Date: close to 100%. At this stage it sent for review by 2 peer reviewers
Submission month: All required changes by Peer Reviewers have been applied, and goes for final review by the Quality Manager, before submitted
be made through appropriate citation, quotation or both. Reproduction is authorised provided the source is acknowledged.

Table of Contents

1 Executive Summary .................................................................................................................. 6
2 Introduction .............................................................................................................................. 7
  2.1 Mapping Projects’ Outputs ................................................................................................. 8
  2.2 Deliverable Overview and Report Structure ....................................................................... 10
3 Dissemination Activities ......................................................................................................... 11
  3.1 Target Audience and Objectives ....................................................................................... 11
  3.2 Dissemination Channels .................................................................................................... 12
  3.3 Dissemination of publications and white papers ............................................................... 12
  3.4 Joint dissemination actions and events ............................................................................. 14
4 Communication Activities ...................................................................................................... 25
  4.1 Target Audience and Objectives ....................................................................................... 25
  4.2 Communication Channels ................................................................................................ 26
  4.3 Newsletters ....................................................................................................................... 32
  4.4 Factsheet .......................................................................................................................... 35
  4.5 Project meetings ............................................................................................................... 37
  4.6 Involvement of SMEs Report ........................................................................................... 40
  4.7 Community Building Report ............................................................................................ 41
5 Dissemination and Communication Phases ........................................................................... 42
6 Metrics and Targets .................................................................................................................. 44
7 Conclusions and Next Actions ................................................................................................ 45

List of Figures

Figure 1: Workshop organized. ................................................................................................... 15
Figure 2: CTTC training............................................................................................................. 16
Figure 3: IEEE MeditCom Conference .................................................................................... 16
Figure 4: IEEE MeditCom Special Session ............................................................................. 16
Figure 5: Program of the Special Session .............................................................................. 17
Figure 6: ICT Conference and Exhibition .............................................................................. 17
Figure 7: ICT Conference and Exhibition with EBOS representing 5G-SOLUTIONS ................ 18
Figure 8: CTTC Demos demonstration .................................................................................... 19
Figure 9: TIM Demo ................................................................................................................ 19
Figure 10: LMI Demo .............................................................................................................. 20
Figure 11: LiveU TM Broadcast International Press Release .................................................. 22
Figure 12: Success Stories - LiveU .......................................................................................... 23
Figure 13: 5G-SOLUTIONS Logo .......................................................................................... 26
Figure 14: 5G-SOLUTIONS Website ....................................................................................... 27
D9.2B Dissemination and communication plan

Figure 15: 5G-SOLUTIONS Poster ................................................................. 28
Figure 16: List of public deliverables in the project’s website ........................................... 29
Figure 17: website audience overview ........................................................................... 30
Figure 18: Location overview ....................................................................................... 30
Figure 19: Mobile overview ......................................................................................... 31
Figure 20: 5G-SOLUTIONS LinkedIn communication channel ........................................ 31
Figure 21: 5G-SOLUTIONS Twitter communication channel ........................................... 32
Figure 22: Newsletter issue #1. December 2019............................................................... 33
Figure 23: Newsletter issue #2. June 2020..................................................................... 33
Figure 24: Newsletter issue #3. December 2020............................................................... 34
Figure 25: Newsletter issue #4. June 2021..................................................................... 34
Figure 26: 5G-SOLUTIONS factsheet............................................................................. 36
Figure 27: Kick-off 5G-SOLUTIONS meeting .................................................................. 37
Figure 28: 2nd Plenary project meeting......................................................................... 38
Figure 29: 3rd Plenary project meeting .......................................................................... 38
Figure 30: 4th Plenary project meeting .......................................................................... 39
Figure 31: 6th Plenary project meeting .......................................................................... 39

List of Tables
Table 1: Adherence to 5G-SOLUTIONS GA Deliverable & Tasks Descriptions..................8
Table 2: Target audience groups for dissemination ........................................................ 11
Table 3: Dissemination channels .................................................................................. 12
Table 4: Other events .................................................................................................... 20
Table 5: Target audience groups for communication ..................................................... 25
Table 6: Communication objectives .............................................................................. 26
Table 7: 5G-SOLUTIONS Dissemination and Communication (D&C) ................................... 42
Table 8: Dissemination and communication outcome, metrics and targets ..................... 44

Glossary of terms and abbreviations used

<table>
<thead>
<tr>
<th>Abbreviation / Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3GPP</td>
<td>3rd Generation Partnership Project</td>
</tr>
<tr>
<td>5G-IA</td>
<td>5G Infrastructure Association</td>
</tr>
<tr>
<td>5G-PPP</td>
<td>5G Infrastructure Public Private Partnership</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>EBU</td>
<td>European Broadcasting Union</td>
</tr>
<tr>
<td>ETSI</td>
<td>European Telecommunications Standards Institute</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EuCNC</td>
<td>European Conference on Networks and Communications</td>
</tr>
<tr>
<td>EVCA</td>
<td>European Private Equity and Venture Capital Association</td>
</tr>
<tr>
<td>ICC</td>
<td>International Conference on Communications</td>
</tr>
<tr>
<td>IETF</td>
<td>Internet Engineering Task Force</td>
</tr>
<tr>
<td>IoTSWC</td>
<td>Internet of Things Solutions World Congress</td>
</tr>
<tr>
<td>ITU-T</td>
<td>International Telecommunication Union - Telecommunication Sector</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
<tr>
<td>MWC</td>
<td>Mobile World Congress</td>
</tr>
<tr>
<td>NGMN</td>
<td>Next Generation Mobile Networks</td>
</tr>
<tr>
<td>ONF</td>
<td>Open Networking Foundation</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>RIA</td>
<td>Research and Innovation Action</td>
</tr>
<tr>
<td>SCEWC</td>
<td>Smart City Expo World Congress</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium-sized enterprises</td>
</tr>
<tr>
<td>SPARWC</td>
<td>Signal Processing Advances in Wireless Communications</td>
</tr>
<tr>
<td>WP</td>
<td>Work Package</td>
</tr>
</tbody>
</table>
1 Executive Summary

D9.2B is an interim report associated to the Task 9.1 – “Dissemination and Communication Activities” (led by CTTC), which implements the dissemination and communication of the project goals, software products, reports, results, achievements, and other outputs. In this sense, this deliverable shows the progress made during the first 20 months of the project and updated in month 29. The dissemination and communication plans for the 5G-SOLUTIONS project were defined in the initial D9.2A deliverable.

In D9.2A the target audiences were identified, ranging from public through scientific and academic communities up to specific 5G stakeholders and market actors. In addition, the dissemination and communication channels and actions were defined, while a thorough communication plan was developed, which incorporated innovative methods for sharing information with the public and interested stakeholders, in accordance with the dissemination strategy.

This deliverable shows the progress at this point of the project and sets the basis for the upcoming D9.2C final report, which will detail the dissemination and communication activities until the end of the project.
2 Introduction

5G-SOLUTIONS is a flagship ICT-19 RIA project that supports EC’s 5G policy by implementing the last phase (i.e., Phase 3b) of the 5G PPP roadmap. The project aims at proving and validating that 5G provides prominent industry verticals with ubiquitous access to a wide range of forward-looking services with significant improvement over 4G, thus bringing the 5G vision closer to realization. This will be achieved through conducting advanced field-trials of novel use cases, directly involving end-users across five significant industry vertical domains in five countries, i.e., Factories of the Future (Belgium, Ireland, and Norway), Smart Energy (Italy), Smart Cities (Ireland and Norway), Smart Ports (Norway) and Media & Entertainment (Greece and Norway). In particular, 5G-SOLUTIONS will provide:

a) Validation of more than 140 KPIs for around 20 innovative and heterogeneous use cases with 5G performance requirements and that are expected to have a high future commercialization potential. These use cases will be field trialed both separately and concurrently with real end-user actors through ICT-17’s 5G-EVE\(^2\) Italy and 5G-VINNI\(^3\) Norway/Greece facilities (with additional private 5G Amarisoft standalone nodes in Belgium, Ireland and Norway) thus validating their conformance to target 5G technological KPIs specified for each use case, as well as their business potential, ethical and social acceptance. The validation will be performed over 3 iterative phases corresponding to upgraded versions of ICT-17 facilities over 3GPP\(^4\) Rel.15, Rel. 16 and beyond.

b) Technological enablers for facilitating the execution of the field trials in an automated way, including: i) a unified cross-domain service orchestrator enabling multi-domain slicing and 5G service lifecycle automation, ii) an innovative smart KPI visualization system for real-time analysis, presentation, benchmarking and performance validation of reference 5G network KPIs against predefined target values, and iii) intent-based APIs for stimulating innovation and fostering the development, portability and provisioning of new innovative applications by SMEs.

c) Significant contribution to 5G standardization to several Standards Developing Organizations (SDOs) and open fora, such as 3GPP\(^5\), ETSI\(^6\), ITU-T\(^7\), IETF\(^8\), ONF\(^9\), NGMN\(^10\), EBU\(^11\), etc.

