



D8.1- Plan for Dissemination & Exploitation including Communication activities

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Abstract

This deliverable reveals the strategy that will be followed for the Dissemination and Communication (D&C) activities to boost the promotion of the project and its achievements. It will also briefly describe the D&C means including the project's logo and the deliverable templates), the Initial Communication Toolkit (trifold leaflet, poster, banner) and the launch of the social media platform including the official project's website. Moreover, it will address the importance of Intellectual Property Rights (IPR) and how we will approach it during this project, based on agreements made prior to the beginning of the project. Finally, It will describe an elaborative proposal of the Exploitation plan. The latter outlines the project's results and how its participants will use them for their own goals or how they intend to make them available to others for use in the society, in the scientific community or in financial or political activities.

Keywords

Dissemination, exploitation, communication, plan, logo, templates, leaflet, poster, banner, social media, website, approval process.

Information Table

Contract Number	101134963
Project Name	iodine Fed Advanced Cusp field Thruster for Mid-Power
Project Acronym	iFACT-MP
Topic	HORIZON-CL4-2023-SPACE-01-72
Type of Action	HORIZON Research and Innovation Actions
Project Starting Date	1 January 2024
Project End Date	31 December 2025
Duration	24 Months
Project Coordinator	AIRBUS DEFENCE AND SPACE GMBH
Deliverable Number	D8.1
Deliverable Title	Plan for Dissemination & Exploitation including Communication activities
Version	02
Status	Final
Responsible Partner	EASN-TIS
Deliverable Type	Report
Contractual Date of Delivery	March 31 st , 2024
Actual Date of Delivery	
Dissemination Level	PU

Authoring & Approval

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Document History

Version	Date	Status	Author	Description
0.1	2024-03-21	Draft	Eleni Sarantoglou - EASN-TIS	1 st draft
0.2	2024-03-21	Final	Eleni Sarantoglou - EASN-TIS	Final

Table of Acronyms and Abbreviations

Acronym/Abbreviation	Description / Meaning
ACFT	Advanced Cusp Field Thruster
C12A7	Calcium Aluminate Electride
D&C	Dissemination and Communication
EASN-TIS	European Aeronautics Science Network -Technology Innovation Services
EC	European Commission
EPS	Electric Propulsion Subsystem
HADEA	European Health and Digital Executive Agency
HET	Hall Effect Thruster
iFACT-MP	iodine Fed Advanced Cusp field Thruster for Mid-Power
IKTS	Fraunhofer Institute for Ceramic Technologies and Systems IKTS (participant)
IPR	Intellectual Property Right
Isp	Specific Impulse
KPI	Key Performance Indicator
PDECR	Plan for Dissemination & Exploitation including Communication Activities of project Results
PPU	Power Processing Unit
PTTR	Power-To-Thrust-Ratio
TRL	Technology Readiness Level
UniPi	University of Pisa (participant)

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1. INTRODUCTION

Dissemination is crucial for the effective distribution of the project generated results to the right audiences, while communication is intended to spread awareness to a broader, non-specialized audience regarding the project's goals. EASN-TIS will create a detailed plan for sharing information and raising awareness about the project's goals, which will be regularly updated with all the activities related to dissemination and communication. The plan will involve participating in conferences, publishing scientific and non-scientific materials, and networking with stakeholders. Building communication partnerships with existing networks, associations and communities is crucial for engaging stakeholders with iFACT-MP project.

The document is organized into the following seven (7) chapters:

1. Introduction to the rest of this document, outlining its scope and providing an overview of the following chapters.
2. Presentation of the dissemination and the communication strategy. It starts with a brief overview and details on the dissemination model that was developed, describing into sub-sections the method that was followed to ensure a strong dissemination and communication management for the project, defining the key goals and objectives, and selecting the right message for the right target audience.
3. Showcase of the suitable dissemination and communication mechanisms and introduction of the tools and channels suitable for the project.
4. Focus on the measures and indicators identified to evaluate the strategy's efficacy.
5. Brief description of the agreed dissemination e-approval process of the consortium.
6. Detailed description of the exploitation plan for the project.
7. Summary of this deliverable.

Finally, Appendix A includes the current planned and foreseen dissemination and communication activities of the iFACT-MP team.

2. DISSEMINATION AND COMMUNICATION STRATEGY

2.1 Introduction

The iFACT-MP team acknowledges the importance of initiating dissemination and communication activities early on in the project to generate interest, enhance the project's impact, and foster a broad community. Moreover, the dissemination and communication strategy will strengthen the results of the planned activities across all project work packages. Furthermore, it will facilitate the establishment of novel research and commercial collaborations, stimulate future research endeavours, and create new market opportunities. Ultimately, this will have a significant positive influence on profitability, growth, and employment.

The primary directive outlined in this document for crafting this plan involves outlining the necessary steps for an effective strategy, encompassing essential elements such as key messages, communicators, target audiences, and communication channels.

The primary goal of this deliverable is to outline and create a suitable plan for disseminating and communicating the different activities that iFACT-MP will undertake in order to ensure its success and long-term viability. This plan is intended to facilitate the implementation of effective dissemination and communication strategies, utilizing the right tools and mechanisms, in order to effectively convey the project's objectives and outcomes to a wide range of target audiences. By doing so, it will contribute to the anticipated impact of the project on Europe.

More specifically, the main objectives of the Dissemination and Communication plan are:

- **Identify** the target audience to communicate the right message using the appropriate channels and tools on a timely basis.
- **Develop** and maintain collaborative mechanisms to ensure efficient dissemination efforts for each of the project's designated target audiences.
- **Support** partners in their dissemination, communication, and networking endeavours.
- **Exploit** the entire consortium to effectively enhance dissemination and outreach. Encourage the utilization of the project's outcomes for forthcoming research endeavours and facilitate informed strategic research policy determinations.
- **Develop** and sustain an active network comprising essential individuals, stakeholders, and policy makers, ensuring they are informed about the advancement of the project and promoting collaboration and relationship-building.

