ACROBA

connect & produce through agile production

D7.5
Updated Dissemination & Communication Plan
WP7.

Lead Beneficiary: EMC2
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Version V1.0

EMC2

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Approval Status

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History of Changes

Version	Date	Description of Changes	By
V 0.1	10/06/2022	First version	EMC2
V 0.2	24/06/2022	Incorporated updates made by reviewers	EMC2
V 1.0	28/06/20022	Last version after PC review	EMC2

Index

Introduction

This report is an update of the *D7.1 Initial Dissemination and Communication Plan* that was submitted in M3 (March 2021). The *Initial Dissemination and Communication Plan* provided a detailed overview of the communication materials and tools created at the beginning of the project and a description of the dissemination actions to be implemented to raise awareness of the ACROBA project among its target audiences.

This *Updated Dissemination and Communication Plan* provides an overview of the actions carried out in the framework of WP7 between M1 and M18. This report is also an opportunity to review, refine and adjust the communication and dissemination strategy based on the ACROBA project progress and challenges to ensure that the project achieves its full impact. This plan is meant to be continuously updated throughout the ACROBA project lifespan, with a final updated version to be submitted at M42 (June 2024).

Table 1 – Summary of actions carried out for WP7 between M1 and M18

From M1 to M6
• Creation of communication materials • Set-up of communication tools • Set-up of the External Experts Board • 1st batch of communication materials (D7.1) • Initial Dissemination and Communication Plan (D7.2)
From M6 to M12
• 2nd batch of communication materials (D7.3) • Stakeholders database (D7.4) • Release of the ACROBA project video • Promotion of the ACROBA project through multiple channels
From M12 to M18
• Regular publication of articles and videos on the website • Increase of followers community through regular publications on the social media • Prepare dissemination towards academia • Pave the way for the ACROBA specific dissemination events • Preparation of the Acrobathons

1. Communication strategy

1.1 General principles

The overall objective of the communication strategy is to raise public awareness of the ACROBA project and to ensure the highest possible visibility of the project results and activities. The communication strategy supports to the dissemination objectives (see section 2 Dissemination strategy) and contributes to engage the target audiences and networks. The communication strategy is summarized in Figure 1 below:

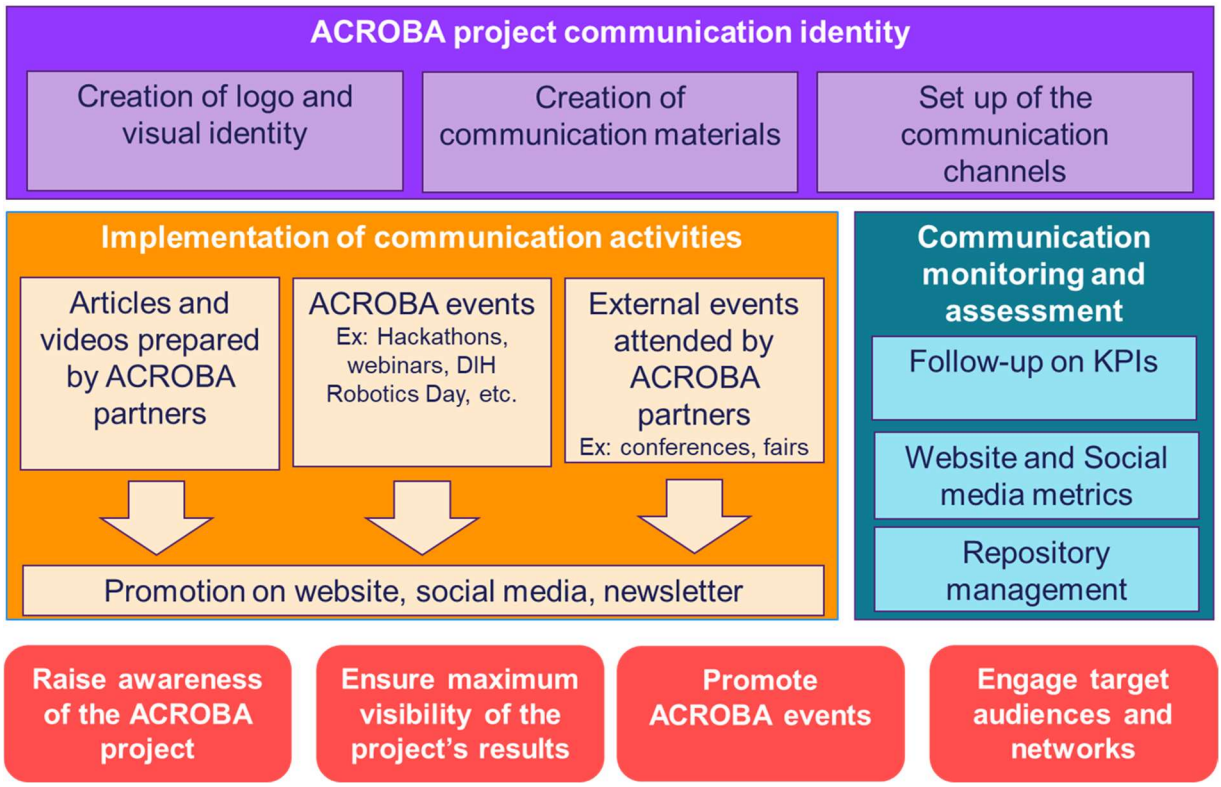


Figure 1 – Overview of the communication strategy

1.2 Visual identity and communication materials

To support the communication strategy, a visual identity and a set of communication materials were created at the beginning of the project to build the ACROBA project identity. The table below provides an overview of these materials, which are also presented into details in the *D7.1 Initial Dissemination and Communication Plan*. All these resources are saved in the Microsoft Teams workspace, in the section "WP7 – Dissemination and Communication" and hence are accessible to all partners. The communication materials are updated whenever necessary to reflect the progress and evolutions of the project.

Table 2 - List of ACROBA communication materials

Category	Material	Responsible partner	Status
Visual identity	Logo	EMC2	Delivered in M3 D7.1 First batch of communication materials
	Graphic identity (Font)		
	Templates (Word and PowerPoint)		
	Guidelines on visual identity		
Communication materials for events	General presentation of the project	EMC2	Delivered
	Poster	EMC2	Delivered in M6 D7.2 Second batch of communication materials
	Roll-Up/kakemono		
	Factsheet		
Videos	Introduction video	EMC2	
	Final video		Due in M42
Press Releases	1st Press release – Launch of ACROBA	EMC2	Delivered in M3 - D7.1
	2nd Press release – Master Acrobathon		Due in M40
	3rd Press release – ACROBA outcomes		Due in M42

1.3 Communication tools and channels

1.3.1 Website

The ACROBA website (https://www.acrobaproject.eu/) is the main source of information on the project. It provides a comprehensive overview of the ACROBA objectives, use cases, partners, and activities. Specific attention is paid to making the website content adapted to a broad range of audiences, including scientists and experts, industry players, policy makers and the general public. The website is subject to continuous improvements to ensure that the project progress and results are timely showcased. EMC2, as WP7 leader, is in charge of keeping the website is up-to-date.

In the "Latest news" section, articles and video are published on a regular basis to promote the outputs and activities of the project (see Annex 1). Although most results will arrive in the last year of the project, the ACROBA partners strive to communicate on the activities and progress already achieved since the launch of the project. The publication of articles and demo videos is coordinated by the WP7 leader EMC2, and partners are encouraged to contribute with contents. It is expected that a significant number of demo video will be released in the course of the project. Video are hence an important dissemination medium for ACROBA.

From M12 onwards, the objective is to publish at least 1 article or video per month. With the acceleration of the project technical developments, the start of the work on the pilot cases, and the launch of multiple dissemination actions in the upcoming months, the frequency of publication will significantly increase over time. The table below provides an overview of the articles and videos published (or planed) between M1-M18.

Table 3 - List of ACROBA website articles and videos published between M1 and M18

Title	Type	Partner	Date
Launch of the ACROBA European project	Article	EMC2	5 Feb 2021
ACROBA provides its first results	Video	SIGMA	11 Apr 2022
Modern geometric reward functions for robot control in ACROBA	Article	Mr. NeC B.V.	25 Apr 2022

1st onsite consortium meeting for the ACROBA team	Article	EMC2	11 May 2022
ACROBA develops its Virtual Gym!	Video	Vicomtech	19 May 2022
Dummy Tool, the future of industrial robot programming system	Article	AITIIP	June 2022
TBC [Video on T3.1 Development of reconfigurable robotic cell and a suite jigs and tools]	Video	IMR	June 2022

