SUPERFLUIDITY

A SUPER-FLUID, CLOUD-NATIVE, CONVERGED EDGE SYSTEM

Research and Innovation Action GA 671566

DELIVERABLE D.8.1:

COMMUNICATION AND DISSEMINATION PLAN

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Abstract:	This deliverable defines the dissemination and communication plan with guidelines for the dissemination activities, including all operational elements of the dissemination. The document explains the strategy underlying the planned activities. It includes standardisation activities and

	the Data Management Plan.
Keyword List:	Communication, Dissemination, Standardisation, Data Management Plan

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Glossary

SUPERFLUIDITY DICTIONARY	
TERM	DEFINITION
Communication	Targeted information to multiple audiences (including the media and the public) aimed at non specialists, including stakeholders whose interest is in potential application of the results
Dissemination	Public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium, aimed at peers, usually other researchers working in the area of the project
Exploitation	Direct or indirect utilisation of foreground in further research activities other than those covered by the project, or for developing, creating and marketing a product or process, or for creating and providing a service, or for using them in standardisation activities. (Article 28.1 of GA)
Standardization	Process of developing and implementing technical standards.
Results	Any tangible or intangible output of the Action, such as data, knowledge and information whatever their form or nature, whether or not they can be protected, which are generated in the Action as well as any rights attached to them, including Intellectual Property Rights.
General Public	Audience composed by people, groups and organizations which do not have specific competences/knowledge in the matter of the project but only a general interest at the application of results in society at a large.
5G PPP	The 5G Infrastructure Public Private Partnership – Initiative supported by the EU Commission and industry manufacturers, telecommunications operators, service providers, SMEs and researchers for delivering solutions, architectures, technologies and standards for the ubiquitous next generation communication infrastructures of the coming decade.
Proof of Concept (PoC)	Demonstration, the purpose of which is to verify that certain concepts or theories have the potential for real-world application. POC is therefore a prototype that is designed to determine feasibility.
Hackathon	Event in which computer programmers and others involved in software development and hardware development, including graphic designers, interface designers and project managers, collaborate intensively on software projects in competition with other teams.
Data Management Plan	Formal document that outlines how data will be handled (stored, shared and published) both during research activity, and after the project completion

Table 1: SUPERFLUIDITY Dictionary.

1 Introduction

1.1 Deliverable Rationale

Deliverable D8.1, the Communication and Dissemination Plan, is addressed to plan, specify and report the activities related to the external communication and dissemination of project results. In order to raise awareness of the techniques and tools developed by SUPERFLUIDITY these findings will be reported to a wide range of audiences from academia through to industry.

The goal of the dissemination plan is to serve as a reference guide for Consortium management of all dissemination-related activities of the project. The objectives of dissemination as specified by the SUPERFLUIDITY project have defined the related strategy aimed to guarantee proper communication of knowledge and project results to and secure maximum impact.

This deliverable describes the definition of a communication strategy shared and agreed within the Consortium, which is divided at the following stages: initial setup of the plan, processes and procedures, targeted channels and media, strategy and frequency, checkpoints and measurement of the results. The definition of a communication strategy at an early stage of the project is essential to help partners and the Consortium as a whole in addressing and maximising effort in this field, paving the way for the achievement of consistent information results. An equally important reason is that a sound communication strategy supports further activities related to the stakeholders involved and the subsequent exploitation of the project results.

1.2 Quality Review

This Deliverable has been arranged in a two-stage procedure. The first draft of D8.1 has been planned as an Internal Deliverable (delivery in M3 as I8.1) and the final version is due in M6 as D8.1. This dual stage process was planned in order to build a common strategy and a shared activity plan among all partners, contributing by their own expertise and working field in an early stage in the project. A first review of D8.1 is planned at the end of the first stage, where all the partners will include their own specific contributions. The reviewer at the first stage is ONAPP – John Thomson.

For the second stage reviewers are ONAPP – John Thomson and Michail Flouris.

VERSION CONTROL TABLE			
VERSION N.	PURPOSE/CHANGES	AUTHOR	DATE
0.1	Initial Draft	CNIT – Maria Bianco	24/09/2015
0.2	Second Draft	CITRIX – George Tsolis	28/09/2015
0.3	Reviewer	ONAPP - John Thomson	30/09/2015

0.4 (and I8.1)	Final revision/check	CNIT – Nicola Blefari Melazzi	1/10/2015
0.5	Third draft	CNIT – Maria Bianco CITRIX – George Tsolis	14/11/2015
0.6	Reviewers	ONAPP - John Thomson ONAPP – Michail Flouris	22/12/2015
0.7	Final Revision/check	CNIT – Nicola Blefari Melazzi	23/12/2015

Table 2: Version Control table

1.3 Executive summary

1.3.1 Deliverable description

In SUPERFLUIDITY, WP8 is responsible for dissemination and outreach activities while receiving contributions from the other work packages.

After stating the different procedures and obligations linked to dissemination, this document briefly introduces the project structure and where dissemination fits into it; and sums up the related tasks and objectives as laid down in the Grant Agreement.

The key aspects of the dissemination strategy are detailed with respect to target stakeholder groups, before detailing the proposed activities through the relevant channels identified. A detailed work plan of these activities is also included, as well as a calendar of relevant external conferences that are suitable for disseminating the project results. The document, in line with the requirement for projects participating in the Open Research Data Pilot[1] in Horizon 2020, includes a Data Management Plan.

D8.1 is the first official deliverable output from WP8 – Communication, Dissemination, Standardisation and Exploitation. It is outlined in Annex 1 – Description of the action - Part A while Annex 1 - Part B - § 2.2.2 defines the main communication strategy at a higher level. The deliverable builds on recognition of activities and a common established strategy among the SUPERFLUIDITY partners, aiming at achieving and optimising the communication activities, which are necessary to disseminate and inform the different target audiences during the lifespan of the project. Dissemination and communication are in fact continuous activities supporting the proper diffusion of project results in different fields. In a horizontal framework, Dissemination and Communication will be targeted at the following audiences:

- General Public

[1] https://www.openaire.eu/opendatapilot

- Scientific Community
- Industrial Targets
- Standardisation and Regulation Bodies

In a vertical framework, the results and achievements of SUPERFLUIDITY will be addressed to more specific fields related to the Scientific Community, Industrial Stakeholders and Standardisation and Regulation domains.

This diffusion and information activity aims at facilitating the Exploitation and Standardisation of results as they become available. During the project implementation phase, it will support also all the technical activities (Work packages from 2 to 7), by communicating and subsequently involving in specific scientific domains expertise and collaborative synergies by other research teams, individual expertise and similar projects (as outlined in the § 7- Implementation Plan).

The deliverable defines the Dissemination plan with guidelines for the dissemination activities including all operational elements of the dissemination. The document explains the strategy underlying the planned activities by describing the following issues:

– Initial description of conditions for dissemination and communication activities complying with Grant Agreement provisions and Consortium Agreement provisions;
– Dissemination Strategy definition describing general approach, stakeholder engagement and partners' commitment;
– Dissemination and communication plan defining specific objectives, targeted results and dissemination channels adopted in order to achieve such results;
– Event strategy definition as outlined in the DoA and detailed by the criterion of targeted stakeholders;
– Description of dissemination tools and materials;
– Implementation plan describing the monitoring procedure for Dissemination and Communication activities and their measurements in terms of success indicators. The monitoring of the dissemination activities provides evaluation of the progress and ensures that the set out objectives will be realised;
– Data Management Plan providing the analysis of the main elements of the data management policy adopted with regard to all the datasets generated by the project.

It is important to emphasise that although this deliverable is meant to be a Communication and Dissemination Plan, the plan of the Standardisation activities has taken into account the interest of the Industrial and Scientific Stakeholders.

1.3.2 Summary of results

The main result of the deliverable is a clear and planned description of the Dissemination and Communication activities to be realised during the implementation of the project. A clear plan is the first tool for achieving knowledge-sharing results and the SUPERFLUIDITY Consortium has

devoted considerable effort in acquiring different audiences, each having different interests in the project results. This deliverable will guide Partners in performing their planned activities in a harmonised and shared strategy since the very beginning of the project. Research activities and scientific challenges of SUPERFLUIDITY could monopolize effort in a strong way: defining a communication strategy at an early stage helps the Consortium to capitalize effort in a cost-effective way towards communication and dissemination needs.

On the other side, communicating results and activities performed to external stakeholders contribute to increasing visibility and attracting new collaborations with external parties, facilitating synergies, building expertise and increasing future exploitation opportunities. The SUPERFLUIDITY communication strategy will be applied throughout all stages of the project implementation in order to promote cross-collaboration among internal and external resources.

A practical monitoring procedure has been set up in order to check, at every stage of the project, implementation, intermediate achievements and results and eventually put in place corrective actions for improving communication and dissemination.

The results of the Communication and Dissemination Plan will be analysed and presented through the Deliverables:

- D8.2 First report on Communication, Dissemination Actions, Standardisation and Open Source Contribution (M12),
- D8.4 Second report on Communication, Dissemination Actions, Standardisation and Open Source Contributions (M20),
- D8.6 Final Report on Communication, Dissemination Actions (M30).

2 Conditions for dissemination and exploitation

2.1 Approval Procedures

Consortium partners should inform, with sufficient advanced notice (30 days), the Management Board and WP8 Leader prior to any of the following external communications, to allow for comments or raise and clarify any concerns:

- presentations of the SUPERFLUIDITY vision or results at external events;
- newsletters, brochures, flyers, posters, web content by their own organisation presenting the SUPERFLUIDITY vision or results;
- papers or articles in scientific, technical or general publications (see § 2.4);
- written press or audio-visual media releases;
- displays at exhibitions or demonstrations by their own organisation that would include SUPERFLUIDITY results (see § 2.4).

2.2 Travelling outside of Europe

In H2020 partners are not required anymore to ask for approval for travels outside EU, see Annotated Model Grant Agreement:

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf , page 75, "There is no distinction between traveling in or outside of Europe"). However, the same document states that "Beneficiaries may contact the Commission/Agency to ask whether a particularly expensive travel plan would be accepted or not".

Thus, the Project Coordinator recommends that in case of doubt that the cost will be approved for sure later or questionable in an audit, it is better to ask for prior approval from the EC project.

In such an instance, partners should contact the Project Coordinator with details of the dissemination opportunity along with its strategic interest for the project in order to seek approval from the EC. In any case, it is worthwhile to remember that travels both inside and outside Europe must satisfy the conditions for eligibility as stated in the Annotated Model Grant Agreement, and particularly they should be necessary for the project and clearly related to the project.

2.3 Management of Knowledge and Results - Intellectual Property Rights

In principle, results will be managed according to the provisions of the European Commission, and access to the results created throughout the project lifetime, will be governed by the Consortium Agreement signed by all the project partners.

"*Unless it goes against their legitimate interests, each beneficiary must - as soon as possible - 'disseminate' its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium)*"- IPR, use and dissemination issues are governed by the rules in GA § 29.1 - Obligation to disseminate results.

