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Title	: Dissemination and Communication Plan - Updated Version
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Lead Partner	: Space Applications Services
Abstract	: This document contains the plan for the dissemination and communication activities. It schedules the stages of a website development and social media presence, and defines the timing for the plan of participation in conferences and article submission to journals. This is the project mid-term version of the document (M14) with the update on the changes from the initial version
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Dissemination and Communication Plan - Updated Version

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1 Introduction

1.1 Purpose and Scope

This document defines, describes, and schedules the communication and dissemination activities we will undertake during SCHUMANN's implementation. Communication activities aim to inform the general public about the project objectives, progresses made, new knowledge gained and outcomes and impacts generated. Dissemination activities aim to share and publish the latest research and development results in order to encourage wider research and technical users and stakeholders to adopt SCHUMANN concept, approaches and technologies in other technical systems.

For each activity we define (i) the purpose and scope of the activity, (ii) the scheduled plan and the respective targeted audience or means. These will ensure SCHUMANN project is fully delivered and impacts created during and after the project.

This document describes the planned activities and methodology applied along the project. This is the second iteration of the document at M14 of the project, with the purpose to review and update the content of the initial version (D4.4). A final iteration will be provided at M24. The effective application and results of the dissemination and communication activities are summarized in the "Dissemination and Communication Report" also provided at M14 and M24.

1.2 Document Structure

In brief, the document is structured as follows:

- Chapter 1** Introduction
- Chapter 2** Communication Plan
- Chapter 3** Dissemination Plan
- Chapter 4** Article Writing Process
- Chapter 5** Conclusions

1.3 Applicable Documents

- AD1 SCHUMANN (Project 101082449) – Grant Agreement (October 2022)
- AD2 SCHUMANN Consortium Agreement, version 2.1 (October 2022)

1.4 Reference Documents

- RD1 Project Website and Identity Material, SCHUMANN-WP4-D4.1-SA_1.0.0

1.5 Acronyms

- | | |
|-------|---|
| CP | Conference Participation |
| DSSCK | Design and Development Specification for the Satellite Construction Kit |
| DVVP | Design, Verification and Validation Plan |
| EC | European Commission |

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ESA	European Space Agency
FSM	Functional Spacecraft Module
IAC	International Astronautical Congress
IAF	International Astronautical Federation
IOD	In-Orbit Demonstration
JP	Journal Publication
REA	Research Executive Agency
RTa	Refuel Tank Module
TBC	To Be Confirmed
TBD	To Be Defined

2 Communication Plan

2.1 Purpose and Scope

The communication of the SCHUMANN activities are of significant importance to the project's impact. The aim is to capture the attention of key stakeholders, making the outcomes of the project highly visible (also advertising EC as funding organization), looking for business opportunities and establishing contacts with a range of relevant organization and people (industrial, scientific, academic – including students), promoting the relevance and benefit of developed technologies to “create” the will to use those technologies (NewSpace industry actors). These activities will be carried out continuously, and their effects will be analyzed and quantified also in continuity. High communication impact will be achieved through the combination of different methods

2.1.1 Project Website

The project website is the main tool and mechanism to facilitate the sharing and exchange of research activities with external parties. In order to attract interest and support, it will be used to reach out technical and non-technical stakeholders, providing information about the goals and objectives of the project, the expected project outcomes and the Consortium Team. It will also serve as a communication support to share the updates on the progress of the work and the results, and communicate important news and events related to the project life. It will also offer the opportunity to enter in contact with the Consortium, through a contact form. Finally, the website will be used as a sharing platform for dissemination of reports, publications and data to help to increase the impact of the work.

The website is also used, after the completion of the project, to secure post-project's presence on the web, and guarantee contact accessibility.

2.1.2 Social Medias

Four social media channels will be favored for the communication and outreach of SCHUMANN, Each of them have a specific audience as well purpose to endure the largest project visibility and impact. As for the website, social media channels will play a role with the active presence of the project, after its completion.

Twitter will be used to share brief updates, news and events from the project in (almost) real-time. It can also be used to engage relevant conversations with other organizations and developers, as well create links with other relevant and related contents. Twitter has the possibility to amplify the reach of the research project by encouraging others to share and engage with project updates and content.

