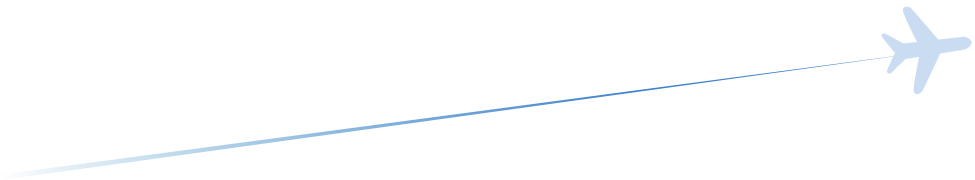

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Authoring & Approval

Authors of the document

Name/Beneficiary	Position/Title	Date
Manuel Soler/UC3M	UC3M contribution leader	06/07/2020
Javier García-Heras/UC3M	UC3M contribution	06/07/2020
Thorben Bethe/UC3M	UC3M contribution	06/07/2020

Reviewers internal to the project

Name/Beneficiary	Position/Title	Date
Damián Rivas/USE	Project Coordinator	12/07/2020
Juan Simarro/AEMET	AEMET contribution leader	12/07/2020
Markus Kerschbaum/ACG	ACG contribution leader	12/07/2020
Davor Crnogorac/CCL	CCL contribution leader	12/07/2020
Valentin Polishchuk/LiU	LiU contribution leader	12/07/2020
Jürgen Lang/MetSol	MetSol contribution leader	12/07/2020
Carl-Herbert Rokitansky/PLUS	PLUS contribution leader	12/07/2020
Manuel Soler/UC3M	UC3M contribution leader	12/07/2020
Doris Novak/ZFOT	ZFOT contribution leader	12/07/2020

Approved for submission to the SJU By - Representatives of beneficiaries involved in the project

Name/Beneficiary	Position/Title	Date
Damián Rivas/USE	Project Coordinator	20/07/2020

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Name/Beneficiary	Position/Title	Date

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Copyright Statement

FMP-Met

METEOROLOGICAL UNCERTAINTY MANAGEMENT FOR FLOW MANAGEMENT POSITIONS

This Communication Plan is part of a project that has received funding from the SESAR Joint Undertaking under grant agreement No 885919 under European Union's Horizon 2020 research and innovation programme.

Abstract

The present deliverable details the communication plan for FMP-Met project. It identifies a focal contact for communication purposes. It details the communication goals, which have been disaggregated by target audiences. In order to reach such goals, the plan includes: 5 high-level messages and a short description to be broadcasted in different media with the aim at making the project understandable at a first glance; the communication means FMP-Met will use to reach its target audiences, including the project's website, the social media, and other relevant means; and finally a detailed communication plan of activities, including a schedule and metrics to measure its impact and effectiveness.

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1 Introduction[1]

The goal of the Communication Plan is to promote the project and its results. For this purpose, the plan presented in this section defines clear objectives and sets out a concrete strategic planning for the communication activities in a timely and effective manner.

The communication plan includes a focal point, the objectives targeted by audience, a description and key take-home messages, the website and a banner image, and a calendar with intended communication activities and their associated metrics to monitor the impact.

1.1 Applicable Reference material

This plan satisfies the content and activities identified in Section 3.10 of the Exploratory Research (ER) Project Execution Guidelines document [1], the article 38.1 of the Grant Agreement concerning the communication activities of the partners, and the instructions provided in the H2020 Communication Guide with regard to the communication strategy [2].

1.2 Focal Communication Contact

The communications point of contact of this project is the WP8 Leader, Prof. Manuel Soler (he will be in continuous contact with the Project Coordinator, Prof. Damián Rivas). Contact details are the following:

Prof. Manuel Soler
Department of Bioengineering and Aerospace Engineering
School of Engineering
Av. de la Universidad, 30
28911 Leganés, Madrid (Spain)
Tel: +34 91 624 8219
E-mail: masolera@ing.uc3m.es

1.3 Acronyms and Terminology

Acronym	Description
ACC	Area Control Centres
ANSPs	Air Navigation Service Providers
ATM	Air Traffic Management

[1] The opinions expressed herein reflect the author's view only. Under no circumstances shall the SESAR Joint Undertaking be responsible for any use that may be made of the information contained herein.