Furthermore, the Consortium Agreement details the provisions regarding the ownership and sharing of knowledge or project results. For these issues the CA, specifically Section 8 - Dissemination applies. This section governs the following issues:

- Ownership of results
- Joint Ownership
- Transfer of results
- Dissemination
- Contribution to standards

2.4 Publication and dissemination of Results

Publication and dissemination of results are granted with the approval of the Consortium. In this case the Consortium Agreement (CA) § 8.4.1 - Dissemination of Results applies in which it is stated


that prior written notice of the final version of any planned publication shall be given to the other Parties at least 30 days before the planned publication submission date. Any objection to the planned publication shall be made in writing to all Parties within 25 days of receipt of the written request to submit. If there is no objection within the time limit stated above, the publication is permitted. The same article rules objections to publication.

2.5 Access rights

In Section 9 of the Consortium Agreement - Access rights, the Partners agreed on a Positive List for Included Background available for project Implementation. The CA - Attachment 1 references Background material that has been granted Access Rights for the implementation of the Action or Exploitation of any Results. Partners may, during the Action implementation, add into Attachment 1 a reference to any of the Background not yet listed. This section rules the followings:

- Background included: “Positive List”
- General principles
- Access rights for implementation
- Access rights for exploitation
- Access rights for affiliated entities
- Additional access rights
- Inability to grant access rights due to third party rights
- Access rights for parties entering or leaving the Consortium
- Specific provisions on software

2.6 Copyrights on Communication Materials

The illustrations, logo and graphics produced in the framework of the project, except where sourced to their original owners, are properties of the Consortium and may not be used by external parties without prior written approval by the Coordinator, and WP8 leader and should clearly acknowledge and cite SUPERFLUIDITY as the source.

3 Dissemination and Communication Strategy

3.1 SUPERFLUIDITY Objectives

The overall objective of SUPERFLUIDITY is to design and implement a novel, superfluid network architecture where network services can be deployed near-instantaneously, whenever and wherever they are needed, and are able to operate with high performance. The overall goal is supported by eight specific objectives:

- Novel 5G data plane processing architecture – Design a flexible, open and programmable 5G data plane processing architecture and relevant APIs for network functions' convergence;
- Converged 5G platform – Design, implementation, and evaluation of a unified and high performance distributed cloud platform technology for radio and network functions support and migration;
- New algorithms and functions – Design, development and evaluation of algorithmic and design improvements for radio processing tasks, flow processing primitives, and service optimisation;
- Ultra-fast and efficient virtualisation – Design, implementation and evaluation of beyond the state of the art, low-memory footprint and high performance virtualisation technology;
- Hardware adaptation and abstraction – design and development of technologies and interfaces to exploit and integrate customised hardware architectures;
- Control and provisioning framework – Extensions of existing and widespread frameworks for platform management, control, and elastic provisioning;
- Security framework – Security abstractions and mechanisms to control the access to, and execution of, the network processing functions, and to prevent third-party network functions from having a negative impact on other clients' functions, the network, or the Internet at large;
- Contribution to standardisation – Feed SUPERFLUIDITY results into the relevant standards bodies and communities working on de-facto standard tools.

SUPERFLUIDITY's ambition is to aid mobile network operators to meet the demanding requirements of 5G while at the same time developing favourable market conditions, which will create sustainable business for all stakeholders in the value chain.

There is a key role to play for **Equipment providers, Service Providers and IT players** together to make this a reality by providing converged IT and Network infrastructure.

In this context, SUPERFLUIDITY helps to create a new ecosystem and the opportunity for all players to collaborate and develop new business models they can mutually benefit from.

We can sum up the main result of the project as a converged cloud-based 5G concept that will enable innovative use cases in the mobile edge, empower new business models, and reduce investment and operational costs, exerting impact as follows:

- At the macro level: Consortium partners aiming at strategically placing themselves as the **driving force in the area of converged 5G service and network architectures** by becoming early adopters of SUPERFLUIDITY's system.
- At the societal level: **enabling software and application providers to bring to the market innovative services and applications** exploiting information on network capabilities and conditions available at the base station without worrying about the underlying hardware; the open application space will drive the quality of the service up and the costs down.

- At the operational level: i) deployment of **service and applications close to users** following their particular performance needs; ii) reduction of end-to-end latency; iii) development of **5G standards and production-quality open source code**; iv) tools for system orchestration and management and for security, integrating the SUPERFLUIDITY system into **one of the leading cloud management frameworks.**

3.2 Strategic Approach

SUPERFLUIDITY plans to address the full range of potential users and targeted fields including research, commercial, and investment, social, environmental, policy making, setting standards, skills and educational training through Specific Communication activities.

SUPERFLUIDITY will ensure that stakeholders are informed about relevant project activities. Project promotion will exploit standardised material in order to create a project brand, e.g. a project logo has already been created (see cover page). The communication effort will strive to follow the general principles described above, and be targeted to several channels and different audiences:

- General public: project web site (www.superfluidity.eu), websites of industrial partners, use of social media (e.g., LinkedIn group: https://www.linkedin.com/groups/8416290, YouTube channel: https://www.youtube.com/channel/UCUEOAQ5x5BC3ANYwe22DICA, Twitter page: @Superfluidity5g, flyers, and worldwide press releases will be used to increase the public's awareness of the project and to keep the community informed about the latest project achievements.
- Scientific community: publications in international conferences and journals, participation in and organisation of workshops and panels in major IEEE and ACM events and hands-on sessions (e.g., hackathons or tutorials).
- Industrial target: visibility in industrial alliances with stands in showrooms, booths in consumer electronic shows, newsletters to partners' customer-bases, hands-on sessions (e.g., hackathons), Proof of Concept (PoC) trials, etc.
- Standardisation and Regulation Bodies: participation to, monitoring of and contributions to standardisation fora are key aspects of SUPERFLUIDITY's dissemination strategy.

3.3 Stakeholder Engagement

SUPERFLUIDITY dissemination activities will ensure wide-reaching impact, increased visibility and effective use of project deliverables among identified stakeholders:

- General Public
- Scientific Community
- Industrial Sector – Research and Project Managers
- Standardisation and Regulation Bodies

The Stakeholders identified are listed in Table 3, below.

General Public	Scientific Community	Industrial Sector	Standardisation and Regulation Bodies
Users and Service Providers	Scientific Audience	Equipment providers	Open Source Communities
Education and Training Sessions for students	Proof of Concept (PoC)	Service Providers	ETSI, IETF/IRTF, 5G-PPP
-	Xen developers community	IT players	-
-	Openstack community	-	-

Table 3: Stakeholders

Different approaches have been developed to achieve a multiplier effect of dissemination activities by addressing the following specific objectives:

- Participation or organisation of education and training events;
- Involvement of the Scientific community and PoC deployment or demonstrations;
- Involvement of industrial sector stakeholders for further exploitation;
- General awareness on the subject of SUPERFLUIDITY and related topics using existing communities and networks.

3.4 Tasks of the Project Partners

All SUPERFLUIDITY partners are contributors to the dissemination activities under the coordination of Work Package leader CITRIX.

All project members are expected to actively contribute by:

- Identifying and informing the Consortium about dissemination opportunities (e.g. Events, publications, etc.) by updating related documents in the project SVN repository on a regular basis (see § 7.1 Recording Communication Activities)
- Contributing the contents of their respective work packages to Web site News (including video), press releases, presentations, etc.;
- Using their network to support the dissemination of project information;
- Presenting the project at relevant conferences, workshops and other events;
- Helping to promote SUPERFLUIDITY workshops/events, in particular engaging key stakeholders to act as multipliers.

More specifically, the tables below (Table 4, Table 5, Table 6 and Table 7) summarise the activities planned by each one of the partner for Specific Stakeholders' group.

General Public		
Specific Activity	Partner	Description
DISSEMINATION	ALL	All the partners are involved in General Public Dissemination as a general obligation of the GA. Results about not planned activities will be given in the Communication Reports' Deliverables.
	ALBLF	ALBLF will showcase the SUPERFLUIDITY technologies during the Bell Labs Open Days organized once a year. ALBLF will publish the description and performance results of SUPERFLUIDITY usage of technologies in its platform in top tier publications.
COLLABORATION WITH 5G-PPP STAKEHOLDERS	CNIT	CNIT coordinates the project participation according to the contractual commitment of the 5G-PPP.
EDUCATION AND TRAINING SESSION	ALUIL, UPB AND BGU	ALUIL, UPB and BGU will organize an education and training session (including a hands-on session) on selected SUPERFLUIDITY results as part of their yearly winter school (see http://events-tce.technion.ac.il/winter-school-2015/) or as part of a separate event in Bucharest
	UPB AND NEC	UPB and NEC will organise a top-quality academic workshop on areas relevant to SUPERFLUIDITY. Partners NEC and UPB have a track record of organising

		high profile workshops in areas relevant to SUPERFLUIDITY. NEC's Felipe Huici has co-chaired the first HotMiddlebox workshop at CoNext 2013 and will co-chair CoNext 2015, and UPB's Costin Raiciu is co-chairing the HotMiddlebox workshop at SIGCOMM in 2015.
	ULG	SUPERFLUIDITY research results will be injected into the MSc curriculum at ULG and exploited by PhD students and research staff. Industry will also benefit through the dissemination of SUPERFLUIDITY results through consulting services from ULG, joint industrial projects, as well as joint internship and joint supervision of MSc and PhD students.

Table 4: Specific Dissemination for General Public

Scientific Community		
Specific Activity	Partner	Description
PUBLICATIONS	ALL ACADEMIC PARTNERS	All the Academic partners are involved in Scientific Dissemination. Results about not planned activities will be given in the Communication Reports' Deliverables.
	UPB	UPB will publish SUPERFLUIDITY outputs to top tier conferences. UPB's past record of publishing in such venues (3 NSDI papers, 2 SIGCOMM papers in the past 5 years) show that SUPERFLUIDITY can make an impact at the top of networking research.
	NEC	NEC will publish SUPERFLUIDITY outputs to top tier conferences. NEC's past record of publishing in such venues (3 SIGCOMM CCR, 1 SIGCOMM, 1 CoNEXT, 1 NSDI papers in the past 5 years) show that SUPERFLUIDITY can make an impact at the top of networking research.
	ULG	ULG will publish SUPERFLUIDITY output to top tier academic conferences and journals. ULG has a long track record of publishing in such venues (several papers at ACM SIGCOMM, ACM CONEXT, IEEE INFOCOM and ACM/IEEE TON) and can thus reinforce the impact of SUPERFLUIDITY the top of networking research. Furthermore, the ULG lead in SUPERFLUIDITY, Prof. Laurent Mathy, has a long track record of invited talks at research facilities and conferences (over 50 invited talks). Prof. Mathy holds a visiting professorship for senior international scientists of the Chinese Academy of Sciences, and is thus a regular seminar series speaker around China, providing an avenue for rapid dissemination of SUPERFLUIDITY results outside of the EU.
PROOF OF	CNIT	Ninux.org is a wireless network community in Italy (http://wiki.ninux.org/FrontPage), based in Rome but spread all over the