LinkedIn will be used to showcase the project team's expertise, and to share information about the project and its progress with other researchers, policymakers, and stakeholders. In another approach than Twitter, LinkedIn can be used for professional networking and to build relationships and connect with potential customers and other professionals in relevant fields. It will also be used to shared project events and updates of the project to increase the communication impact (not everybody is connected to Twitter).

YouTube channel will mostly be used to share videos content related to the research project, including potential recording of presentations and project results. It is foreseen to prepare, at the end of the project, a professional quality short movie (~3' - with professional voice over) stressing the key concepts and potential benefit for SCHUMANN results' potential users.

Research Gate will be used to share, with a wider audience, research papers (conferences and publications) and connect with other researchers in the field. In more a context of research activities, it

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also support potential discussions, collaborations, as well networking for students and researchers that would be interested to join our Companies or perform new partnerships and collaborations.

2.2 Planned Activities

Communication related activities are under the responsibility of SpaceApps, with the involvement of the Communication Team, and the support and contributions from the other partners. The following communication actions will be implemented as a baseline:

Table 2-1: SCHUMANN Communication Activities

Description	Schedule
Initial measures at the beginning of the project	
Definition of a project's identity, including logo, color palette and presentations templates	M2
Design and setting up of the project website, including initial project description (goals, Team, methodology....)	M3
Setting up social media tools, including Twitter, LinkedIn, YouTube and Research Gate	M3
Prepare project flyer/leaflets summary sheet for diffusion during events or for promotional discussions	M4
Continuous activities along the project	
Update social media with projects news and relevant events (e.g. successful milestone)	At each relevant event
Update project website News page	At each relevant event
Update website project progress description and review of content	At each main project milestone
Update website Publication page	When relevant material available
Preparation of project News Letter	Twice a Year
Actively answering to external requests for information and contacts	When contact feedback
Review and Analyze project communication actions Impact (social media statistics)	Twice a year and for each reporting action
Post-Project transition and follow-up activities	
Preparation of professional quality short movie (~3' - with professional voice over) stressing the key concepts and potential benefit for SCHUMANN results' potential users	M24 (available for final project presentation)
Keep project website available and social media open, as well contact form	For at least 1 year after the end of the project

Initial activities to setting up the website and the project's identity are described in RD1.

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3 Dissemination Plan

Dissemination activities involve sharing the results of a research project with a wide range of audience, including researchers, relevant companies (e.g. from the new space sector), potential end-users of the developed technologies, decision and policy makers. Effective dissemination in SCHUMANN is crucial for ensuring that the project developments and results reach the interested stakeholders, offering higher chance to be used by them, as well given opportunities for further development through collaboration and support by decision makers.

It is important to consider wide range of these stakeholders and design and implement suitable mechanisms to reach out. A combination of dissemination mechanism will be implemented during the project to achieve maximal impact, including conference attendance for quick publications, high quality journal submission for an acceptance of technical excellence, invited talks to present results to targeted policy and decision makers.

The following table summarizes the expected scientific dissemination output of SCHUMANN. The next sections provide more details on the purpose and targeted activities.

Table 3-1: SCHUMANN dissemination activities

Dissemination Activity	Year 1	Year 2	Post-Project (2 years)
Peer-reviewed conferences papers	2	4	5
Invited talks and symposia	4	8	10
Journal articles	1	2	2
Total (cumulative)	7	7+14=21	7+14+17=38

All publications related to SCHUMANN shall comply with the legal requirements imposed by the Grant Agreement (AD1) and summarized here:

- Before engaging in a communication or dissemination activity expected to have a major media impact, the beneficiaries must inform the granting authority.
- Communication activities of the beneficiaries related to the action including the conferences, journal papers, outreach material, infrastructure and equipment funded by the grant, must acknowledge EU support and display the EU flag and funding statement. This is a requirement to be eligible to costs reimbursement.
- All publications related to the action must use factually accurate information (purpose of the cross-review process) and indicate the following disclaimer:

“ Funded by the European Union, under the Grant 101082449. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them. “

- The beneficiaries must ensure open access (meaning online access to research outputs provided free of charge to the end-user) to the peer-reviewed scientific publications relating to their results, including the deposit of the publication in a trusted repository. Although ‘gold’ open access to peer reviewed publications has the advantage of almost immediate availability to the research community, the associated cost is pretty high (i.e. provisioning copyrights purchase

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on the project's budget), and the consortium believes that other trade-offs are acceptable, and more cost-effective. We will therefore favor a 'green' open access approach as much as possible, with a self-archiving strategy (and provide access to these papers through the project's website and/or through authors own web pages – then with a link from the project's website). If embargo periods are required before giving access, we will take them into account according to regulation.