2.2 Overview

It is crucial for all HORIZON EUROPE projects to implement a successful Dissemination and Communication strategy to enhance their impact and advance European research and innovation. This strategy should reach all target audiences effectively throughout the project's duration, ensuring continuous communication of progress, achievements, and outcomes in a coherent and unique manner.

2.3 Dissemination management practices

The disseminating process involves the distribution of information to various groups or organizations through one or multiple channels to achieve a particular outcome. Hence, it is crucial to establish a cohesive dissemination strategy to effectively share the significant research findings generated within the project.

To achieve the maximum impact of the project, it is crucial to identify the appropriate individual and information at the precise moment, utilizing the correct language. In order to guarantee that dissemination activities are carried out efficiently and effectively throughout the project's lifespan, a consistent methodology is implemented. This methodology ensures the involvement of partners in maintaining the continuity and consistency of actions, as well as the appropriate allocation of time and funds.

2.3.1 Methodology

Step 1: Identifying the target audience

The initial phase involves determining the target audience for the project. This includes various European stakeholders such as industry, research, academia, customers, and others involved in aerospace infrastructures. Additionally, the general public, including the European taxpayer who significantly contributes to funding such projects, is also considered as one of the target groups.

Step 2: Development of suitable tools for gathering dissemination and communication activities.

This stage entails creating templates that will be utilized for collecting input from the partners. The templates can be found in Appendix A – Plan for the Dissemination, Exploitation and Communication section of this document.

Step 3: Development of a comprehensive plan

Following the creation of the PDECR template document, it is shared with the project's partners to be filled out with their planned dissemination and communication activities. Once the template is completed, the input is analyzed, formulating of the project's comprehensive plan for dissemination and exploitation, which includes various communication activities. By carefully examining the input provided by the partners, the project's target audience is determined,

enabling the dissemination manager and partners to choose the most impactful methods and tools to reach them.

These communication methods and tools can vary in form, and they fall into three main categories, for example for interpersonal communication through workshops and presentations, for printed media through articles in magazines, press releases, etc., and for digital media through the website, social media, videos, emails, etc.

Step 4: Implementation of tasks.

This step involves carrying out the planned activities, which include executing all actions outlined in the Dissemination and Exploitation Plan, such as communication tasks. The main goals of this phase are to implement dissemination and communication activities, establish two-way communication channels for the chosen platforms, and raise awareness about the project, its goals, and anticipated outcomes.

Starting from the initiation of the dissemination and communication phase, and with the aim of promoting future opportunities for exploitation, all members of the consortium are expected to contribute to the implementation of activities based on their respective areas of expertise and influence.

Step 5: Process of assessment.

This step involves the continuous monitoring, updating, and evaluation of the dissemination and communication activities during the project's duration, to ensure that dissemination actions align with the established plan.

It is essential to regularly update the PDECR to ensure it remains well-informed, thus it will be shared with partners twice a year for any necessary updates, corrections, or amendments. Moreover, throughout the entire project life cycle, continuous additions will be made to the ongoing dissemination and communication activities.

Ultimately, this step also encompasses the assessment of the dissemination and communication activities to evaluate the effectiveness of the executed activities. The assessed data will offer valuable insights to oversee and coordinate the planning of dissemination and communication actions and intervene as required.

2.4 Identifying the target audience

Communication and dissemination are essential tools that will be utilized to showcase the project and its outcomes to various audiences, such as the media and the general public, and potentially engage interactive communication.

It is essential to deliver a message to the intended audience using the most suitable methods, in order to optimize communication. Thus, it is crucial to identify the target audience before selecting the appropriate media for message transmission.

2.5 Select the appropriate message

The dissemination plan aims to efficiently organize activities to enhance the project's impact by delivering the right information to the appropriate audience at the correct time and in the suitable language. It is crucial to effectively communicate iFACT-MP's results to ensure maximum utilization and uptake. Identifying target audiences, key messages, and suitable communication channels is the initial step in creating a successful dissemination plan. By developing a tailored strategy, the project can increase its chances of success through the use of appropriate communication tools for each audience's specific needs. Based on the project's concept, objectives and expected impact, the table below identifies the target audiences, the key messages that will be disseminated them and appropriate channels to use.

Target Audience	Key Message	Communication Channel
Scientific community <ul style="list-style-type: none"> Academic institutions, Research institutions, Researchers, Innovators, PhD/MSc students 	<ul style="list-style-type: none"> Developed novel alternative propulsion concepts, knowledge and know-how, Technical scientific results Data acquired, Novel methodologies 	Scientific publications, participation to conferences & workshops, website, newsletters
Industry, SMEs, Start-Ups		
Policy makers, regulatory authorities, certification bodies	<ul style="list-style-type: none"> Innovative knowledge acquired, Competing solutions Core applications of the developed electrical propulsion subsystem 	Policy Briefs Recommendations, newsletters, open days
Technology Transfer organizations, Networks & Associations		Cluster meetings, project website, social media, press releases, newsletters
Other EPIC and HORIZON Europe projects	<ul style="list-style-type: none"> Knowledge and know-how acquired, Novel methodologies 	Cluster meetings, web-based outreach tools (project website, social media, etc.), press releases, newsletters
General public	<ul style="list-style-type: none"> Key innovations Societal challenges that will be tackled by the project (job opportunities, advancement of postgraduate education programs etc.) 	Video, project website, online and offline media

Table 1 Dissemination plan with target audiences, key messages and communication channels

3. USING APPROPRIATE COMMUNICATION AND DISSEMINATION TOOLS

The project team plans to execute customized dissemination and communication strategies in order to effectively engage all identified target groups, with the ultimate goal of maximizing the project's impact and ensuring optimal utilization of its results. It is essential to utilize a diverse range of communication methods tailored to each specific target group.