CONCEPT (PoC)		country with about 300 nodes. In cooperation with CNIT, Ninux.org deployed about 20 INTEL NUC devices (http://www.intel.com/content/www/us/en/nuc/overview.html) running Linux virtual machines in home premises. In SUPERFLUIDITY, CNIT and Ninux.org will assess and test on a production network, with actual users, edge-cloud services (e.g. IoT, home automation, environmental monitoring, edge-NFV) by reusing and improving the already deployed INTEL NUCs and adding similar devices. Ninux.org members will cooperate on a voluntary basis assisted by CNIT personnel working in SUPERFLUIDITY. The interest of Ninux.org in participating to the project lies in the opportunity to experiment with new functionality and services, which is one of its main institutional aims.
	ALBLF	ALBLF will integrate and demonstrate a real RF link by connecting to a 4G RRH via a CPRI to Ethernet box, and mixing with virtual 5G handsets. The demonstration will instantiate virtual eNB functions supporting a variety of scenarios such as: i) mixing 4G and 5G eNB; ii) supporting various services such as sensor and multimedia; iii) moving some functions dynamically between the RRH (or the box next to it) and the central computing node; iv) updating some functions on the fly in the eNB instantiation (such as the MAC scheduler to fit with the end-user service).
	ALUIL	ALUIL holds multiple PoCs with multiple operators, including Deutsche Telekom and China Mobile demonstrating vIMS (by Huawei and Alcatel-Lucent) as well as with NTT Docomo and KT Corporation on-boarding vEPC (by NEC and Alcatel-Lucent). ALUIL will complement and extend those PoCs with SUPERFLUIDITY results (e.g., performance enhancements and the ability to move service from the cloud to the remote radio head and vice versa). These enhancements would allow a shift to a second phase of performance demonstration in additional to the current functional PoCs.
	BT	BT will participate in the test and deployment of a selection of SUPERFLUIDITY use cases within the NFV PoC Framework (http://www.etsi.org/technologies-clusters/technologies/nfv/nfv-poc) in collaboration with other industrial partners, according to the referenced framework.
	CITRIX	CITRIX aims to execute at least the following PoC's, as aligned with the objectives of SUPERFLUIDITY: i) PoC on subscriber-aware service chaining, employing NSH (Network Service Header) for scalable and efficient delivery of composite network services, ii) PoC on virtualization/cloudification of EPC/GiLAN applications, interoperable with the major cloud orchestration options and aligned with NFV architecture.

	EBLINK	EBLINK will participate in the testing and evaluation of SUPERFLUIDITY results in their "EBlink Lab". This laboratory has all required equipment to test information transmission between access nodes and the remote radio head. EBLINK will further test SUPERFLUIDITY results within its partner operators' network environments together with Alcatel-Lucent platform (in order to test wireless access solutions together with fiber connectivity to deploy multi RRHs).
	ONAPP	ONAPP intends to use the low resource Hypervisors within the ONAPP platform as a trial to see how performance can be improved against the most recent version of the product. If there are significant performance increases then these changes may be incorporated into the ONAPP Integrated Storage and/or Cloud products (900+ service providers / 2000+ clouds). The other area that ONAPP intend to produce a PoC in is on a high performance CDN addition to its CDN and Federated Market platform.
	PTIN	PTIN intends to transfer SUPERFLUIDITY results to its new Cloud business unit deploying the brand new data center (https://cloud.ptempresas.pt). The targeted PoC will show how to seamlessly move (virtualized) functions from the cloud data centers to the (wireless) access of the network.
	TELCARIA	TELCA will test and deploy a selection of SUPERFLUIDITY use cases thanks to their cooperation with REDIRIS (the National Research Network, NREN, in Spain).
	TID	TID will participate in the test and deployment of a selection of SUPERFLUIDITY use cases within the NFV PoC Framework (http://www.etsi.org/technologies-clusters/technologies/nfv/nfv-poc) in collaboration with other industrial partners, according to the referenced framework.
	UNIFIED STREAMING	USTR will participate in and test a selection of SUPERFLUIDITY use cases using its OTT streaming video solutions at the edge level (late transmuxing) with specific attention to the use of protection (DRM) at this level.
OPENSTACK SUMMITS AND HACKATHONS	NEC - CITRIX	NEC will co-organise, along with CITRIX, one of the official Xen hackathons, where the main Xen developers and other developers from industry come together for a few days to advance the state of Xen-related software.
	NEC	NEC commits to organize, along with other project partners, a SUPERFLUIDITY hackathon where we bring together developers from the project and from external entities (operators, SMEs, research institutions) to try out, hands-on, the software produced by the project. The aim is three-fold: (1) for the external input to provide constructive criticism; (2) as a dissemination activity; and (3) as a means to gather potential new use cases from external parties.

	RED HAT	REDHAT will present SUPERFLUIDITY solution in OpenStack conferences (once per year).

Table 5: Specific Dissemination for Scientific Community

Industrial Sector		
Specific Activity	Partner	Description
INDUSTRY EVENTS AND AD-HOC MEETINGS	ALL INDUSTRIAL PARTNERS	All the Industrial partners are involved in Dissemination towards industrial sectors. Results of no planned activities will be detailed in the Communication Reports' Deliverables.
	CNIT	Organization of the SUPERFLUIDITY workshop for discussions with policy makers, social and environmental organizations regarding project results.
	ONAPP	ONAPP will present and demonstrate SUPERFLUIDITY results at several trade shows including WHD in Europe / US where the platforms can be demonstrated.
	UNIFIED STREAMING	USTR plans to demonstrate SUPERFLUIDITY results to its broad portfolio of industry partners, at tradeshows USTR participates in and specific events, e.g. ad-hoc talks USTR is invited for.
	TUD	Vodafone Chair of TUD will demonstrate SUPERFLUIDITY results to its broad portfolio of industry partners (e.g. Vodafone, Huawei, Nokia Networks). Moreover, Vodafone Chair's close relation to Vodafone R&D allows promoting the SUPERFLUIDITY concepts and achievements through Vodafone in NGMN Alliance and 3GPP.

Table 6: Specific Dissemination for Industrial Sector

Open Source Communities, Standardisation and Regulation Bodies		
Specific Activity	Partner	Description
OPEN SOURCE COMMUNITIES	ALBLF	ALBLF will support relevant contributions to the Docker open source project (pull requests, commits). ALBLF will propose to organize a Docker hackathon in its premises focussing on Docker usage in wireless access (stateful relocation, access to I/O acceleration hardware, realtime preemption). ALUBLF will contribute to the Open Air Interface Foundation relevant technologies from SUPERFLUIDITY and will propose to host a "school" session at the Open Air Interface Foundation to showcase the relevance of SUPERFLUIDITY.
	ALUIL	i) Incorporate resource allocation schemes into OpenStack NOVA scheduler; ii) integrate SUPERFLUIDITY's SLA-oriented orchestration

		into OpenStack HEAT; iii) include the SUPERFLUIDITY requirements and use cases (e.g., inclusion of vRAN) into the work items of OPNFV (ALUIL is part of the technical steering committee of OPNFV).
	CITRIX	CITRIX will continue their participation to Open Daylight and OPNFV Linux Foundation projects on making de-facto standards for the applications and services of the Application Delivery Controller (ADC), as a component of the infrastructure (NFVI) layer of the NFV architecture, this contribution is meant to enable offering of advanced capabilities based on SUPERFLUIDITY results to VNFs and can provide application-layer feedback to the Orchestrator about the VNF performance, which can be used for scaling-up/scaling-down and other lifecycle management decisions.
	INTEL	i) INTEL is actively working with internal and external partner organisations on Blue Print and other options for evolving OpenStack. INTEL will push to OpenStack SUPERFLUIDITY's results on monitoring, control, QoS and other service-level requirements relevant to OpenStack projects (in particular Ceilometer and Neutron plugin); ii) INTEL is one of the main maintainers of DPDK.org, the open source Data Plane Developer Kit. INTEL plans to add SUPERFLUIDITY results to DPDK.org on issues of manageability and orchestration for services and platforms for network workload.
	NEC	NEC commits to release part of its project code output as open source (under the original repositories, e.g., cnp.neclab.eu, KVM, XEN, DPDK.org, etc.). The parts that are deemed business-relevant will be kept closed-source for exploitation purposes.
	RED HAT	REDHAT will contribute SUPERFLUIDITY results to OpenStack (Triple-O, Ceilometer, OpenStack scheduler) and create a management framework for the RAN inside OpenStack.
	TELCARIA	TELCA plans to contribute to the open source community by pushing SUPERFLUIDITY results to OpenDaylight (ODL) and OpenStack.
	TID	TID will contribute SUERFLUIDITY results through its participation into the NFV OpenStack group, as well as to the recently launched OPNFV project.
	TUD	TUD plans to integrate SUPERFLUIDITY open source software into research and prototyping platform of 5G Lab Germany (5glab.de).
STANDARDI-SATION AND REGULATION	ALUIL	i) Extend OASIS TOSCA (Topology and Orchestration Specification for Cloud Applications) standard to support the description of the SLA required by the applications; ii) ETSI NFV – MANO to support the description of the SLA required by the applications.

BODIES	BT	BT will contribute to the standardisation of proposed SUPERFLUIDITY solutions both in 3GPP and ETSI NFV ISG and MEC ISGs. The team regularly attends quarterly meetings and plans to present SUPERFLUIDITY concepts and outputs at these meetings.
	CITRIX	CITRIX aims to continue to contribute to the IETF SFC WG (http://datatracker.ietf.org/wg/sfc), both in the area of Generic SFC Encapsulation (such as the Network Service Header) and also in the area of Control Plane Mechanisms.
	INTEL	i) OGF OCCI, the Open Cloud Computing Interface is an open, community-driven specification for remote control of cloud resources. INTEL is a founding co-chair of the OCCI Working Group. SUPERFLUIDITY will establish references and insights into meaningful representations and control requirements for infrastructure and service configurations and can serve as an API basis as well as incorporating useful output on its own roadmap; ii) ISO SC38 (SLA focus): this group is now considering vocabularies for SLAs. INTEL has prior work in machine readability, SLA monitoring and KPI mapping. SUPERFLUIDITY's use cases will provide insights and proof-points relevant for the standardisation of vocabularies for SLAs. INTEL is actively contributing at local chapter level and will represent SUPERFLUIDITY at ISO SC38.
	TID	TID will contribute to the standardisation of proposed SUPERFLUIDITY solutions in IETF, 3GPP and ETSI NFV and MEC ISGs. Diego López is Technical Manager of NFV ISG.
	UNIFIED STREAMING	As member of DASH-IF, Unified Streaming plans to follow the MPEG SAND ('Server And Network Assisted DASH') task force proposed to DASH-IF, where MPEG SAND serves as a standardised framework to realize MEC usages around enhancing video delivery.

Table 7: Specific Dissemination for Standardisation and Regulation Bodies

4 Dissemination and Communication Plan

4.1 Targeted results

Per the Technical Annex, activities in the areas of Dissemination and Exploitation shall include:

- **Demonstrations through PoC**s: SUPERFLUIDITY will demonstrate its results through proof-of-concept prototypes and trial activities.
- **Community development:** SUPERFLUIDITY will further push its results and develop community awareness by participating in events, such as Hackathon sessions, OpenStack summits, MWC, ONS, SDN World Congress.
- **Scientific dissemination:** SUPERFLUIDITY will target top tier research conferences and journals; partners have established presence/track record.
- **Workshops**: the Consortium will organize a top-quality academic workshop on relevant areas and two workshops involving industry stakeholders.
- **"World" dissemination tours and education:** SUPERFLUIDITY partners will further disseminate results via "world" dissemination tours of invited talks.
- Communication and collaboration with **peer 5G-PPP projects** in the framework of the overall 5G-PPP program, and the related cross projects working groups.
- **Community and public awareness:** Project will seek to increase community awareness by participating in EU-organized concertation events, by usage of social media (e.g., LinkedIn, Twitter), and through press releases (website).
- **Contribution to standardization:** SUPERFLUIDITY targets novel technologies in the 5G networks area and plan to contribute to relevant standards bodies in it: 3GPP, ETSI,ONF: Wireless and Mobile WG, IETF/IRTF. Additionally, SUPERFLUIDITY plans to interact with several FOSS communities producing frameworks that are widely adopted and can be considered de-facto standards.