3.1 Conferences Participation

3.1.1 Purpose and Scope

Participation to conferences will allow members of related technical communities to discover, understand and discuss rapidly the objectives, the methods and the technologies of project SCHUMANN. It will allow us to receive feedback from peers, elicit interest in technical communities, and encourage research leaders and industry leaders to follow SCHUMANN and eventually adopt its results. Participation to the conferences also offer an opportunity to learn about other research activities in similar field. For each participation, we will write an article that will be available in the conference proceedings for wider dissemination. Project outcomes will further be leveraged at the occasion of large space fairs, with presence at partners' booths.

3.1.2 Planned Activities

The participation to conferences will span on the full duration of the project, as well as post-project activities. The following table provides a summary of the main topics, candidate for publication in conference proceedings. This list is non-exhaustive and each partner is welcome to propose other or more specific ones. Also, one conference paper/presentation can cover several subjects. The suggested deadline columns provide an estimation of the first related submission, in accordance to the availability of the technical material. Further submission can be considered if better aligned with the scope of the Conference.

Table 3-2: Conferences submission topics

Topic ID	Suggested Topic	Initial Deadline
CP1	Introduction to SCHUMANN, main objectives and methodology	10/2023
CP2	RTa, Refueling Tank Spacecraft module, missions overview and requirements	10/2023
CP3	RTa and Functional Spacecraft Modules (FSM): architecture and design for space	12/2023
CP4	DSSCK: Purpose, requirements and ontology elicitation	12/2023
CP5	RTa, Engineering Model integration and testing	07/2024
CP6	DSSCK: Design, Verification and Validation tools – Definition and Implementation	08/2024
CP7	RTa Qualification Model validation and demonstration	12/2024
CP8	DSSCK: Support to conceptual FSM design, a first benchmark	12/2024
CP9	Summary of SCHUMANN project and results	12/2024
CP10	The future of spacecraft modules, applications and development plan	>12/2024

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CP11	SCHUMANN perspectives and IOD demonstration	>12/2024
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3.1.3 Targeted Conferences

The following table provides a list of targeted conferences whose audience would be aligned and interested with the SCHUMANN related activities, with a proposition of mapping with the topics suggested above. This list is non-exhaustive and each project partner is encouraged to propose additional events and actively participate to them. For each conference, if available the table also provide the date as well the paper submission deadlines.

Table 3-3: List of targeted conferences (highlights in red)

Conference	Topic(s)	Date	Submission Deadline
Symposium on Advanced Space Technologies in Robotics and Automation (ESA-ASTRA)	CP1+2 ,CP4 CP3 to CP6 CP7 to CP11	10/2023 10/2024-TBC 10/2025-TBC	23/06/2023 Cancelled TBC
International Astronautical Congress (IAC/IAF)	CP1, CP3, CP4 CP7 to CP9 CP10, CP11	10/2024 (Milan) 09/2025(Sydney) 10/2026(Antalya)	28/02/2024 TBC TBC
Small Satellite Systems and Services Symposium (4S)	CP1 to CP6	02/2024 02/2025	Not applicable TBC
EPIC Workshop	CP2, CP3, CP5 CP7, CP9 to CP11	2024 (TBC) 2025 (TBC)	Cancelled TBC
Space Propulsion Conference (SP)	TBC	05/2024(Glasgow) 2025-TBC	20/11/2023 TBC
International Electric Propulsion Conference (IEPC)	CP2, CP3, CP5 CP7, CP9 to CP11	06/2024 09/2025	11/12/2023 TBC
ESA Clean Space Industry Days	CP1+2 ,CP4 CP3 to CP6 CP7 to CP11	10/2023 2024 (TBC) 10/2025-TBC	23/07/2023 TBC TBC
Space Tech Expo and Conference	Attendance, contribution TBC	11/2023 11/2024	TBC TBC
ESA Industry Space Days (ISD)	Attendance, contribution TBC	09/2024 2025 (TBC)	TBC TBC
Data Systems in Aerospace (DASIA)	Attendance CP1, CP4 CP6, CP8, CP9	06/2023 05/2024(Opatjia) 2025 (TBC)	No 10/02/2024 TBC
Satellite 2024	CP1 CP2 CP3 CP4	03/2024(Amsterdam) 03/2025	29/01/2024 TBC

