5G CONNI

Private 5G Networks
for Connected Industries

Deliverable D6.1
Dissemination Plan & Project Website

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Executive Summary

This deliverable has been written as part of the work in the project Work Package (WP) 6 "Dissemination", and reports the 5GCONNI project plans on dissemination and on contributions to standardization bodies, regulatory bodies, industry for a and other related organizations. The deliverable also describe the structure of the 5GCONNI website.

Keywords

Dissemination, Publication, Exploitation, Standardization, Regulation, Website, 5GCONNI.

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List of Acronyms

5G CONNI   5G for Connected Industries

Acronym	Description
3GPP	3rd Generation Partnership Project
5GCONNI	5G for Connected Industries
EU	European Union
MCX	Mission Critical Services
TW	Taiwan
MEC	mobile edge cloud (computing)
mmWave	millimeter-wave
C-plane	control-plane
QoE	Quality of Experience
IEICE	Institute of Electronics, Information and Communication Engineers
5GMF	Fifth Generation Mobile Communications Promotion Forum
uHSLLC	ultra-High-Speed and Low Latency Communication
WP	Work Package

Executive Summary

This deliverable presents an overview of the plans for the dissemination, standardization and exploitation of the 5GCONNI project. The main areas reported are the following:

•   Setup of the project website and dissemination through press releases and initial dissemination activities.

•   Planning for contributions to relevant standardization bodies. The project, through the participating companies, is involved in 3GPP and IEEE, groups.

•   Planning for the first year contribution for publication of project technical achievements in peer-reviewed technical journals and magazines.

•   Planning for participation and contribution to international conferences, symposia and summits.

•   Planning for organization and co-organization of workshops.

In the first months of the project, a detailed dissemination plan will be worked out and appropriate means for a most effective dissemination of the forthcoming project results will be put in place. The dissemination strategy will follow the "green" open access model, that is by making peer-reviewed versions of the papers available online on the project's website or other scientific self-hosting database websites. Self-Archiving through the project's website will keep the published material available at least two years beyond the project's end date. Moreover, manuscripts that contain major scientific achievements will be submitted for publishing in open access journals.

1 Introduction

The objective of this deliverable is to present the planned and already achieved dissemination, standardisation, and exploitation activities. The 5GCONNI dissemination activities aim at ensuring that the results of the project are broadly advertised during the duration of the project. Moreover, the 5GCONNI planned standardization activities aim at influencing the relevant standardisation bodies.

2 Planned dissemination activities

The dissemination plan designed for 5GCONNI is described in detail in this chapter. The dissemination activities planned for the 5GCONNI project are thought for reaching the highest possible audience for spreading the 5GCONNI results and knowledge. The information about the project can be disseminated in two ways:

- *Internal dissemination*: The cooperation and communication among WPs is an essential part of a project. In fact, the 5GCONNI project is structured to create the right communication among the WPs and the main *intra*-project results will be shared with all the involved partners, enabling active discussions for improving and reaching always better results.

- *External dissemination*: The consortium will be active in participating in the most important international private and public events, conferences, exhibitions, international venue and workshops. For the external dissemination, the website will be avilable from the beginning of the project and a social profile will be created, with the objective of effectively reaching the interested audience

For sake of the clarity, the dissemination activities will be reported in a more structured way by clustering them in consistent sections.

