

INNOVATIVE INFUSION AIRFRAME MANUFACTURING SYSTEM - IIAMS

D.9.1. Plan for Communication, Dissemination and Exploitation of project results



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EXECUTIVE SUMMARY

The main objective of the **communication, dissemination and exploitation plan** is to increase the opportunities to promote, communicate and disseminate, and exploitation of the **research results obtained during the IIAMS project** during the execution period and after the end of the project.

The PDER describes the activities to carry out during the execution of the project with the aim to disseminate the results of the project among the stakeholders and the target audience. The dissemination is important to the future exploitation of the results generated in IIAMS project.

This document could suffer modifications through the lifecycle of IIAMS project extending the information given now or including new issues or changes in the project procedures.

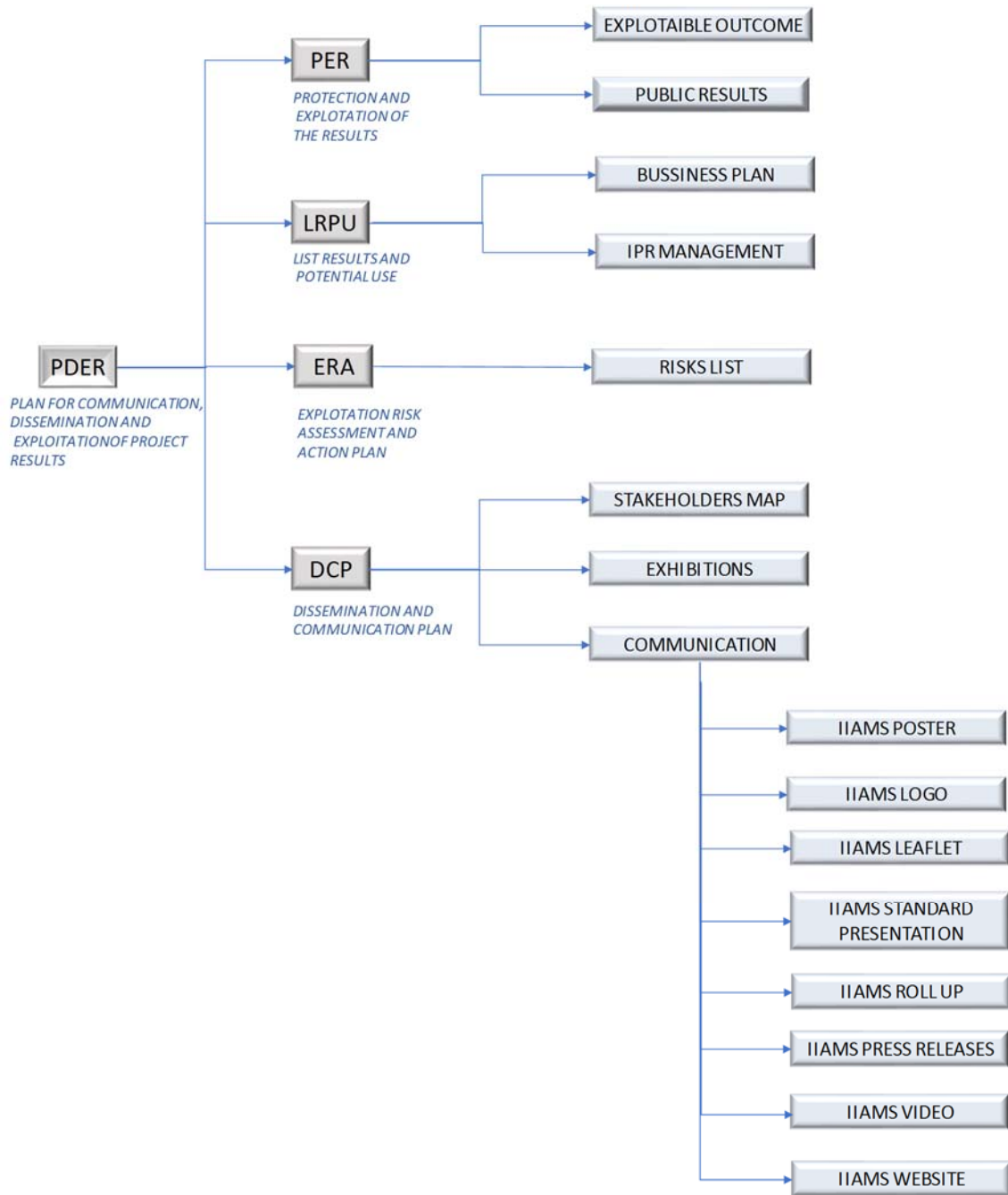
1. GENERAL COMMUNICATION, DISSEMINATION & EXPLOITATION STRATEGY

This Plan for Dissemination and Exploitation of results (**PDER**) in coordination with the expectations of the Topic Manager includes:

- **Overview of the project results and potential uses**: List of identifiable project results, ownership, sectors of potential application and users;
- **Plan for the protection and exploitation of the results** and the time schedule for subsequent actions. This part of the document shall contain a reporting of technology watch performed MTorres, namely, a systematic observation, tracking, filtering out and assessing of any scientific or technical innovation with potential to create opportunities/synergies or avoid threats; In addition a business plan is contemplated as a part of strategy to exploitation the results obtained during IIAMS project.
- **Exploitation Risk Assessment and Action Plan**: Covering technological, partnership, market and legal risks;
- **Dissemination & Communication Plan**: Aimed at raising awareness of project activities and results within the aeronautic community as well as the general public. The different communication material is included in this plan.

The **PDER has been prepared by MTorres**. It determines which part of the results and knowledge arising from the project will be exploited and which part will be made available to the public through public reports and/or journals, publications and conferences, during the project.

The **PDER**, agreed with the Topic Manager prior to the end of the project, and according to the Implementation Agreement, **establishes the rules for exploitation and dissemination**, addressed to results and knowledge obtained at the end of the project, and therefore to results to be exploited and disseminated after the project.



2. PROJECT RESULTS AND POTENTIAL USE

Keeping always the concepts of **innovation and Intellectual Property Rights** in mind, MTorres is **highly committed to fully exploit the outcomes of IIAMS project**.

MTorres has clearly identified its current background, the main outcomes of the project, its interests in the exploitation of the project results and the means to achieve such exploitation (Table 1).

Table 1. List of identifiable project results, ownership, sectors of potential application and users;

FOREGROUND – EXPLOITABLE OUTCOME	EXPLOITER	EXPLOITATION INTEREST AND EXPLOITATION MEAN. MAIN COMPETITIVE MARKET ADVANTAGE
Light tooling chain for dry fibre raw material, with smart approach of tooling definition.	MTorres	<ul style="list-style-type: none"> • Ergonomic and simple way of handling. • Minimisation of costs, logistics and hardware storage. • Ground tooling displacements instead of crane-based ones.
High temperature hot forming and infusion	MTorres	<ul style="list-style-type: none"> • The final performances will be reached for the high temperatures manufacturing behaviour.
Smallest system size	MTorres	<ul style="list-style-type: none"> • “Nomad and portable” concept, both for industrial and R&T applications
Advanced system monitoring and sensing techniques	MTorres	<ul style="list-style-type: none"> • Online, wifi and long-distance control parameters • Big data management
Full integrated AFP infusion manufacturing system for wing box	MTorres	<ul style="list-style-type: none"> • Wing box structure manufactured by dry carbon fibre by using Liquid Resin Infusion (LRI) with stiffened lower skin and rear and front spars.

3. PLAN FOR THE PROTECTION AND EXPLOITATION OF THE RESULTS

This section summarizes the commercialization and business plan for the outcomes of IIAMS project, and the plan for the protection of the results obtained during the execution of IIAMS project. This information is contained in the DELIVERABLE 9.2. EXPLOITATION PLAN OF THE CONFIDENTIAL PROJECT RESULTS (CONFIDENTIAL).

3.1. Business plan

This information is contained in the **DELIVERABLE 9.2. EXPLOITATION PLAN OF THE CONFIDENTIAL PROJECT RESULTS (CONFIDENTIAL)**.

3.2. Results protection plan

With respect to the **Intellectual Property Right (IPR) management**, including all IPR (Background and Foreground Information, among others), MTorres is committed to maximum exposure of the work carried out within this project, while ensuring intellectual property is protected and exploited. MTorres, as Project Coordinator, in accordance with the Topic Manager, **will determine the results and knowledge arising from the project that will be made available to the public through public reports and/or journal publications and conferences.**

The Commission and CS2-JTI Recommendation on the management of intellectual property in knowledge transfer activities and the Code of Practice for universities and other public research institutions will be taken into account. **The strategy for knowledge management and protection of project results will include measures to provide open access (free on-line access, such as the 'green' or 'gold' model) to peer-reviewed scientific publications which might result from the project.**

Regarding the **Intellectual Property Rights (IPR)**, it is important to **protect the previous knowledge/background as well as the foreground to be generated in the project.** All these conditions about the IPR have been collected in the Implementation Agreement that has been signed between MTorres and the Topic Manager after the signature of the Grant Agreement with the European Commission.

