



Deliverable D12.5

Communication, Dissemination, Exploitation, Standardization & market analysis

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Abstract	As part of task 12.1 and task 12.4 the deliverable will provide an Initial plan for dissemination and exploitation including communication activities, standardization activities, and market analysis.

Authoring & Review

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1. Executive Summary & Objectives

This report will include an initial plan for dissemination, exploitation and communication activities within the PLEIADES project. It will also present the planned standardization activities and the measures to create a market analysis. This report should be read in conjunction with D12.3 as this deliverable contains a lot of detailed information about the communication kit.

The basis for the following explanations is work package (WP) 12 (project month 1-18) especially task 12.1. and 12.4. as well as the subsequent work package (WP) 13 (project month 19-36) with the tasks 13.1 and 13.4.

The activities in task 12.1/13.1 “Planning and execution of Communication and Dissemination activities” are led by EuCIA. The activities are carried out and monitored throughout the entire project period.

The activities in task 13.1/13.4 “Market Analysis, exploitation activities of foreground knowledge and interaction with standardization” are led by TWI. Also these activities extend over the entire duration of the project.

This deliverable includes the procedure and the basis for creating a detailed action plan for dissemination – **Dissemination Action Plan (DAP)**. This will be available in its final version in M6. This plan will include a **dissemination strategy**, which will consist of three stages to ensure maximum impact. The main aim here is to protect the intellectual property (IP) generated during the project. This strategy, which is monitored by the Innovation and Exploitation Committee (InEC), is evaluated and updated every six months, taking into account all new internal and external factors. The InEC is chaired by the coordinator and consists of key participants from all consortium partners

In addition, the first version of a **communication plan document (CPD)** will be presented, in which the **communication strategy** for maximizing the visibility of PLEIADES will be set up. The communication plan will be flexible, regularly updated and used throughout the entire project life cycle. It will also take into account the KPIs and present measures to ensure that objectives are met.

As part of the activities in WP12/WP13, **market and research monitoring** will be carried out continuously in order to gain a good understanding of the markets and the industry. The result of this activity will be a market analysis that presents use cases and the applicability of the results obtained in the form of **exploitation plans**. A development plan will be included in D13.1 (month 36) at the end of the project, describing how to achieve TRL4 and meet emerging market needs

The exploitation plans will be specific to each partner, capitalizing on the skills (industry and domain knowledge) of the entire PLEIADES consortium.

PLEIADES also will promote **standardization activities**, ensuring that its disruptive technologies will be adopted by 2035. As part of Task 12.4 TWI will lead the standardization activities, while standardization initiatives will be tracked and inputs from

PLEIADES will be communicated and anticipated to the respective bodies, while the possible impact of results will be timely identified. The consortium has close ties with standardization bodies and will promote these activities to ensure compliance and early adoption when the time comes. PLEIADES partners are active in the following Associations, committees, workgroups and organisations:

- COLS: (SAE International, SAE AC9C Aircraft Icing Working, AIAA, IEEE),
- TWI:
 - BSI standards committee: PRI/42 "Fibre reinforced thermosetting plastics and prepregs",
 - WEE/3 "Welding of thermoplastic moulded components", RI/88/4 "Test methods – Plastic piping",
 - CEN: TC249/WG16 "Welding of thermoplastics",
 - ISO: TC61/SC1/WG1 "Plastics Terminology – Terms and definitions", TC61/SC11/WG14 "Plastics joining",
 - AWS: B2F/G1A "Plastics welding qualification and hot gas welding and extrusion welding"),
- ICCS, IMEC: (Photonics21 Board of Stakeholders (BOS), JEPPIX Open Standards, ESA Roadmap Harmonisation).

Adhering to these standards, even if they are not released as open source, is of paramount importance for long-lasting impact, by enabling their interoperability.

In order to protect existing IPR, to avoid violating petitioners and to ensure that the project goals are in line with existing rights, the partners performed an IPR search on topics relevant to the project to ensure no patent infringement issues.

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2. Dissemination Strategy

The remarks made here refer to planned activities. In M6, a detailed dissemination action plan (DAP) will be developed to involve the partners in dissemination activities during the project.