ATC	Air Traffic Control
EU	European Union
FMP	Flow Management Position
I	Institutions
ICAO	International Civil Aviation Organization
IPA	Industrial and intellectual Property Agents
GP	General Public
NM	Network Manager
RSC	Research and Scientific Community
SESAR	Single European Sky ATM Research Programme
SJU	SESAR Joint Undertaking
STELLAR	SESAR Tool Enabling coLLaborative ATM Research
TRL	Technology Readiness Level
UGS	Undergraduate and Graduate Students
WP	Work Package

1.4 FMP-Met Consortium

Acronym	Description
USE	Universidad de Sevilla
AEMET	Agencia Estatal de Meteorología
ACG	Austro Control GmbH
CCL	Croatia Control Limited
LiU	Linköping University
MetSol	MeteoSolutions GmbH
PLUS	Paris-Lodron Universität Salzburg
UC3M	Universidad Carlos III de Madrid
ZFOT	University of Zagreb

2 Communication Objectives and Target Audience

The FMP-Met results will be targeted to the following audiences:

1. General public (GP).
2. Undergraduate and graduate students (UGS).
3. Research and scientific community (RSC).
4. Industrial and Intellectual Property Agents (IPA).
5. Institutions (I).

The goals of FMP-Met communication strategy are different for each audience:

1. **Targeted to GP:** Ensure that the research activities are made known to society in such a way that they can be understood by non-specialists, thereby improving the public's understanding of science and technology. Establish a concern on how European collaboration and funding contributes to society.
2. **Targeted to UGS:** Wake up interest to follow scientific careers, especially to join FMP-MET groups and follow PhD studies and develop Bachelor and Master thesis.
3. **Targeted to RSC:** Maximize the dissemination, including other scientific disciplines; enhance excellence and scientific reputation; find follow-up ideas and collaborations.
4. **Targeted to IPA:** Anticipate what results could be protected and how to do it; attract the interest of the industry; find potential partners for higher TRL proposals within SESAR H2020 and/or other European/National Projects; find potential clients for existing products/services and/or potential new products/services to be developed.
5. **Targeted to I:** Draw the attention of different institutions, e.g., European Commission, National Governments, Regional Governments, Regulators (ANSPs, ICAO, SESAR), to make them aware of FMP-Met results and make them visible to their agendas. This will facilitate the allocation of more funding and the revision/modification of standards.

3 High-level Messages and Project Description

3.1 High-level Messages

The benefits that the project is expected to bring can be expressed in the following high-level messages:

- *FMP-Met will tailor multi-scale, multi-source convective weather information for FMP application.*
- *FMP-Met will predict probabilistic aircraft trajectories using multi-scale convective weather information.*
- *FMP-Met will forecast multi-sector demand and complexity under convective weather.*
- *FMP-Met will translate convective weather forecasts into predictions of reduced airspace capacity.*
- *FMP-Met will produce guidelines for the use of probabilistic forecasts for FMP application*

3.2 Short description

Next, a short description of the project in language suitable for non-experts is provided (as included in CORDIS site[2]):

"Weather is difficult to predict even with the help of the latest in forecasting technology. But an accurate weather outlook is crucial for air traffic management. As such, meteorological forecast uncertainty should be included in the decision-making process. The EU-funded FMP-Met project will develop a multi-sector, multi-source convective weather information application for flow management position (FMP). The aim is to provide the FMP with an intuitive and interpretable probabilistic assessment of the impact of convective weather on operations, up to 8 hours in advance. The overall goal of the project is to improve decision-making in traffic flow management, which will ultimately reduce flight delays and improve passenger journeys."

3.3 Abstract

The framework for this project is the integration of meteorological forecast uncertainty information into the decision-making process for Flow Management Position (FMP). FMP is an operational position located in Area Control Centres (ACC) which serves as an interface between Air Traffic Control (ATC) and the Network Manager (NM). FMP monitors the level of traffic in ATC sectors, adjusts the value of

[2]https://cordis.europa.eu/project/id/885919

capacity in view of unexpected events, and coordinates possible traffic flow measures with the ACC Supervisor and the NM when an excess of demand over capacity is detected. The presence of convective weather challenges this task, because it makes the sector demand not easy to predict and increases the complexity, thus reducing the sector capacity. The goal of this project is to provide the FMP with an intuitive and interpretable probabilistic assessment of the impact of convective weather on the operations, up to 8 hours in advance, coming from probabilistic forecasts of sector demand, complexity and capacity reduction, to allow better-informed decision making. The provision of a trustworthy forecast of the future sector demand and complexity and of a reliable estimation of the impact of the convective weather in the sector capacity will support the FMP in taking anticipated, appropriate, and timely tactical flow measures, which as a consequence will lead to a reduction of delays and an improvement of passenger journeys.