2.1 Internal dissemination

2.1.1 Repository Server

All the information such as important documents, deliverables, software, publications, research activities, obtained results, project data, meeting organization, conference calls and related minutes, and dissemination activities performed, will be shared in an internal and members-only access repository created for the project (https://owncloud.fraunhofer.de/). The main scope of such a repository is to make the main content of all WPs available to all the authorized members and also to monitor the status of all the on-going parallel activities. Each member of the project will have its own private account and all the published content authored by the project members will be stored to take trace of the members activities. The repository will be organized in folders, each one strictly dedicated to a WP, and managerial aspects for a smooth and easy comprehension. For this reason, since the beginning of the project, a 5GCONNI members-only, access-restricted repository is available, as shown in Figure 1.
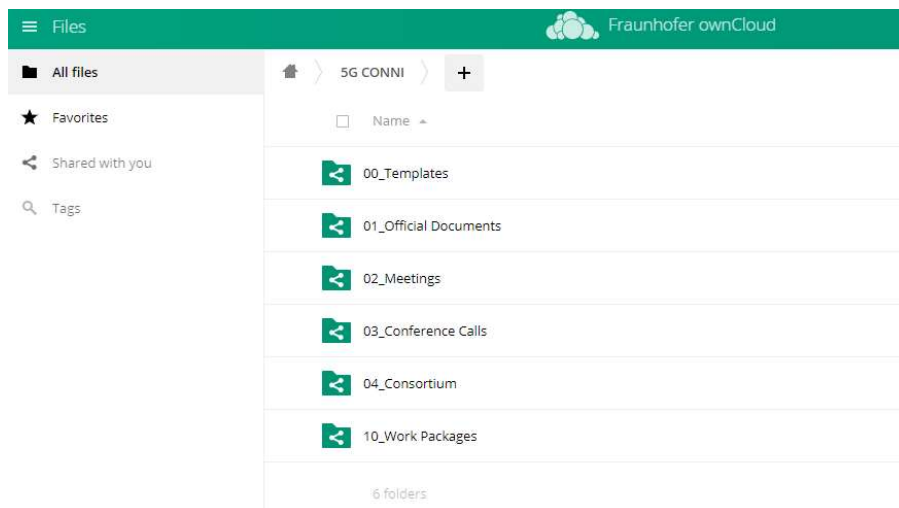
Figure 1: Internal repository

2.1.2   Distribution list and internal communications

In order to foster the communication among WPs and partners involved in the project, a set of mailing list has been created. A dedicated mailing list for each WP will be used for reporting the status of the WP, arranging conference calls, open discussions for important issues and main results, sharing deliverable drafts during the writing activities. Each mailing list dedicated to a WP includes a selected subset of the whole consortium.

Each WP leader will also organize calls among the WP participants, either bi-weekly or monthly (depending on the WP status) to organize the work and to monitor the status of both technical and non-technical aspects. The activities and main information that involve all the participants of the project will be made available by means of with a dedicated mailing list which contains all the consortium members. The call minutes will be stored in a dedicated folder in the private part of the 5GCONNI website.

Finally, monthly calls, including all the project partners will be organized for exchanging the most important information. This will provide a further opportunity for each partner to express ideas, new technical aspects to be investigated, questions and proposals. The calls are held in a very open and collaborative mood. Even in this case, all the discussions addressed in the open calls will be stored in reporting documents.

Table 2-1: Project internal distribution lists

Scope	Address
Management	5g-conni-management@5gconni.eu
WP1	5g-conni-wp1@5gconni.eu
WP2	5g-conni -wp2@5gconni.eu
WP3	5g-conni wp3@5gconni.eu
WP4	5g-conni -wp4@5gconni.eu
WP5	5g-conni-wp5@5gconni.eu
WP6	5g-conni-wp6@5gconni.eu
Whole Consortium	5g-conni@hhi.fraunhofer.de

2.2 External dissemination

This Section presents the main vision about communication and dissemination activities to promote the main results of the 5GCONNI project.

In particular, the 5GCONNI consortium will disseminate the main achievements and concepts regarding the use of Private 5G Networks for Connected Industries in 5G.

The overall efficiency and impact for communication activities of the 5GCONNI project will be maximized through a coordinated approach between Taiwan and Europe management teams and between all the partners of the consortium. Emphasis will be laid on joint European/Taiwan communication activities, including in particular joint contributions to best-in-class conferences, journals, keynote speeches, talks to expert groups, fora and standardization meetings, etc. Furthermore, public show-casing of prototype platforms at key events will be used in order to provide a further emphasis on the project results. Corresponding messages will further be communicated broadly in press releases and through similar communication means.

5GCONNI will take the effort from the early stages of the project to create a basic set of necessary presentation materials targeted for various audience types: a dissemination package will be used as the core communication measure to promote the project to different organizations and fora. The project logo, website, poster and leaflets will be designed during the first 6 months of the project and will be used by all partners of the project consortium during the whole project duration. Table 2-2 summarizes the main communication measures.