4. EXPLOITATION RISK ASSESSMENT AND ACTION PLAN

Table 3 shows possible risks related to the exploitation of the new process developed in IIAMS project. In addition, an action plan has been developed with the aim to reduce the negative impact of the possible risk. This list will update during the execution of the project.

Table 3. List of possible risks during the exploitation of the results obtained in IIAMS project

Risk	Action Plan
<p>Innovate technology from other competitors will launch into the market</p>	<p>MTORRES will be continually informed about the competitors and the new technology. MTORRES will try to adapt the new manufacture process with the aim to offer the best solution in technical and economic terms.</p>
<p>New manufacture process developed in IIAMS project finds difficulties to penetrate in the market</p>	<p>MTORRES will be continually carried out several communication and dissemination of the benefits of the new manufacture process among the stakeholders and the costumers with the aim to facilitate the introduction of their manufacture process in the market.</p>
<p>New laws and normative apply to the new manufacture process developed in the IIAMS project will enter into force during the project execution period.</p>	<p>MTORRES will be continually informed about the laws and normative to apply in their process. MTORRES will try to adapt the new manufacture process with the aim to accomplish the new laws and normative in the shortest possible time.</p>

5. DISSEMINATION & COMMUNICATION PLAN

MTorres is currently supplier of all the main OEM and TIER1 in the regional aircraft market. Currently, its customer base is large and includes: **AIRBUS, BOMBARDIER, SAFRAN, EMBRAER, AERnova, ACITURRI**, etc, as well as customers in the wind energy industry.

In this framework, MTorres is committed to maximising the potential impact of the project results in terms of its dissemination to the relevant stakeholders. This mainly consists of the **Topic Manager and the industrial aeronautic sector**, but MTorres will set up the appropriate project dissemination strategy towards **policy makers, academy** and the **European citizenship** in a broad sense.

Moreover, **internal dissemination among the project work package leaders is an essential tool for smooth project functioning**. As a consequence, another objective of dissemination is to ensure the information flow correctly among work packages and tasks. Dissemination of information will be guaranteed via MTorres ICT knowledge management system, direct research interactions, regular written reports and meetings.

In order to carry out the project dissemination in a comprehensive way, a detailed **dissemination plan** has been elaborated. It has been elaborated with agreement and significant collaboration from the Topic Manager. MTorres is the responsible for coordinating the formulation and monitoring of this Plan, which includes activities to be carried out both during and after the project

5.1. Main target audiences

Special attention will be paid to the identification and classification of main target audiences, key messages and communication channels related to the project. Messages will be tailor-made for each kind of audience which means taking into account their current knowledge, attitudes and practice. The dissemination activities have been specifically designed to reach the broadest audience possible. More concretely, the dissemination plan defines:

- **Objectives of dissemination:** identify the project dissemination objectives;
- **Target groups:** identify crucial target groups and bodies that are interested in the project;

- **Key messages:** identify core project messages for specific target groups;
- **Dissemination methods:** identify dissemination methods, tools and channels;
- **Dissemination time plan:** identify a plan of dissemination activities

The following target groups, key messages, communication channels and dissemination products have been identified (Table 4):

Table 4. List of target groups with the goal, communication channels and the type of information

Target groups	Goal	Communication channels	Type of information
Professional stakeholders (manufacturers and supply chain companies) <ul style="list-style-type: none"> ▪ <u>Manufacturing industry of Regional aircrafts:</u> Worldwide organisations on the role of future clients as end-users, i.e. Airbus, Bombardier, Safran, Embraer, Aernnova, Aciturri, etc. ▪ <u>Manufacturing organisations clusters</u> (i.e. EASN, MATERPLAT, MANUFUTURE, ...) ▪ <u>Incumbents developing Autonomous Air Taxis</u> (and particularly new companies and start-ups). Focus on European start-ups to nurture the incipient aerospace ecosystem. ▪ <u>New companies and start-ups developing Electric regional aircrafts</u>, with a focus on the European market ▪ <u>Others</u> 	Share experience, mobilise sector interest, continue R&D activities, market technology	<ul style="list-style-type: none"> ▪ Website ▪ Dissemination material ▪ Trade magazines ▪ Exhibitions in fairs ▪ Promotional videos ▪ Project work publicity in our social media channels: Facebook, LinkedIn, twitter, website ▪ European Platforms meetings 	<ul style="list-style-type: none"> ▪ Process manufacturing video-simulation ▪ Technology description ▪ Manufacturing capabilities ▪ Experience reports ▪ Business cases
Policy makers & public bodies (including EU, National, Regional and local authorities and manufacture platforms)	Influence policy priorities, others	<ul style="list-style-type: none"> ▪ Website ▪ Final conference ▪ Press releases ▪ Regional events ▪ Policy workshops 	<ul style="list-style-type: none"> ▪ Process manufacturing video-simulation