3.4 Keywords

Adverse weather, thunderstorms, weather forecast uncertainty, aircraft trajectory analysis, sector demand, sector capacity, sector complexity, FMP, ATM.

4 Communication means

4.1 FMP-MET Website.

A dedicated webpage has been created to promote the project and its research activities and your contribution to SESAR, including a link to the SJU website https://www.FMP-Met.com.

Figure 1: FMP-MET Website

This website is a crucial component of the FMP-MET communication strategy. It will provide thorough and consistent information about all aspects of the FMP-MET project, with the goal of positioning the FMP-MET website as a prime information source for relevant scientific and technical information. The vast majority of the FMP-MET deliverables are public, and full access to these will be provided through the website. The website will also contain:

1. lists of publications and links to open-access repositories,
2. copies of technical documentation,
3. information about project partners,
4. copies of presentations,
5. public data and results, and
6. links to the Horizon 2020 programme and to related research projects in order to highlight the role played by FMP-Met within the broader SJU research framework.

4.2 Banner and SJU website.

A banner with dimensions 1350x250 pixels has been created and distributed to SJU.

Figure 2: FMP-MET Banner

In parallel, with the aid of the banner and other requested information, SJU has developed specific project web pages on SJU website - https://www.sesarju.eu/projects/fmpmet.

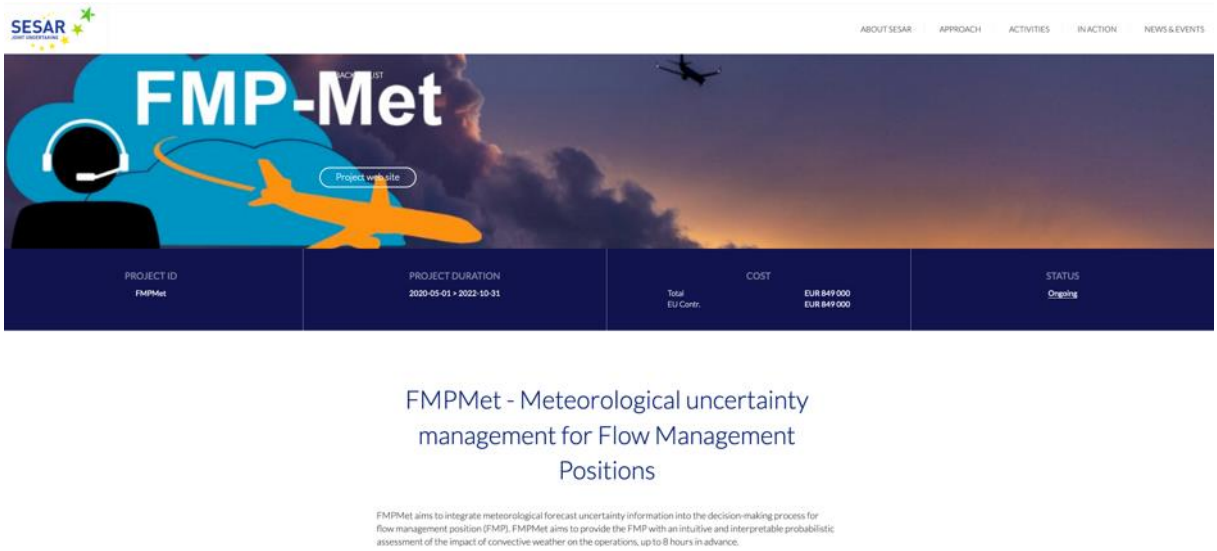

Figure 3: FMP-MET in SJU site

4.3 Social Media

FMP-MET will be present in different social media networks, namely:

- Linked-In (Targeted to IPA and I), already on air: see Figure 4.
- Twitter (Targeted to GP), already on air: see Figure 5.
- Research-gate (Targeted to RSC)