Table 2-2: Summary of the main communication measures

Project website	5GCONNI will share its concepts, results and achievements to the audience through its dedicated project website, which will be designed, set up, operated and maintained using state-of-the-art tools and platforms. The website will be the primary tool of communication and promotion of the project to distribute all the information to be shared among the project partners and to the public. Moreover, the website will be tailored to be user friendly and meet all audience types and their needs, offering an easy and quick access to the different areas of website.
Press releases, poster, and leaflets	5GCONNI will prepare and distribute project posters, press releases and leaflets on the project concept and objectives to a broad audience to raise wide public awareness.
Networks and societies	5GCONNI partners will exploit their involvement in various communities at national and international level in order to promote the project concept and objectives (e.g., the European Technology Platform NetWorld2020).
Exhibitions, conferences	5GCONNI partners will use their participation to the most popular conferences (e.g., EUCNC, ICC, Globecom, PIMRC, WCNC), exhibitions worldwide (Mobile World Summit, further events in Taiwan and Asia are under consideration, 5G global event, other relevant dedicated 5G event) in order to communicate the progress of the project, during the lifetime of the project.
Industry events	5GCONNI partners will participate to industry events organized by telecom operators (including mobile network operators), with the aim to promote 5GCONNI proposed network scenarios and technologies.

2.2.1 Website

In order to obtain the broadest possible impact of the project results, it is paramount to provide a web resource with constant updates on the latest news on the advancement of the work in 5GCONNI. For that reason, a public website was set up at the beginning of the project under the domain https://5gconni.eu. One of the most important publicly available information about a research project is the list of dissemination activities, which can come in different formats, e.g. white papers and deliverables, amongst which the public ones will be freely downloadable. The website is hosted at the Fraunhofer HHI and it is planned to keep it online at least 3 years after the project end.
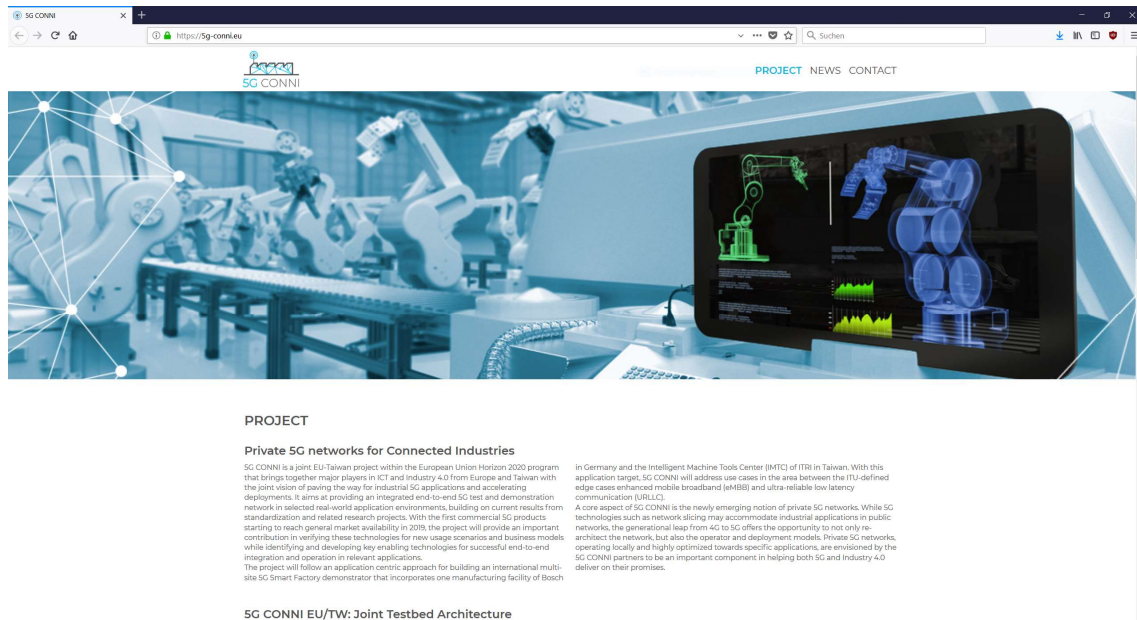

Figure 2: 5GCONNI Project Website

2.2.2 Interaction with press and Media

Regular updates on the concepts, objectives and achievements of the 5GCONNI project will be disseminated as press releases. These releases will be shared to the media and distributed on the project website. Additionally, a Twitter account and LinkedIn group will be established. These social media platforms will be used to share the press releases and short updates during exhibitions, conferences and networking activities. To further enhance visibility of the project, a rollup poster and flyers to be distributed at exhibitions and conferences were designed.