The DAP will outline the roles and responsibilities of the partners, as well as the conditions for proper dissemination of the generated knowledge in terms of confidentiality, publication and use of the knowledge, without jeopardizing the intellectual property rights of the relevant partners. The DAP will be updated regularly.

The dissemination strategy consists of three phases to achieve maximum impact.

- **Phase I - Creating visibility and attracting stakeholder interest**

The focus of phase 1 is to create visibility for the project and its objectives. The aim is to attract stakeholder interest in the expected project results. To this end, channels on digital and social media (website/social media channels) will be created and used (see deliverable 12.1 Communication Kit). In addition, introductory discussions and presentations are to be held. General information about the project and, if available, initial interim results are to be presented in digital media and also at international scientific and technical events.

- **Phase II – Disseminating the project results**

Once the initial project results are available, they will be widely communicated to demonstrate the benefits of the developed solutions for relevant potential end users/users. This includes publishing articles in trade journals, participating in conferences and organizing our own workshops and events. All corresponding activities will be collected in a document.

- **Phase III - Disseminating the results beyond the end of the project**

This phase complements phase II. The results of the project should also be communicated beyond the end of the project. Among other things, a final event is planned for this purpose.

The target stakeholders in all phases includes not only the research community, but also potential end users in and outside the target application, namely the aerospace (i.e. wind power, shipping, construction, biomedical, automotive) industry. The presence of partners with outstanding expertise in technical and scientific topics guarantees the attraction of a large number of stakeholders thanks to their consolidated networks.

The target audiences/target groups and tools for dissemination are listed in Table 1.

Table 1: PLEIADES dissemination target groups

Communication Activities	Description	Month	I&A	IPs	CLs	IND	RP	GP
Logo/ graphic identity	Creation of project logo/visual identity	M1	✓	✓	✓	✓	✓	✓
	Templates (Deliverables, Presentation)	M2						
Printed materials	Production of PLEIADES factsheet	M2		✓	✓	✓	✓	
	PLEIADES Technical Brochures	M10, M24						
Website & Online	Creation & Management of website	M2-M36	✓	✓	✓	✓	✓	✓
	Communication Kit	M2						
Videos	Promotional videos	M7–M36	✓	✓	✓	✓	✓	✓
Social media	Maintain social networks accounts	M2-M36	✓	✓	✓	✓	✓	✓
Newsletters	Online leaflets & bi-annual e-Newsletters	M1-M36	✓	✓	✓	✓	✓	
Press release	Announce at least two press releases	M2, M36	✓	✓	✓	✓	✓	✓
Assessment of communication	CPD & DAP	M3 & M6		✓	✓	✓	✓	✓
	Re-organization of communication strategy	M18						

Initiatives & Associations (I&As): R&I end-users brought forward by the project (e.g. standardisation organisations, policy makers), **Infrastructure Providers (IPs), Clusters (CLs):** European initiatives & clusters, associations, research communities, **SMEs and industry (IND):** Infrastructure and service providers and Private sector, **Related Projects & Initiatives (RPs), General Public (GP):** General Public

The following measurable objectives have been set:

- **Creation of a project website:** The website will be updated throughout the entire project period and for at least three more years after the end of the project.
- **Creation of social media channels and a YouTube channel:** (see deliverable 12.1 Communication Kit)
- **Conferences & Publications:** PLEIADES will actively promote the publication of the project's scientific results in renowned international journals, conferences and workshops. The partners will participate in at least one major international conference/exhibition and publish at least 3 peer review papers per year.
- **Training activities:** Training activities will be carried out with a focus on young researchers, postgraduates and young professionals.

- **Workshops:** PLEIADES will organize workshops together with industry associations and other EU projects.

3. Communication Strategy

The aim of the communication strategy is to create a common understanding of how to use and disseminate the project results within the project team. The activities are led and monitored by EuCIA.

The communication activities aim to promote the dissemination of the project results and to reach a wide range of recipients during the project lifetime and beyond.