1.3.2 Social media

Social media communication is a powerful tool to strengthen the project visibility and impact. The ACROBA-dedicated account on LinkedIn has currently 149 followers (28/06/2022), and the community has been growing significantly in the recent months (+36 followers in the last 3 months) as a result of more regular publications. The LinkedIn account is managed by the WP7 leader EMC2 and is used to communicate on the following contents:

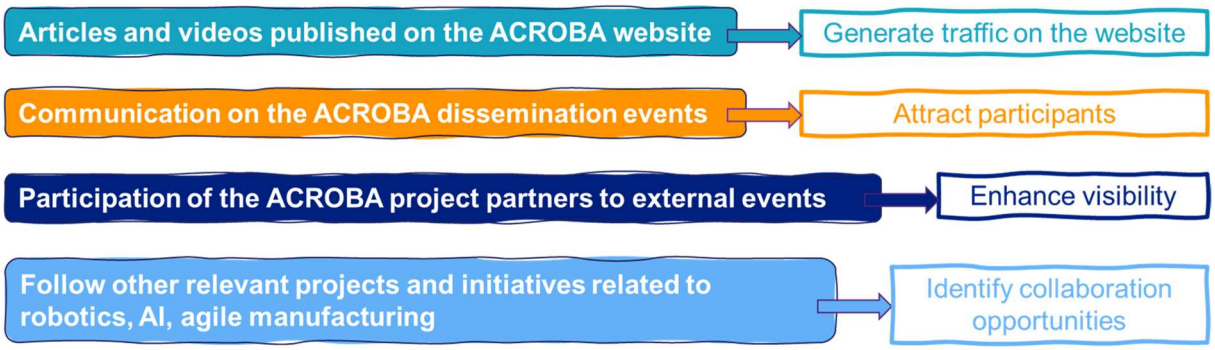


Figure 2 –Social media communication contents and objectives

Whenever relevant, EMC2 shares the link to the ACROBA social media publications by email to the whole consortium to encourage the partners to like and share the content from their own accounts, and hence increase the impact of the publication. ACROBA partners were provided with a brief “social media best practices toolkit” so each of them can contribute individually to enhance the project visibility (see Annex 2).

ACROBA also has a Twitter account, which has currently 60 followers and a dedicated account on YouTube, which is used as a repository for the videos that are produced in the framework of the project and are promoted through the website and the LinkedIn account.

1.3.3 Newsletter

In order to increase the impact of the communication activities, it is planned to launch a project newsletter whose first issue will be released in the Fall 2022. There will be 3 issues a year and it will be created from the MailChimp software by EMC2. The content of the newsletter will consist of the articles and videos published on the website, as well as announcements of the ACROBA events. The main purpose of the newsletter will be to retain and grow the ACROBA followers community and engage them to take part to the ACROBA-dedicated dissemination events such as the Acrobathons, the Demonstration Open Days, etc (see section 2).

The newsletter's recipients list will constitute an exploitable mailing list of relevant contacts interested in the development of the ACROBA project and in attending the ACROBA-dedicated events. In line with the RGDP, the newsletter will be sent only to people who will have subscribed to it. People will be encouraged to subscribe to the newsletter by the following means:

- Advertisement and subscription form on the ACROBA website landing page
- Social media publications
- Email banner with direct link to the subscription webpage to be embedded in the email signature of the partners
- Emailing campaign targeting the stakeholders database contacts (see section 2.1.2) to subscribe

2. Dissemination strategy

2.1 Target groups and database

2.1.1 Target stakeholders groups

The table below provides an overview of the target groups identified by the ACROBA partners at the beginning of the project, and the specific dissemination actions that are put in place to engage them.

