HORIZON 2020

H2020 – INFRADEV-2019-3

D5.1

Dissemination, Engagement and Communication Strategy

Project acronym: SLICES-DS

Project full title: Scientific Large-scale Infrastructure for Computing / Communication Experimental Studies – Design Study

Grand Agreement: 951850

Project Duration: 24 months (Sept. 2020 – Aug 2022)

Due Date: 31 December 2020 (M4)

Submission Date: 29 January 2021 (M5)

Dissemination Level: Public

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Reviewers: ALL

1 Executive summary

The objective of this document is to define the communication strategy and plan and describe the activities SLICES-DS partners will pursue to guarantee broad visibility, promotion and up-take of SLICES-RI. It provides an overview of the dissemination strategy of SLICES-DS, including target groups, dissemination channels and tools, key communication messages and events.

SLICES-DS will have its own organised events and aims to capitalize on several third-party events to maximise visibility and reach a wider range of stakeholders.

This plan covers branding, the project website, social media channels, electronic newsletters and press releases as well as project's dissemination materials such as leaflets/brochures.

The monitoring of the execution of the dissemination shows the overall targets of the dissemination plan as well as progress goals throughout five phases leading up to the completion of the project.

This deliverable also paves the way to the future D5.4 "Strategy for the future communication and exploitation of the SLICES-RI" that will be prepared at M24.

2   Table of content

1 Introduction and Overall Strategy

1.1 Intended audience

This document is aimed at SLICES-DS consortium members, to develop an effective and integrated approach to dissemination and communication activities and contribute to the overall objectives of the project.

1.2 Document structure

The document is structured into the following sections:

- Chapter 1 – SLICES-DS at a glance
- Chapter 2 – Introduction and Overall Strategy, introduces the intended audience of the document and its structure.
- Chapter 3 – Dissemination and Communication Strategy, describes target groups, communication messages, channels and tools and planning and evaluation.
- Chapter 4 – Dissemination Channels and Tools
- Chapter 5 – Events, organised by SLICES-DS consortium members and third parties.
- Chapter 6 – Monitoring and Evaluation for the dissemination activities

2   SLICES-DS at a glance

Digital Infrastructures as the future Internet, constitutes the cornerstone of the digital transformation of our society. As such, innovation in this domain represents an industrial need, a sovereignty concern and a security threat. Without Digital Infrastructure, none of the advanced services envisaged for our society is feasible. They are both highly sophisticated and diverse physical systems but at the same time, they form even more complex, evolving and massive virtual systems. Their design, deployment and operation are critical. In order to research and master Digital Infrastructures, the research community needs to address significant challenges regarding their efficiency, trust, availability, reliability, range, end-to-end latency, security and privacy. Although some important work has been done on these topics, the stringent need for a scientific instrument, a test platform to support the research in this domain is an urgent concern.

SLICES-RI (Research Infrastructure) ambitions to **provide a European-wide test-platform**, providing advanced compute, storage and network components, interconnected by dedicated high-speed links. This will be the main experimental collaborative instrument for researchers at the European level, to explore and push further, the envelope of the future Internet. A strong, although fragmented expertise, exists in Europe and could be leveraged to build it. SLICES-RI is our answer to this need. It is ambitious, practical but overall timely and necessary. The main objective of SLICES-DS is to adequately design SLICES-RI in order to strengthen research excellence and innovation capacity of European researchers and scientists in the design and operation of Digital Infrastructures. The SLICES Design Study (DS) will build upon the experience of the existing core group of partners, to **prepare in details the conceptual and technical design of the new leading-edge SLICES-RI for the next phases of the RI's lifecycle.**

Regarding the objectives, all SLICES-DS objectives have been defined in relation to the list of Minimal Key Requirements of the ESFRI 2021 Roadmap for the Preparatory phase, in order to be reached at the end of the Design Study.

SLICES-DS consortium identified 5 main objectives to be reached during the 24-month duration of the project, keeping in mind the overall SLICES-RI initiative:

1. To adequately design SLICES-RI in order to strengthen research excellence and innovation capacity of European researchers and scientists in Digital Infrastructures;
2. To accomplish preparatory work and planning of the new Research Infrastructure;
3. To define governance and management of the new Research Infrastructure;
4. To define models for the financing of the new Research Infrastructure;
5. To define stakeholder and engagement strategy on community-based research.