The two central objectives of the PLEIADES communication strategy are:

- Raise awareness of the project's key objectives, activities and results through communication, thus ensuring maximum visibility, driven by all project partners,
- Promote PLEIADES events and dissemination material as widely as possible and to continuously inform the desired stakeholders about insights, news and project results.

EuCIA will lead the project communication activities and set up the appropriate mechanisms and tools for maximum visibility and impact, ensuring that all partners contribute to and evaluate the communication activities.

A logo and a PLEIADES factsheet/leaflet have already been created and are available on the website and in the internal sharefile system. Appropriate templates (Word & PowerPoint) have also been created and are available to the participants to ensure a consistent appearance.

Within this framework, flyers/posters/banners are also to be created to present the project to the outside world (at least 4).

In addition to the factsheet, there will be further project brochures (including two technical brochures on the technical-scientific achievements and two non-technical brochures describing the project results). All materials will be publicly available via the project website and social media.

A project website has already been set up (www.pleiades-project.eu). (See also D12.1. Communication Kit). This includes three sub-pages focusing on communication. These are "News and Events", "Media Centre" and "Repository". In the future, all public results and dissemination materials will be published here, as well as information about the participation of consortium members in external events and information about own events.

A social media channel on LinkedIn has also already been set up. This also serves to disseminate relevant news and project results as widely as possible, as well as to promote events. In the further course and after the completion of the first videos (M7), a YouTube channel will be set up.

A message about the project start was already published in social media. The official press release about the project start will be published on the website. The aim is, to produce at least two press releases per year.

There will be a continuous analysis, evaluation and, if necessary, adaptation of the communication channels and materials. This will also be done on the basis of the specified measurable results.

Table 3 gives an overview about the quantifiable targets of PLEIADES

Table 2: Dissemination, Exploitation and Communication outcomes, metrics and quantifiable targets

Activity/Metrics		Target Value
Dissemination	Publications	Number of publications in peer-reviewed Journals:> 3/year, Conferences > 3
	Projects events	Workshops / Webinars / Focus groups:> 5, - Participants per event:> 30 Participation at Exhibition booths:>3 - Training activities (incl. summer schools)> 3
	Project website	Number of visitors by M12: 1000 - Average duration of visits: 2 minutes, Posts published (incl. news): >75 - Documents available in the website repository:> 20
Exploitation	Academic	Lectures/courses> 3 - Diploma > 8, MSc > 4, PhD students trained:> 6
	Post project	Partnerships>9 - Opportunities identified>6 - Meetings with potential investors>6
	Patentable R&I	Patent applications > 1
Communication	Promotional material	Brochures/factsheets: 4, - Events where brochure/factsheets are used:> 5 Press releases/newsletters: Press releases: 2/year - Newsletters: 2/year, Project's promotional video: 1 - Video views:700 - Available at website/social media. Webinars/Podcasts:>2 - Flyers, posters, and roll-up banners> 4
	Public engagement	Public events e.g., at schools/universities:> 3 - Students per event:>50
	Social media	LinkedIn followers: >350, LinkedIn posts:> 180, Twitter followers:> 450, Re-Tweets:>400, Facebook followers:>350, YouTube channel:>30, Banners:>30

4. Exploitation Strategy

While most of the measures presented so far have focused on the dissemination of project results, the following section looks at the use of results in the form of exploitation.

Dissemination includes the publication of relevant project results by all appropriate means that do not serve to protect or exploit the results (IPR), including scientific publications in any form.

Exploitation focuses on the use of results in further research and innovation activities, including, among other things, commercial use such as the development, creation, production and marketing of a product or process, the creation and provision of a service or in standardization activities.

Of particular importance in this context are the IPR of the project partners and the protection of the results obtained.

PLEIADES will share knowledge created during the project, open as is feasible, in line with the OpenAIRE initiative without jeopardizing project exploitation and impact, following the approach 'as open as possible, as closed as necessary'. PLEIADES will provide FAIR (findable, accessible, interoperable and reusable) access through OpenAIRE and whenever possible enable the reproducibility of produced research findings.

The development of a detailed exploitation plan and the definition of technical roadmaps and routes to market the results after the end of the project are at the forefront of the activities. As part of the exploitation activities, a roadmap for the exploitation activities will be defined for each partner. D13.1 will contain a development plan at the end of the project that describes how TRL4 can be achieved and how new market requirements can be met.