Table 4 - Target groups of stakeholders for dissemination

Manufacturers / Agile production / Industry 4.0 stakeholders *Manufacturing SMEs and large enterprises in healthcare, plastic industry, consumer electronics and electric motors. Other industrial sectors embracing agile production principles*	
Interests in the project	• Learn/get trained on the project's results • Establish cooperation agreements with related ACROBA partners to adopt the Platform for their production facilities • Participate in the project's events
Targeted dissemination actions	**ACROBA-dedicated events:** Webinars; Demonstration Open Days; DIH Tours; ACROBA On-Site Lab **Other dissemination actions:** Direct pitch; presentation at industrial fairs; articles in technical magazines
Robotics systems manufacturers and integrators *Provider of robotic systems, including sensors and special equipment suppliers, robotic systems integrators.*	
Interest in the project	• Learn/get trained on the project's results • Use the results to improve their customer's processes • Participate in the project's events
Targeted dissemination actions	**ACROBA-dedicated events:** Webinars; Demonstration Open Days; DIH Tours; ACROBA On-Site Lab **Other dissemination actions:** Direct pitch; presentation at industrial fairs; articles in technical magazines
Industry associations, clusters and DIH *EU and national initiatives, technology clusters and DIH networks dedicated to new manufacturing technologies and agile production*	
Interest in the project	• Disseminate the results and ACROBA events to their members • Include the project's results in collaborative research activities • Knowledge exchange.
Targeted dissemination actions	**ACROBA-dedicated events:** Webinars; Demonstration Open Days; DIH Tours; DIH Robotics Days; ACROBA On-Site Lab; Hackathons **Other dissemination actions:** Direct pitch; presentation at European events (ERF, etc)
IT and professional services	

ICT, software engineering and other professional service. companies that provide software or consulting for manufacturing.	
Interest in the project	• Participate in the project's events • Exploit the project's open results or get inspiration for new ideas.
Targeted dissemination actions	**ACROBA-dedicated events:** Webinars; Hackathons; Demonstration Open Days; DIH Tours; ACROBA On-Site Lab **Other dissemination actions:** Direct pitch; presentation at industrial fairs; articles in technical magazines
Academia and researchers *Individuals and organisations engaged in Industry 4.0 research*	
Interest in the project	• Advance the project's research • Extend the innovations to other areas of application • Inspire future research initiatives • Participate in the project's events.
Targeted dissemination actions	**ACROBA-dedicated events:** Webinars; Hackathons **Other dissemination actions:** Scientific publications and conferences
Public authorities and policy makers *Public authorities interested in the industrial development, including Standardisation and certification authorities for robot systems*	
Interest in the project	• Evaluate the project's impact • Consider project's experience for further research or innovation initiatives • Get input for standardisation activities.
Targeted dissemination actions	**ACROBA-dedicated events:** Webinars; Demonstration Open Days; DIH Tours; DIH Robotics Days, ACROBA On-Site Lab; Hackathons **Other dissemination actions:** Direct pitch; presentation at European events (ERF, etc)
7: General public *Worker unions, civil society representations.*	
Interest in the project	Understand the innovation activities and the benefits on social improvement.
Targeted dissemination actions	**ACROBA-dedicated events:** Webinars; Demonstration Open Days; DIH Tours; DIH Robotics Days, ACROBA On-Site Lab; Hackathons **Other dissemination actions:** Wbsite and social media publications

2.1.2 Stakeholders database

A stakeholders database (D7.4) was created in M6 by IMR. This database currently contains 335 DIH contacts (publicly available email addresses). This database will be used to actively promote the ACROBA events among DIH networks, who will act as multipliers to disseminate the ACROBA actions and opportunities among European SMEs. The database will be regularly updated until the end of the project. Additional contacts will be identified via the following ways:

- Subscribers to the newsletter
- Relevant contacts made by each partner through their dissemination activities (fairs, conferences, direct pitch, etc): the ACROBA partners will invite those relevant contacts to subscribe to the project newsletter to be kept informed of the project progress. The new subscribers will be added to the stakeholders database.

The stakeholders database will allow to gather relevant information about each contact and to keep track to their participation to the ACROBA events. It will help to understand their specific interest for ACROBA, from the industrial sector and scientific/technological field and to send them tailored invitations to participate to the ACROBA events matching with their interest.

2.2. Dissemination through external channels

The ACROBA consortium aims to disseminate the project results via **8 peer-reviewed scientific publications** and to promote the project scientific and technical achievements in **at least 12 high impact European or international robotics events** during the project's lifespan. These events include scientific conferences, industrial fairs, and exhibitions.