SLICES-DS consortium gathers partners from **nine countries** (France, Greece, Poland, Switzerland, Spain, the Netherlands, Cyprus, Italy, Belgium) with a special focus in networking and wireless research; Future Internet; Internet of Things and Internet of Services; mobile communications, security of telecommunications and applications; Network protocols and architectures, NFV, cloud/edge/fog computing, artificial intelligence; deployment of 5G testbeds for experimentation; Data Management, Data Analytics.
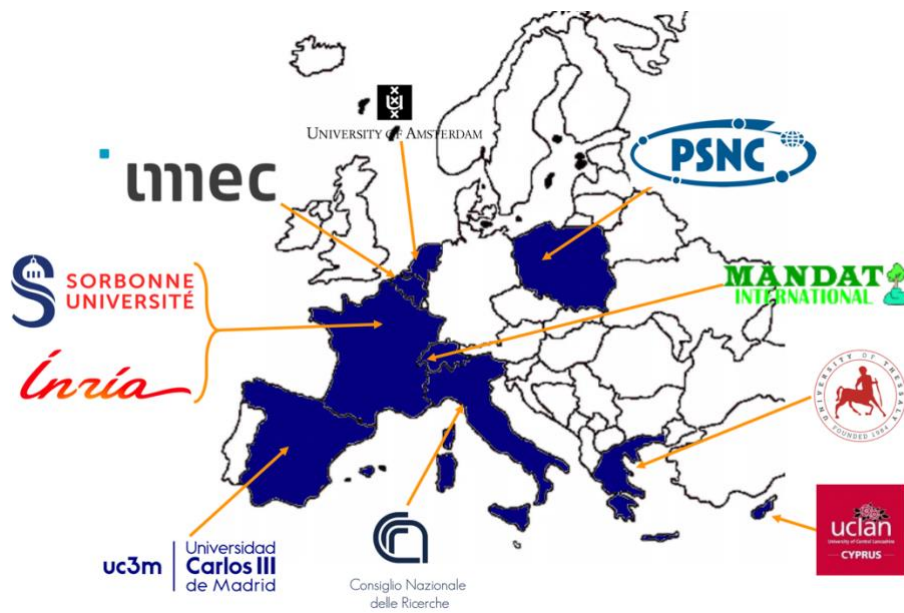
Figure 1 – Overview of SLICES-DS partnership and its deployments in Europe

3   Dissemination, Engagement and Communication Strategy

To reach these goals this document includes a roadmap and guidelines for dissemination performed by consortium partners during SLICES-DS period.

SLICES-DS will engage in a comprehensive and well-structured dissemination, communication and community building plan to ensure a broad promotion of the design studies conducted, the developed concepts, technologies and future implementation potential results. The consortium will follow a phased approach to defining, planning, organising and exploiting a rich set of activities and instruments in the most effective way.
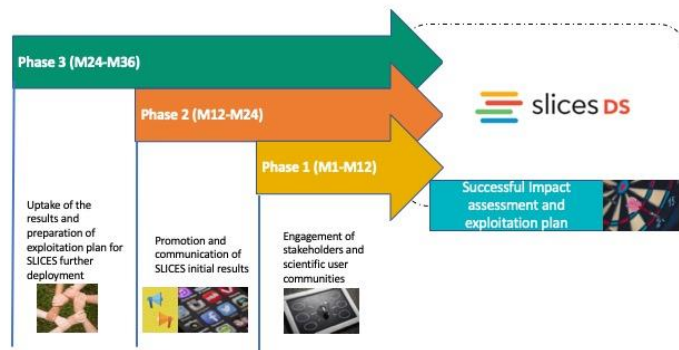

Figure 2 – SLICES-DS Communication Phases

The main elements of this strategy will be detailed in the following sections to provide the basis for all dissemination and communication activities that will be implemented during SLICES-DS . The main elements are:

- Target groups;
- Dissemination messages;
- Tools and channels;
- Planning and evaluation.

The awareness raising activities online and offline will consistently run from M1 to M24, to communicate SLICES-DS objectives and updates on activities. It will at the same time raise awareness about SLICES-RI and contribute to define the communication and dissemination strategy for its uptake that will then be detailed in D5.4 at M24.

3.1   SLICES-DS Dissemination Objectives

The objective of the dissemination strategy is to identify and organise the activities to be performed to maximise the influence/impact of SLICES-DS and to promote commercial and secondary exploitation routes of the project results and to pave the way for SLICES-RI. To ensure the widest possible dissemination of the project and to increase its impact and outreach, SLICES-DS dissemination objectives have been set around the following pillars:

- to raise awareness and openly demonstrate clear economic, social, and environmental benefits for the SLICES-DS community;
- to reach out and build a sustainable customer base for SLICES-RI;
- to disseminate the respective project outcomes to the widest possible community of potential beneficiaries.