The technical contributions of 5G-SOLUTIONS are, without doubt, the main priority of the project. However, the dissemination of the developed ideas and the obtained results to a wide audience, ranging from the research community to non-scientific public, is critical for the overall success and the impact of the project on the society. WP9 aims at increasing the visibility of 5G-SOLUTIONS by coordinating the activities related to the dissemination of the results and the communication of the proposed solutions. To that end, a set of tools (website, LinkedIn, and Twitter social media channels) has been created to promote the 5G-SOLUTIONS solutions both to the expert and non-expert audience. This deliverable of WP9 presents the initial dissemination and communication plan and the progress until M29 of the 5G-SOLUTIONS project lifetime.

\(^2\) https://www.5g-eve.eu/
\(^3\) https://www.5g-vinni.eu/
\(^4\) https://en.wikipedia.org/wiki/3GPP
\(^5\) https://www.3gpp.org/
\(^6\) https://www.etsi.org/
\(^7\) https://www.itu.int/en/ITU-T/Pages/default.aspx
\(^8\) https://www.ietf.org/
\(^9\) https://www.opennetworking.org/
\(^10\) https://www.ngmn.org/home.html
\(^11\) https://www.ebu.ch
## 2.1 Mapping Projects’ Outputs

The purpose of this section, and more specific, Table 1 below, is to map 5G-SOLUTIONS Grant Agreement commitments, both within the formal Deliverable and Task description, against the project’s respective outputs and work performed.

**Table 1: Adherence to 5G-SOLUTIONS GA Deliverable & Tasks Descriptions**

<table>
<thead>
<tr>
<th><strong>5G-SOLUTIONS Task</strong></th>
<th><strong>Respective Document Chapter(s)</strong></th>
<th><strong>Justification</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement the dissemination of the project goals, software products, reports, results, achievements, and other outputs. The target audiences will be identified, ranging from general public through scientific and academic communities up to specific 5G stakeholders and market actors. The dissemination and communication channels and actions as defined in Section 2.2.1 will serve as a baseline to achieve the goals in this task.</td>
<td>Section 3, 4</td>
<td>The target audience for the dissemination and communication activities have been identified, along with the respective channels.</td>
</tr>
<tr>
<td><strong>Dissemination of publications and white papers:</strong> Along the project, the 5G-SOLUTIONS partners will be involved in the preparation and publication of articles in scientific journals, peer-reviewed conferences, and books. The approved publications will be available in the internal document repository of the consortium, and those with appropriate copyright permissions will be publicly available through the project’s website.</td>
<td>Section 3</td>
<td>D9.2B lists the publications and white papers during the first 18 months and D9.2C will include all the publications and white papers published in the context of 5G-SOLUTIONS</td>
</tr>
<tr>
<td><strong>Joint dissemination actions and events:</strong> The project’s intermediate results will also be presented in form of white papers, presentations and online demos in various conferences and industrial/commercial exhibitions (e.g. MWC, Global 5G events, ITS Congress, EuCNC) with the purpose of commercially exploiting 5G-SOLUTIONS results and identifying new partners for collaboration in the EU market. At the end of the project, the task leader will organize the final project workshop gathering both local and international participants. To further amplify the potential of the initiative, the following options will be considered: (i) joint organisation with other relevant 5G-PPP projects, (ii) co-hosting in the framework of other well-established events, (iii) organisation of a dialogue session with other</td>
<td>Section 3</td>
<td>D9.2B enumerates the dissemination actions carried out during the first 18 months of the project and D9.2C will include all the dissemination actions carried out.</td>
</tr>
</tbody>
</table>
### Communication media:
Ensure the creation and constant update of all web-based communication means, including the project’s website (from M1 by EBOS), as outlined in Section 2.2.1.2. Participants will also ensure visibility of the project activities through a number of traditional and electronic dissemination material edited electronically and sent out to a large pool of stakeholders (Table 2.5) on a quarterly basis. Implement the communication plan of the project and its associated activities and create a set of documents and tools, which can be shared with consortium partners in order to communicate the project’s goals and outcomes. Relevant activities include: (i) create and publish visual representations (infographics) of information, data or knowledge intended to present complex information quickly and clearly; (ii) provide effective support to dissemination and exploitation activities, whilst ensuring effective and appropriate communication towards various stakeholders, (iii) foster community building and realize impact on industry and research in Europe and worldwide, (iv) gather feedback from relevant stakeholders through networking activities, and (v) monitor and evaluate communication and dissemination activities.

### Development of the communication plan:
Development of the communication plan, which will incorporate innovative methods for sharing information with the public and interested stakeholders, in accordance with the dissemination strategy.

### Section 4
The website has been set up. D9.2B shows figures about the impact of the website. In addition, the dissemination material created in the framework of the project is shown. Future activities will be reported in D9.2C.

### Section 5
Definition of the dissemination and communication phases. The activities carried out are described throughout D9.2B and the complete list will be provided in D9.2C.

## 5G-SOLUTIONS Deliverable

**D9.2B: Dissemination and communication plan (Current deliverable M20)**

Interim report containing the dissemination and communication plans and activities implemented.
2.2 Deliverable Overview and Report Structure

The structure of the deliverable is as follows. First, in Section 3, we present the dissemination activities of the project. Then, Section 4 describes the communication activities. Section 5 provides details about the time plan of the dissemination and communication phases, while Section 6 lists the metrics of interest and the targets for these activities and the degree of meeting these target values until M29 of the project. Finally, Section 7 includes the conclusions and next actions for this Task.
3 Dissemination Activities

This section outlines how the project will establish and organise the dissemination actions to promote the project and the adoption of its outcomes beyond its lifetime.

3.1 Target Audience and Objectives

The general objectives of the joint 5G-SOLUTIONS dissemination strategy are to disclose project results that can be used by the target audience to progress their own work, i.e., to build upon the knowledge generated by 5G-SOLUTIONS, fertilising the advancement of technology, science, industry, and policy. 5G-SOLUTIONS has identified a number of target audiences, which are listed in Table 2. The specific joint dissemination activities are tailored to the needs and profile of the target audience for dissemination.

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Description</th>
<th>Dissemination Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academia</td>
<td>Institutions primarily for education and early research</td>
<td>Consideration of results in updated curricula, advanced courses, and new R&amp;D initiatives</td>
</tr>
<tr>
<td>Public R&amp;D</td>
<td>Institutions with innovation-oriented R&amp;D and technology transfer (e.g. EU Investment Bank, Start-Up Europe, EC Digital Innovation Hubs)</td>
<td>Adoption of results in technology transfer and new R&amp;D initiatives with industry</td>
</tr>
<tr>
<td>Industry R&amp;D / R&amp;I</td>
<td>Private companies that maintain R&amp;D groups for new products and services, e.g. telecom vendors, such as Ericsson, Nokia and vertical stakeholders</td>
<td>Adoption of results in product and service roadmaps and planning of new products, services, and future R&amp;D initiatives</td>
</tr>
<tr>
<td>Government</td>
<td>Governmental agencies mainly concerned with policy setting (e.g. Chamber of Commerce, Regional Development Units)</td>
<td>Consideration of results in policy development</td>
</tr>
<tr>
<td>IT experts from SMEs</td>
<td>Developers of new services and applications, typically for vertical industry requirements</td>
<td>Adoption of results for development and deployment of new 5G-enabled applications</td>
</tr>
<tr>
<td>Public/Private associations</td>
<td>Initiatives that leverage public and private resources and funds for joint undertakings (e.g. EIT Digital, European Private Equity and Venture Capital Association (EVCA))</td>
<td>Consideration of results in the planning of joint undertakings</td>
</tr>
</tbody>
</table>

3.2 Dissemination Channels

A major element for dissemination relates to the joint and coordinated participation in any relevant activities of the 5G-PPP12 and the 5G Infrastructure Association (5G-IA). 5G-SOLUTIONS contributes to the brochures and other material coordinated at 5G-PPP level, such as the “European 5G Annual Journal”13, the 5G-PPP projects brochure14 and other material including videos15, as requested by the 5G-IA and/or the coordinating support action of the 5G-PPP.