4.2 Specific goals

Also per the Technical Annex, specific commitments of the projects include:

- **Dissemination and communication** of the project results via the project website, publications, press releases and media coverage.
- Co-chairing of workshops, demonstrations or specialized sessions at top technical conferences.
- **Open source** code releases and collaboration with major open source development communities.
- Organization of at least one **workshop** (likely as part of a top-tier conference), involving external developers.

– Organization of one project-related **hackathon** event involving external developers.

– Communication activities targeting industry stakeholders, including organization of **two specific industrial workshops**

4.2.1 Key milestones of the project

Milestone number	Milestone name (and short description)	Related WP(s)	Means of verification	Delivery date (Project month)
1	**Project fully operational.** Management structures and procedures, including standard formats and forms for project documentation ready. Composition of boards and teams fully defined. Technological infrastructure to support cooperative work fully operational (web server, document server, version control system for sources files, mailing lists, management & report tools, etc.). First version of the use cases. Planning of Communication, Dissemination, Standardization and Exploitation activities.	1, 2, 8	D1.1, Project technological platform office fully operational (verified by all partners), I2.1, I8.1	Month 3
2	**Intermediate Requirements and Functional Analysis.** WP2 producing intermediate Technical and Business Requirements and Functional Analysis and Decomposition for the Reuse&Sharing of Resources. Early results on System architecture	1,2,3	D1.2, I2.1, I2.2	Month 6
3	**End of phase 1**. First project review; first edition of the Project vision and roadmap; first annual review report; final results from WP2. Stable system architecture; intermediate results from core WP 4, 5, and 6; first report on communication, dissemination and open source	All	D1.2 D1.3 D1.4, D1.2, I4.1, I5.1, I5.2, I6.1, I6.2, I6.3, D8.2, D8.3 and first project review	Month 12

	contributions and standardization and innovation and exploitation.			
4	**System architecture complete**	3	D3.1	Month 16
5	**Public documentation of major project accomplishments;** in 2nd report on communication, dissemination and open source contributions and standardization and innovation and exploitation	All	D8.4, D8.5	Month 20
6	**End of phase 2 and completion of core technical WPs (4,5,6)**. Platform components complete, initial platform available and demoed; Communication and Dissemination reaching wider audience.	1,4,5,6,7,8	D1.2 D1.3 D1.4, D4.1, D4.2, D4.3, D5.1, D5.2, D5.3, D6.1, I7.3;	Month 24
7	**System integrated**. Platform integration and prototype available.	1,7,8	Trial platform integrated and running (D7.2)	Month 28
8	**End of phase 3 and of the project**. Second project review: second edition of the Project vision and roadmap; second annual review report; final release of platform and use case code; final report on dissemination and open source contributions and standardization	1,7,8	D7.3, D8.6, D8.7, D8.8 and final project review	Month 30

4.3 Dissemination Channels

4.3.1 SUPERFLUIDITY Web Site

The SUPERFLUIDITY website is the main promotional tool for publishing project information and research results. The following domain names have been secured and are linked to the same page:

- www.superfluidity.eu
- http://superfluidity.eu/

The web site has been realised through WordPress and the Access Press Ray Theme. A screenshot of the current view of the website is captured in Figure 1.

The main structure of the pages follows the scheme of the Home page: main field dedicated to Project content with a static section of the right side showing official information about the project, Coordinator Organization, Funding and Official EU Acknowledgement.

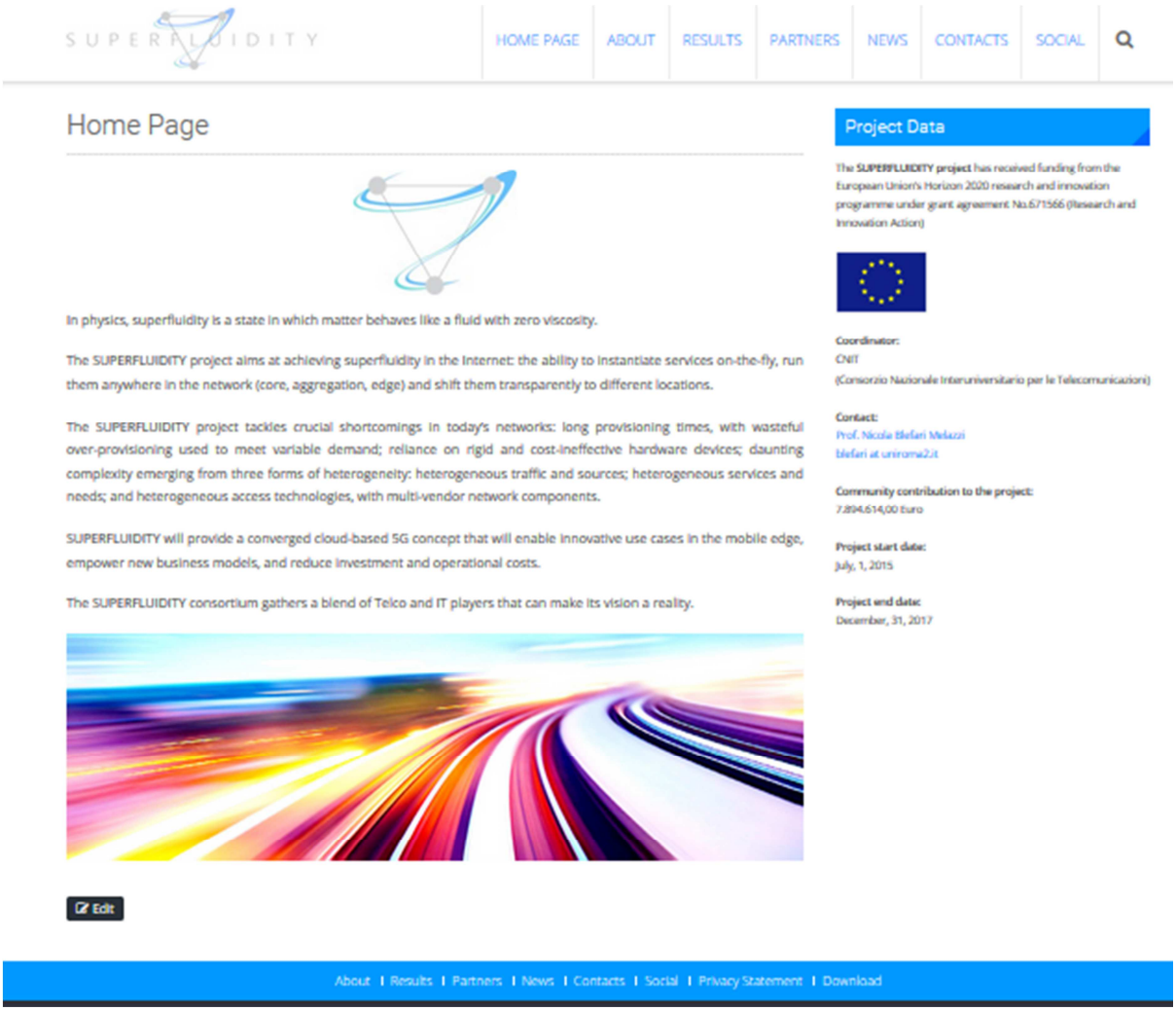


Figure 1: SUPERFLUIDITY Home page

Furthermore, the Web site is equipped with a web analytics service (Google Analytics) which allows checking and collecting information about website traffic.

Analytics reports will allow Consortium to acquire information about the audience and their behaviour and therefore adapt communication style in order to reach a wider audience.

Analytics reports will be made available by CNIT to the WP8 Leader on a timely basis (in coincidence with Internal Reporting Periods, i.e. every four months) and on WP8 Leader specific request at any time. Reports will be stored in a specific folder in SVN repository and made available for all the Partners.

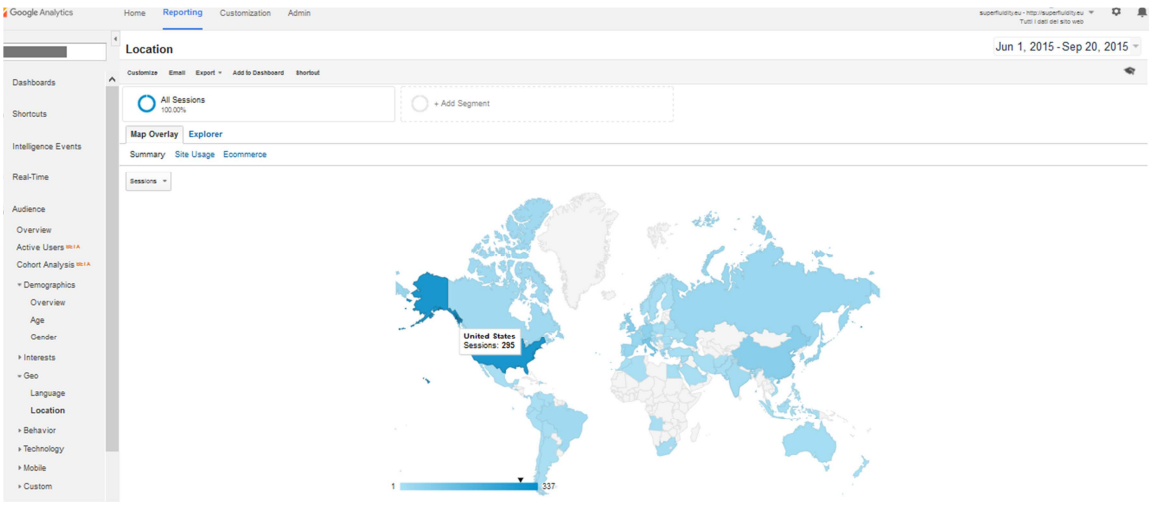


Figure 2: Google Analytics Geographic Report

4.3.2 Structure

The SUPERFLUIDITY web site is structured in the following sections accessible from the Header Menu:

1. **Home page** - summary describing the vision, context and audience of the SUPERFLUIDITY Project.
2. **About** - describe the main objectives of the project, expected benefits and impact, the main research activities, the current status of the project roadmap and related projects and initiatives in different sub-sections:
    a. Specific Objectives
    b. Benefit and Impact
    c. Research Description
    d. WPs Description
    e. Step by Step - shows the complete Roadmap of SUPERFLUIDITY
    f. Related Projects
3. **Results** - describes the main results of the project in several subsections:
    a. Communication – from this page is possible to Download SUPERFLUIDITY Communication Materials
    b. Dissemination
    c. Standardisation
    d. Exploitation
    e. Deliverables – this sub-section is equipped with a private area in which partners and EC Officer can download Deliverables complete.
    The Deliverable manager plugin is set up in such way that Public Deliverables will be downloadable for the general public as soon as they will be available. Private

Deliverables will be downloadable just through log-in, whose access details will be made available to Partners' team, EU officers and reviewers under request.