2.2.3 Exhibitions

During the 5GCONNI project, both Taiwan and EU partners will devote substantial effort into developing their PoC testbeds and giving various demonstrations of their respective 5G services. Furthermore, by closely collaborating with each other, Taiwan and EU partners will also demonstrate various applications of the inter-continental interoperability with an integrated Taiwan and EU PoC testbed. The wide range of demonstrations will be showcased at a key

event to reveal our technological achievements in the field of 5G, thus validating the potential and the feasibility of our new proposed technologies. This will lead to new disruptive business models, stakeholders and opportunities for entrepreneurial innovation. Scientific publications

2.2.4 Scientific publications and conferences

The 5GCONNI partners have the ambition to generate a highly visible and impacting footprint of their research outcomes in the scientific community. The main KPI that the project is using to measure this impact is in the form of publications in journals and at best-in-class conferences, as well as through speeches, tutorials, etc. Concerning scientific publications, the consortium has the target to publish at least 20 conference papers, in the most suitable venues.

While there are no conferences explicitly excluded from the consortiums publication targets list, there are a number of venues that are particularly targeted to disseminate the scientific findings of the project, which are listed below.

Table 2-3: Identified key conference candidates for contribution by 5GCONNI

Event name	Main topics
EuCNC (European Communications and Networking Conference)	Communication and networking.
IEEE GLOBECOM	IEEE flagship conference covering all aspects of networking and communications.
IEEE ICC (International Conference on Communications)	IEEE flagship conference covering all aspects of networking and communications.
IEEE INFOCOM	Communication and networking
IEEE VTC (Vehicular Technologies Conference)	Networking and vehicular aspects.
IEEE WCNC (Wireless Communications and Networking Conference)	New approaches in wireless communications and networking technology.
SPAWC (Signal Processing Advances in Wireless Communications)	Signal Processing in Wireless Communication Systems
IEEE WFCS (International Workshop on Factory Communication System)	Conference on Factory Communication Systems
IEEE Asilomar on Signals, Systems, and Computers	Signal Processing, Wireless Communications and, Computing
IEEE 5G World Forum	Broad range of 5G topics incl. dedicated track on verticals
IEEE PIMRC (International Symposium on Personal, Indoor and Mobile Radio Communications)	Includes tracks on practical and experimental systems (testbeds and demonstrators), and applications and business (vertical industries and factory automation solutions)

In addition, Contributions to scientific journals are a suitable means to disseminate mature and substantial results of the 5GCONNI consortium with great visibility in the scientific community. A list of targeted journal papers is given in Table 2-4.

Table 2-4: Identified key Journal Paper candidates for contribution by 5GCONNI.

Publication name	Main topics
EURASIP Journal on Advances in Signal Processing	Algorithms and Signal Processing approaches in general.
EURASIP Journal on Wireless Communications and Networking	General wireless and access network topics, covering PHY to System level.
IEEE Access	Communication and networking aspects.
IEEE Antenna and Wireless Propagation Letters	Electromagnetics, antennas and propagation
IEEE Communication and signal processing magazines	Communication technologies and systems in more tutorial style.
IEEE Communications letters	Communication technologies.
IEEE Communications Magazine	Communications and networking aspects.
IEEE Signal Processing Magazine	Tutorial-style articles on signal processing research and applications, as well as columns and forums on issues of interest
IEEE Transaction on Antennas and Propagation	Electromagnetics, antennas and propagation
IEEE Transactions on Control Systems Technology	Consolidated traffic steering control algorithms
IEEE Transactions on Signal Processing	Algorithms and Signal Processing approaches in general.
IEEE Vehicular Technology Magazine	Networking and vehicular aspects.
IEEE Wireless Transactions	Communication technologies – scientific evaluation of approaches and techniques.
IEEE Transactions on Industrial Informatics	Industrial systems with some focus on 5G since 2018

2.2.5 Planned and Organized Workshops, special sessions and panels

The 5GCONNI consortium targets to disseminate actively project results at international conferences, international workshops, and EU commission-specific events (see for instance EUCNC, ICT days, joint Europe-Taiwan dedicated workshops, etc.). This will be achieved not only through dissemination of scientific publications, but also through the organization (when possible jointly with other H2020 and Taiwan projects) of workshops, special sessions, industrial seminars and panels at international top ranked conferences, fares and events.