12 https://5g-ppp.eu/
14 Current edition available at https://5g-ppp.eu/docs/brochure/
15 Project videos at https://5g-ppp.eu/5g-ppp-phase-3-videos-now-available/
Furthermore, 5G-SOLUTIONS has identified channels for the dissemination of the project’s results to scientific, technology and industry communities. The specific activities will be tailored to the needs, clients and events that will be used for dissemination. More specifically, the target audience and the dissemination channels are being actively monitored and selected to achieve the highest possible impact. Table 3 provides an outline of the target audience and channels.

Table 3: Dissemination channels

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific journals</td>
<td></td>
</tr>
<tr>
<td>R&amp;D Conferences</td>
<td></td>
</tr>
<tr>
<td>Government, Industry R&amp;D, IT experts through</td>
<td>• EuCNC(^{16}) 2020-2022, Global-5G Europe 2020-2022, MWC 2020-2022. • CTTC, acting as the project’s Dissemination &amp; Communication Manager, will arrange a dedicated event for the project results, inviting chief R&amp;D and CIOs from relevant institutions in the sector. In addition, CTTC expects to arrange a 5G specific workshop with major telecom vendors and telecom associations in Europe to distribute the project’s results.</td>
</tr>
<tr>
<td>Industrial Exhibitions and Business Conferences</td>
<td></td>
</tr>
<tr>
<td>Industry R&amp;D, Universities through Online Media</td>
<td></td>
</tr>
</tbody>
</table>

3.3 Dissemination of publications and white papers

All the activities, publications, events, etc. listed in this deliverable are taken from a public excel file for the consortium where the partners are adding their dissemination and communication activities.

This section highlights published Articles and White Papers until M29 of 5G-SOLUTIONS project. The published Journals, Conferences and White Papers by consortium are as follows:

- CTTC published in **6 Journals** of IEEE:

\(^{16}\) [https://www.eucnc.eu/](https://www.eucnc.eu/)


- **CTTC** published 3 papers in conferences and 1 conference paper collaborating with Forthnet, Telecom Italia, LiveU, Telenor, A2T, IRIS, IBM on IEEE:
  2. G. Kollias, A. Antonopoulos, "*Joint Consideration of Content Popularity and Size in Device-to-Device Caching Scenarios*" IEEE ICC, 7-11 June 2020, Dublin, Ireland.

- **CRAT** published 3 conference papers on IEEE:

- **UOP** published 1 conference paper and 1 conference paper collaborating with LiveU and FNET as following:
3. Giannopoulos D., Papaioannou P, L. Ntzogani, Tranoris C., Denazis S., A holistic approach for 5G Network Slice Monitoring, 2021 IEEE International Mediterranean Conference on Communications and Networking (MeditCom) - Main Track, 7-10 September 2021, Athens, Greece

- IBM published 2 conferences collaborating with CTTC:
  1. "Ramy Mohamed, Sofiane Zemourri, Chrisots Verikoukis, Towards a Cloud-Native 5G Service Chaining for IoT and Video Analytics in Smart Campus, Conference on Cloud and Internet of Things (CIoT) (CIoT) 2021.

- LiveU published 1 Technical Articles/Policy Briefs:

3.4 Joint dissemination actions and events

This section summarizes actions and events so far:

The organized Events can be summarized as:

- ARES2T participated in 1 conference organization, 2 workshops, 1 industrial workshop events:

- ARES2T with collaboration of AppArt, Forthnet, and PIIU organized 1 workshop event:
  1. Infocom World "5G SOLUTIONS – A European 5G platform available to SME" - Speakers: Kostis Tzanettis, Ioannis Markopoulos, Yuri Chianese, Maurizio Cecchi, 2020 as illustrated in Figure 1: Workshop.
D9.2B Dissemination and communication plan

Figure 1: Workshop organized.

- ARES2T (organizer) with collaboration of PIU, TIM, ENEL and IREN participated in 2 workshop events:
  1. IoTthings Week, 5G SOLUTIONS, your business on 5G - Speakers: Yuri Chianese, Andrea di Giglio, Elena Vitelaru, Giovanni Coppola, Antonino Biondi, Maurizio Cecchi.
  2. IOTHINGS WORLD "5G SOLUTIONS Workshop" - Speakers: Yuri Chianese, Andrea di Giglio, Gianluca Serale, Maurizio Cecchi

- TNOR with collaboration of NTNU, and YARA organized 1 workshop events:

- TIM organized 3 industrial workshop events in the following international conferences:
  1. Design of Reliable Communication Networks (DRCN) 2020, 24-27 March 2020, Milan, Italy
    • Andrea Di Giglio (TIM), 5G: new industrial revolution or just better performance?
  2. Optical Network Design and Modelling (ONDM) 2020, 18-21 May, Castelldefels, Spain
    • Andrea Di Giglio (TIM), 5G: new industrial revolution or only higher bandwidth?
  3. Optical Network Design and Modelling (ONDM) 2021
    • Andrea Di Giglio (TIM), New generation networks: How will 5G change networks, our life, and our bank account?

- AppArt organized 1 special session as follows:
  1. Virtual Workshop of the 5GPPP Technology Board - presentation on Verticals’ KPI testing and validation by Kostis Tzanettis

- CTTC organized 1 Training course where LMI also delivered 2 training sessions on slicing in 5G, as well as Machine Learning-based solutions in 5G:
  1. The IEEE ComSoc Autumn School 2019 on Network Slicing and Data-Driven Communication technically sponsored by 5G-SOLUTIONS was organized in Castelldefels, Spain (see Figure 2: CTTC training).
CTTC organized 1 conference and with collaboration of TIM and TNOR 1 special session as follows:

1. IEEE international Mediterranean Conference on Communications and Networking 2021 (MeditCom2021) (see Figure 3).
2. 5G Solutions for Verticals and European Citizens, IEEE International Mediterranean Conference on Communications and Networking (MEDITCOM), September 2021, Athens, Greece (see Figure 4 and the program in Figure 5)
**Special Session 1 (Virtual)**

5G Solutions for Verticals and European Citizens  
Date/Time: Tuesday, Sept 7th, from 4:15 PM – 6:00 PM Athens time (UTC+3)  
Chair: Andrea Di Giglio (Telecom Italia, Italy); Sarang Kahvazadeh (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain); Håkon Lønsethagen (Telenor, Norway); David Pubill (CTTC, Spain); Anna Tzanakaki (National and Kapodistrian University of Athens, Greece)

1) **Performance Evaluation and Comparison between SA and NSA 5G Networks in Indoor Environment**  
Ramy Amer (Trinity College Dublin, Ireland); Soifane Zemouri (ID, IBM, Ireland); Christos Verikoukis (CTTC & UB, Spain)

2) **5G Vertical Application Enablers Implementation Challenges and Perspectives**  
Dimitrios Fragkos and Georgios Makropoulos (NCSR Demokritos, Greece); Panteleimon Sarantos (National Centre of Scientific Research, Greece); Harilaos Koumaras (NCSR Demokritos, Greece); Anastasios-Slavros Charismiadis (National and Kapodistrian University of Athens, Greece); Dimitris Tsolakis (Fogus Innovations and Services, Greece)