3.2   SLICES-DS Dissemination Strategy

The dissemination strategy and activities follow principles and best practices successfully tested by the partners and in line with the EC Guidelines for successful dissemination. The focal point of the SLICES-DS overall dissemination strategy is the identification and mapping of targeted stakeholders (*whom to disseminate to*) and

understanding of their needs and characteristics so as to tailor clear and concise messages (*what to disseminate*) to the different target audiences. This also comes to ensure the use of the most appropriate and efficient dissemination channels and communication tools and drive the development of proper material per target stakeholders (*how to disseminate*). It further defines a time plan (*when to disseminate*), on the basis of which 3 phases are introduced, with specific objectives and target focuses per phase, assisting all project partners in implementing communication activities and reaching the dissemination and exploitation objectives throughout SLICES-DS implementation.

Focusing at reaching a wider audience beyond the main targeted stakeholders of SLICES-DS, the Dissemination Strategy will outline liaison and networking activities with other EC projects, initiatives and networks that will further enhance the dissemination range and impact.

3.3   Target groups

SLICES-DS target groups as initially identified are listed hereby. This list will be refined and enriched at SLICES' run-time and will be presented in the relevant deliverable. As represented in the Figure 3 below, the main SLICES-DS stakeholders are identified as:

Table 1 – SLICES-DS main target groups

Potential beneficiaries	Main objective	Dissemination / Material
Scientific community at Universities and research centres	Promote the platform both to raise awareness and also to gather requirements. Explore educational use cases.	Flyers, Workshops and questionnaires.
Research departments from industry with activity in societal challenges.	To get requirements and to evaluate the design decisions.	Questionnaires to collect requirements from the facility perspective.
Researchers and SMEs working in product and services on mobile networks	Promote the facility and gather of requirements.	Dissemination material focused on non-specialists, questionnaires.
Funding and selection agencies managing research infrastructures (ESFRI, e-IRG)	Raise awareness on the need of the experimental facility as SLICES-RI. Provide material to evaluate the implementation of the facility.	Reports of SLICES-DS covering the design and the deployment and business model plans.
National authorities (Government, Ministries, dedicated agencies)	Raise awareness in order to (i) include SLICES-DS in all relevant national roadmaps or similar political documents, (ii) obtain Expressions of political Support (EoS), (iii) obtain Expressions of Commitment (EoC) of financial contributions.	High level materials (mission statement, slide-deck, brochure for policy makers).
National and EU regulators as Policy makers	To explore how SLICES-RI could release spectrum regulations regarding RI.	Specific report on the technical and regulatory barriers that limits the use of experimental facilities for research in Europe.
Members of 5GPPP	Networking in international initiatives related to testbeds supporting the evolution towards 5G.	Posters, presentations, contributions to white papers, etc.
European initiatives supporting research like the PPPs in big data, security, etc.	Promote SLICES-RI facility as the way of providing validation at scale on the different programs.	Promotion of the SLICES-RI facility during the info days, engagement with

		stakeholders to discuss missing aspects, etc.
Standardisation organisations at global level	Raise awareness about SLICES-DS and establish links with all the international organisations that support research work addressed by SLICES-DS.	Specific report on the technical and regulatory barriers that limits the deployment of SLICES-RI experimental facility. Invitation to assist to the different project results meetings and workshops.
Non-European agencies or institutions	To promote cooperation and to ensure alignment with other initiatives.	Invitation to workshops, direct communications.

Figure 3 – SLICES-DS Target stakeholders and overall ecosystem

3.4   Communication messages

After considering the target groups contexts and needs, the guidelines and key messages of SLICES-DS are to be developed.

- Messages should be clear and appropriate for the target group;
- Messages should be tailored to the target group relevant to their needs and context;
- Provide accurate and up-to-date information about SLICES-DS and its developments;
- Encourage long term engagement, (e.g. using SLICES-RI Research Infrastructure).

Key impacts expected from SLICES-DS

SLICES-DS will ***identify the relevant stakeholders of the design of conceptual architecture of the proposed RI***, and the communication of this in the national and ESFRI road mapping activities. SLICES-DS will define the ***strategies for engagement*** with such ***road mapping activities***, and also within the wider RI landscape.

- Clarification of the roles of scientific instruments and production infrastructures;
- Positioning of international competition (both science and industry).

The consortium will involve in the International Scientific Advisory Board and the User Committee, representatives of the research community, funding of infrastructures, and policy makers with strong visibility in Europe and worldwide. SLICES-DS already secured the support and commitment of different stakeholders. SLICES-DS technical work will directly contribute to the above key points for the [European Research Area](#).