Target groups	Goal	Communication channels	Type of information
<ul style="list-style-type: none"> ▪ <u>Official bodies</u>: government agencies and other organisations involved in the manufacturing regulations or other policy issues ▪ <u>Standardisation bodies</u>: standardisation committees and working groups which are defining standards and normative ▪ <u>Others</u> 			<ul style="list-style-type: none"> ▪ Market potential evaluation ▪ Final report on Dissemination activities ▪ Technical criteria and scientific findings
<p>Scientific and Academic audience</p> <ul style="list-style-type: none"> ▪ <u>R&D community</u>: universities, research centres and R&I divisions of companies related to the manufacturing sector, on the role of contributors to the introduction and dissemination of innovative technologies. 	Raise awareness. Spread knowledge between researchers and students about the new technology	<ul style="list-style-type: none"> ▪ Website ▪ Dissemination material ▪ Publications in relevant scientific/academic journals ▪ Conference speeches ▪ Lectures 	<ul style="list-style-type: none"> ▪ Process manufacturing video-simulation ▪ Original scientific findings and methodologies ▪ Experience reports
<p>Society:</p> <ul style="list-style-type: none"> ▪ <u>Design engineers</u> ▪ <u>Future technicians & machine operators</u> ▪ <u>Unemployed (youth)</u> 	Boost the knowledge and possibilities of AFP and LRI technologies	<ul style="list-style-type: none"> ▪ Training courses ▪ Fairs ▪ Technical events 	<ul style="list-style-type: none"> ▪ Process training ▪ Best process and design practices ▪ User cases and examples

5.2. Exhibitions

This plan requires an active EU/international marketing campaign to build the means for successful dissemination. Such dissemination activities will be carried out by MTORRES in its habitual presence in all composite and manufacturing exhibitions, such as:

- JEC Composites 2019 (Paris)

<http://www.jecomposites.com/knowledge/international-composites-agenda/jec-world-2019>

JEC WORLD
2019 The Leading International Composites Show
 March 12-13-14, 2019 | PARIS-NORD VILLEPINTE



- **Le Bourget International Airshow 2019 (Paris)**

https://www.siae.fr/en/general_info/prices.htm



- **JEC Composites 2020**

<http://www.jeccomposites.com/knowledge/international-composites-agenda/jec-world-2020>

MTorres will take to the events highlighted above, jointly with the Topic Manager, the following material:

- **Dummy parts** (representative of the final part) manufactured to date
- **Audio-visual material of the manufacturing process**
- **Process manufacturing video-simulations**
- **Samples of the moulds used in manufacturing**
- **Industry 4.0 tools** (digital work instructions, Augmented Reality production aids, etc.)
- **Upon project completion, technical paper describing the highlights, challenges, solutions and benefits of the project.**

5.3. Communication Plan

The **Communication strategy consists of the dissemination activities** addressed to the general public for promoting the project and its findings during the period of the grant.

5.3.1. IIAMS Logo

First of all, a **visual identity** will be developed for the IIAMS project comprising a logo and style in different formats, in line with Clean Sky and the H2020 visual guidelines.

5.3.2. IIAMS Leaflet

A leaflet showing the basic features of IIAMS: objectives, expected results, partner, pilots, etc.

5.3.3 IIAMS Standard presentation

A standard presentation for EU and local project communication gathering key messages and one-page project description.

5.3.4. IIAMS Roll up

A set of roll up stands to support project communication visually at events.

5.3.5. IIAMS Poster

A poster (1 version and 1 update)

All these materials will be based under the visual identity defined for IIAMS project and Clean Sky recommendations.

5.3.6. IIAMS Periodic Press Releases

Periodic press releases will be prepared for the general public and sent to different media and to the Cordis Press Office, including the publication on the project website.