3) **Slicing enabled 5G experimentation platform for Robotics vertical industry**  
Suvendu Sudhakar Mhatre (Iquadrat Informatica, Spain); Renxi Qiu (Bedfordshire University, United Kingdom (Great Britain)); Kostas Ramantas (Iquadrat Informatica, Greece); Christos Verikoukis (CTTC & UB, Spain)

4) **Measuring 5G KPIs for the Media Vertical**  
Panagiotis Papaioannou, Dimitris Giannopoulos, Christos Tranoris and Spyros Denazis (University of Patras, Greece); Baruch Altmann and Ran Rahav (LiveU, Israel); Ioannis Markopoulos (FORTHNET, Greece)

5) **Business Value and Social Acceptance for the Validation of 5G Technology**  
Luigi Briguglio (CyberEthics Lab., Italy); Per Nesse (Telenor Research and Innovation, Norway); Andrea Di Giglio (Telecom Italia, Italy); Ioannis Markopoulos (FORTHNET, Greece); Carmela Occhipinti (CyberEthics Lab., Italy); Patrick Durkin (Intecom, Belgium)

6) **A KPI Visualization System for Use Case validation of the 5G network**  
Kostis Tzanettis (SApparit AE New Technologies Computer and Telecommunications, Greece)

---

- **EBOS sponsored 1 conference:**  
  1. 11th ICT Conference & Exhibition – Tech Revolution. EBOS sponsorship and participation (see Figure 6 and Figure 7).
D9.2B Dissemination and communication plan

2 White Papers were published:

- ILS in collaboration with TNOR and FNET published 1 white paper:
- FNET in collaboration with WIT and APPART published 1 paper:
  - Service performance measurement methods over 5G experimental networks, 5G-PPP TMV, 2021
- FNET in collaboration with LMI, TNOR, CTTC and TIM contributed to 1 white paper:

Demos and show casing are as follows:

- CTTC organized 4 demos as illustrated in Figure 8:
  - 5G-SOLUTIONS was presented in IoT Solutions World Congress (IoTSWC) 2019 in Barcelona, Spain.
  - 5G-SOLUTIONS was presented in Smart City Expo World Congress (SCEWC) 2019 in Barcelona, Spain.
  - Initial results on dynamic network slicing in the framework of the 5G-SOLUTIONS project was presented in the ETSI IoT Week 2019 in Sophia Antipolis, France.
  - 5G-SOLUTIONS was presented in the Researcher’s night 2019 organized by CosmoCaixa in Barcelona, Spain.
• TIM with collaboration of EBOS, CTTC, and FNET organized 1 demo in the European Conference on Networks and Communications (EUCNC) 2019 in Valencia, Spain as shown in Figure 9.

Figure 8: CTTC Demos demonstration

Figure 9: TIM Demo
LMI organized 2 demos in Ericsson Ireland Tech Day 2019 and 2020. Figure 10 shows LMI demo on Tech Day 2019. Tech Day 2020 was a virtual event with a high level of attendance from many Ericsson companies in different countries.

![Figure 10: LMI Demo](image)

- UoP with collaboration with LiveU and Nokia organized 1 demo virtually due to the COVID-19 pandemic:
  1. Providing Real-Time, High-Quality User and Machine Generated Content over a 5G Network, IEEE MEDITCOM 2021
- NURO did 1 showcasing in Hannover Messe 2020.

Other events where partners of the consortium have participated so far are shown in Table 4:

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Title</th>
<th>Partners</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop participation</td>
<td>Technical Committee workshop of 5G-PPP</td>
<td>TNOR, FNET</td>
<td>October 2019</td>
</tr>
<tr>
<td>Webcast</td>
<td>Discover Techniques and the End-to-End System of 5G Networks</td>
<td>NURO</td>
<td>March 2020</td>
</tr>
<tr>
<td>Webinar</td>
<td>Webinar On Verticals Onboarding, Testing and Monitoring In 5G-VINNI</td>
<td>NURO</td>
<td>March 2020</td>
</tr>
<tr>
<td>Panel</td>
<td>Industrial Panel DRCN 2020 - 5G: new industrial revolution or just better performance?</td>
<td>TIM /A2T</td>
<td>March 2020</td>
</tr>
<tr>
<td>Podcast</td>
<td>Investi.re platform. Podcast in economics, followed in Italy</td>
<td>TIM</td>
<td>November 2020</td>
</tr>
<tr>
<td>Speech &amp; Roundtable</td>
<td>Roundtable ITALIA 5G with GSMA, ANUTEI, ANIE, ANITEC-ASSINFORM</td>
<td>A2T</td>
<td>May 2020</td>
</tr>
<tr>
<td>Web TV</td>
<td>Euronext web TV: Launching Advanced 5G validation trials across multiple vertical industries</td>
<td>TIM</td>
<td>May 2021</td>
</tr>
<tr>
<td>Webinar</td>
<td>Organized by Cluster of Photonics Secpho: “5G para la industria 5.0”</td>
<td>IRIS</td>
<td>November 2020</td>
</tr>
<tr>
<td>Workshop participation</td>
<td>Virtual Workshop of the Tech Board</td>
<td>IRIS</td>
<td>December 2020</td>
</tr>
<tr>
<td>Webinar</td>
<td>Demystifying 5G in Manufacturing</td>
<td>ILS, TIM</td>
<td>September 2021</td>
</tr>
</tbody>
</table>
Due to the COVID-19 pandemic the number of face-to-face events has been reduced. However, virtual events brought in the advantage of a wider scope audience.

**Press Release and Fact Sheets** can be summarized as:

- **LiveU provides Press Releases as Success Stories as follows:**
  1. Multiple magazines articles (printed and online): TV Technology, Business Insider, etc. that can be found:
     - [https://www.tvbeurope.com/media-delivery/liveu-extends-collaboration-in-5g-test-projects](https://www.tvbeurope.com/media-delivery/liveu-extends-collaboration-in-5g-test-projects)
     - [https://www.tvtechnology.com/the-wire-blog/5g-hevc-eu](https://www.tvtechnology.com/the-wire-blog/5g-hevc-eu)
     - [https://www.panoramaaudiovisual.com/2020/02/04/liveu-participa-nuevos-proyectos-paneuropeos-5g/](https://www.panoramaaudiovisual.com/2020/02/04/liveu-participa-nuevos-proyectos-paneuropeos-5g/)
     - [https://www.broadcastbeat.com/liveu-collaborates-on-two-additional-pan-european-eu-5g-projects/](https://www.broadcastbeat.com/liveu-collaborates-on-two-additional-pan-european-eu-5g-projects/)
     - [https://www.4rfv.com/ARD713PMBDNE/601/liveu-collaborates-on-two-additional-paneuropean-eu-5g-projects.htm](https://www.4rfv.com/ARD713PMBDNE/601/liveu-collaborates-on-two-additional-paneuropean-eu-5g-projects.htm)

  2. TM Broadcast International, #80, that is illustrated in Figure 11 and can be found on:
     - [https://issuu.com/daromedia/docs/tmbroadcastmagazine80](https://issuu.com/daromedia/docs/tmbroadcastmagazine80)
3. MediaKWest #37 JUIN JUILLET 2020 can be seen in:
   - https://mediakwest.com/

4. New game-changing product launch (LU800), CEO statement and multiple PRs.
   - https://www.liveu.tv/products/field-units/lu800

5. Broadcasts Rencontre avec Baruch Altman, LiveU, à l’orée de la vague 5G can be seen in:
   - https://mediakwest.com/rencontre-avec-baruch-altman-liveu-a-loree-de-la-vague-5g/

6. 5G for media and entertainment: from theory to practical use cases in IABM Journal 3rd quarter 2020 #114 (The International Trade Association for the Broadcast & Media Industry) that can be found on:

7. TM Broadcast International, #86, Baruch Altman "what 5G means for media and entertainment" page 54 can be seen in:
   - https://issuu.com/daromedia/docs/tmbroadcastinternational86?fr=sOWE0YjM2ODg0OQ

8. LiveU, February 2020. News, Success Stories - LiveU collaborates in two additional pan-European EU 5G projects which is shown in Figure 12 and can be found in:
   - https://issuu.com/daromedia/docs/tmbroadcastinternational78?fr=sZjA1MTM2ODg0OQ
LiveU collaborates on two additional pan-european EU 5G projects

LiveU has increased its collaboration with leading European partners on 5G infrastructure Public Private Partnership (PPP) projects, testing and validating content contribution and media production use cases over advanced 5G Release 16 interfaces. The projects’ goals are to provide the broadcast community and other verticals with insights into 5G performance in real-world scenarios. The projects are funded by Horizon 2020.