Science is evolving quickly based on: (1) experimentally driven approach; (2) data-driven and is mandatory for: (1) educating future talents; (2) scientific performance; (3) industrial competitiveness.

SLICES-DS commits to promote and/or to favour any action that could contribute to improve the environmental impact of the RI and also to work towards the objectives of the [United Nations Sustainable Development Goals](#). This will done both internally for the conception of the infrastructure, from the very early phase, and externally for the experiments to be done by the users. Having an ***open European research facility as SLICES-DS*** can potentially reduce the number of private pilots, opening the infrastructure to any researcher, vendor and operator can benefit overall to the trans-national research.

Key message goals:
- ***Build commitment***: Through user workshops collect needs and engage the target groups;
- ***Make SLICES-DS/SLICES-RI part of Digital Research Infrastructures in Europe***: encourage the regular use of the SLICES-DS Research Infrastructures through the engagement of different communities and stakeholders;
- ***Share knowledge about SLICES-DS***: through online and offline activities with members of the Public and Private sectors to inform decision makers and academics;
- ***Impact on academic community***: SLICES-DS has interesting potential outcomes from a different research disciplines perspective.

3.5 Media Strategy

To reach the primary and secondary target groups and participants several offline and online dissemination tools and channels will be used. These channels include an active online presence with frequent updates on project events, achievements and other developments. These will be presented on the website, on social media channels and summarized in biannual newsletters.

A general introduction will be provided on promotional materials. Through meetings, events (organised by partners and third parties) will serve as opportunities to introduce SLICES-DS, its achievements and inform participants how they can get engaged appropriate to their context.

3.6 Planning and evaluation

This communication strategy serves as a comprehensive long-term plan for SLICES-DS online and offline dissemination activities. This also includes the monitoring and the evaluation of progress and impact, which will be used also to design the strategy for SLICES-DS. The effectiveness of reaching target groups will be continuously monitored, according to outreach channel and checked against the KPI's.

4 Dissemination Channels and Tools

The dissemination of SLICES-DS will integrate several forms of media. Some channels and activities are expected to create higher visibility than others. These expectations are specified in the KPI's include in Chapter 6.1. This section introduces how the different media channels and tools will be used to give SLICES-DS progressively high visibility.

4.1 Project Branding

The development of the SLICES-DS brand was significant step to create a unified easily recognisable visual identity for SLICES-DS. SLICES-DS logo (Figure 4) serves as a symbol under the SLICES family projects under the umbrella of SLICES-RI (Figure 5). The different projects of the family will have similar and unique visual identity.
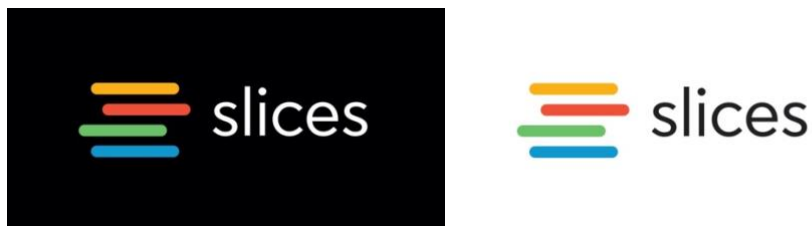

Figure 4 – SLICES-DS logo

Figure 5 – SLICES logo
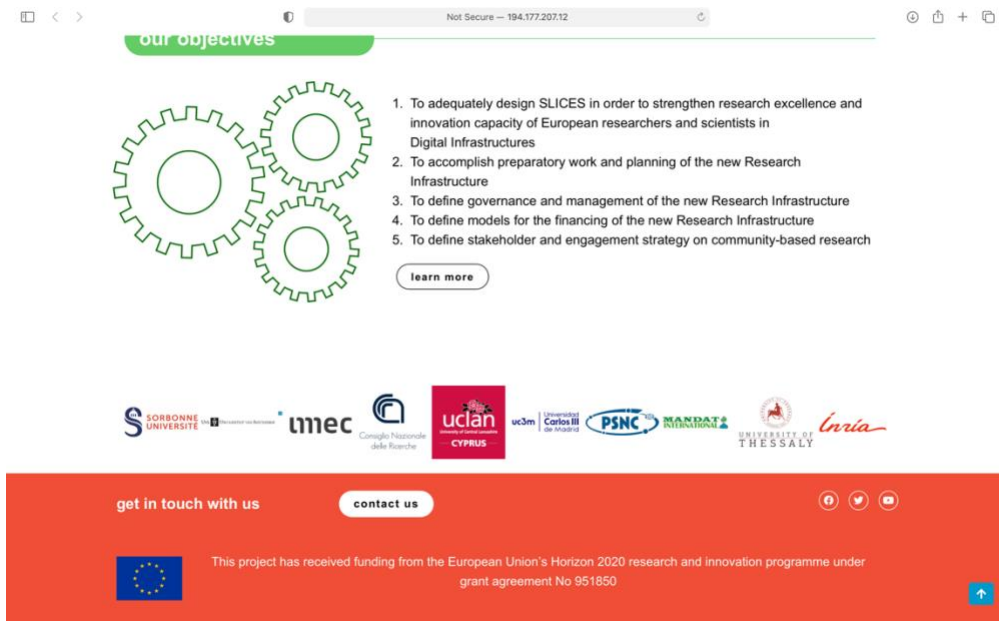
4.2 Project Website