This task encompasses the exploitation activities of the consortium partners for foreground knowledge. The exploitation strategy and exploitation plans will be updated, refined and consolidated based on the project results and the changing context (as determined by the market analysis).

TWI will lead the standardization activities. The PLEIADES consortium will develop a solid strategy for the commercialization and exploitation of the technology developed in the project, as well as for the dissemination of the scientific and innovative results. To do this, it will create a solid exploitation plan that identifies the main exploitable results for each partner and sets out a clear path for exploitation.

Standardization initiatives will be monitored and PLEIADES' contributions to the respective bodies will be communicated and anticipated, while the potential impact of the results will be determined in a timely manner.

This strategy includes several key points:

- **Market research:** the PLEIADES technologies cover a range of technologies in both the composite and photonics sectors, with innovations targeting the aerospace industry but also applicable to other markets related to composite materials. All of this will be taken into account in the PLEIADES market research.
- **Exploitation plan:** PLEIADES will establish a solid exploitation plan identifying the main exploitable results for each partner and defining a clear path for exploitation.
- **Promoting the excellence of European research, maximizing impact and fostering science-based innovation through dissemination activities:** PLEIADES aims to participate in high-level, high-impact academic events to strengthen and promote European research in the fields of composites, SHM and photonic technologies for

industrial applications, and especially to raise awareness of the benefits of a multidisciplinary approach.

In order to protect existing IPR, to avoid violating petitioners and to ensure that the project goals are in line with existing rights, the partners performed an IPR search on topics relevant to the project to ensure no patent infringement issues.

Several relevant patents, some listed below, were found and analysed and it was concluded that they do not pose any freedom to operate limitations to the execution and future exploitation of PLEIADES, since they are either of a different scope or address complementary issues.

- Regarding induction welding: "Method for controlling the consistency of an arc welding process by monitoring welding voltage to determine weld droplet detachment." U.S. Patent No. 8,063,340. 22 Nov. 2011,
- "Systems and methods providing an enhanced user experience in a real-time simulated virtual reality welding environment." U.S. Patent No. 9,318,026. 19 Apr. 2016,
- "Non-linear adaptive control system and method for welding." U.S. Patent No. 8,963,045. 24 Feb. 2015. Regarding the vitrimer formulation,
- "Benzoxazine Derivatives Vitrimers"⁴¹, EP4165107B1, 07 Feb 2024 refers to vitrimers with low glass transition (<100°C) not suitable for aerospace applications, CU42 approach in PLEIADES using bis(4-hydroxyphenyl) disulfide provide the exchange bonds and achieves Tg over 150°C and addresses aerospace requirements and is not subject to any Freedom to Operate limitations.

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It was determined that the mentioned patents do not restrict the freedom of action in the implementation and future use of PLEIADES, as they either have a different scope or deal with complementary topics.

This exploitation strategy will be overseen by an Innovation and Exploitation Committee (InEC). The strategy will be evaluated and updated every six months, taking into account any new internal and external factors that could affect PLEIADES exploitation path, including the standardization efforts that will take place as part of the project.

For every result generated in the project, its consortium members, under the recommendation of the InEC body, will decide whether it is suitable for exploitation/protection or if it can be disseminated to increase the project impact. PLEIADES Key Exploitable Results (KERs) will drive its exploitation plan and the development of appropriate commercial sustainability plans. Support is provided in the form of market research, competitor analysis and feedback on project activities. As part of the activities of WP12/WP13, market and research observations are continuously carried out in order to gain a good understanding of the development of the central markets and the industry.

Summary

Communicating the progress and results is a central task within a funded project that is intended to contribute to the advancement of general knowledge and to promote the research landscape.

The focus is on tools and strategies in the areas of communication, dissemination and exploitation. These are defined and specified in this deliverable. In addition, the project partners must ensure that the IPR is protected. Furthermore, the protection and non-violation of existing rights/standards and patents must be ensured.

The present document describes the procedure within the PLEIADES project and ensures that applicable rules are not violated.

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