LiveU is a technology and use case partner in 5G Tours and in 5G Solutions. Both projects test and analyze 5G performance KPIs, including media use cases related to LiveU 5G bonding technology. The core 5G technologies being validated include network slicing, New Radio (NR), low latency, edge/cloud computing, SDN/NFV, service orchestration and more, bringing the 5G vision closer to realization. As part of these tests, LiveU’s field units are being used in live events, for example, the Turin festival where orchestral music in auditorium will be synchronized live with street players (5G-Tours) and the Patras festival where multiple cameras will be transmitted from a crowded street (5G-Solutions).

The 5G-Solutions ICT-19 RIA project “Smart Mobility, media and e-health for citizens” involves advanced 5G validation trials across multiple vertical industries, deploying full end-to-end trials to bring 5G to real users for thirteen representative use cases. The project will provide efficient and reliable close-to-commercial services in three different types of cities: Rome, Turin, and Athens.

EBOS did Press Releases as follows:

1. EBOS Technologies Ltd leading innovations for 5G and beyond technologies in Business web magazine (GR Version) that is shown in:
   - https://inbusinessnews.reporter.com.cy/business/ict918/article/247079/i-ebos-technologies-ltd-protagonistesis-kainotomes-technologes-5g

AppArt participation in 5G-SOLUTIONS project in case of Press Release that can be seen in:


Yara did Testing 5G network in logistics operations at Herøya which was illustrated in:

- https://eng.heroya-industripark.no/latest-news/testing-5g-network-in-logistics-operations-at-heroya

TNOR with collaboration of NTNU got success story in Co-creation of smart sustainable cities - the 5G Solution project as shown below:

Promotional videos. 2 videos have been prepared to promote the project and Living Lab 4 activities. Both can be found on the website of the project (https://5gsolutionsproject.eu/dissemination/videos/) and were shared on social media.
4 Communication Activities

4.1 Target Audience and Objectives

The following Table 5 provides an outline of the target audience of the joint 5G-SOLUTIONS communication strategy and sets out the communications objectives to maximise the 5G-SOLUTIONS project's exposure.

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Description</th>
<th>Interest in the project</th>
</tr>
</thead>
</table>
| A - Industry, SMEs and Entrepreneurs | Stakeholders from industry, network operators, SMEs and entrepreneurs, operating in the 5G infrastructure domain (e.g. EU Telecom Network Operators, 5G Automotive Association, ICT WG of Enterprise EU, 5G ACIA). | • Utilisation of project's results in operations and in their R&D activities for new service and product development.  
• Amplify innovation in 5G infrastructure by blending 5G-SOLUTIONS results with in-house artefacts. |
| B - 5G PPP infrastructure Programme Stakeholders | Participants, project partners and relevant stakeholders active in the 5G PPP infrastructure (e.g. 5G Trials WG, WG on Verticals of 5G-IA managed by TIM). | • Identification of common topics.  
• Synergies and collaborations for results promotion.  
• Enhancing innovation through results combination.  
• Co-organisation of events. |
| C – Technology Clusters | European initiatives and clusters, research communities, associations, (e.g. ETNO NetWorld2020, Digital Business Innovation, Digital Agenda, Innovation Union, 5G-ACIA, etc.). | • Inclusion of project's results to collaborative research activities (roadmap, white papers, etc.).  
• Dissemination of project's results to their members and stakeholders.  
• Participation in project's events for knowledge exchange. |
| D – Researchers and Academics | Researchers and academics working in universities, research centres, R&D departments of industry. | • Advancing research post-project.  
• Training personnel & students.  
• Porting results to real-life industry cases through the re-use of results. |
| E – Policy Makers | Policy-makers at any level (e.g. Europe of Regions, EC Directorate for Communication, European Radio Spectrum Policy Group). | • Evaluation of the project's techno-economic and regulatory aspects.  
• Definition of future research and innovation directions based on project's acquired knowledge. |
| F – Standards bodies and fora | Standards bodies and industry fora (e.g. 3GPP, ETSI, IETF, NGMN, IEEE). | • Development of roadmaps for standards development.  
• Pre-standardisation workshop.  
• Input for standardisation activities. |
| G – General Public | General public and anyone interested in the project. | • Understand the value of European research.  
• Stimulate innovation in unexpected groups of society. |
Based on the target audience groups identified above and their expected interest in the project, the objectives of the joint communication strategy and their relation to the target audience groups are identified in Table 6.

**Table 6: Communication objectives**

<table>
<thead>
<tr>
<th>Objectives Description</th>
<th>Target groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a clear view of the project goals and its results, including the 5G-PPP</td>
<td>A B C D E F G</td>
</tr>
<tr>
<td>perspective.</td>
<td></td>
</tr>
<tr>
<td>Create an active community of interested stakeholders and potential users and</td>
<td></td>
</tr>
<tr>
<td>collect knowledge and requirements considered by the project's activities.</td>
<td></td>
</tr>
<tr>
<td>Prepare the ground for the exploitation of project's results towards the industry.</td>
<td></td>
</tr>
<tr>
<td>Create awareness of the project among the full range of stakeholders impacted by the</td>
<td></td>
</tr>
<tr>
<td>results.</td>
<td></td>
</tr>
<tr>
<td>Establish liaisons with other projects and initiatives for knowledge and innovation</td>
<td></td>
</tr>
<tr>
<td>transfer.</td>
<td></td>
</tr>
<tr>
<td>Support the dissemination and exploitation of results (including the 5G PPP</td>
<td></td>
</tr>
<tr>
<td>programme results) by formulating adapted key messages and prepare adapted</td>
<td></td>
</tr>
<tr>
<td>communication material.</td>
<td></td>
</tr>
<tr>
<td>Recognition of the results (including the 5G-PPP programme results) among the</td>
<td></td>
</tr>
<tr>
<td>research communities, standardisation bodies, potential users, policy-</td>
<td></td>
</tr>
<tr>
<td>maker institutions.</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Communications Channels

The integrated approach to communication adopted by 5G-SOLUTIONS, combines a mix of traditional and disruptive communication channels as listed below:

- **Logo and Templates:** A common template and logo (Figure 13) supporting the identity creation/branding of the project has been produced and will be used in all project presentations and publications.

![5G-SOLUTIONS Logo](image)

- **Online presence:** A modern, dynamic, and user-friendly 5G-SOLUTIONS website has been designed and maintained by EBOS with the contribution of CEL (M1), acting as a web portal for public dissemination of project information and results. The web portal will be regularly updated and will employ state-of-the-art social media mechanisms (e.g., Blogs, LinkedIn, Facebook, Twitter) to announce new information concerning the project, its results, upcoming events, etc. and to engage the target audience groups. In this context, CEL analysed and defined some style guides to develop and maintain the graphical identity.
D9.2B Dissemination and communication plan

(definition of fonts, images positioning, colours, styles, etc.) of the project, that will be used throughout the whole project website at any refinement. The initial page of the website is depicted in Figure 14. A detailed description and analysis of the project’s website is described in D9.1, “Online project presence” which has already been submitted at M1 of the Project.

![5G Solutions for European Citizens](image)

Figure 14: 5G-SOLUTIONS Website

- **Interaction with peer projects**, within the scope of the 5G-PPP, including participation and contribution to EC concentration and cluster meetings.

- **Event organization**: The project participates in the organisation of established conferences and workshops. In this context project consortium members have organised special sessions, panels, and workshops in top conferences. In consent and in cooperation with other projects of the 5G-PPP, the project will contribute to the organisation of a targeted initiative for all stakeholders of the 5G infrastructure business, scientific and research community.