http://slices-ds.eu/

The purpose of the website is to serve as the central source of information about SLICES-DS, its activities, its news and developments. It will be targeted at all stakeholders to foster awareness raising and engagement and promoted on social media as well as digital and hard copy promotional materials and publications.

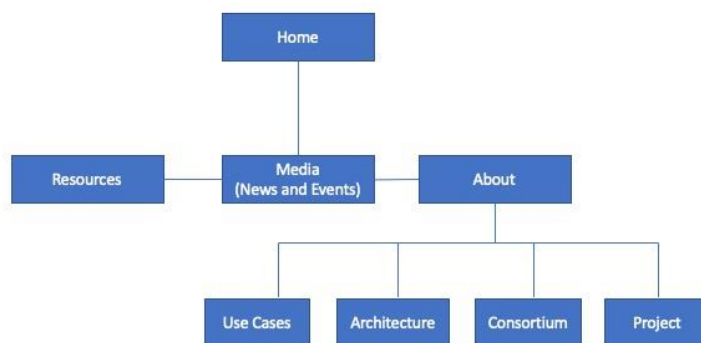The initial structure of SLICES-DS website is depicted in the figure below:

Figure 6 – SLICES-DS website structure

The website will be maintained throughout SLICES-DS cycle until M24 and it will be maintain at least during 2 years after the project end. It will be also linked to SLICES-RI website. At the initial stage the website provides static content and some news articles and events. Based on the progress of SLICES-DS will be updated and enhanced accordingly.

4.3   Promotional material

Brochures/flyers will be small booklets that will be made in line with the SLICES-DS visual identity. They will provide general information about SLICES-DS, including issues it aims to address and solutions it offers. Their aim is to provide information of target groups participating in offline events (meetings, workshops, conferences).

4.4   Social Media

In the planning stages of SLICES-DS, it was decided to build social media presence to represent the consortium members and the results of the project in an integrated way. Its main goals are to bring attention to the project website, amplify its content, support communication and impact creation of SLICES-DS and encourage participation in SLICES-DS communities. The following channels will be used: Twitter, YouTube and LinkedIn.
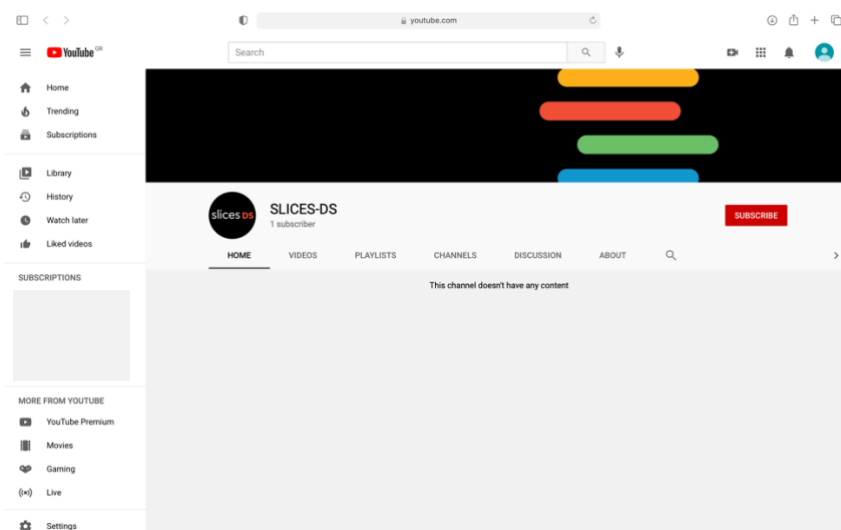
- **Twitter:** project related news and relevant articles from other sources in support Digital Research Infrastructures will be tweeted. The target groups will be researchers, general public, scientific and academic personnel, businesses, NGOs technological developers, policy makers, funding authorities, etc.