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Winter Satellite Workshop 2024	CP3, CP4	01/2024 01/2025	TBC TBC
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3.2 Journal Publications

3.2.1 Purpose and Scope

Conferences and journal publications complement each other in dissemination activities. While conferences provide an opportunity for timely dissemination, networking, and feedback, journal publications contribute to the long-term impact, credibility, and recognition of the research project.

Publishing project's results in reputable peer-reviewed journals offers the opportunity of validating the research outcomes, through the rigorous peer-review process by experts in the fields, as well getting valuable feedback from them. It also allows to add credibility to the project's outcomes and increase the acceptance within the scientific and industrial community. This process increases project reach and visibility, with a wider audience than specific conference attendees, while ensuring archiving and accessibility for future reference and citation. Finally, through the high quality process, successful publication enhances project's team expertise and reputation in the community, interesting for new collaborations and opportunities.

3.2.2 Planned Activities

Typically, journal publications require some material and a certain level of maturity of the project to reach the threshold of quality to pass review processes. For this reason, journal publication is typically achieved from the second year of the activity and after its completion. Exception includes the publications of conference proceedings in special journal session. The following table provides a summary of the main topics, candidate for journal publication. This list is non-exhaustive and each partner is welcome to propose other ones. Also, ones. The suggested deadline columns provide an estimation of the paper submission for the review process. Active tracking of journal submission call, for instance for special issues, allow to better align the scope of the project.

Table 3-4: Journal publications topics

Topic ID	Suggested Topic	Initial Submission
JP1	In depth discussion of SCHUMANN project challenges and potential exploitation (including literature and commercial market review) – Based on second iteration of the exploitation plan	02/2024
JP2	Flight design of modular spacecraft module for refueling applications (end of Task 1.2)	02/2024
JP3	Qualification testing of a functional spacecraft module for refueling applications (end of Task 1.4)	12/2025
JP4	DSSCK, satellite construction kit for future modular spacecraft: definition and tool description	09/2025
JP5	Spacecraft modules design, implementation of the SCHUMANN satellite construction kit	12/2025
JP6	SCHUMANN, foundations of the future European modular space ecosystem, projects results and perspectives	06/2026

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3.2.3 Targeted Journals

The following table gives a list of journals that would be suitable for publications of the SCHUMANN activities and results. Journals have typically a 3-6 months review cycle before publication. The selection of journal should favor open access support. A preliminary mapping is proposed. Each project partner is encouraged to propose new opportunities.

Table 3-5: List of targeted conferences

Journal	Topic(s)
Journal of Spacecraft and Rockets	JP1 to JP3, JP6
Advances in Space Research	JP1, JP4-5, JP6
Acta Astronautica	All
Journal of Propulsion and Power	JP2-3
Journal of Aerospace Information Systems	JP4-5

3.3 Invited Talks

Opportunities to deliver an Invited Talk in major international conferences or symposia can have a larger impact on the dissemination of project results. Typically they are presented to a larger and new audience, and better highlighted in the event schedule. This type of dissemination is equivalent to conference presentation, with the difference that it doesn't require the submission of an article. By that, the output is rarely published in the proceedings.

The participation to invited talks is opportunistic and the precise content of the presentation is not planned in advance. The content typically represents the current status of the project, at the time of the presentation. The performance around this type of events strongly depend on the pro-activity of the partners to create links and find opportunities for such invitations

4 Articles Writing Process

This sections describes the typical process involved in the submission of an article to a journal or conference. The purpose is to ensure effective and collaborative dissemination work, and production of high quality publications, in respect of intellectual properties, compliance with individual partner requirements and satisfaction of the project legal requirements (see introduction of section 3). The process is under the monitoring and control of the Coordinator.