- **Industrial Workshops**: The objective is to organise 4 industrial workshops (2 hosted by TIM, 1 by CTTC and 1 by TNOR) and 1 pre-standardisation workshop (hosted by IRT) organised jointly with other 5G-PPP projects, to draw a complete picture of the achievements in Europe.

- **Showcasing**: The 5G-SOLUTIONS consortium has plans to use and showcase its results in at least 2 public events (e.g. Patra carnivals in 2021 & 2022). This is expected to generate the largest industrial and societal impact on the various involved stakeholders, hence paving the way to a faster adoption of 5G technologies.

- **White papers** in conjunction with the European Technology Platform Networld2020 and industry fora.

- **Promotional material**: Layout and printing of flyers, posters, other materials as needed including but not limited to brochures, A4-format information folder, poster, A5-format double sided distribution leaflet and a 5G-SOLUTIONS project PowerPoint presentation template. A project poster has been already designed and printed by EBOS (Figure 15), with the graphical support of CEL and exposed at the EuCNC 2019.

(Check Section 3 for the list of events attended)
Validation of the technological and the business aspects of 5G through advanced field trials of innovative use cases.

Innovative technological enablers for automated execution of advanced field trials:
- Unified cross-domain service orchestrator
- Smart KPI visualization system for 5G network KPIs validation
- Intent-based APIs for stimulating the development of novel applications by SMEs

Significant contribution to 5G standardization.

CONSORTIUM

Figure 15: 5G-SOLUTIONS Poster
• **Project documentation:** Deliverables, technical reports, posters, and presentations will be made publicly available in the project’s website and through social media channels (as an example see Figure 16 for the list of public deliverables in the project’s website)

<table>
<thead>
<tr>
<th>No.</th>
<th>Deliverable No.</th>
<th>Deliverable name</th>
<th>Delivery date (project month)</th>
<th>Lead beneficiary</th>
<th>Nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D9.1</td>
<td>Online project presence</td>
<td>1</td>
<td>ENOS</td>
<td>OTHER</td>
</tr>
<tr>
<td>2</td>
<td>D10.2A</td>
<td>Technical management handbook (v1.0)</td>
<td>2</td>
<td>TNO</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>D9.2A</td>
<td>Dissemination and communication plan (v1.0)</td>
<td>3</td>
<td>CTIC</td>
<td>R</td>
</tr>
<tr>
<td>4</td>
<td>D1.2A</td>
<td>Specifications &amp; design of CIUS plug-in CIUS plug-in (v1.0)</td>
<td>4</td>
<td>NOKIA</td>
<td>R, OTHER</td>
</tr>
<tr>
<td>5</td>
<td>D10.4A</td>
<td>Report on legal and ethics monitoring (v1.0)</td>
<td>4</td>
<td>CEL</td>
<td>R</td>
</tr>
<tr>
<td>6</td>
<td>D1.1A</td>
<td>Definition and analysis of use cases/Scenarios and corresponding RPs based on LI (v1.0)</td>
<td>5</td>
<td>FISET</td>
<td>R</td>
</tr>
<tr>
<td>7</td>
<td>D1.2A</td>
<td>Cross-domains orchestration and management challenges analysis (v1.0)</td>
<td>5</td>
<td>LMI</td>
<td>R</td>
</tr>
<tr>
<td>8</td>
<td>D1.1A</td>
<td>Leveraging and extending 5G-PPP previous work in 5G-SOLUTIONS (v1.0)</td>
<td>5</td>
<td>TIM</td>
<td>R</td>
</tr>
<tr>
<td>9</td>
<td>D1.4A</td>
<td>Methodology for the validation of 5G and for LI measurements (v1.0)</td>
<td>6</td>
<td>WIT</td>
<td>R</td>
</tr>
<tr>
<td>10</td>
<td>D1.1A</td>
<td>RFP Visualization System Specifications and Design (v1.0)</td>
<td>6</td>
<td>AFRATE</td>
<td>R</td>
</tr>
<tr>
<td>11</td>
<td>D9.1A</td>
<td>Market assessment &amp; technology monitoring (v1.0)</td>
<td>4</td>
<td>ELS</td>
<td>R</td>
</tr>
</tbody>
</table>

**Figure 16:** List of public deliverables in the project’s website

- **Newsletters:** Two electronic newsletters per year will be released presenting the main achievements.
- **Call for Ideas:** An event for third parties (SMEs and spin-off of research institutes) who are willing to contribute to the project with new ideas to address other use cases will be organized. The best ideas to exploit 5G-SOLUTIONS results will be selected. Specific attention will be given to IPR issues. This initiative will start in M24.
- **Horizon Results Platform:** The results of the project could be potentially presented and exposed to thousands of people through the Horizon Results Platform, which is a platform to encourage third party exploitation of R&I results.

Figure 17, Figure 18 and Figure 19 illustrate the analytics results of the project’s website overviews over the first half of the 5G-SOLUTIONS project. There is a clear correlation between the website hits and our social media posts. There is an impact on the website when any 5G-Solutions activity is shared in the media.
D9.2B Dissemination and communication plan

Figure 17: website audience overview

Figure 18: Location overview
Figure 19: Mobile overview

5G-SOLUTIONS project is also communicating through created LinkedIn (https://www.linkedin.com/in/5gsolutions-project) and Twitter (https://twitter.com/5g_solutions) social media channels that are shown in Figure 20 and Figure 21. At the time of writing this deliverable the LinkedIn account has 150 connections and more than 500 people are following our Twitter channel.

Figure 20: 5G-SOLUTIONS LinkedIn communication channel
D9.2B Dissemination and communication plan

4.3 Newsletters

So far 5G-SOLUTIONS has published four Newsletters. The first one was released in December 2019, the second one in June 2020, third one in December 2020 and the fourth one in June 2021. All newsletters are illustrated in Figure 22, Figure 23, Figure 24 and Figure 25 respectively and accessible from the website of the project: https://5gsolutionsproject.eu/news-n-events/newsletter/
D9.2B Dissemination and communication plan

5G SOLUTIONS for European Citizens

In this issue:
- 5G SOLUTIONS Overview 1
- Kickoff Meeting 2
- Dissemination Activities 2
- Training Activities 3
- 2nd P2P meeting 4
- Factsheet 4
- Deliverables submitted 5
- Publications 5
- Social media 5

Consortium

5G SOLUTIONS Overview

December 2019
Issue Number 1

Figure 22: Newsletter issue #1. December 2019

5G SOLUTIONS Project Status

January-June 2020
Issue Number 2

- The first phase of 5G SOLUTIONS ended in November 2019, establishing the requirements and project methodologies for the use-cases.
- The second phase, identified by the mock-up of KPIs visualization tool, ended at May 2020. It collects data from all the respective parties, either the use case application itself or the underlying network, performs all the necessary calculations and displays the metrics to the end user in both a tabular and graphical form through a user-friendly web portal.
- The project created an initial plan for machine-learning-based optimizations in terms of orchestration, based on: (i) correlations of data between different domains (e.g., network and vertical domains), and (ii) predictive slicing patterns, depending on the level of access to platform

Figure 23: Newsletter issue #2. June 2020

© 5G Solutions, 2021
Figure 24: Newsletter issue #3, December 2020

Figure 25: Newsletter issue #4, June 2021
4.4 Factsheet

Figure 26 shows the project factsheet which is useful dissemination material for events such as international fairs. In general terms it describes the project objectives, living labs and the consortium.
Figure 26: 5G-SOLUTIONS factsheet
4.5 Project meetings

1. **Consortium meetings (more info can be found on project website\(^\text{17}\)):**
   a) The 5G-SOLUTIONS F2F kick-off meeting was held on June 4-5, 2019, at the headquarters of TIM in Turin, Italy. The kick-off-meeting of the project brought together the project’s 26 partners, including major telecom operators, industry vendors, academic and vertical industry actors, from 7 European and 2 associated countries. The consortium is united by the common objective to accelerate the uptake of 5G services across Europe by demonstrating and validating the 5G network technological performance (KPIs) and business aspects in extensive field trials involving 20 innovative use cases across five prominent vertical sectors: Factories of the Future, Smart Energy, Smart Cities, Smart Ports, Media & Entertainment. Field trials will also be further clustered into Living Labs for multi-Living Lab multi-vertical concurrent validation. To achieve this, the necessary technological enablers will be designed and developed within the framework of the project. All field trials will be executed over the ICT-17 5G-EVE facilities in Rome/Turin (Italy) and 5G-VINNI facilities in Trondheim (Norway) and Patra (Greece) in an automated way and engaging end-user actors in Living Labs.