https://twitter.com/SLICESRI
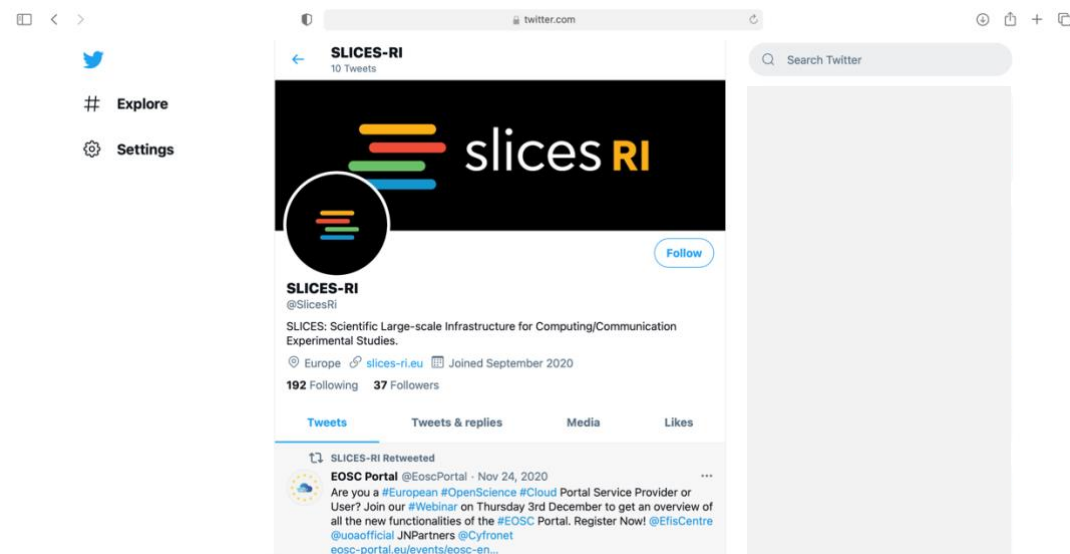
- **YouTube**: promotional videos and "Success Stories" to be linked to website, Twitter. Frequency: as videos become available. The target groups will be researchers, general public, scientific and academic personnel, businesses, NGOs technological developers, policy makers, funding authorities, etc.

https://www.youtube.com/channel/UCKM15y2D8rRYAnUDjpLsHug/featured?view_as=subscriber

- **LinkedIn:** project related news and relevant articles from other sources in support Digital Research Infrastructures will be tweeted. The target groups will be researchers, general public, scientific and

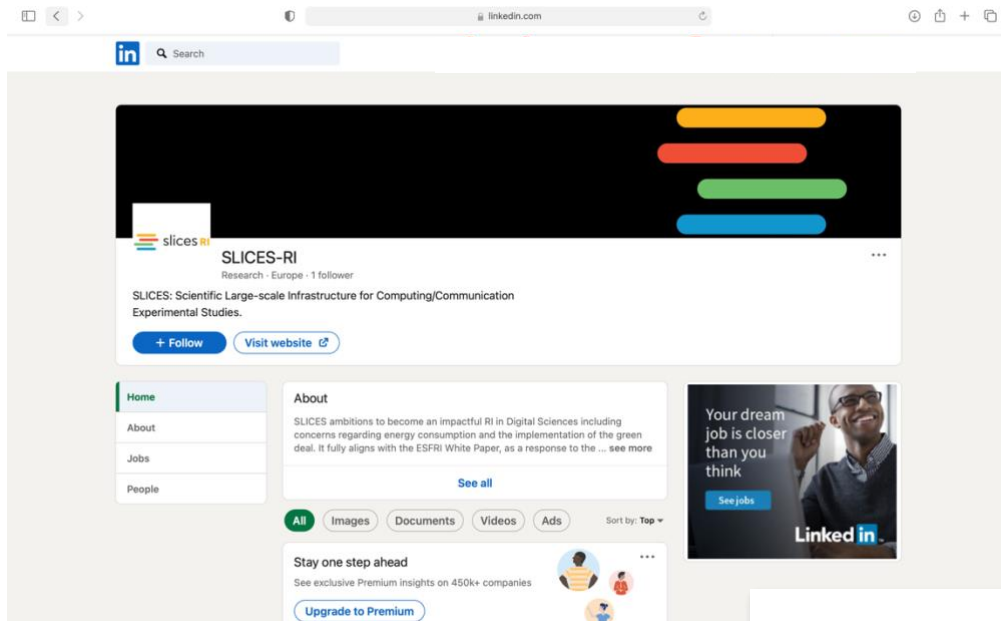academic personnel, businesses, NGOs technological developers, policy makers, funding authorities, etc.

https://www.linkedin.com/company/slices-ri

4.5 Newsletters

Electronic newsletters will be sent out every 6 months from M1 to M24 to the SLICES-DS community.