3.1 Visual Identity

Attractive communication material is created at the beginning of the project to establish its visual identity, which will be maintained in all external and internal communications during the project's lifespan. This includes the distinctive logo of the project, along with project templates (such as deliverables, meeting minutes, agenda, presentation) as illustrated in Figures 1 and 2. The visual identity of the project will act as the primary means of communication to enhance its visibility. Further details will be provided in **D8.2 – Communication packs and channels**.



Figure 1 iFACT-MP official logo

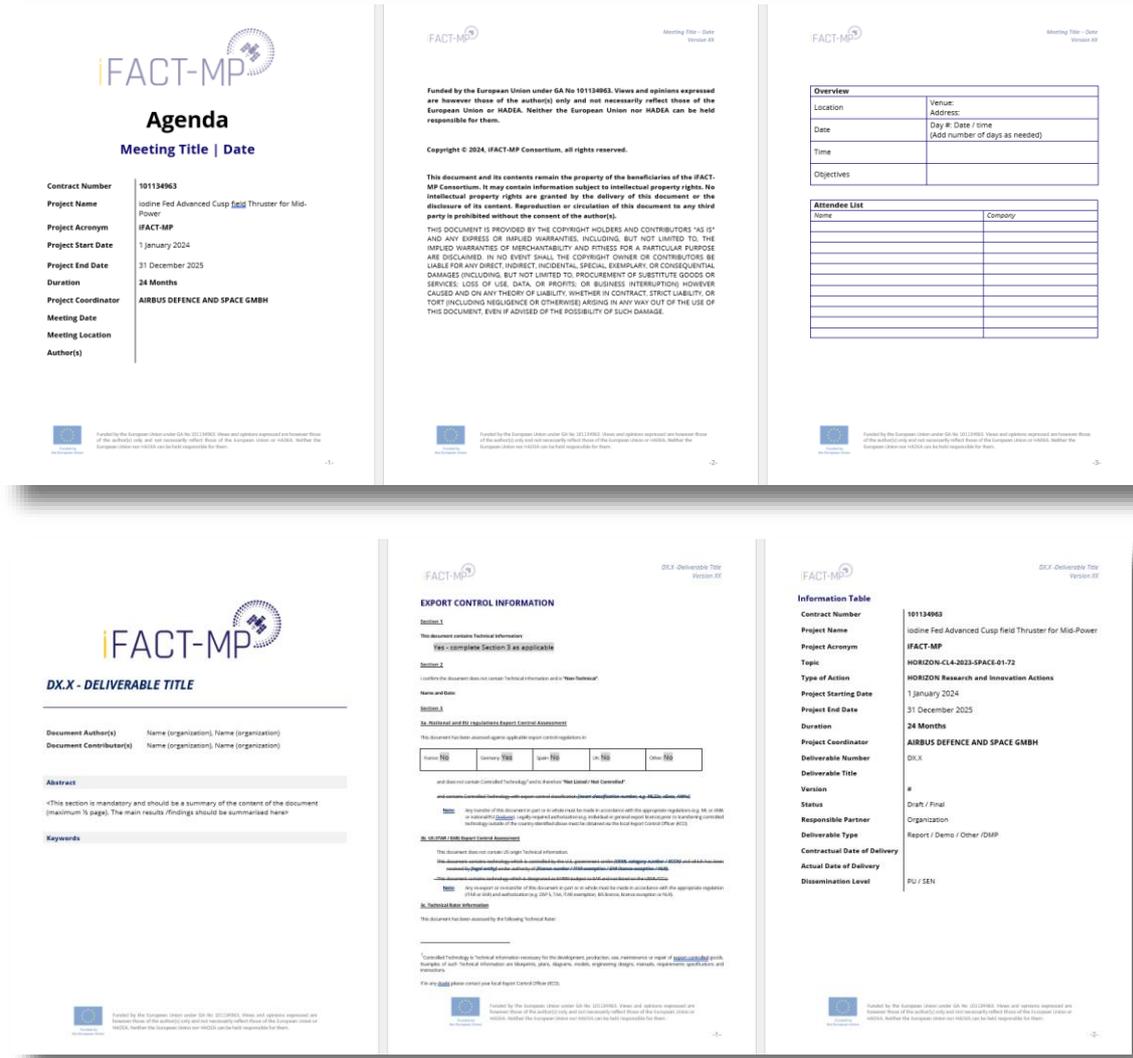


Figure 2 Indicative project templates

3.2 Communications pack (digital and printed materials)

The initial communication pack was developed during the first few months of the project's lifetime with general information regarding the project's objectives and expected impact. These materials will be shared in both digital and printed format with all partners for distribution within their institutes, as well as to their respective communities, workshops, and other relevant European and international events. Further details will be included in **D8.2 – Communication packs and channels**. Moreover, a final communication pack will be developed and presented in **D8.4 – Final Communication and Dissemination Plan & Project Legacy Pack**, highlighting the project's accomplishments and outcomes for use in partners' dissemination efforts post-project completion.