![Figure 27: Kick-off 5G-SOLUTIONS meeting](image)

b) The second Plenary project meeting was held on November 26\(^{\text{th}}\)-27\(^{\text{th}}, 2019 organized by Apart in Athens, Greece. Discussion topics were mostly focused on:
   - Patent Overview – General Process and methodology to be followed
   - Process towards standardization
   - Seminar for Ethics
   - Updated on the UCs and the technical WPs
   - Parallel workshops for the LLs
   - Coordination of research items and activities
   - Quality and risk management

\(^{17}\) [https://5gsolutionsproject.eu/news-n-events/](https://5gsolutionsproject.eu/news-n-events/)
D9.2B Dissemination and communication plan

c) Due to the COVID-19 pandemic the 3rd regular meeting of the project was held online by TIM and was spread in 8 sessions:
   - 27 April 2020 (Morning and afternoon)
   - 5 April 2020 (Morning and afternoon)
   - 6 April 2020 (Morning and afternoon)
   - 11 April 2020 (Morning and afternoon).

Discussion topics were mostly focused on:
   - UC actual trails status and plans
   - COVID-19: risk analysis review and discuss a common strategy
   - COVID-19: review of activity (dissemination, standardization, SMEs involvement, community building)
   - Updated activities per WP
   - Project review rehearsal
   - Results of the project review, and how to continue.

Figure 29: 3rd Plenary project meeting

d) The 4th regular project meeting was held also online over a virtual (web) environment on September 9th-10th 2020 hosted by EBOS. The aim of the project meeting was to discuss the progress made so far, including mitigation measures for compensating against delays and impacts.
on the use case scenarios due to COVID-19. Specific emphasis was given on the first testing cycle of project trials, orchestration and target key performance indicators.

Figure 30: 4th Plenary project meeting

e) The 5th regular project meeting was held also online on January 11th, 2021, organised by Telecom Italia. The aim of the project meeting was to discuss the progress made so far, especially on the UCs regarding the testing cycle 1. Due to COVID-19 impact to the project, an extension was also discussed as a mitigation action. There was also an emphasis on the participation of the project in 5G-PPP activities.

f) The 6th Plenary meeting was held also online on September 29th-30th, 2021, organised by Telecom Italia, took place via a teleconference with the participation of all consortium partners. The focus of the meeting was on the analysis of the status of the use cases and the recommendations that we received after last project review. The status of each use case has been detailed presented and analysed and next steps have been identified to be implemented during the testing cycle 2.

Figure 31: 6th Plenary project meeting
2. Review meetings:
   a) The first 5G-SOLUTIONS project review meeting was successfully held on May 7th, 2020. Due to the COVID-19, the project review was held online with an overall very positive assessment.
   b) The second 5G-SOLUTIONS project review meeting was successfully held on February 11th, 2021. Due to the COVID-19, the project review was held online with an overall very positive assessment.

4.6 Involvement of SMEs Report

The main activities so far were initially dedicated to improving the SME Involvement framework with the objective of maximising the impact of the 5G-SOLUTIONS project, also considering the difficulties in receiving ideas from SMEs and start-up accelerators by Applied Research to Technologies’ (A2T) team. The marketing campaign organized has been centred around opportunities such as funding from 5G-SOLUTIONS Consortium, networking with industrial stakeholders, early visibility to 5G vertical features and visibility in SME events. The framework consolidation consisted in:

1. Designing and agreeing a common SME Involvement framework among Partners proposing to organize SME Involvement events including A2T, APPART, EBOS, PIIU and probably CTTC.
2. Preparing the SME Participation Terms and Conditions to be published on the Call for Ideas submission portal.
3. Selecting, preparing, and publishing the Call for Ideas that has been opened on YouNoodle portal at the following link [https://platform.younoodle.com/competition/5g_call_for_ideas](https://platform.younoodle.com/competition/5g_call_for_ideas)
4. Designing, preparing, and submitting the deliverable “D9.3A-Information package for external SMEs to facilitate the design of new applications” (due 2020, May 31st – M12 and submitted 1 month in advance).
5. Planning events dedicated to SME involvement and after the COVID-19 Crisis in March-June, redefining the SME Involvement event approach from physical meetings to online workshops to be hosted in relevant conferences in at least 3 different countries.
6. Starting the research of potential external conference organizers, defining agreements with Innovability in Italy (owner of the online initiatives dedicated to SMEs such as ITALIA 5G, IOENERGY, AUTOTEQ 5G) and Smart Press in Greece (owner of the format Infocom World focused on communication technologies such as 5G and Fiber).
7. Launching the SME Involvement events execution, which have been held in English and promoted across multiple countries to encourage international participation. The status of event management is:
   1. A2T prepared and organized with the support of PIIU a first event on Innovability on June 29th, 2020 during the event IoThings Insights with a sponsored workshop “5G Networks and SME Involvement: Technological Validation and Commercial Sustainability in the Key Sectors" ([http://www.innovability.eu/insights/#5g](http://www.innovability.eu/insights/#5g)) to this event participated TIM, A2T, PIIU and other 3 Italian start-ups which submitted their ideas.
   2. APPART prepared and organized the second event with the direct involvement and support of A2T and PIIU. This event was planned during Infocom World on November 5th, 2020 with a sponsored workshop "5G SOLUTIONS – A European 5G platform available to SME" ([https://www.infocomworld.gr/22o-infocom-world-2020/programma-workshops/](https://www.infocomworld.gr/22o-infocom-world-2020/programma-workshops/)). The partners that participated to this event were: FORTHNET, APPART, A2T, PIIU and other 2 start-ups (1 from Greece and 1 from Italy) which submitted their ideas.

In the month of December, a SME Involvement strategy review has been initiated by A2T with the goal of better engaging SMEs, considering the continuous need for 2021 to organize online events required by COVID-19 pandemic situation and the learnings acquired during the first two events organized in 2020.
4.7 Community Building Report

Within the 5G-PPP framework, the most relevant 5G-PPP working groups for 5G-SOLUTIONS have been identified and contact persons inside the project have been defined to keep a strong link with the different 5G-PPP initiatives. In particular, a tight connection with the other 5G-PPP projects has been created thanks to the participation in joint workshops and booths, which lead to the organization of other similar events in the future.

The partners responsible for the 5GPPP WG are the following:

1. Steering Board (TIM).
2. Technical Board (TNOR).
3. SMEs Involvement WG (PIIU).
4. Pre-standardization WG (IRT and TIM).
5. Test, Measurement and KPIs Validation WG (EBOS).
7. Trials WG (PIIU).
8. International activities SG of Trials WG (LiveU).
9. Software Networks and 5G WG (TNOR).
10. Task Force on mapping the vertical KPIs to network KPIs (FORTH).
11. Business Validation Models and Ecosystem SG (Telenor), SG is part of VSC WG.

PIIU is the main contributor to the activities related to the 5GPPP Working Groups participating in all WGs mentioned in Task 9.3. PIIU organized the first strategic discussion with the External Advisory Board (EAB): the result was presented to the EC during the first technical review. A specific questionnaire for the Members of the EAB has been prepared.

The interactions with the EAB are expected to be in the following areas:

1. Collection of requirements.
2. Technical and strategic meetings to discuss design matters and use cases.
3. Presentation of main results validation from the trials.
Dissemination and Communication Phases

Dissemination and communication activities are being carried out in four phases following experience acquired in related projects, other works, regulations, and best practices learned in the past. Each of these phases has its own objectives and target audience groups and will perform the activities using the best-suited channels. These D&C phases will be discussed and aligned with other projects of the 5G-PPP programme to achieve an optimum mix of dissemination and communication for 5G-SOLUTIONS and the 5G-PPP programme at large. Table 7 presents the four 5G-SOLUTIONS dissemination phases in detail.