4. News – this section will be the main channel for dissemination of information. News, which will be published with the contribution of all the Partners, will be shareable through Social media.
5. Partners – this page gives access to information about the composition of the Consortium and to single pages dedicated to Partners' description and Teams with links to the partners web-pages
6. Contact – Information about the Contact Details of the Project Coordinator, Technical Coordinator and Innovation Coordinator.
7. Social – links to main social networks in which SUPERFLUIDITY accounts have been created: LinkedIn, Twitter and YouTube.

The Footer Menu differs from the Header menu because from this menu the Download pages are accessible. Furthermore, from the Footer menu the Privacy Statement can be open.

4.3.3 News Editorial Plan

The aforementioned "News" section represents a channel for spreading information outside the Consortium. The page is planned to be a blog where news and information can be published in a very easy and light way through WordPress platform. As already mentioned, this section will allow sharing of news through social networks, thanks to a sharing plugin that has been installed.

Keeping the news site up-to-date is essential for maintaining and increasing online traffic on the website. The Editorial plan considers that the commitment of all the partners is important in order to share information/impression on their own activity related to SUPERFLUIDITY. For such reason each Partners involved in project will share information on the following activities by writing and sharing short news items:

- Congresses, workshops, commercial events and fairs attendance.
- Networking activities with Organisations external to SUPERFLUIDITY Consortium in the specific topic of the project.
- Presentations held, Publications authored and Press releases made in connection with SUPERFLUIDITY activities.
- Collaborations established with expertise and projects similar to SUPERFLUIDITY's topic and exploitable synergies.
- Interesting Events, Information and Calls for the benefit of SUPERFLUIDITYs objectives.

4.3.4 Responsibility and maintenance

CNIT is responsible for designing, realizing, maintaining and updating the web site. However all partners, led by the WP8 Leader, are involved in content production and all partners will be asked to provide feedback, information, documents, news, or any other material they consider useful to disseminate progresses and results through the web site.

The maintenance activity consists of (at least):

- Periodic Backup of the website (monthly);
- Renewing of the domain name and hosting services (yearly);
- Traffic checks (accesses, traffic sources, etc.) for security guarantee (monthly).

4.3.5 Social Networking

As planned in the proposal, SUPERFLUIDITY will exploit also the communication and information opportunities through social network. The planned channels are Twitter, LinkedIn and Youtube.

The SUPERFLUIDITY's profiles are reachable through the following addresses:

- LinkedIn: https://www.linkedin.com/groups/8416290
- Twitter: @Superfluidity5g
- YouTube: Superfluidity 5G
  https://www.youtube.com/channel/UCUEOAQ5x5BC3ANYwe22DICA

All the social networks' accounts have been created by CNIT but are available for sharing all the contents created by partners.

4.3.5.1.1 LinkedIn Professional Network

A SUPERFLUIDITY Group has been created on LinkedIn's social network platform for professionals (URL: https://www.linkedin.com/groups/8416290) and all the Partners Team members have been invited to join the Group. The strength of LinkedIn consists in the possibility to reach through the network similar Expertise and suitable Organizations (both from Research and Industrial Sector) potentially interested in exploitation of results and further development of solutions.

To achieve a positive interaction among Group members, it is necessary to generate a continuous flow of information and discussions and at a very high quality level. Commitment of all the Partners (i.e. individual members of the Groups) is crucial in order to achieve valuable results and pave the way to exploitation actions.

First of all on the LinkedIn group will be shared all the News and Information published on the SUPERFLUIDITY web site. Secondly, but not less important, is the commitment of the Consortium in contributing through initiation and following of discussions generated.

Partners can indicate to the Manager/s of the SUPERFLUIDITY LinkedIn Group the contact persons to be invited and should devote effort for sharing updates, participating in discussions and engaging their own professional networks.

4.3.5.2 Twitter

Another Social Network for the Dissemination and Communication activities of SUPERFLUIDITY is Twitter. A specific profile (https://twitter.com/Superfluidity5g) has been created in order to connect and disseminate information through the Official EU Channels. First of all with 5GPPP Twitter Account: @5GPPP.

4.3.5.3 YouTube

The YouTube account contains the first SUPERFLUIDITY Video produced by CNIT. All the partners that want to share their multimedia contents can take advantage of this channel.

4.4 Academic publications and project literature

SUPERFLUIDITY will target top tier research conferences and journals (USENIX NSDI, USENIX OSDI, USENIX ATC, ACM CONEXT, ACM SIGCOMM, ACM SIGCOMM CCR, ACM MMSys, NOSSDAV, MOVID etc.). These leading venues shape future research in this area and as such provide maximum visibility for the project results. Several partners (UPB with MPTCP, NEC with ClickOS, etc.) have an established presence and a strong track record in such venues.

4.5 Press Releases

SUPERFLUIDITY's DoA planned to realise 1 press release per year. Each project partner can issue its own press release and share contents for Consortium approval.

The first press release was issued by NEC and published on 9th November 2015 on official NEC Web site: http://www.nec.com/en/press/201511/global_20151109_02.html. The coverage of this first press release was very wide and the following online newspapers propagated the news:

Telecom TV (following interview between Saverio and Ian Scales)
http://www.telecomtv.com/articles/5g/defining-superfluidity-as-a-key-piece-in-the-5g-jigsaw-puzzle-13018/
Telecoms.com
http://telecoms.com/451992/euro-consortium-to-develop-cloud-based-5g/
Telecompaper
http://www.telecompaper.com/news/nec-joins-eus-superfluidity-5g-development-project—1112462
Business Cloud News

http://www.businesscloudnews.com/2015/11/09/nec-and-partners-in-europe-to-develop-converged-cloud-based-5g-network/

Equities.com (via M2)

http://www.equities.com/index.php?option=com_k2&view=newsdetail&id=464697

Telecoms Tech

http://www.telecomstechnews.com/news/2015/nov/10/superfluidity-project-wants-build-cloud-based-5g-network/

Wireless

http://www.wireless-mag.com/News/39517/nec-joins-european-5g-virtual-network-and-service-platform-project.aspx

Business Cloud News

http://www.businesscloudnews.com/2015/11/09/nec-and-partners-in-europe-to-develop-converged-cloud-based-5g-network/

A second Press Release was realised by CNIT in the frame of 5G PPP collaboration. The press release was published on 5G PPP web site at the following address:

https://5g-ppp.eu/superfluidity-a-super-fluid-cloud-native-converged-edge-system/

Next Press Releases will be reported in the next Deliverables planned as Reports, i.e. D8.2 (M12), D8.4 (M20), D8.6 (M30).

4.6 Relevant external conferences and events

A work-in-progress table of future interesting conferences and academic events, including submission dates, is the following:

Industry Events			
Event	When	Where	SUPERFLUIDITY
Mobile World Congress	February 22-25, 2016	Barcelona, ES	
Open Compute Summit	March 9-10, 2016	San Jose, CA	
Open Networking Summit	March 14-18, 2016	Santa Clara, CA	
World Hosting Days Global	March 15-17, 2016	Rust, DE	
NFV World Congress 2016	April 19-22, 2016	San Jose, CA	
Net Futures 2016	April 20-21, 2016	Brussels, BE	
OSCON 2016	May 16-19, 2016	Austin, TX	
Network Virtualization & SDN Europe	May 31 - June 2, 2016	Madrid, ES	
5G World	June 28-30, 2016	London, UK	
HostingCon	July 24-27, 2016	New Orleans, USA	
LinuxCon + ContainerCon	August 22-24, 2016	Toronto, Canada	
Mobile Edge Computing Congress	September 27-28, 2016	Munich, DE	
OpenDaylight Summit	September 27-29, 2016	Seattle, WA	
LinuxCon Europe	October 4-6, 2016	Berlin, DE	
SDN & OpenFlow World Congress	October, 2016	Europe	
AWS re:Invent	November 28 - December 2, 2016	Las Vegas, CA	
Carrier Network	December 6-8, 2016	Palo Alto, CA	

Virtualization			

Academic Events			
Event	When	Where	SUPERFLUIDITY
Innovations in Clouds, Internet and Networks (ICIN 2016)	March 1-3, 2016	Paris, FR	
Special Issue on Standardization in SDN and NFV	March 31, 2016	(Journal)	Paper submission: March 31, 2016
IEEE INFOCOM 2016	April 10-15, 2016	San Francisco, CA	
/ 1st International Workshop on Software-Driven Flexible and Agile Networking	April 11, 2016	San Francisco, CA	Workshop (see 5.1) Paper submissions due: December 20, 2015
ACM Multimedia Systems (MMSys)	May 10-13, 2016	Klagenfurt am Wörthersee, AT	Submission deadline: December 11, 2015
/ Special Session on "Media Synchronization"	May 10-13, 2016	Klagenfurt am Wörthersee, AT	Submission deadline: February 5, 2016
Network and Operating System Support for Digital Audio and Video (NOSSDAV)	May 10-13, 2016	Klagenfurt am Wörthersee, AT	
8th ACM Workshop on Mobile Video (MoVid)	May 10-13, 2016	Klagenfurt am Wörthersee, AT	Paper submission: February 5, 2016
IEEE International Conference on Communications (relevant workshops)	May 23-27, 2016	Kuala Lumpur, MY	Paper submission (extended deadline): December 18, 2015
QoMEX 2016	June 6-8, 2016	Lisbon, PT	Full paper submission: March 4, 2016
2nd IEEE Conference on Network Softwarisation	June 6-10, 2016	Seoul, KR	Paper submission: December 16, 2015

(NetSoft 2016)			
/ IEEE International Workshop on Software Defined 5G Networks (Soft5G 2016)	June 10, 2016	Seoul, KR	Paper Submission: January 15, 2016
IEEE LANMAN 2016	June 13-15, 2016	Rome, IT	Workshop (see 5.1) Paper submissions due: March 7, 2016
TNC16	June 13-16, 2016	Prague, CZ	
HotCloud 2016	June 20-21, 2016	Denver, CO	Paper submissions due: Tuesday, March 8, 2016
EUCNC 2016	June 27-30, 2016	Athens, GR	Submit your paper until: February 5, 2016
8th International Conference on Ubiquitous and Future Networks	July 5-8, 2016	Vienna, AT	Submission Deadline: Feb. 15, 2016
ACM SIGCOMM 2016	August 22-26, 2016	Salvador, BR	Main conference paper titles and abstracts due: January 22, 2016 Main conference complete paper submissions due: January 29, 2016 Tutorial proposals due: February 22, 2016
/ HotMiddlebox 2016	August 22-26, 2016	Salvador, BR	
/ Internet-QoE 2016	August 22-26, 2016	Salvador, BR	
/ NetPL 2016	August 22-26, 2016	Salvador, BR	
ACM GlobeCom 2016	December 4-9, 2016	Washington, DC	
ACM SIGCOMM	December 12-15, 2016	Irvine, CA	

CoNEXT 2016			

Standardisation Events			
Event	When	Where	SUPERFLUIDITY
NFV-ISG Information Modelling Workshop	January 13-14, 2016	Louisville, KY	
Workshop on Future Radio Technologies: Air Interfaces	January 27-28, 2016	Sophia Antipolis, FR	
NFV#13	February 16-19, 2016	Dublin, IE	
IETF/IRTF-95	April 3-8, 2016	Buenos Aires, AR	
NFV#14	May 3-6, 2016	Atlanta, GA	
IETF/IRTF-96	July 17-22, 2016	Berlin, DE	
IETF/IRTF-97	November 13-18, 2016	Seoul, KR	

4.7 Contacts with EU Institutions and other projects 5GPPP Common dissemination

The 5G Infrastructure Association (https://5g-ppp.eu/) aims at creating a common coordination and synchronisation on dissemination and communications activities among 5GPPP Projects. For this purpose, common communication channels have been created in order to regularly share information on external publications and press releases to ensure maximum impact.