5.3.7. IIAMS video-simulation of manufacturing process

A video-simulation of the manufacturing process will be produced as a strong tool to demonstrate the effectiveness of the manufactured process developed in the IIAMS project.

5.3.8. IIAMS Website

Furthermore, a **dedicated website** is the main communication tool for the project, where all the dissemination materials will be published in a timely manner. This is accessible through:

<https://www.iiams.eu/>

It has been created at the beginning of the project. Internet is today the most efficient communication medium and thus the project website will be a key dedicated disseminating tool. The website includes web analytics to register the visitors' frequency

tendencies. The site features two main goals: it serves as a source of information for the general public and also as an internal tool for information exchange among the project partners only available to them. To this end, it features the following functionalities:

- Overview of the concept, objectives, project partner and the activities proposed within the project.
- News and information service on IIAMS activities.
- Link to social media in order to be attractive to the general public.
- Access to a secured (members only) collaborative space for sharing information and documents with the Topic Manager.

MTorres publishes in its website relevant information of the public portal of the project allowing the access of non-confidential information to the great public, with dissemination and commercial purposes. Specific dissemination of information about the project will remain limited to the distribution of publishable abstracts and internal reports to be circulated between the project partner and the Topic Manager.

Finally, **journalistic articles** will be actively promoted on the consumers' area of the website, newspapers and social media (with all its interactive material), as well as through other dissemination channels such as magazines.

A project website has been established for internal and external communication purposes. The "public" part of the site contains a general description of the project with contact information and public documents, while the "private" site, protected by password, is mainly used to exchange documents and other files within members of the Regional Aircraft IADP.



PROJECT OVERVIEW

The main high-level requirements of this system are:

Adapted to AFP lay-up for dry fiber

High temperature hot forming and infusion

Optimization of system size and logistics, by means of lightweight moulds and tooling (ground tooling displacements preferred to crane-based ones)

Energy saving, minimizing large industrial means such as autoclaves and big ovens, applying low cost heating systems including sensor to enable monitoring, controlling and recording the main key process parameters

Fast training, in an innovative way, minimizing the trial and error loop by using digital tools as well as a proper technology of dummies

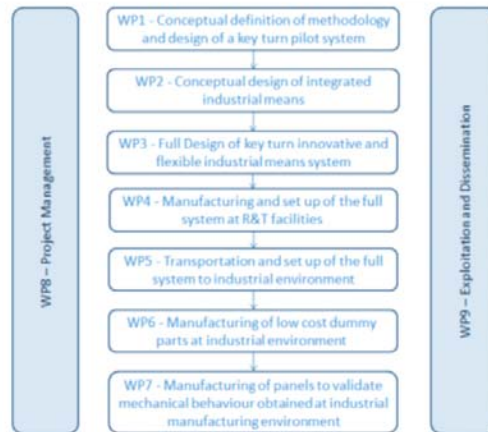
Cost efficient materials approach, studying minimum hand operations and best practices to minimize scrap and ancillary materials wasting, reusing materials to enable recurrent costs savings



Objective

To demonstrate an alternative technology that offers lower costs, reduces lead times & environmental footprint, able to achieve similar design tolerances and quality levels.



This project will be a great milestone for M-Torres, because it will push forward its last efforts in this line of work (MS-21 and Torreswing Fuselage), and accomplishing this objective will contribute to enter new segments and participate in future R&D projects that involve new technologies, to create a new market.





The implementation of those works shall be accomplished within an 18 months period, following the time-line presented below:


Time Line



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CONSORTIUM

HORIZON 2020 PROGRAM OF THE EUROPEAN UNION 

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Concurrency Meeting in Getafe

Work package 3 is ongoing, and a concurrency meeting has taken place at project Topic Manager (AIRBUS) site in Getafe (Spain).

[Read article >](#)

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Oct
30
2018

Work Package 1 Completion

At the end of October 2018 the first work package ("WP1 – Conceptual definition of methodology and design of a key turn pilot system") of the IIAMS project has been finished.

[Read article >](#)

Table 5. Communication and dissemination materials

Materials	Month of the project
IIAMS Logo	Month 8
IIAMS Leaflet	Month 8
IIAMS Standard presentation	Month 8
IIAMS Roll up	Month 9
IIAMS Poster	Month 9
IIAMS Press Releases	Month 12-18
IIAMS Video-simulation process	Month 15
IIAMS Website	Month 6