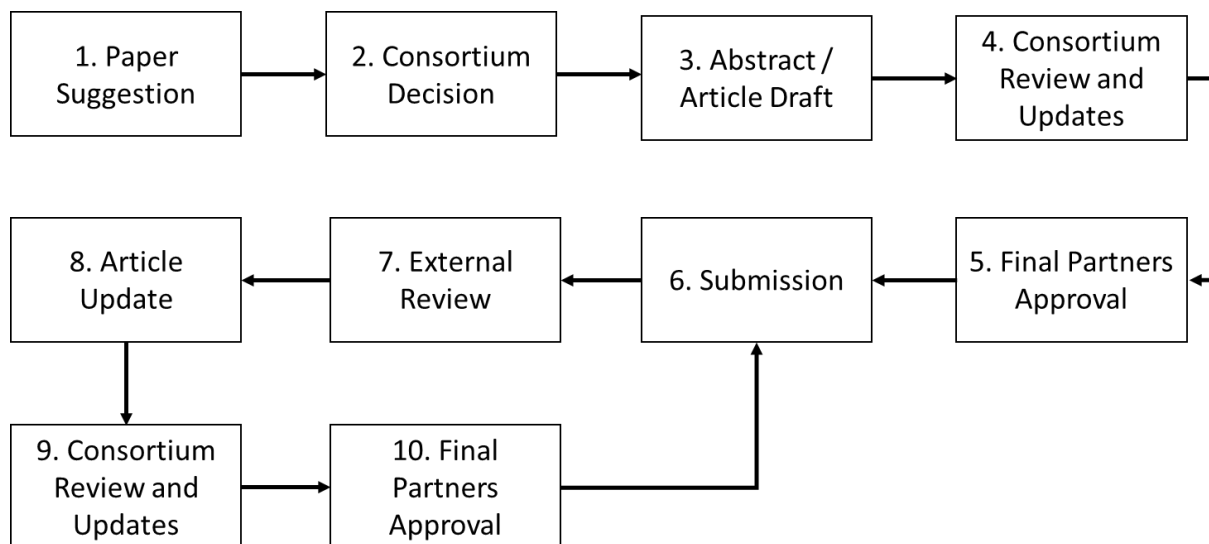


Figure 4-1: Article writing process

1. Any partner suggests the participation to a Conference or a journal publication, describing the expected target and content of the publication. This suggestion can be done by e-mail or during the project status meeting.
2. Consortium partners can provide their feedback and proposition of implication and content. One partner is nominated as publication leader for the follow-up of the process (typically the initiator of the contribution).
3. The publication leader leads the preparation of the abstract/paper draft with the support of the involved partners.
4. The draft is reviewed by the Consortium and updated according to the comments. The final version for first submission is prepared.
5. The Consortium partners provide their approval for the submission.
6. The abstract/paper is submitted to the conference/journal (typically by the publication leader). All partners share their required information for the submission (e.g. author's information).
7. The external review process provide its feedback and acceptance for participation/publication
8. In case of required update, the publication leader performs the updates with the support of the required partners.
9. The final version is reviewed by the Consortium and updated according to the comments. The final version of the paper is prepared.
10. The Consortium partners provide their approval for the submission (the process can be iterated between step 7 and 10, as function of the external reviewing process.)

Same event can require several preparations, as for example a first abstract and then the full publication.

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Table 4-1 suggests the timeline for the completion of the steps above, according to the type of publications (conference abstract, paper or journal publication). This can be discussed and adapted according to priorities, opportunities and internal constraints at partner level for review and approval process.

Table 4-1: Writing process timeline (in weeks before submission deadline)

Step	Conference Abstract	Conference Paper	Journal Paper
1-2	4	6	8
3	2	4	6
4	1	2	4
5	1	1	2

5 Conclusions

This document summarized the SCHUMANN dissemination and communication activities. It covers the actions related to the project website, the social medias, the participation to conferences and the publications of journal articles.

All project partners are reminded that success in the dissemination activities require a share effort to achieved the targeted goal fixed, and more importantly an efficient dissemination of our technical work.

This plan will be further edited along the work, to adapt the content to the development of the work, as well the new perspective of dissemination that could be found. It will be complemented by two reports that will focus on the achievement and performances.

End of Document