The SUPERFLUIDITY Dissemination and Communication activities will therefore exploit these channels by:

- Sharing with other 5GPPP projects information and communication Materials
- Tighten connection through social network such as: Twitter, LinkedIn, YouTube
- Preparing common presentation materials
- Events joint participations

The main contact point between SUPERFLUIDITY Consortium and 5GPPP Association is CNIT Coordinator Prof. Blefari Melazzi therefore CNIT will take care to harmonize and coordinate communication and common dissemination.

A short News has been issues by CNIT on 16 November 2015 and published on the 5G-PPP web site. 5G-PPP Communication services will take care to spread information provided by all 5G projects through their own communication channels.

As a first result of such collaboration, in occasion of the International conference GLOBECOM IEEE 2015 (San Diego, California) a SUPERFLUIDITY video was presented at the 5G Architecture Working Group demo Booth.

Further results of these joint communication activities will be reported in the Communication Reports' Deliverables.

4.8 Other relevant research projects

The SUPERFLUIDITY project implementation implies research and innovation activities in a wide range of domains and scientific fields and applications. Considering this aspect, it is very important to take the opportunity to exploit synergies with other Research and Innovation Actions, which are implementing complementary or similar technologies. From another point of view, it is also important to get in touch with such consortia where relevant expertise can be found. Involving other project Coordinators and learning from their experiences will assist the SUPERFLUIDITY implementation. A list of relevant projects is detailed in Table 8.

Related Research Projects	
Name	Web site/Relevant domains
NetIDE - An integrated development environment for portable network applications	http://www.netide.eu/
Xhaul - The 5G Integrated fronthaul/backhaul	http://www.xhaul.eu/
5GEx - 5G Exchange - Cross-domain orchestration of services over multiple administrations or multi-domain single administrations	https://5g-ppp.eu/5gex/
Green ICN - Architecture and Applications of Green Information Centric Networking	http://www.greenicn.org/
FLAVIA Project - FLexible Architecture for Virtualizable future wireless Internet Access	http://www.ict-flavia.eu/
BEBA – BEhavioural BAsed forwarding	http://www.beba-project.eu/
T-NOVA	http://www.t-nova.eu/

	(NFV, NFV as a service, Orchestration)
Mikelangelo – Drive and evaluate enhancements to responsiveness, agility and security within KVM and OSv stack	http://www.mikelangelo-project.eu/
Trilogy 2 – Liquid Network resources	http://trilogy2.eu/
EUROSERVER – next generation, green, power-efficient datacentre	http://www.euroserver-project.eu/

Table 8: Related research projects

Such preliminary lists will be updated during the life span of the project and will constitute a specific task of the Dissemination activities report (see §7.2 Recording Communication Activities). In the planned Reports about Dissemination and Communication activities will be also described the collaboration fields and actions undertaken between relevant projects' activities.

5 Events Strategy

5.1 Two SUPERFLUIDITY Workshops

Per the Technical Annex, the Consortium will organize a top-quality academic workshop on areas relevant to SUPERFLUIDITY and two workshops involving policy makers, social and environmental stakeholders to discuss the project's results.

In the meantime SUPERFLUIDITY Partners are contributing to the organization of the following events, focused on the Superfluidity theme:

- Software-Driven Flexible and Agile Networking (SWFAN 2016), (http://www.swfan.org). The 1st International Workshop on Software-Driven Flexible and Agile Networking will be held on the 11th of April, 2016 in San Francisco, CA, USA in conjunction with IEEE INFOCOM 2016 (http://infocom2016.ieee-infocom.org/authors/call-for-papers).
- IEEE LANMAN 2016 (http://www.ieee-lanman.org/). The 22nd IEEE International Symposium on Local and Metropolitan Area Networks, JUNE 13-15, 2016, ROME, ITALY. This year, the symposium's central theme is Adaptive, Agile and Fluid networking, a broad topic encompassing autonomic and reconfigurable networking, network function virtualization, software defined networking, and so on.

5.2 Demonstrations through PoCs

SUPERFLUIDITY will demonstrate its results through proof-of-concept prototypes and trial activities; especially for PoCs involving network virtualization technologies (but possibly extending also to

wireless), “open” access also to parties outside of the project will be granted (subject to adhering to the CA and the IPR rules). Open calls for participation to these PoCs will be made by presentations at operator events (e.g., DENOG), through proposals to the ETSI NFV ISG initiative, and by means of different communication media (e.g., the project’s website, partners’ open source sites).

The involved partners in this activity confirm their participation in the PoCs described in the Table 5 above described and more details will be provided in the Communication Reports when the SUPERFLUIDITY platform will be better defined, and requirements on the underlying network and NFV Infrastructure will be clarified.

For the time being, the partners reported below have slightly updated their plans regarding PoCs as follows; the other partners will do so in the next future.

CNIT will involve Ninux.org, a wireless network community in Italy (http://wiki.ninux.org/FrontPage), based in Rome but spread all over the country with about 300 nodes. In cooperation with CNIT, Ninux.org deployed about 20 INTEL NUC devices (http://www.intel.com/content/www/us/en/nuc/overview.html) running Linux virtual machines in home premises. In SUPERFLUIDITY, CNIT and Ninux.org will assess and test on a production network, with actual users, edge-cloud services (e.g. IoT, home automation, environmental monitoring, edge-NFV) by reusing and improving the already deployed INTEL NUCs and adding similar devices. The CNIT’s PoCs will be organised when first results will be available and more precisely in the second half of the project.

CITRIX maintains intention to participate to up to two PoC’s, specifically:

I. PoC on virtualization/cloudification of EPC/GiLAN applications, interoperable with the major cloud orchestration options and aligned with NFV architecture,
II. PoC on subscriber-aware service chaining, employing NSH (Network Service Header) for scalable and efficient delivery of composite network services.

The first PoC above is aligned with the use case already submitted (and analysed the requirements and functional blocks of). Towards implementing this PoC, we take the underlying MEC infrastructure for granted, i.e. our PoC involves moving services from the S/Gi-LAN to the Mobile Edge, NOT actually implementing MEC functional blocks. With regard to the second PoC, the idea is to utilize the (Citrix) NetScaler ADC to implement composition of VNFs. Given that NSH-based service chaining is developed outside the context of SUPERFLUIDITY, this will be mostly a system integration activity.

TELCARIA will test and deploy a selection of SUPERFLUIDITY use cases thanks to their cooperation with REDIRIS (the National Research Network, NREN, in Spain). TELCARIA will also test selected use cases on their own test bed infrastructure.

ONAPP intends to trial the low-resource Hypervisors (namely the MicroVisor) within the ONAPP platform as a trial to investigate how performance can be improved against the most recent version of the product. The other area that ONAPP intend to produce a PoC in is on a high performance CDN addition to the CDN and Federated Market platform (based on the platform above mentioned).

Unified Streaming is interested in organising a PoC in late transmuxing in SUPERFLUIDITY architecture.

PTIN's PoC is related to "seamlessly move virtualized functions from the cloud data centers to the wireless access of the network" but the partner intends to put the emphasis in contributing with a 'MEC like' server prototype that will fit into this 'transmuxing PoC' and other PoCs that may be later identified in WP7 scope. Moving virtualized functions also fits in MEC scope (apps mobility between edge MEC servers, or between edges servers and aggregation servers), being possible to achieve both at the same time.

5.3 Community development

SUPERFLUIDITY will further push its results and develop community awareness by participating to relevant events such: Hackathon sessions (e.g., in cooperation with the Xen Hackathon and as separate SUPERFLUIDITY events), OpenStack summits, "marketing-oriented" presentations at industry events (among others, candidate venues are Mobile world Congress (MWC), Open Networking Summit (ONS), Layer123 (SDN Congress).

5.4 "World" dissemination tours

SUPERFLUIDITY partners will further disseminate the results of the project by committing to "world" dissemination tours of invited talks. The main partner involved in this activity will be person Laurent Mathy ULG, who has done the same for Asian countries, giving talks at various universities of the Chinese Academy of Sciences, but also at Microsoft Research Asia and Huawei.

5.5 Education: Winter/Summer school

A school will be organised to train students and researcher on the latest SUPERFLUIDITY results.

6 Dissemination Tools

6.1 Logo

Creation of a project identity moves from the creation of a logo, a clear and simple image able to embody the SUPERFLIDITY's concept, to create awareness on it and to attract the attention of the target groups.

The SUPERFLUIDITY Logo represents multiple sinuous lines crossing connected nodes enforcing the concept of superfluid connection.

Colour, considered as important to brand recognition, is also associated with certain emotions; in fact Blue is often associated in the Software sector and it relates to Professionalism, Trust, dependability and Loyalty. Therefore the colours chosen for SUPERFLUIDITY are:

- Blue: R – 101; G – 194; B – 255;
- Light blue: R – 111; G – 255; B – 226;
- Light grey: R – 110; G – 211; B – 213.

The Font chosen is Calibri Light for its property to express clarity.

The following pictures show the complete logo with lettering and the small logo of SUPERFLUIDITY.

Figure 3: SUPERFLUIDITY Logo

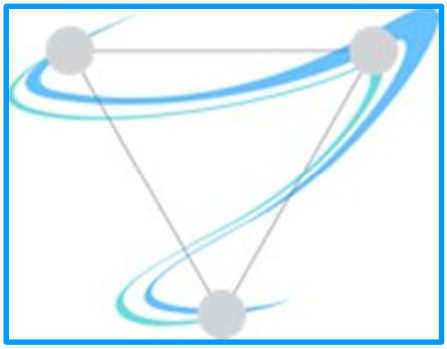


Figure 4: SUPERFLUIDITY Small Logo

6.2 PPT Template

A set of slides have been produced for general presentations of the SUPERFLUDITY material. This is available to all partners on the SVN Repository and has been already delivered with Deliverable 1.1. – Project Management Manual. Partners' specific presentations at external events will be made available in the "Public Documents" section of the SUPERFLUIDITY public website.