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ABOUT IFACT-MP

The iFACT-MP project aims to develop a **competitive iodine-fed thruster** for the 3-5 kW range, by focusing on **key components** like the **Advanced Cusp Field Thruster (ACFT)**, the **fluid system** (including a heated iodine reservoir, an optical flow sensor and control for the thruster), the **neutralizer** and functionally equivalent **PPU breadboard**.
The **goal** is to **scale up the ACFT and develop the necessary fluidic components to realize a functional iodine Electric Propulsion (EP) subsystem and enhance its maturity.**

IFACT-MP EXPECTED IMPACT

Sustainability

Drastic reduction in propellant carbon footprint

Strategic

Ensuring 100% non-dependence from other countries

Excellence

Expand leadership in iodine EP

Economic

Significant reduction in propellant & subsystem cost

Performance

Highly throttleable thruster with xenon-like performance

IFACT-MP TEAM

CONNECT WITH IFACT-MP

101134963 | 01.01.2024 | 24 Months

Coordinated by AIRBUS DEFENCE & SPACE GMBH

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Design by EASN-TIS

Funded by the European Union.

IFACT-MP

iodine Fed Advanced Cusp field Thruster for Mid-Power

IFACT-MP OBJECTIVES

- Specification**
Conducting a thorough analysis of market and platform needs to determine the requirements for a compelling Electric Propulsion (EP) subsystem.
- Thruster**
Scaling up the Advanced Cusp Field Thruster (ACFT) to the 3-5 kW power range to meet higher power class demands.
- Cathode**
Innovating the development of an iodine-fed hollow cathode utilizing C12A7 emitters with enhanced performance characteristics.
- Fluidics**
Establishing a complete chain comprising a heated tank, flow control mechanism, and piping for the iodine EP system.
- Test Facility**
Creating an iodine-compatible vacuum chamber capable of enabling thorough characterization and endurance testing at the required power level.
- Diagnostics**
Pioneering the development of an optical sensor designed to measure iodine flow rate in-situ, enhancing precision and monitoring capabilities.

IFACT-MP WORKPLAN

WP1. Management

WP2. System Engineering, Specification & Feeding Development

WP3. Thruster & Cathode Development

WP4. C12A7 Development

WP5. Breadboard PPU Development

WP6. Facility Development & Endurance Testing

WP7. Iodine Mass Flow Diagnostics

WP8. Dissemination, Communication & Exploitation

IFACT-MP KPI's

	State of the Art 3-5 kW EPS (Xe HET)	iFACT-MP EPS	
Subsystem Cost	100%	80%	80%
Subsystem Volume	100%	35%	35%
Thruster unit Mass	12kg	<10kg	67%
Propellant Cost	5000 - 15000 €/kg	<100 €/kg	2%
Integration Cost	100%	80%	80%
Specific Impulse	1630 - 1860s	>1800s	125%
Propellant CO2e	685 t _{CO2e} /MNs	<1 t _{CO2e} /MNs	< 0.1%

Figure 3 iFACT-MP leaflet



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“Showcasing European leadership in iodine Electric Propulsion (EP)”

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Design by EASN.TIS

Figure 4 iFACT-MP poster



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3.3 Website and Social Media

3.3.1 Website

A draft version of the project's website is under development using the "*visual identity*" as a foundation, serving as the primary means of communication to increase awareness for the project, its goals, obstacles, and expected results.

The majority of individuals will engage with the project's activities at the website. Both digital and printed communication tools will direct users to the project's website for more in-depth information regarding the project and ongoing research endeavours. The visitors will be able to access detailed information about the project's goals, advancements, approach, team, and freely available resources.

The project's registered domain is **<https://ifact-mp.eu/>**.

A detailed report for the development of the website will be included in ***D8.2 -Communication packs and channel***.

3.3.2 Social Media

The project's LinkedIn page was created and launched once the partners approved the logo and the visual identity pack was completed. The YouTube channel will be set up once there is sufficient material, with the goal of expanding the project's reach. By leveraging the detailed user data available on social media platforms, it is aimed to grow our follower base, engage our target audience, and direct them to the project's website. The project partners, along with individuals and organizations from the specified audiences, are encouraged to join. The project will actively maintain its presence on social media by sharing updates, news, and events to keep our online community informed and engaged. Further details about the project's social media strategy will be outlined in ***D8.2 -Communication packs and channels***.

The social media page of the project can be accessed through the following link:



<https://www.linkedin.com/company/ifact-mp/>

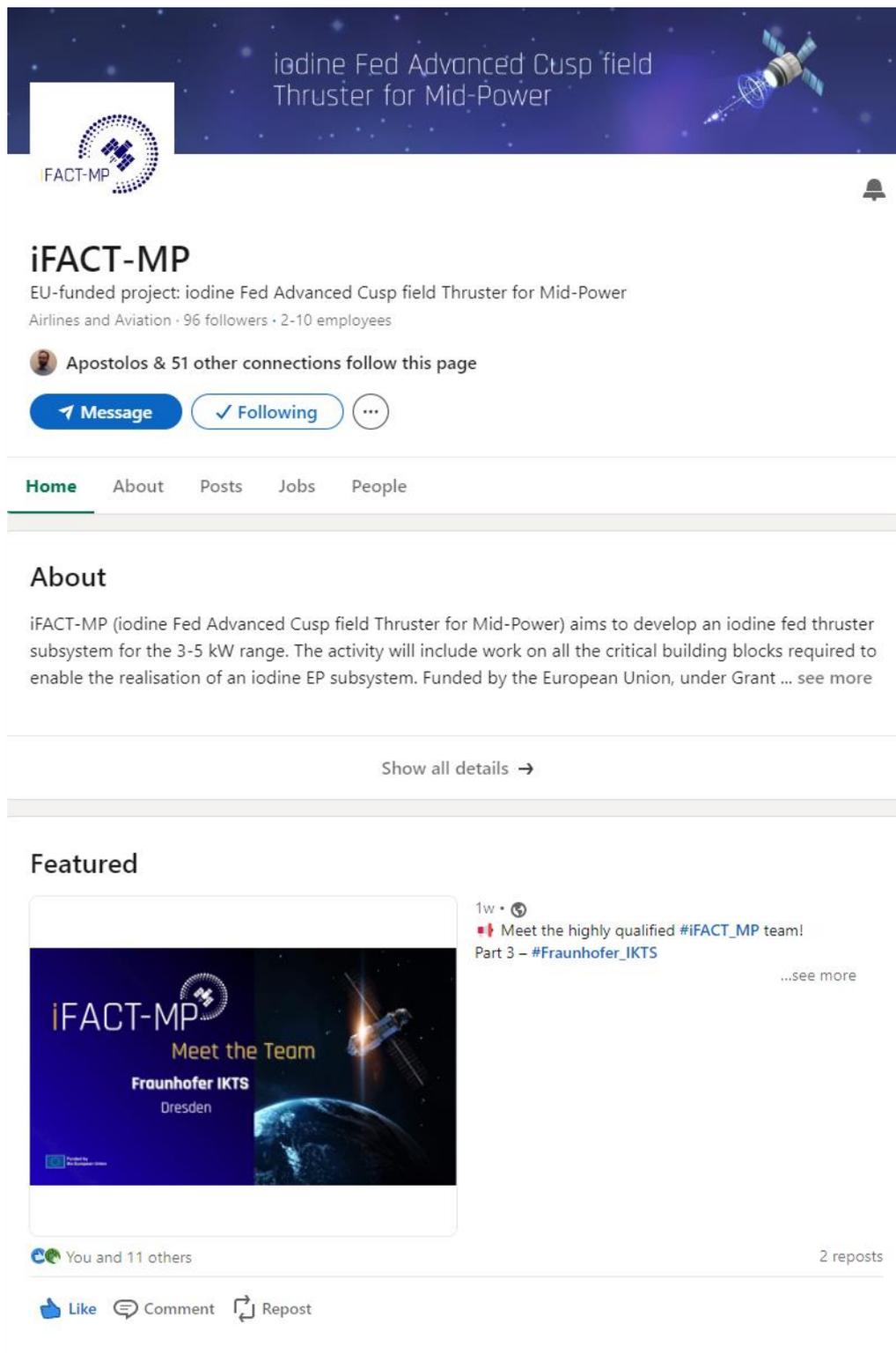


Figure 5 iFACT-MP LinkedIn profile



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3.4 Conferences, workshops and events

To effectively spread the project's message, it is essential to participate in a variety of events like conferences and workshops within the project's field. Moreover, engaging in events such as exhibitions, trade fairs, etc. will initiate discussions with potential end users and customers of the project outcomes. The Grant Agreement included a list of potential events of interest for iFACT-MP, which is provided below. This list will be regularly updated through the PDECR template during the project's lifetime.

Event	Schedule
International Electric Propulsion Conference (IEPC)	2024, 2025
Small Satellite Conference (SmallSat)	2024, 2025, 2026
International Astronautical Congress (IAC)	2024, 2025, 2026
International Conference on Space Propulsion (ICSP)	2024, 2025, 2026
Space Tech Expo	2024, 2025, 2026
SmallSat Symposium	2024, 2025, 2026
Satellite Conference Series	2024, 2025, 2026
ESA Clean Space Industry Days	2024, 2025, 2026
Space Propulsion Conference	2024, 2026

Table 2 List of events

3.5 Non-scientific articles, newsletters and press releases

It is important for all partners to publish the results of the project in local, national, and international press, as well as through EC communication. This action will also help increase project awareness among the target audience by sharing the project's news with people. The D&C team will share the project's news and outcomes in the project's website newsletter as well as in the EASN newsletter.

3.6 Scientific publications

Scientific knowledge can be disseminated through various forms of publications, such as papers in scientific journals and conferences, chapters in books, and more. It should be highly emphasized the importance to share project-related information in Open Access publications, which will allow unrestricted access to scientific knowledge for readers. The D&C team is responsible for monitoring all released outcomes. In case publishable results do not receive the necessary exposure, the D&C team will work closely with the project coordinator to address this issue. Below is a list of the scientific publications where the partners plan to publish their research articles.



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Journal Name	ISSN
Journal of Electric Propulsion	2731-4596
The European Physical Journal Applied Physics (EPJ AP)	12860042, 12860050
Review of Scientific Instruments	0034-6748
Aerospace MDPI	EISSN 2226-4310
Solid State Ionics	0167-2738
Journal of the European Ceramic Society	0955-2219
Journal of Electronic Materials	0361-5235
Vacuum	1879-2715

Table 3 List of scientific journals

3.7 Clustering events

To ensure stakeholder engagement with the project's innovations, we will establish communication channels with pre-existing networks, associations, and communities. By reaching out to these networks, we aim to establish partnerships and leverage their expertise. Additionally, we will actively seek collaborations with related projects and initiatives, particularly those funded under the Horizon 2020 Work Programme. This collaboration will create synergies and facilitate the exchange of experiences and ideas, ultimately maximizing the impact and benefits for all parties involved.

4. ASSESSING THE EFFECTIVENESS OF THE COMMUNICATION AND DISSEMINATION STRATEGY

The D&C team has established various metrics to monitor the advancement of the distribution and communication efforts and assess their impact, in order to evaluate whether the implemented approach is producing the desired outcomes. These metrics can be enhanced and fine-tuned during the project's lifetime. To ensure efficient communication efforts, the D&C team will employ the following tools to effectively disseminate the project's results to a wide range of potential users.