Table 7: 5G-SOLUTIONS Dissemination and Communication (D&C)

<table>
<thead>
<tr>
<th>Type of information</th>
<th>Target audience</th>
<th>Channels</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D&amp;C Phase 1 (Create awareness) M1-M12</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Objective:</strong> To create awareness about the project’s objectives and expected results for as many 5G Stakeholders as possible, leveraging the awareness that has already been created around the 5G-PPP programme.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Presentation of 5G-SOLUTIONS</td>
<td>• Industry, technological, research and academia&lt;br&gt; • Potential end-users&lt;br&gt; • International Stakeholders identified</td>
<td>• Conferences, workshops&lt;br&gt; • Brochures, roll-ups, posters&lt;br&gt; • Website&lt;br&gt; • Social media channels</td>
<td>• General visibility&lt;br&gt; • Attract potential customers, investors and collaborators</td>
</tr>
<tr>
<td><strong>D&amp;C Phase 2 (Accelerate potential impact) M13-M26</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Objective:</strong> To kick-start and boost the potential impact of the project through the elaboration of the use cases, leveraging the achieved awareness of D&amp;C Phase 1 to reach out to target stakeholder groups.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Presenting elaborated use cases of 5G-SOLUTIONS&lt;br&gt; • Demonstration of usage and results</td>
<td>• Potential end-users&lt;br&gt; • Specific technological, research and academic communities&lt;br&gt; • 5G vendors and application developers</td>
<td>• Conferences, workshops&lt;br&gt; • Publications in journals&lt;br&gt; • Special sessions in major congresses/exhibitions&lt;br&gt; • Website&lt;br&gt; • Social media channels</td>
<td>• Exposing synergies with other 5G-PPP projects&lt;br&gt; • Providing visibility&lt;br&gt; • Informing EC authorities&lt;br&gt; • Attracting potential collaborators</td>
</tr>
<tr>
<td><strong>D&amp;C Phase 3 (Results) M27-M33</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Objective:</strong> To leverage general awareness, to emphasise the use of the 5G-SOLUTIONS offerings and results, and to attract users and customers of the project’s partners, thus increasing the impact through external collaboration.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Presenting elaborated use cases of 5G-SOLUTIONS&lt;br&gt; • Demonstration of usage and results</td>
<td>• Potential end-users&lt;br&gt; • Potential developers in ICT companies&lt;br&gt; • Specific technological, research and academic communities</td>
<td>• Conferences, workshops&lt;br&gt; • Publications in journals&lt;br&gt; • Special sessions in major congresses/exhibitions&lt;br&gt; • Website&lt;br&gt; • Social media channels</td>
<td>• Attracting potential investors&lt;br&gt; • Attracting potential customers</td>
</tr>
<tr>
<td><strong>D&amp;C Phase 4 (Valorisation) M34-M42 and beyond</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Objective:</strong> To demonstrate the usefulness of the results to internal and external users and customers and to attract investors. To consolidate and publish the final scientific and business findings of the project in national/international journals and online media.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Final results of 5G-SOLUTIONS&lt;br&gt; • User-oriented demonstration</td>
<td>• Potential end-users&lt;br&gt; • Potential developers in ICT companies&lt;br&gt; • Specific technological, research and academic</td>
<td>• Website&lt;br&gt; • Publications in journals&lt;br&gt; • Industry focused events&lt;br&gt; • Client demonstrations and demos in major 5G</td>
<td>• Attracting potential customers&lt;br&gt; • Attracting investors&lt;br&gt; • Informing the EC Authorities</td>
</tr>
<tr>
<td>communities.</td>
<td>events</td>
<td>• Demonstrating results to existing customers</td>
<td></td>
</tr>
</tbody>
</table>

- Communities.
- Events.
6 Metrics and Targets

Table 8 lists the metrics and their corresponding target values and the degree of meeting these target values, this helps to measure the outcome and effectiveness of the dissemination and communication activities until October 2021 (M29). Deliverable D9.2C will report on the final degree of meeting these target values.

Table 8: Dissemination and communication outcome, metrics and targets

<table>
<thead>
<tr>
<th>Metrics</th>
<th>Targets</th>
<th>Until October 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dissemination Activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific articles</td>
<td>&gt;12</td>
<td>17</td>
</tr>
<tr>
<td>Conference presentations</td>
<td>&gt;20</td>
<td>11</td>
</tr>
<tr>
<td>Technical articles &amp; policy briefs</td>
<td>&gt;10</td>
<td>1</td>
</tr>
<tr>
<td>Industrial workshops</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Supporting events (Conferences/Workshops/Special Sessions)</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Number of people participating in consultations and industrial workshops</td>
<td>100</td>
<td>&gt;400</td>
</tr>
<tr>
<td>Webinars/showcasing events</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Demos in Fairs/Exhibitions/EU-related events</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Showcasing events with end users</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Number of webinar and supporting events participants</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td><strong>Communication Activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Press Releases</td>
<td>&gt;3</td>
<td>8</td>
</tr>
<tr>
<td>White papers, success stories, factsheets</td>
<td>&gt;9</td>
<td>11</td>
</tr>
<tr>
<td>Newsletters</td>
<td>2/year</td>
<td>4</td>
</tr>
<tr>
<td>Number of white papers downloads</td>
<td>&gt;1000</td>
<td>N/A</td>
</tr>
<tr>
<td>Promotional Videos</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Unique Web Visits</td>
<td>&gt;5000</td>
<td>6748</td>
</tr>
<tr>
<td>Blog posts, tweets including editorials and clippings</td>
<td>&gt;3000</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Media coverage (editorials and clippings)</td>
<td>100</td>
<td>14</td>
</tr>
<tr>
<td>Size of the community (incl. Twitter followers, mailing list subscribers, bloggers)</td>
<td>&gt;1000</td>
<td>682</td>
</tr>
</tbody>
</table>
7 Conclusions and Next Actions

This deliverable (D9.2B) provides updated information about the dissemination and communication activities carried out until M29 of the 5G-SOLUTIONS project and presented in the initial D9.2A deliverable. Regarding the dissemination activities, we have provided the list of journals, papers in international conferences and technical articles published by the partners of the consortium. The project partners have also participated in conferences and workshops giving high-quality talks. Moreover, the consortium has organized workshops, industrial panels, conferences, a special session, and a training course. Several white papers also have been published and some demos have been presented in recognized international fairs where the main objectives of 5G-SOLUTIONS were presented. 5G-SOLUTIONS has been also active in the media thanks to many Press Releases.

So far, some promotional material has been developed: poster, factsheet, and promotional videos. At the beginning of the project a modern, dynamic, and user-friendly website was designed and being updated with all the dissemination activities carried out during the project. LinkedIn and Twitter social media channels have been created to keep the Community updated with the last progress of the project. So far four newsletters have been published summarizing the dissemination activities.

Besides the target audience and the channels for the dissemination activities, we have also provided a time plan for these activities, which includes 4 phases. The goal of the 1\textsuperscript{st} phase (M1-M12) is to create awareness about 5G-SOLUTIONS, while the 2\textsuperscript{nd} phase (M13-M26) is expected to accelerate the potential impact of the project. The core results will be disseminated and communicated during the 3\textsuperscript{rd} phase of the project (M27-M33), while the 4\textsuperscript{th} phase (M34-M42 and beyond) will guarantee the valorisation of the project’s outcome. During the 1\textsuperscript{st} phase of dissemination and communication, our main goal has been to create awareness about the project’s objectives and expected results for as many 5G Stakeholders as possible, leveraging the awareness that has already been created around the 5G-PPP programme.

Finally, D9.2B has also updated the current state of the quantified targets for the dissemination and communication activities. The last deliverable of this series (i.e., D9.2C) will list the dissemination and communication activities carried out throughout the 5G-SOLUTIONS project.