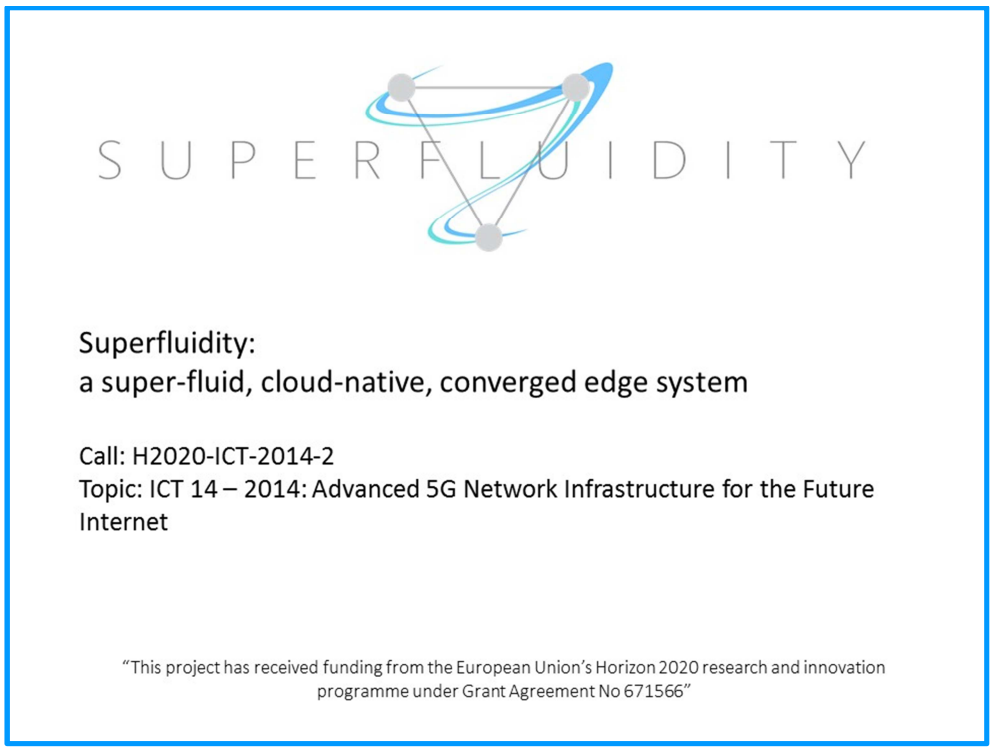


Figure 5: SUPERFLUIDITY PPT Template

6.3 Project Factsheet

A project Factsheet has been realised in order to comply with the common communication activities established within the 5GPPP Association. The Factsheet has been requested by the 5GPPP association and it was realised by CNIT at the end of M1 (July '15). The electronic version will be also downloadable from the SUPERFLUIDITY web site.

Superfluidity: a super-fluid, cloud-native, converged edge system

SUPERFLUIDITY

Superfluidity

MAIN OBJECTIVES

Many shortcomings affect today's networks, and must be addressed if we expect successful 5G network deployments (overly long provisioning times; reliance on proprietary, hard-to-modify and cost-ineffective hardware devices and components; and the daunting complexity from awide range of heterogeneous access technologies). SUPERFLUIDITY tackles these challenges with a multi-pronged comprehensive strategy:

Flexibility, via an architectural decomposition of network components and network services into elementary, reusable primitives.
Simplicity, via a cloud-based architecture, getting rid of access-specific gateways and integrating heterogeneous JBOAs.
Agility, via virtualization of radio and network processing tasks.
Portability and viability, through platform-independent abstractions, permitting reuse of network functions across multiple heterogeneous hardware platforms.
High performance beyond the state of the art, via software acceleration, specialization and adaptation to hardware accelerators, while making these mechanisms transparent to network service designers so that they can focus on the development of novel services.

USE CASES (or APPLICATIONS)

SUPERFLUIDITY will enable the following sample of use cases: Minimum-Delay Cloud storage ; RAN As A Service ; Localized services ; Pooling ; Edge offloading ; Portable signal processing; On-the-fly Monitoring ; Virtualized CDN operators and many others: For instance, context-aware services that take advantage of location information, low-delay services such as augmented reality (e.g., Google glass) or SIRI, edge-based video analytics, and application-aware performance optimizations, as described in a recent ETSI white paper on Mobile-Edge Computing

TECHNICAL AND RESEARCH CHALLENGES

SUPERFLUIDITY plans to offer a converged solution to counter the complexity emerging from three forms of challenging heterogeneity: **Heterogeneous data traffic and end-points** make proper planning and prediction of loads incredibly hard.
Heterogeneity in services and processing needs: operators have largely recognized the need to transform the wireless access network from a bit pipe to a "smart" pipe. A network that is able to instantiate platform-agnostic software-based processing when and where needed, would open up seemingly endless possibilities.
Heterogeneity in access technologies and their scale. 5G networks should become access-agnostic: specific wireless or wired technology should be treated as "just a bunch of accesses" (JBOAs), and seamlessly exploited so as to offer an "always best served" model down to a per-application level of granularity (rather than users).

EXPECTED IMPACT

The 5G network will benefit from: 1. location-independence: network services deployable in heterogeneous networks; 2. time-independence: near instantaneous deployment and migration of services; 3. scale-independence: transparent service scalability; and 4. hardware-independence: development and deployment of services with high performance irrespective of the underlying hardware.
Through these properties, SUPERFLUIDITY will provide a converged cloud-based 5G concept that will enable innovative use cases in the mobile edge, empower new business models, and reduce investment and operational costs.

Project Coordinator:
Prof. Nicola Blefari Melazzi - CNIT
Partners:
http://superfluidity.eu/partners/
More information at:
https://5g-ppp.eu/superfluidity/
Contact
<superfluidity>-Contact@5g-ppp.eu

Figure 6: SUPERFLUIDITY Factsheet

6.4 Project Leaflet

Classical print media (e.g. brochure, flyers and leaflets) will be produced to be freely circulated for project information and promotion at workshops, trade shows, technical fairs, congresses and other events. The SUPERFLUIDITY Leaflet will describe in a concise manner the project, its main goals and steps and its partners. Other flyers can be produced on a per-need basis.

A first Leaflet has been realised by partners CNIT and CITRIX in electronic version (pdf and ppt files) and will be circulated among Partners in order to allow them to print paper copies on a per need basis. The electronic version of materials is also downloadable from the SUPERFLUIDITY web site in the section “Download”, accessible from the Footer menu of the website.

Figure 7: SUPERFLUIDITY Leaflet

6.5 Acknowledgement of EU funding

Any material produced within the SUPERFLUIDITY Dissemination and Communication activities and which is addressed to an external audience shall comply with the terms of GA – Article 29.4 - Information on EU funding – Obligation and right to use the EU emblem. Accomplishing this rule, material shall report in a visible way the following elements:

- EU emblem: http://europa.eu/about-eu/basic-information/symbols/flag/
- It is mandatory to quote the following sentence in any dissemination material produced: "This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 671566".

7 Implementation Plan

7.1 Internal Communication

The large number of partners of the SUPERFLUIDITY Consortium requires a consistent effort in sharing and circulating information among all the partners at various stages of the implementation plan and WPs interaction. For this reason, all the relevant information related to Dissemination and Communication activities shall be communicated to Project Coordinator and WP8 Leader in order to allow them in collecting, supervising and coordinating effort among all the activities performed.

A specific folder in SUPERFLUIDITY SVN is available for storing and collecting materials and documentation related to Dissemination activities. The SUPERFLUIDITY SVN is based at the CNIT's premises and its URL is: https://minerva.netgroup.uniroma2.it/svn/superfluidity.

The Innovation Coordinator compiles and distributes an internal update on Industry, Academic and Standardisation Events that are related to the project. This has a quarterly recurrence.

7.2 Recording Communication Activities

In a project like SUPERFLUIDITY, which requires considerable effort to build the platform, it is easy to under-estimate the importance of the dissemination activities and to not record all the relevant activities. In order to maximise and optimise effort it is important to keep the Project Dissemination records continuously updated.

SUPERFLUIDITY is equipped with a simple Excel workbook where all the partners can record (by uploading on SVN) the Dissemination and Communication activities carried out.

In order to complete the issue, it is very important to produce evidence of the activities performed by collecting from the Partners:

- Material produced (leaflet, brochures, PPT)
- Proceedings
- Pictures
- Contact details.

The mentioned Excel workbook is drafted in order to collect information about the following Target:

- Exhibition and Fair: information and related material about Events where SUPERFLUIDITY Has been presented
- R&D Expertise: Professionals and Individuals whose expertise could be relevant for SUPERFLUIDITY Activities
- Industrial Sector: Industrial Stakeholders
- Related Projects
- General Public

- Publication: Scientific and Press release publications

Images below show the recorded activities performed so far by SUPERFLUIDITY partners in targeting "Exhibition, Fair, Congress" and "General Public".

SUPERFLUIDITY - Exhibitions, Fair, Congress, Workshop	Partner Involved/Proposer	Name of the activity	Type of activity	Information Material Distribution	Specify Material Distributed	Location	Date	Supporting Documentation (if any, please attach)
IETF 94	elefonica - Pedro Arand	SPF Presentation	Dissemination	n.a.		Yokohama Japa	2 - 4 Nov 2015	https://www.ietf.
http://www.swfan.org/ (an Infocom Workshop)			Dissemination	n.a.				Flexible/Adaptive a
http://www.ieee-lanman.org/		SPF Presentation	Dissemination	n.a.				Flexible/Adaptive a
EUCNC 2015 - NetWorld 2020 W	TELCARIA	SPF Presentation	Communication	n.a.		PARIS	29Jun - 2July 2015	
SDN World Congress	BT Andy Reid	Speech	Dissemination	n.a.	Presentations F	Duesseldorf	12-16 October 2	http://www.layer
OSS in Era of SDN & NFV	BT Andy Reid	SPF Presentation	Dissemination	n.a.	Presentations F	London	06-nov-15	http://www.light
IEEE 5G Silicon Valley Summit	Vodafone Chair Prof. G	Speech	Dissemination	n.a.		Santa Clara Un	November 16, 2015	
		-	-	n.a.				
		-	-	n.a.				
		-	-	n.a.				
		-	-	n.a.				
		-	-	n.a.				

Figure 8: Exhibition, Fair, Congress

SUPERFLUIDITY - Stakeholder: General Public Dissemination	Partner Involved/Proposer	Name of the activity	Type of Audience	Type of Activity	Information Material Distribution	Specify Material Distributed	Location	Date	Supporting Documentation (if any, please attach)
NEC + http://www.nec.com/	NEC	Communication	-	Communication	yes	Press Release	UK	09/11/2015	2015-9-23 NEC-PR-S
TelecomTV : http://www.tele	NEC	Interview	End Users	Communication	n.a.	Article Published	UK	10/11/2015	Dissemination Mat
Light Reading + http://www.	BT	Interview	End Users	Communication	n.a.	Article Published	UK	05/11/2015	Dissemination Mat
TelecomsTech + http://www	NEC	Article	End Users	Communication	n.a.	Article Published	UK	10/11/2015	Dissemination Mat

Figure 9: General Public

This Excel workbook will be updated during the whole life span of the project by WP8 and Coordinator Team with the active contribution of all the partners. All partners who engage in any dissemination and communication activities should communicate and share relevant information and materials with WP8 and Coordinator's Team.

7.3 Measurement of activities

Key performance indicators have been identified to monitor the efficacy of the dissemination activity. The table below identified, since the proposal stage, the Key Performance Indicators.