- Website and social media statistics: The D&C team will use Google analytics to track the volume of visitors and their engagement on the website, for example the duration of visits, the most frequently visited pages, traffic sources, the amount of time spent on the website, referral traffic, and the geographical distribution of visits. Furthermore, the number of followers and interactions with our posts on social media will be considered.
- The dissemination and communication materials for press publication involve tracking the quantity of press releases, brochures, posters, and other promotional materials that have been distributed throughout the project's duration.
- The D&C team will keep track of the external dissemination events that the partners attend to promote or present the project, by supervising the details of these events, including the distribution of the products showcased (such as leaflets, posters, presentations, etc.) and the feedback received from the audience.

The following table summarizes the Key Performance Indicators (KPI's) that will display the effectiveness of the strategy.

Disseminations & Communications KPIs		
Activity	Indicator	Target
Dissemination Activities	Number of attended events	10+
	Number of presentations to external events	8+
	Number of academic publications	8+
	Open Access repository	100+ downloads of the scientific articles and data sets
Website & Social Media	Number of website visits	4000+ /year
	Search engine position	First page
	Geographical coverage (origins of the visitors)	25+
	Number of downloads	20+ /document
	Number of posts to the social media pages	100+
	Number of followers to the social media pages	500+
	Number of likes to the posts of the social media pages	500+
	Number of YouTube vies of the project's videos	1000+
Dissemination materials	Number of distributed brochures	500+
	Number of press releases	2+
	Number of non-academic publications	5+
	Number of videos	At least 2
	Project's newsletter issues	4+

Table 4 List of Dissemination & Communication KPIs

5. DISSEMINATION E-APPROVAL PROCESS

The D&C team is responsible for the safekeeping of the Intellectual Property Rights (IPRs) of the partners when we have dissemination activities during the project's lifetime. In order to keep track of the dissemination activities and to avoid potential IP issues, the D&C team has created an online platform "**iFACT-MP e-Approval Tool**". According to Grant Agreement, all partners should send their intended publications to the D&C team (presentations, scientific publications in journals or in conferences, posters, press releases, etc.) at least 15 days before the dissemination activity is performed.

Once the D&C team sends out a notification regarding the intended publication to the partners, the next steps for the partners are to:

- Acknowledge the notification receipt within 48 hours, otherwise reminders will be sent out every two days.
- Download and read the dissemination material.
- Vote by selecting one of the following options:
 - Accept the publication.
 - Accept the publication with comments. Comments will be sent to the author as suggestions for improvement.
 - Deny the publication. This option is selected if the voter believes that his/her legitimate interests are in severe conflict with the dissemination activity. In that case, please provide a clear explanation of the reasons that led you to the rejection. The dissemination manager will intervene to resolve the issue.

It is an automated process that is executed through clickable links in the notification email received, it eliminates errors and enhances accuracy and consistency.

- After the available time for comments or objections (15 days according to the C.A.), each voter who has not expressed their opinion, is considered to have accepted the publication, and the approval process is finalized. Then, the tool notifies the dissemination manager and the author that the publication has been approved.
- If all partners approve the dissemination activity before the deadline expires, then the tool notifies the dissemination manager and the author that the publication has been approved.
- If there is an objection, the tool notifies the dissemination manager and the author, while the publication approval will be pending until the issue is resolved by the dissemination manager.

6. iFACT-MP EXPLOITATION PLAN

6.1 Motivation and Objectives

A major objective of the Horizon Europe initiatives is to transform research and innovation results into scientific, economic and societal value. In essence, the European Commission's strategy aims to bridge the gap between research outcomes and practical applications, fostering innovation and positive impact. The strategy and measures taken to ensure this throughout the iFACT-MP project are outlined in the exploitation plan, which is presented in this section.

As mentioned right at the beginning of this section, transforming research and innovation results into economic, societal, and scientific value is a key objective, which benefits both Europe and the global community. This in turn is mainly achieved through Market Uptake of the developed technologies: The exploitation strategy aims to facilitate the adoption of research and innovation results in the market, it further encourages commercial exploitation by connecting research outcomes with industry needs.

Another goal is that the results can be used by the Scientific Community: The European Commission promotes wider scientific use of project results, and Researchers, institutions, and organizations benefit from access to valuable knowledge and technologies. These objectives are mainly addressed by the Communication and Dissemination strategy and activities.

The exploitation strategy defines application segments of the innovation, economic size of the target markets and their geographic coverage. It identifies potential users and stakeholders and sets objectives for addressing and involving them in the project. It compares their needs to the kind of problem the proposed solution solves and outlines why this solution is better than existing ones in terms of benefits to users and the society at large. It talks about the knowledge the project will generate compared to the state of the art or what is commercially available today. Finally, at the end of the project, it shall be clear which further actions shall be taken both in terms of scientific and commercial follow up. Options range from further internal research, collaborative research, internal product development, internal service creation, licensing, assignment, joint venture, to creating a spin-off, or supporting standardization activities (European IPR Helpdesk, 2015/2).

6.2 Exploitation Strategy and Plan

The exploitation plan for iFACT-MP is aimed at providing a strategy to introduce the developed iodine EPS to the satellite market, but also to ensure the exploitation of other findings, technologies and assets that are an outcome of this project. Whereas this version of the exploitation plan covers the current state at the beginning of the project, the **Plan for**

Dissemination & Exploitation including communication activities (PDECR) is continuously updated throughout the project.

With iFACT-MP, Europe has the opportunity to become the leader in mid-power iodine EP. At that power level, the high storage density of the propellant provides a significant advantage over conventional propellants for high total-impulse missions, where the low storage density of i.e. krypton is prohibitive. Further, the developed iodine ACFT subsystem will provide an extremely competitive and non-dependent solution to enable high-performance, low-cost, sustainable EP on satellites. With life cycle assessments becoming common even for satellite missions, the environmental impact of the EPS, particularly the propellant is of growing importance.