The main intention is to disseminate the project vision and results at large, targeting different audiences from academia and research, to industry and vertical markets operators, to institutional policy makers and standardization bodies. More specifically, starting from the second year, at least one workshop, exhibition or panel per year will be organized (jointly with

other H2020 and Taiwan projects or EU commission or 5GO if possible). The main goal of such events is twofold. First, the goal is to exchange with targeted audiences on 5GCONNI vision, results and achievements by presenting and showing project results also (when possible) with the support of demos, and exchange ideas not only with other projects but also with the relevant industrial stakeholders. The second goal is to establish an ecosystem of potential audiences for future exploitations of the project results.

The project has already co-organized and participated to the European and Taiwanese Cooperation on 5G workshop held at EUCNC 2019 in collaboration with 5G Coral (see https://www.eucnc.eu/workshops/workshop-6/).

Moreover, the project has participated with an invited presentation to the EU-TW 5G/B5G Workshop (31.10.2019, Taipei) where future research cooperation between EU and TW within Horizon Europe program has been discussed.

The possible participation to other major events taking place in 2020 are under discussion in the 5GCONNI consortium. For the moment, the consortium is targeting the joint organization of a workshop at IEEE Globecom 2020 with 5G-Allstar. Moreover, the project is planning an industrial tutorial for IEEE Globecom 2020 on 5G Cloudification and Beyond that will be delivered by Dr. Emilio Calvanese Strinati. The seminar will present the fundamental issues of 5G connectivity for edge and hybrid cloud assisted vertical services.

2.2.6 Education – teaching, tutorials, winter/summer schools, training

- 5GItaly
    - Presentation on 5G and 6G Cloud linked with 5GCONNI activities on private networks. Logo 5GCONNI on slides
    - https://www.5gitaly.eu/en/phd-school-2/#Program¨
- IEEE Globecom 2019
    - Industrial Tutorial on 6G Cloudification: presentation on 5G and 6G Cloud linked with 5GCONNI activities on private networks. Logo 5GCONNI on slides
    - https://globecom2019.ieee-globecom.org/program/industry-program/industry-tutorialsseminars
- IEEE CCNC 2020
    - Industrial Tutorial on 6G Cloudification: presentation on 5G and 6G Cloud linked with 5GCONNI activities on private networks. Logo 5GCONNI on slides
    - https://ccnc2020.ieee-ccnc.org/program/tutorials
- IEEE WCNC 2020 WDN-5G&6G workshop
    - Organization of 13th INTERNATIONAL WORKSHOP ON EVOLUTIONAL TECHNOLOGIES & ECOSYSTEMS FOR BEYOND 5G AND 6G (WDN-5G&6G) (https://wcnc2020.ieee-wcnc.org/workshop/13th-international-workshop-evolutional-technologies-ecosystems-beyond-5g-and-6g-wdn-5g6g)
- IEEE ICC Cloud and energy efficiency workshop
    - https://icc2020.ieee-icc.org/workshop/ws-18-workshop-cloud-technologies-and-energy-efficiency-mobile-communication-networks-cleen
- First 6G summer school, to be held in como Lake on the 20th to 24th of July 2020 (https://lakecomoschool.org/)

2.3 Standardization activities

The 5GCONNI consortium is actively monitoring the progress and outcome of standardization bodies working on topics relevant for the topic. Where possible, the consortium will try to push the main results coming out of the project into standards. The standardization activities will be aligned with other H2020 funded projects in the EU as well as in Taiwan. Regular reports of the main outcomes of standardization activities will be shared amongst the project partners to ensure that the directions taken by the project are aligned with on-going 5G standardization activities.

Besides 3GPP, the consortium will focus its standardization activities on the ETSI MEC and PLUGTESTS forums. The most relevant standards groups for the topics in focus of the project and therefore the groups that the project aims at impacting most are listed in the table below. Additional forums may be identified during the project lifetime.