In order not to miss any opportunity to disseminate the ACROBA project's results, and to make sure the dissemination activities carried out by the partners are adequately promoted, a dedicated process has been put in place:

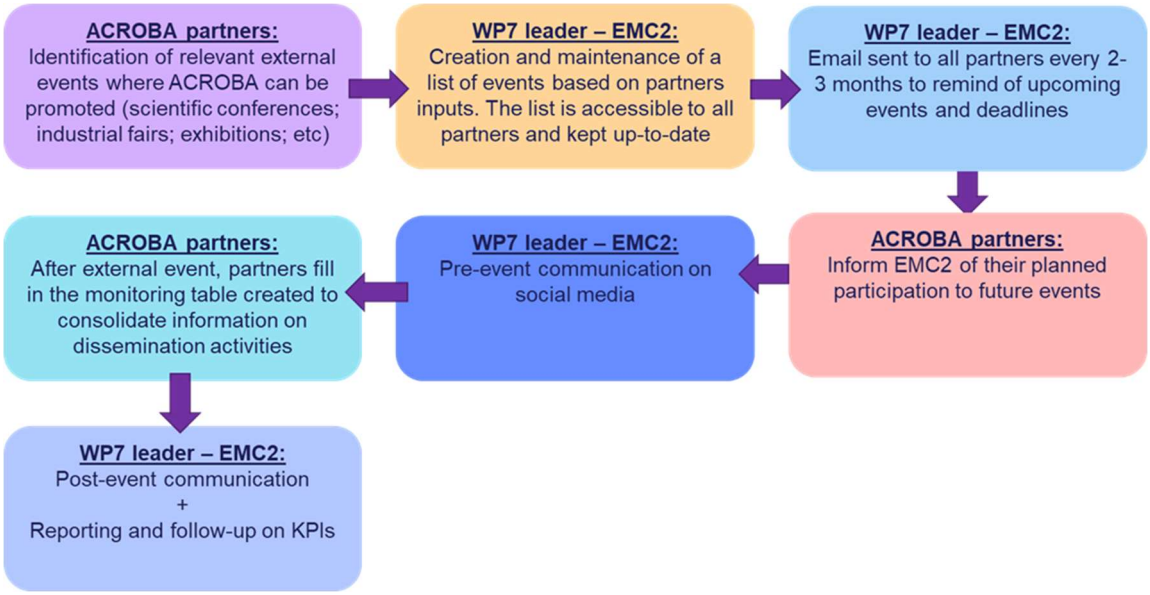


Figure 3 – Process for dissemination in external events

2.2.1 Publications in scientific journals

The academic partners (AITIIP, BFH, BIBA, DEUSTO and SIGMA) estimate that at least **8 peer-reviewed scientific papers** will be published by the end of the project. These papers publications are planned for 2023 and 2024 and will address the following topics:

- Critical Robot Autonomy in Agile Production
- Organizational change in reaction to the implementation of robots
- Effectiveness of the (training) interventions (empirical paper and Intervention protocol paper)
- Digital-Twin based Validation of Safe Human Robot Interaction
- Novel Robot programming methodologies for Human Robot collaboration
- Multi-modal-robotic perception, control and planning for contact-based tasks with generalization based on DRL

The following scientific journals are targeted by the academic partners:

- *Robotics and Computer-Integrated Manufacturing* (Elsevier)
- *International Journal on Advanced Manufacturing Technology* (Springer)

- *Journal of Mechanical Engineering and Automation* (Open access Scientific & Academic Publishing)
- *International Journal of Advance Robotic Systems* (Sage Publication)
- *The International Journal of Robotics Research* (Sage Publication)
- *Advances in Mechanical Engineering* (Sage Publication)
- *IEEE Transactions on Robotics* (IEEE)
- *IEEE Intelligent Systems* (IEEE)
- *Journal of Intelligent Manufacturing* (Springer)
- *Journal of Applied Intelligence* (Springer)
- *IEEE Robotics and Automation Letters* (IEEE)

The consortium has put in place an approval procedure for the publication of scientific papers and conference proceedings to allow timely review of the content of the publication and the protection of sensitive or confidential information by all partners. This procedure is in line with the Consortium Agreement and can be found is in Annex 3.
The link to the open access version of the publications and conference proceedings will be uploaded on the ACROBA project website to facilitate the access for potential readers.

2.2.2 Scientific conferences

In June 2022, a total of **four conference papers** has been submitted by the partners, including one accepted, and one additional paper is in preparation.