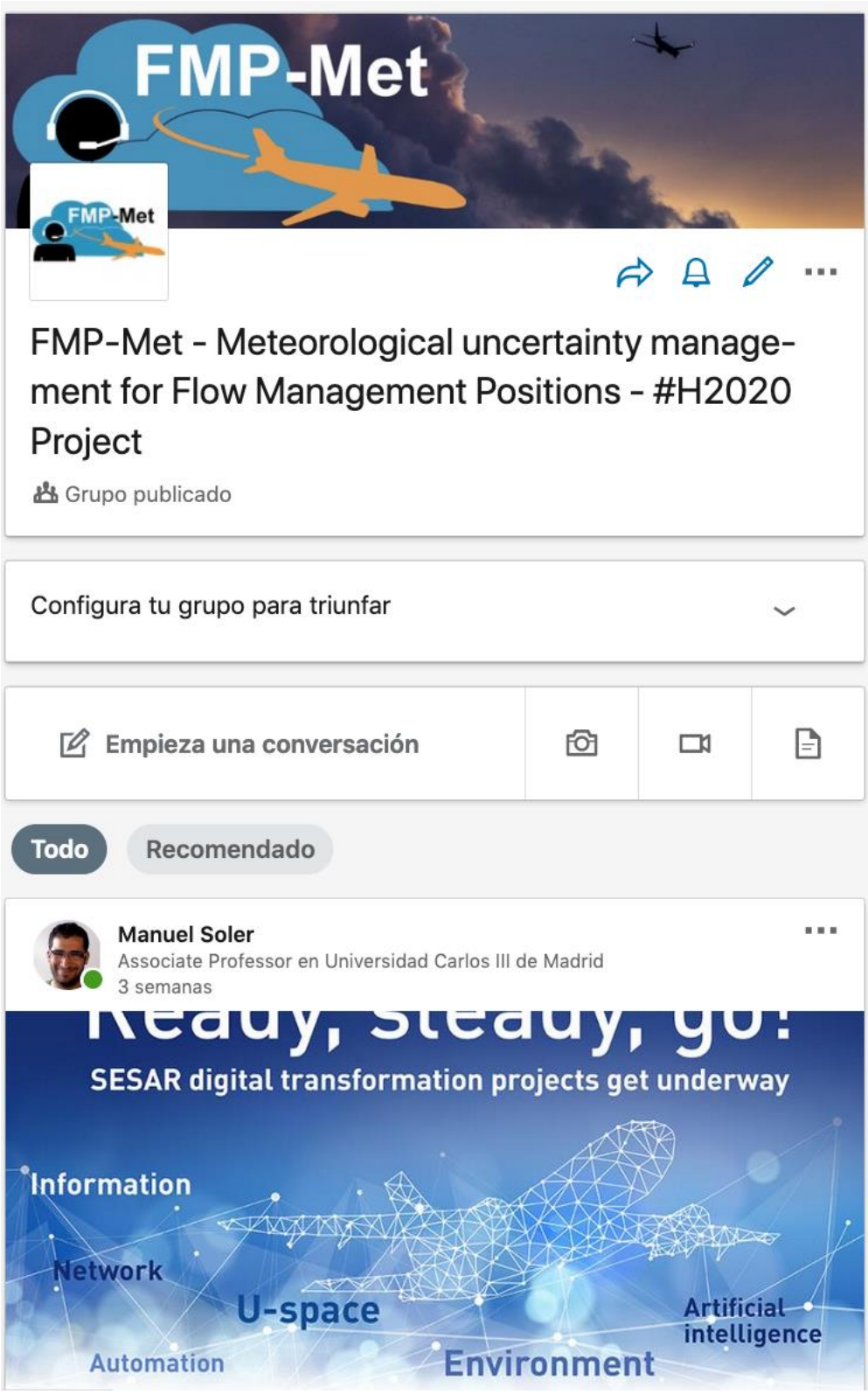

Figure 4: FMP-Met Linked-in screenshot

Figure 5: FMP-Met Twitter screenshot

4.4 Institutional outreach channels

The WP8 leader (UC3M) counts on the support of the University's Communication structure to help them achieve FMP-Met communication objectives of information transfer to the different target audiences regarding their initiatives, processes and results. A UC3M service promotes, manages and carries out activities in the area of corporate and brand communication, internal communication, advertising, media relations, social networks, etc. In addition, these activities are also undertaken in the area of scientific information and knowledge, through the Office of Scientific Information. This unit is linked to the Autonomous Community of Madrid's Network of Scientific Culture and Innovation Units of the Spanish Foundation for Science and Technology.

The Office of Scientific Information uses a variety of formats and journalistic genres to emit scientific information regarding research projects and their findings (in open access), along with other subjects of interest in the area of research and innovation, with institutional support from the Vice-Chancellor's Office for Communication and Culture and the Vice-Chancellor's Office for Scientific Policy.

It likewise participates in campaigns such as Science Week and European Researchers' Night to disseminate scientific advances to society at large. These science education activities seek public engagement through interactions with the populace, promoting a 'science with and for society' philosophy.

In addition, this office emits news articles and press releases on a weekly basis, using a web format, videos, photos, etc. In each communication campaign, the Office of Scientific Information prepares a dossier to track the impact that these contents have in webs and communication media.