4.6 Press Releases

Press releases will target the mass media and the general public to raise awareness about SLICES-DS as the Design Study for the building the Digital Research Infrastructure at European level.

4.7 Academic papers and policy briefs

As the experiences and results of SLICES-DS are gathered, scientific publications will be submitted to peer-reviewed journals and conferences. Policy briefs towards the end of SLICES-DS will be produced to inform policy makers on Digital Research Infrastructures based on the outcomes of SLICES-DS and its activities.

In the following table, the relevant journals to SLICES-DS are listed.

Table 2 – Scientific Publications relevant for SLICES-DS

Type of Event	Event name
Scientific Publications	**Open Access Journals, and also in leading scientific journals such as** ▪ Mobile Networks and Applications ▪ IEEE Internet Computing ▪ IEEE Wireless Communications ▪ IEEE Network ▪ IEEE Pervasive Computing ▪ Computer Communications ▪ Springer Wireless Networks ▪ EURASIP Journal on Wireless Communications and Networking ▪ IEEE Transactions on Mobile Computing (TMC) ▪ IEEE Transactions on Parallel and Distributed Computing ▪ IEEE Transactions on Cloud Computing

	- Journal of Parallel and Distributed Computing - Elsevier Computer Networks - Elsevier Future Generation Computer Systems

5   Dissemination Events

SLICES-DS will organise dedicated events and will participate to different third party events. It should be noted that the events will be organised either physically or as virtual events according to the global situation of the COVID-19 outbreak.

5.1   Project events

SLICES-DS will organise three different workshops starting from M1 to M24. Specifically,

- ***a workshop for related scientific communities will be organised on M6*** and is planned to validate the initial set of requirements and collect input for definition of additional community specific requirements for the new RI. The findings of the workshop will contribute to Deliverable D1.2.
- ***two workshops*** will be organised till the end of SLICES-DS according to the needs of the community and the design process of SLICES-DS.

5.2   Third party events

SLICES-DS and its members will participate in different relevant events according to the development and the results of the project. The participation will be either presentation, exhibition of results, etc.

Table 3 – External Events relevant for SLICES-DS

Type of Event	Event name
Scientific Conferences	- EuCNC conference - IEEE International Conference on Communications (ICC) - IEEE CCNC (Consumer Communications and Networking Conference) - Personal, Indoor and Mobile Radio Communications (PIMRC) - SIGCOMM - IEEE INFOCOM - WiNTECH - TridentCom - Wireless World Research Forum Meeting - Mobile World Congress - International ACM Symposium on High-Performance Parallel and Distributed Computing - The International Conference for High Performance Computing, Networking, Storage, and Analysis (Supercomputing) - IEEE International Parallel and Distributed Processing Symposium
Research Infrastructures Roadmap meetings	- ESFRI Roadmap meetings - National RI Roadmap meetings (in each country) - Annual meetings or presentation of other RIs from the European landscape - EOSC meetings and workshops

6   Monitoring and Evaluation

6.1   Key performance indicators for dissemination and communication

Defining key performance indicators to assess the progress of dissemination and communication in line with the overall project's approach is important to closely monitor the progress of our activities and measure their impact (as far as this is feasible from a quantitative point of view). We defined a set of key performance indicators, KPIs, which, with respect to dissemination and communication, will be monitored and managed throughout the lifespan of SLICES-DS. This will allow corrective measures to be taken and enforced, whenever the performance and progress marked by the consortium are not aligned with the set objectives. Table 4 gives figures for the Key Performance Indicators (KPIs) related to communication activities. The table will be updated yearly in order to depict the current status and results of the KPIs.

Table 4 – Key Performance Indicators for dissemination and communication (KPIs)