The unique throttle-ability of the ACFT principle will enable the iFACT-MP subsystem to be not only an attractive choice in the mid-power range, but also the 1 kW power level. This particular range is the level being targeted by major constellations, therefore expanding the addressable market considerably. Particularly for the constellation business the easy integration of an iodine EPS is a huge asset, as it allows the propellant to be already loaded before integration, omitting the cost- and time-consuming propellant loading procedure.

The advantages of the iFACT-MP subsystem result in the estimated KPIs that are presented in the following Table 5. These KPIs will be clearly defined, tracked and reported over the duration of the activity.

Table 5: KPIs of the iFACT-MP EPS compared to state-of-the-art EPS for reference.

Key Performance Indicator	State-of-the-Art 3-5 kW EPS (Xe HET)	iFACT-MP EPS
Subsystem Cost	100 %	80 %
Subsystem Volume	100 %	35 %
Subsystem Mass (thruster, cathode, flow control)	12 kg	< 10 kg
Propellant Cost	5000 - 15000 €/kg	< 100 €/kg
Integration Cost	100 %	80 %
Specific Impulse	1630 - 1860 s	> 1800 s
PTTR	15.5 - 18.4 W/mN	16 - 24 W/mN
Propellant carbon footprint	685 t _{CO2e} /MNs	< 1 t _{CO2e} /MNs

As these figures show, the iFACT-MP EPS will provide significant economic and technical advantages towards state-of-the-art solutions. It is therefore expected to become a preferred EPS solution for future satellite missions and constellations. To give a time-to-market indication it is estimated that after completion of the project, the iFACT-MP could reach sufficient TRL for

space mission insertion within about two years, resulting in a possible market introduction in 2027/28.

The performance achieved experimentally within the iFACT-MP project will be compared to state-of-the-art EPS in a comparable power range, as identified within the market analysis at the beginning of the project. The major performance metrics for the thruster (PTTR and Isp) will be evaluated experimentally during the coupling and endurance testing by measuring the thrust, power input and propellant consumption with the optical iodine flow sensor developed by University of Pisa. The justifying documentation will be made available to EU services by end of the project with the final KPIs report D1.7 (reporting of the achieved KPIs) and Subsystem Test Report D3.7 (detailed description of the performed testing and evaluation of the performance).

Value Proposition: Providing a low-cost, high-performance, sustainable and non-dependent EPS for the mid-power range

Target Customer: Satellite manufacturers, constellation operators

Distribution Channel: Direct sale to be integrated by the satellite manufacturer. The design is platform agnostic and can be integrated into any satellite platform in the proper mass class.

A detailed business plan will be developed within D2.1 exploring the potential market, estimated cost and achievable revenue. The following Table 6 gives an overview of the expected project results and their exploitation that are anticipated at the current state, potential additional opportunities will be identified and added to the PDECR (Table B2: List of exploitable foreground) over the course of the project.

Table 6: Initial exploitation plan with expected project outcomes and their exploitation.

Key Expected Result	Responsible partners and affected external stakeholders	Further steps required
iFACT-MP subsystem available for satellite missions and constellations	Airbus; Upon completion of further qualification work after the activity, a European high-performance, low-cost, sustainable EPS will be available for satellite platforms	Flight-PPU development and full qualification of the EPS (mechanical and thermal testing, lifetime firing and ignition cycling)
Improved current density of C12A7 electron emitter for cathodes	Fraunhofer IKTS; Manufacturer of electron emitting cathodes for electric propulsion or electron beam applications	Industrialisation of the manufacturing process (depending on the scale of the intended production)
Demonstrate use of spectrophotometric	UniPi; The iodine EP community will have access to a flexible yet accurate	Design Iteration to optimise for customer

methods for mass flow metering of corrosive vapours	tool to properly characterise the mass flow rate, and hence the specific impulse, or their devices.	usability and industrialisation (Depending on desired application)
Availability of an iodine EP test facility for up to 5 kW thrusters	Aerospazio; An iodine compatible vacuum test facility will be available for the EP community, enabling independent performance characterisation and external endurance testing.	None (except for potential refurbishments after endurance testing)

6.3 IP Management

Closely linked to the exploitation plan is the management of intellectual property rights, as this lays the foundation for the successful use of the developed technologies, especially when these have been developed within a consortium.

To clearly define the ownership of linked Intellectual Property at the initial state of the project, a list of background brought into the project has been defined, integrated into the Consortium Agreement and signed by all parties. The CA further addresses and handles the ownership of IPs that are an outcome of this project, which will be regularly updated and tracked in the PDECR (Table B1: List of foreseen & performed applications for patents, trademarks, registered designs, etc.) as well.

For a period of up to 4 years after the end of the project, access rights to the use of products and/or processes generated by the project shall be given to European entities, in compliance with the signed Grant Agreement and with no legal restrictions and limitations stemming from International Traffic in Arms Regulations (ITAR), EAR99 or equivalent instruments applicable in other jurisdiction.

7. SUMMARY

This deliverable serves as a reference point for all future Dissemination, Communication and Exploitation activities, including the first PDECR table.

Firstly, we defined the target audiences based on the level of interest. Then the project's objectives and ambitions were examined to enable the Dissemination and Exploitation plan's completion. The third step involved analyzing the key message conveyed by each objective and aligning it with the corresponding target audience.

In order to guarantee the effectiveness of the Dissemination and Communication activities, the iFACT-MP team will utilize a range of tools, including social media statistics and printed and digital materials, to closely track and assess their impact. These tools will enable the team to make necessary adjustments and give them an extra push whenever required.

Finally, this report provides a brief overview of the online platform "iFACT-MP e-Approval Tool", whose main objective is to safeguard the intellectual property rights of the partners and oversee the content intended for publication. Additionally, it briefly sets out the procedures that will be implemented to ensure sustained utilization throughout and after the project's duration, with the aim of optimizing the influence of the funding received in the marketplace.