4.5 Information on funding

Any communication activity related to the action (including in electronic form, via social media, etc.) will display the SJU logo and the EU emblem, and will include the following text:

"This project has received funding from the SESAR Joint Undertaking (JU) under grant agreement No 885919. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the SESAR JU members other than the Union".".

When displayed together with another logo, the SJU logo and the EU emblem will have appropriate prominence.

Figure 6: FMP-MET website example

4.5.1 Disclaimer excluding SJU responsibility

The communication activity related to the action will indicate that it reflects only the author's view and that the SJU is not responsible for any use that may be made of the information it contains.

5 Communication Activities

5.1 Schedule of Communication Activities

A detailed list of FMP-Met intended communication activities, indicating its target audience, is given in Table 1. Communication activities.

Number	Communication activity	Target Audience	Date	Media
CA1	Participation at each SESAR Innovation Days with a poster describing the status of the project.	RSC, IPA, I	T0+06 (31/10/2020) T0+18 (31/10/2021) T0+30 (31/10/2022)	• Poster (digital and in paper). • Broadcasting via web and social media. • In situ presentation and discussion.
CA2	Participation at SESAR Innovation Days with scientific papers showing the progress of the project.	RSC, IPA	T0+18 (31/10/2021) T0+30 (31/10/2022)	• Paper (digital and in paper). • Broadcasting via web and social media. • Oral communication
CA3	Publication of papers in scientific journals: Transportation Science, Transportation Research, Journal of Air Traffic Management, Journal of Guidance, Control, and Dynamics	RSC	2021 and 2022	• Paper (digital and in paper). • Broadcasting via web and social media.
CA4	Participation and presentation at scientific conferences (different from SESAR Innovation days): International Conference on Research Air Transportation (ICRAT) and USA/Europe ATM Seminar.	RSC, IPA	T0+13 (31/05/2021) T0+25 (31/05/2022)	• Paper (digital and in paper). • Broadcasting via web and social media. • Oral communication
CA5	Organisation of a dedicated workshop to present the project's results. This workshop will be organized at the end of the project.	RSC, S, I	T0+30 (31/10/2022)	• Workshop organisation • Panel discussion • Oral communications • Digital proceedings
CA6	After the workshop, publication of FMP-MET press describing the major outcomes of the project	GP, UGS, RSC, IPA	T0+30 (31/10/2022)	• Digital press-release • Broadcasting via web and social media.

CA7	Creation of FMP-MET website (https://www.FMP-Met.com)	GP, UGS, RSC, IPA	T0+01 (31/05/2020)	• Static information • Monthly updates via posts
CA8	Social Media (Twitter, Linked-In, Research Gate)	RSC, IPA	T0+01 (31/05/2020)	• Weekly updates via posts
CA9	Institutional outreach news	GP, UGS	1 at the end of the project	• Digital press-release • Broadcasting via web and social media.
CA10	SESAR outreach news (newsletter)	RSC, IPA, I	1 after KoM 1 at the end of the project	• Digital press-release • Broadcasting via web and social media.
CA11	Discussion with other related ER4 MET projects to discuss possible synergies.	RSC, I	T0+06 (31/10/2020) T0+30 (31/10/2022)	• Workshop • Oral communications

Table 1. Communication activities

The dates at which the different communication activities will take place are presented in Table 1. Communication activities. This calendar of key project milestones and communications activities (press release, news item, media event, magazine interview, web presence) will be also implemented through STELLAR Communication Register.

5.2 Communication Success Criteria

The metrics proposed to measure the success of the communications activities are the following:

- Number of results obtained in an internet search engine (e.g. Google) when any of the following search terms are used: *"FMP-MET SESAR", "FMP-MET H2020", "FMP", "Meteorology and ATM".* It will be reported every six months.
- Website (It can be gathered from free web analytics services as, for example, Google Analytics. It will be reported every six months):
    - Number of visitors (by country) to the project's website.
    - Number of clicks
    - Number of documents' downloads.
- Twitter: Number of twits, number of re-twits, number of "followers" and "following". It will be reported every six months.
- Linked-in: Number of messages, number of "followers" and "following". It will be reported every six months.
- Number of attendants to the workshop, including speakers and panellists. We will measure the nationalities and the stakeholders.
- Number of channels reached with the institutional outreach service.

6 References

[1] Project Handbook of SESAR 2020 Exploratory Research Call H2020-SESAR-2019-2 (ER4) (Programme Execution Guidance), Edition 03.00.00, March 2019.

[2] Communicating EU research and innovation guidance for project participants, Version 1.0, 25 September 2014.


FMP-Met


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