Measure	Indicators	Target	Means of verification
SLICES-DC brochure (1 with updates every year)	Number of brochures distributed	**At least 200 per year**	Through the dissemination reporting activities by SLICES-DS partners and online
Posters	Number of posters produced	**2 by the end of the project**	Through the dissemination reporting activities by SLICES-DS partners
Set of high level materials for policy makers (mission statement, slide-deck, brochure)	Number of sets	**At least 1 per year**	Through the dissemination reporting activities by SLICES-DS partners
SLICES-DS website	Number of unique visitors to website/page-hits	**> 1000 visitors per year**	In-built website statistics tool
Social networks	Number of followers in: Twitter YouTube	**> 500** **> 100**	Keeping the profiles on such networks active via regular posting and monitoring
Workshops regarding SLICES-DS design and demand organised	Number of workshops and number of participants	**3 by the end of the project with at least** 30 participants at each event	Attendance proofs (e.g., photos, presentations, minutes, videos, interviews)
Videos	Number of videos published on the project's YouTube channel and average number of views	**2 videos** and > 50 views per video	Videos published via the YouTube channel of the project
Scientific publications	Number of peer-reviewed papers/articles	**At least 5** by the end of the project	Papers/articles published in proceedings and online
Presentations	Number of presentations made	**At least 3 per year**	Presentations made available via the project's website
Attended external events	Number of events attended	**At least 6 attended external events**	Attendance proof, presented material, photos,

		during the overall project's duration	animation of social media channels, events' reports

Table 5 - Key Performance Indicators for dissemination and communication (KPIs) per year

Measure	M12	M24	Total target
SLICES-DS brochure	200 copies	200 copies	400 copies
Posters	1	1	2
Set of high level materials for policy makers	1	1	1
SLICES-DS website	1000 visitors	1000 visitors	2000 visitors
Social networks (Twitter)	200 followers	300 followers	500 followers
Social networks (You Tube)	50 followers	50 followers	100 followers
Workshops	1 workshop	2 workshops	3 workshops
Videos	1 video	1 video	2 videos
Scientific publications	2 publications	3 publications	5 publications
Presentations	3 presentations	3 presentations	6 presentations
Attended external events	3 external events attended	3 external events attended	6 external events attended

7 SLICES-DS Open Access practises

SLICES-DS complies with the "Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020", published by the European Commission and the article 29.2 of the Model Grant Agreement for H2020 projects, thus ensuring open access (free of charge, online access for any user) to all peer-reviewed scientific publications relating to its results.

In its attempt to achieve increased rigour, accountability, transparency and reproducibility of research through sharing knowledge and data as early as possible in the research process with all relevant actors, SLICES-DS incorporates open science principles/practices as integral parts of its overall work-plan. Knowledge and data sharing among all relevant actors, i.e., researchers across universities, research centres and industry, as well as its dissemination to other stakeholders, inquiring broad public in general, takes place regularly, as early as possible, namely towards stimulating creativity and trust in the R&I process. As required under EC's R&I funding programmes, open access will be assured, and thus, all scientific publications generated from SLICES-DS developments and outcomes, as well as other relevant material, will be appropriately disseminated and made available to the community, free of charge, online, for any user. Essentially, each publication, journal article or conference paper, as well as presentations based on SLICES-DS results, will be available via open access.

To implement this, external repositories will be considered, e.g., Zenodo (a general-purpose open-access repository developed under the European OpenAIRE program, operated by CERN).

SLICES-DS will disseminate its Key Exploitable Results through the tool developed by the EC in order to give visibility to key exploitable results on the Horizon Results platform.

In addition, SLICES-DS will be in touch with EU services related to the Horizon Results Booster in order to get assistance within the dissemination and exploitation of our activities.

In addition, the SLICES-DS website will include a webpage listing all publications resulting from the project's outcomes, which any external stakeholder can access. The latest publications will be promoted in its homepage and in SLICES-DS online social networks towards reaching a broader audience. In order to further involve and potentiate cooperation towards achieving trustworthy, privacy compliant, green and responsible data sharing open technology platforms will be considered and made available, eventually based on the project's demonstrators. Such open platforms, accessible to users, suitable for exploring multiple data management applications, will further motivate the R&I community to explore and integrate the technologies developed in SLICES-DS. The access to these platforms, eventually made under specific licensing terms e.g., open-source licenses, will also promote continuous sustainable innovation through sharper dissemination of the proposed technologies towards their rapid uptake.

7.1 SLICES-DS Obligatory disclaimers

All SLICES-DS deliverables and dissemination tools, both in printed or electronic form, will include the EU emblem and the following sentence as obligatory:

SLICES-DS publications, will be on a standard format and include the acknowledgement to the EU funding, the name of the action, acronym and the grand agreement number, such as: *This publication is part of a project that has received funding by the European Union's Horizon 2020 research and innovation programme under grant agreement number 951850.*

8   Conclusions

This document provides an overview of the dissemination strategy of SLICES-DS, including target groups, dissemination channels and tools, key communication messages and events.

This plan covers branding, SLICES-DS website, social media channels, electronic newsletters and press releases as well as project's dissemination materials such as leaflets/brochures.

These activities, that SLICES-DS partners will pursue, will contribute to guarantee broad visibility, promotion and up-take of SLICES-RI.