Table 2-5: Target standardization bodies and planned activities

Forum	Groups	5GCONNI activities	Partners
3GPP	SA groups	Monitoring and contributing to use cases and scenarios, participation in 3 meetings per year	HHI, III
3GPP	RAN groups	Impact on the radio access technologies for connected industries, participation in 6 meetings per year	HHI
ETSI	MEC	Participation in weekly calls and 3-6 meetings per year	Athonet
ETSI	PLUGTESTS	Participation in yearly NFV and MCX events	Athonet
ETSI	ENI	Monitoring and contributing on system architecture design for including AI intelligence in private networks	CEA

In addition to standardization bodies, the 5GCONNI consortium is planning to participate actively at industry alliances. Targeted alliances are the CBRS Alliance with weekly calls and approximately 3 face-to-face meetings a year and the Multefire Alliance and 5G ACIA with on demand attendance. Furthermore, partners of the consortium will attend industry events and fairs like the Mobile World Congress, Edge Computing Congress, Critical Communications World or 5G World summit to coordinate with industry partners and identify use cases and scenarios.

3 Cross Taiwan/European collaboration benefits

Even though the 5GCONNI project just started, the bilateral benefits of a Taiwanese-European collaboration are visible for the partners and the Taiwanese and European ecosystems. On a global scale, it is clear that the worldwide 5G community will benefit from the active 5GCONNI dissemination activities. At this stage of the project, we already experience the benefits of **jointly validating the potentials of 5G on industries**:

- **Taiwanese and European consortium members** will put substantial emphasis on the definition of new Private 5G Network architectures and operator models. Building on collaborative experience, the project will showcase industrial use cases, including an

integrated end-to-end 5G test and demonstration network for industrial applications. This creates momentum for strengthening the cooperation between Europe and Taiwan for future research projects not only at the consortium scale but also between Taiwanese and European future collaboration frameworks under discussion. Today, 5G partners experience that joining forces in such unique collaborative ecosystems gives them an edge in the attempt to get ahead of the game in developing ultra-reliable 5G wireless communication networks and preparing global standardization for it.

- **Industry, service providers and operators** will give practical feedback to improve reliability and performance of the newly developed techniques and related services from both European and Taiwanese market players. Moreover, by working together towards global standards for 5G in ongoing standardization in relevant fora such as 3GPP, ETSI and ITU, global interoperability can be ensured. Close cooperation of industrial end users, service providers and vendors will help to shape and mutually open the European and Taiwanese markets for private 5G networks.

- **5G Global Community** will benefit from a vivid and active dissemination activity by the 5G CONNI project. Owing to the high relevance of its research topics, it is expected that the project will draw a lot of attention, not only in Europe and Taiwan but on a global scale in many other countries in the world. A successful demonstration of 5G in new application areas will help in maintaining the momentum gained during the research in related fields over the last years and validate new business opportunities foreseen by the partners involved.

4 Liaison with other H2020 projects

5GCONNI has established a liaison with several 5GPPP projects and has co-organized the following workshops:

- The European and Taiwanese Cooperation on 5G workshop held at EUCNC 2019 (https://www.eucnc.eu/workshops/workshop-6/) in collaboration with 5G Coral.

- IEEE WCNC 2020 WDN-5G&6G workshop (see section 2.2.6) with 5GAllstar

- IEEE ICC Cloud and energy efficiency workshop (see section 2.2.6) with 5GAllstar

- The international cooperation workshop, that will be held at EUCNC 2020, in collaboration with 5G Allstar, 5G Coral, 5G-DIVE, 5G-RANGE, 5G-Enhance, 5G-DRIVE, - PriMO-5G.

- First 6G summer school (see section 2.2.6) with 5GAllstar

5 Conclusions

The present document is a sound basis for the 5GCONNI consortium. It introduces a clear strategy on how to address the dissemination of project results with the objective to :

- Drive the 5G technology development forward and show thought leadership in the scientific, industrial and media community,

- Exploit key events to showcase the 5GCONNI consortium results, in particular proof-of-concept equipment and to thus maximize the project visibility and overall impact.

The strategy and plan outlined throughout this document in combination with the efficient cross-region collaboration between Europe and Taiwan is expected to manifest in the highest level of visibility and impact of the project results and outcomes.