N. OBJ	WHAT	DESCRIPTION	KEY PERFORMANCE INDICATOR (KPI)
OBJ 1	Open Source Contributions	Contributions to open source projects at TRL 6 (technology demonstration): e.g., OpenStack, OpenDaylight, Xen, OPNFV, DPDK, cnp.neclab.eu, netmap/vale, Open Air Interface.	At least 1 per project per year
OBJ 2	Proof of Concepts (PoCs)	Application and demonstration of project's concepts at TRL 6 (relevant environment): a representative prototype system which goes well beyond discrete	At least 2 in total

		component level breadboarding.	
OBJ 3	Contributions to Standards	Contributions to standardisation organizations related to 5G: 3GPP, ETSI NFV ISG and MEC ISG, ONF W&M WG, IETF/IRTF NFV-RG, SDN-RG and SFC-WG, NGMN, DASH-IF, etc.	At least 2 per year
OBJ 4	Attend industrial and academic events and present key findings	Organization of special sessions at events like OpenStack Summits and Xen Hackathons to disseminate SUPERFLUIDITY results. One SUPERFLUIDITY-organized Hackathon for deep-dive into SUPERFLUIDITY software.	2 Hackathon session (e.g., XEN)
OBJ 5			2 OpenStack Summit presentation
OBJ 6			1 SUPERFLUIDITY Hackathon
OBJ 7	Industry events and ad-hoc meetings	"Marketing-oriented" presentations at industry events (e.g., Mobile World Congress, Open Networking Summit, Layer123 SDN Congress, RIPE / NANOG / DENOG, World Hosting Days (6.000 visitors in 2014), Hosting Con events.	At least 2 presentations per year
OBJ 8		Discussions with policy makers, social and environmental organizations regarding project results: SUPERFLUIDITY workshop organization.	1 SUPERFLUIDITY Workshop
OBJ 9	Collaboration with 5G-PPP stakeholders	Cooperate with other peer 5G-PPP projects in the framework of the 5G-PPP overall programme	Allocate resources as described in the WP1 table
OBJ 10	Education and Training	World-wide dissemination tour	2 world-wide dissemination tours
OBJ 11		SUPERFLUIDITY's academic workshop and winter school camp events.	1 academic workshop and 2 winter schools
OBJ 12	Publications	Key scientific publications at top tier conferences (e.g., SIGCOMM, CONEXT, INFOCOM, NSDI, OSDI, etc.), associated workshops, and magazine/journals (IEEE Transactions, ACM Computer Communications Review)	At least 2 per year
OBJ 13			At least 7 total
OBJ 14	Web site, Social Networks, Press Releases	Wiki-style website allowing easy retrieval of main project data (including software repositories), as well as social networks presence. Press releases targeting the public at large to allow for wide dissemination of project concepts and results.	Website up and running from M1
OBJ 15			Social networks' account ready from M2, 1 post/update per month
OBJ 16			1 press release per

			year

Table 9: Dissemination Key Performance Indicators

Other Success Indicators, which will be monitored during the implementation of the project, are listed in the table below. The monitoring period of Expected progress reflects the due date of delivery of related Report on Communication and Dissemination Activities, i.e.:

- D8.2 First report on Communication, Dissemination Actions, Standardisation and Open Source Contribution (M12)
- D8.4 Second report on Communication, Dissemination Actions, Standardisation and Open Source Contributions (M20)
- D8.6 Final Report on Communication, Dissemination Actions (M30)

COMMUNICATION CHANNEL	INDICATOR	EXPECTED PROGRESS		
		M1 - 12	M 13 - 20	M21 - 30
Web site	Number of Posts	5	15	25
	Number of Visitors	1000	3000	6000
Brochure	Number Brochures distributed	300	600	1000
Press	Number of publication on paper press			
Press	Number of online press publications	20	60	100
Events	Number of Conferences, workshops, exhibition where the project is presented	10	20	40
SUPERFLUIDITY Events	Number of Attendees	-	50	70
Social Media	Number of Feedback collected	100	300	500
Other Project	Number of participation to meetings organised by other projects			

Other Project	Number of people from other projects participating in SUPERFLUIDITY events	-	10	20

Table 10: Other Dissemination Indicators

8 Data Management Plan

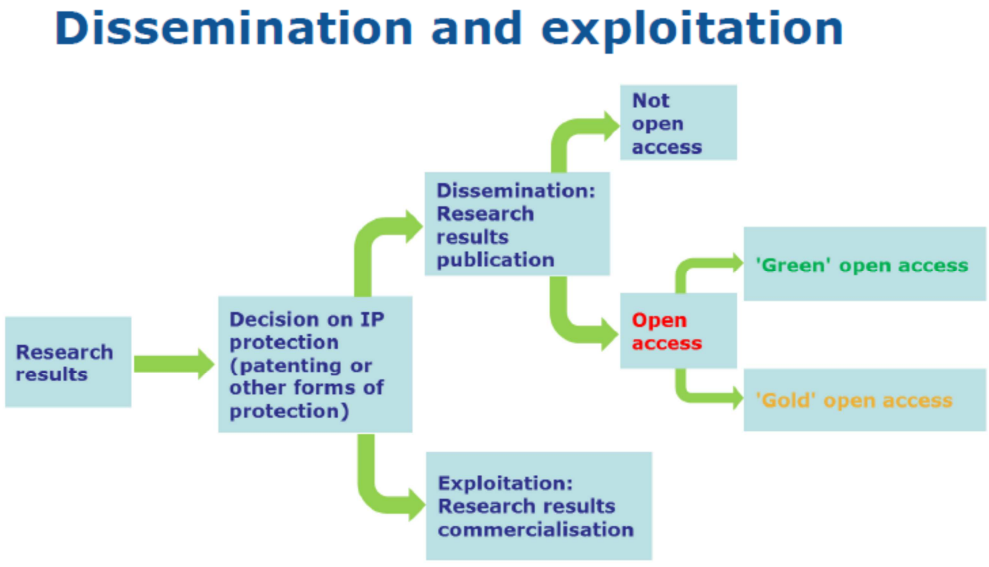
The Data Management Plan will be revised and updated during the project and included as Report for the Mid-term and Final Review.

SUPERFLUIDITY participates to the Horizon 2020 Pilot Action on Open Access to Research Data (GA § 29.3); therefore, the Consortium must comply with the provisions related to:

- *"Deposit generated research data in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate them*
- *provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves)."*

This provision does not change the obligation to protect results according to Exploitation plan and Consortium Agreement.

The Image below describes the decision process for granting open access to research results generated by the project.



The structure of the Data Management Plan (DMP) is described in "Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020". In the same document, requirements for Open Research Data Pilot are defined as follows:

Step 1: *participating projects are required to deposit the research data described above, preferably in to a research data repository. 'Research data repositories' are online archives for research data. They can be subject - based/thematic, institutional or centralised. Useful listings of research data repositories include the Registry of Research Data Repositories (www.re3data.org) and Databib (http://databib.org). In addition, it is expected that the Open Access Infrastructure for Research in Europe (OpenAIRE) will become an entry point for linking publications to underlying research data.*

Step 2: *as far as possible, projects must then take measures to enable for third parties to access, mine, exploit, reproduce and disseminate (free of charge for any user) this research data. One straightforward and effective way of doing this is to attach Creative Commons Licence (CC-BY or CC0 tool) to the data deposited (http://creativecommons.org/licenses/, http://creativecommons.org/about/cc0)*

The above-mentioned *Guidelines* describe the information that shall be detailed in the DMP as follows:

- What types of data will the project generate/collect?
- What standards will be used?
- How will this data be exploited and/or shared/made accessible for verification and re-use? If data cannot be made available, explain why.
- How will this data be curated and preserved?

8.1 SUPERFLUIDITY Data Sets

This section will give preliminary information on Initial Data Set to be collected and related metadata, which can nevertheless change and include further data during the implementation of the project. At this stage of the project, not all the data to be collected and stored have been identified. The identification of data and the update of the table below will be ensured for the whole duration of the project and reported on a timely base (the updated Data Management Plan will be included as Report for the Mid-term and Final Review).

It is expected that SUPERFLUIDITY will produce the following Categories of data:

SUPERFLUIDITY DATA		
CATEGORY	DESCRIPTION	EXAMPLES
Collected Data	contents that will be used as one of the reference workloads for traffic generation	web pages, files, videos, etc.

8.1.1 DS01 – Reference Workload for Traffic Generation

DS01

Data set description

CITRIX will collect content (web pages, files, videos, etc.) that will be used as one of the reference workloads for traffic generation, in the context of the hardware profiling activities of Task 4.1 (WP4).

Standards and metadata

Traffic profile characteristics, such as TCP/UDP protocol mix, HTTP/HTTPS content type mix, video content mix, device type mix, average object sizes, average TCP connection durations, HTTP/HTTPS transaction rates, etc. will be captured.

8.2 Data sharing

At this stage of implementation, where most of the data remain still unidentified, no specific procedures or rules for sharing data have been decided. More information will be given in the next updated version of the Data Management Plan.

8.3 Archiving and preservation (including storage and backup)

According to *Guidelines* on Open access to research data, beneficiaries must ensure that their publications can be read online, downloaded and printed. For complying with this provision, the Consortium will deposit the research data into an online research data repository. In deciding where to store project data, the following alternatives can be selected, in order of priority:

- An institutional research data repository;
- An external data archive or repository already established and available (e.g. http://www.openaire.eu, http://www.opendoar.org, http://roar.eprints.org, http://www.re3data.org).
- The European sponsored repository: http://zenodo.org;
- License the data for reuse (Horizon 2020 recommendation is to use Creative Commons License CC0 or CC BY);

One of the above-mentioned repositories will be selected and information about validation of results will be provided and reported in the next update of the Data Management Plan.

8.4 Conclusion

The SUPERFLUIDITY Data Management Plan above described represents an initial draft for implementing Open Access of Research Data initiative. At this first stage of the project only few data sets have been identified. The DMP will be updated by the Mid-term and Final Review of SUPERFLUIDITY, since not all data or potential uses are clear at this stage of the project.

9 Overall Conclusion

This Deliverable represents a starting point for all the Communication and Dissemination activities planned in SUPERFLUIDITY project, by setting up a shared strategy among all the Partners. During the implementation of the project, Coordinator and WP8 Leader will monitor the progress and achievement of such activity in order to measure impact and results. A practical monitoring procedure has been set up in order to check, at every stage of the project implementation, intermediate achievements and results and eventually put in place corrective actions for improving communication and dissemination. As described in the § 7.3 - *Measurement of activities,* the monitoring activity will focus on the achievement of the results indicators set up in the Tables 9 - *Dissemination Key Performance Indicators* and Table 10 - *Other Dissemination Indicators*. The above-mentioned indicators will be updated during the whole life span of the project and will serve as checkpoint for planned results. Update of the main communication strategy and result indicators, as well as description of corrective actions will be undertake in order to achieve such results will be reported in the further WP8 Deliverables:

- D8.2 First report on Communication, Dissemination Actions, Standardisation and Open Source Contribution (M12),
- D8.4 Second report on Communication, Dissemination Actions, Standardisation and Open Source Contributions (M20),
- D8.6 Final Report on Communication, Dissemination Actions (M30).