Table 4 – List of papers accepted, submitted or in preparation until June 2022

Partner	Status	Title	Authors	Type of publication
BFH	Submitted	*Using a Skill based Robot Task Model and Notation (RTMN) - an Extension based on BPMN - for Modeling*	Congyu Zhang	Conference paper IROS 2022

		and Executing Robotic Processes		
VICOMTECH	Accepted	*Simulation based initial feasibility analysis pipeline for small-sized part picking*	Iñigo Mendizabal, Antonio Tammaro, Marco ojer Andres, Xiao Lin	Conference paper CEIG 2022
BFH	In preparation	*ROS based flexible task planner*	Thomas Ribeaud, +?	Conference paper ETFA 2022
DEUSTO	Submitted	*A method for multi-robot arm system implementation using the ROS framework*	Ignacio Fidalgo, Alberto Tellaeche, Juan-Ignacio Vazquez	Conference paper ETFA 2022
DEUSTO	Submitted	*On the creation of a robotics software architecture for AI-based advanced applications*	Ignacio Fidalgo, Alberto Tellaeche, Borja Sanz, Juan-Ignacio Vazquez, Iker Pastor	Conference paper ETFA 2022

2.2.3 Industrial fairs and robotics events

Although the travel restrictions due to the COVID-19 have significantly impacted the first year of the project, the project partners managed to promote ACROBA in multiple online events. It is expected that partners will be able to attend a number of physical events in 2022, which will increase the opportunity to promote the ACROBA solution to target stakeholders.

Table 5 – List of industrial fairs and robotics events where the ACROBA project was presented

Partner	Date	Event	On site / online	Type of dissemination activity
BIBA	12/04/2021	Hannover Messe 2021	Online	Oral presentation
BFH	13/04/2021	European Robotics Forum 2021	Online	Video presentation
ROBOCOAST	23/11/2021	ROS-days 2021	On site	Oral presentation
AITIIP	02/03/2022	Advanced Factories 2022	On site	Oral presentation
AITIIP / MOSES	29/03/2022	Advanced Factories Industry 4.0 Congress	On site	Demonstration on booth
AITIIP	18/05/2022	SUM 2022 - 6th Symposium on Circular Economy and Urban Mining	On site	Oral presentation
ICPE	16-19/05/2022	Space and Security for Eastern Europe	On site	Oral presentation
NUTAI CABKA	24/05/2022	Hispack 2022	On site	Booth
NUTAI	3-7/06/2022	BIEMH International Machine-Tool Exhibition	On site	Booth
ICPE	13-17/06/2022	EUROSATORY 2022 The defence & security global event – Paris	On site	Oral presentation

2.2.4 Other dissemination activities

The ACROBA partners promoted the project in a number of dissemination events, including webinars, workshops and direct pitches targeting their own networks of stakeholders and providing opportunities to establish synergies with other initiatives having similar scope.

Table 6 – List of other dissemination actions until June 2022

Partner	Date	Type of event	On site / online	Description
ROBOCOAST	29/01/2021	Webinar	online	Bi-annual meeting with professionals from the manufacturing industry and robot specialists. Presentation of the concept of agile manufacturing and how ACROBA can help.
NUTAI	27/04/2021	Webinar	online	Presentation of ACROBA to an industrial audience among the new reconversion and opportunities that are arising in collaborative robotics in the automotive industry. Event hosted by Universal Robots.
NUTAI	27/04/2021	Direct pitch	on site Valencia, Spain	NUTAI explains its client FORD about ACROBA and its objectives. Keep our customer informed of new advances.
DEUSTO	08/05/2021	Workshop	online	Exchange and discuss research directions and build a community for investigating reinforcement learning problems in human-computer interaction.
BIBA	25/11/2021	Workshop	on site Sfax, Tunisia	Event organised to present interesting research and innovation activities, how research/innovation projects could contribute to business creation, Industry 4.0 technologies and application scenarios. Many interesting questions (mainly from students) about the concept of ACROBA platform and use-cases. Industrial partners have asked for videos and access to the platform, if it is already established.
DEUSTO	13/12/2021	Lecture for students	on site Bilbao, Spain	In the context of a course about advances in application of AI techniques, the ACROBA project was presented and discussed, especially in terms of AI applied to robotics and its implications. The event increased awareness about application of AI in robotics and its implications and helped to gather students interested in collaborating in research and final-

				degree projects, aligned in ACROBA goals.
ROBOCOAST	14/02/2022	Direct pitch	on site Finland	Presentation of ACROBA in front of potential customer, Digital Twin creator company ALL3D Ltd
ROBOCOAST	18/03/2022	Direct pitch	on site Finland	Presentation of ACROBA in front of local Univ. representatives
NUTAI	08/04/2022	Webinar	online	ACROBA presentation
BFH	18/03/2022	Lecture for students	on site Burgdorf, Switzerland	The structure and the benefits of using Acroba have been presented as part of an advanced laboratory course in automation technology. Emphasis was put on flexible programming of robots and its advantages in production of smaller lot sizes.
BFH	29/04/2022	Other (please comment)	on site Burgdorf, Switzerland	Municipality of Burgdorf organised a public event addressing all kind of public to get informed about industrial progress in the region. BFH presented its work in Acroba and possible uses of collaborative robotics.