APPENDIX A – PLAN FOR DISSEMINATION & EXPLOITATION INCLUDING COMMUNICATION ACTIVITIES OF PROJECT RESULTS (PDECR)

NO.	Type of PID (repository)	PID of deposited publication	PID (publisher version of record)	Type of publication	Link to publication ¹	Info about the Author(s)		Title of the scientific publication ²	Title of the journal or equivalent	Number	ISSN or eISSN	Publisher	Date of Publication	Was the publication available in open access (OA) through the repository at the time of publication ?	Is this publication peer reviewed ?	Book title	Did you charge OA publishing fees to the project ? ³	Type of publishing venue (only if the answer to the previous question is 'yes')	Article processing costs that will be charged to the project (€)	
						Entity	Author(s)													
1	Handle					AIRBUS DEFENCE AND SPACE GMBH (Airbus FDH)	Max Vaupel et al.	iFACT-MP: Multi-kilowatt iodine electric propulsion development	Space Propulsion 2024 Proceedings											
2	Handle					AIRBUS DEFENCE AND SPACE GMBH (Airbus FDH)	Gerrit Kottke et al.	Development of an iodine Fed Advanced Camp Field Thruster for Mid-Power – iFACT-MP	IEPC 2024 Proceedings											
3	Other																			
4	Other																			
5																				

Table 7 List of Current and Foreseen Scientific publications

No.	Dissemination activity name	Main leader		Date of dissemination activity When?	Place of dissemination activity Where ? (Country)	Type of dissemination activity What?	Target audience reached Who?	Status of the dissemination activity	Why? Description of the objective(s) with reference to a specific project output (max. 200 characters)
		Entity	Participant(s)						
1	SP2024 Presentation	AIRBUS DEFENCE AND SPACE GMBH (Airbus FDH)	Max Vaupel	20.-23.05.2024	Glasgow, Scotland	Conferences	Research communities		Presentation of the planned activities and current status to the European EP community.
2	IEPC2024 Presentation	AIRBUS DEFENCE AND SPACE GMBH (Airbus FDH)	Gerrit Kottke	23.-28.06.2024	Toulouse, France	Conferences	Research communities		Presentation of the planned activities and current status to the global EP community.
3									

Table 8 List of Planned & Performed Dissemination activities



Funded by the European Union

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Table A3: List of Planned & Performed Communication activities								
No.	Communication activity name ¹	Description	Main leader		Type of audience: Who?	Communication channel How?	Outcome ²	Status
			Entity	Participant(s)				
1	LinkedIn	Introducing iFACT-MP Project: iodine Fed Advanced Cusp field Thruster for Mid-Power https://www.linkedin.com/feed/update/urn:li:activity:7158390512352124929/	EASN TECHNOLOGY INNOVATION SERVICES BVBA (EASN-TIS)	Eleni Sarantoglou	Civil society, Industry, business partners, Research communities	Social media		Delivered
2	LinkedIn	The 1st 2024 issue of the EASN - European Aeronautics Science Network #newsletter is out! https://www.linkedin.com/feed/update/urn:li:activity:7161289894512721920	EASN TECHNOLOGY INNOVATION SERVICES BVBA (EASN-TIS)	Eleni Sarantoglou	Civil society, Industry, business partners, Research communities	Social media		Delivered
3	LinkedIn	Meet the highly qualified iFACT-MP team! Part 1 - Airbus Defence and Space GMBH https://www.linkedin.com/feed/update/urn:li:activity:7166021693109387264/	EASN TECHNOLOGY INNOVATION SERVICES BVBA (EASN-TIS)	Eleni Sarantoglou	Civil society, Industry, business partners, Research communities	Social media		Delivered
4	LinkedIn	Meet the highly qualified iFACT-MP team! Part 2 - Airbus Defence and Space SAS https://www.linkedin.com/feed/update/urn:li:activity:7170703076939481090	EASN TECHNOLOGY INNOVATION SERVICES BVBA (EASN-TIS)	Eleni Sarantoglou	Civil society, Industry, business partners, Research communities	Social media		Delivered
5	LinkedIn	Meet the highly qualified iFACT-MP team! Part 3 - Fraunhofer IKTS https://www.linkedin.com/feed/update/urn:li:activity:7173623525877006336/	EASN TECHNOLOGY INNOVATION SERVICES BVBA (EASN-TIS)	Eleni Sarantoglou	Civil society, Industry, business partners, Research communities	Social media		Delivered
6								

Table 9 List of Planned & Performed Communication activities



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Table B1: List of FORESEEN & PERFORMED applications for patents, trademarks, registered designs, etc.				
NO.	Type of IP Rights	IPR is Confidential	Application title	Embargo End Date
1				

Table 10 List of Foreseen & Performed applications for patents, trademarks, registered designs, etc.

Table B2: List of exploitable foreground(s)								
NO.	Name	Result type	Key results (KER) (does result have a high potential?)					N/A
			High scientific potential	High societal potential (other than climate or environmental)	High societal potential	High technologic, business or economic potential	High policy or regulatory potential	
1	3-5 kW iodine ACFT subsystem	PROD: Product (new or improved)	Yes	No	Yes	Yes	No	
2	Enhanced C12A7 electride	METH: Method, material, technology, design (new or improved)	Yes	No	No	Yes	No	
3	Optical iodine mass flow meter	METH: Method, material, technology, design (new or improved)	Yes	No	No	Yes	No	
4	Iodine compatible EP test facility for up to 5 kW	INFRA: New or improved infrastructure or facilities	Yes	No	No	Yes	No	
5								

Table 11 List of exploitable foreground(s)