2.3 Dissemination through ACROBA specific activities

2.3.1 Webinars

Partners involved: NUTAI, IKOR, IMR, AITIIP

Objective and target audiences: Webinars are aimed to raise awareness of the ACROBA platform and present its potential applications to targeted audiences, including professional from industry but also researchers in AI and robotics, as well as engineering students. These webinars also contribute to promote the other dissemination actions such as the Demonstration Open Days, the Hackathons, etc. and will help identify potential participants for these different events.

KPIs: At least 4 webinars will be organized during the project lifespan.

Table 7 – List of ACROBA webinars

Organizer / host	(Exp.) Date	Status	Audience	Participants
ROBOCOAST	29/01/21 M13	completed	Profesionals from the manufacturing industry and robot specialists	30
NUTAI	08/04/22 M16	completed	Industrial audience	30
NUTAI and IKOR	M25-M36	pending		
IMR	M19-M24	pending		
AITIIP	M19-M24	pending		

2.3.2 Training course for professionals

Partners involved: The course content will be prepared by AITIIP. The trainings will be hosted by different partners: AITIIP, IMR, IKOR, VICOMTECH and NUTAI.

Objective and target audiences: The training course aims to provide personalized training to professionals willing to implement the ACROBA solution into their own premises. It targets SMEs and large companies interested in automating their manual processes, implementing new robotic solutions into their production lines and acquiring transversal skills in industry 4.0 technologies. Professionals expected to attend are process engineers, production engineers, R&D managers. A maximum of two representatives per companies will be selected on a "first come first served" basis, provided that their business has proven relevance with the ACROBA project.

KPIs: At least 2 SMEs trained (30-hour training). The training courses will be implemented in the second half of 2023 in synergy with the ACROBA On Site Lab events.

2.3.3 Lectures to students

Partners involved: the academic partners: DEUSTO, BFH, BIBA, SIGMA.

Objective and target audiences: DEUSTO, BFH, BIBA, and SIGMA will integrate the first results of the project in their lectures and create engineering practical exercises based on the ACROBA platform. The course will be comprised of a 5-hour lecture and 20-hour student work. It will target students in production engineering, computer science and industrial engineering. Each partner will develop/update its own course content.

KPIs: At least one course will be delivered in each of the four institutions. The first courses shall be implemented in the school year 2022-2023 (M21-M30).

Table 8 – List of ACROBA lectures to students

Organizer / host	Expected timeframe	Status
DEUSTO	M21-M30	pending
BFH	M21-M30	pending
BIBA	M21-M30	pending
SIGMA	M21-M30	pending

2.3.4. Demonstration Open Days

Partners involved: CABKA & VICOMTECH, STERIPACK & AITIIP, ICPE & STAM, DEUSTO & MOSES

Objective and target audiences: Real, in context demonstration is the best way to understand the technology and assess its potential for improvement of production processes. The Demonstration Open Days will ensure the promotion of the ACROBA platform as an attractive innovative technology able to adapt to any industrial scenario. The ease of implementation of the ACROBA platform will make the solution very attractive, in particular for SMEs from the manufacturing sector. Profiles expected to attend are: process engineers, production engineers, robotic integrators. The Demonstration Open Days will be open to any interested industry stakeholders, with a target of 40% of SME participation.

Format: Each Demonstration Open Days will follow a similar agenda:

1. Presentation of the ACROBA project
2. Visit of the demonstrator
3. Workshop on AI-driven cognitive abilities in robotics. The objective of this workshop is to help participants identify a relevant use-case to implement the ACROBA solution into their production process.

DIH representatives will be invited to co-present by pitching industrial solutions on the market that could benefit to the audience.

KPIs: 4 workshops of 20 participants each at local level will be organized by the end-user partners in charge of the pilot deployments at their production site. Involved partners will support each end-user in the organisation and hosting of the workshops and contribute as speakers themselves during the workshop, introducing their work in the project.

Table 9 – List of ACROBA Demonstration Open Days

Organizer / host	Partner involved	Location	Expected timeframe	KPI
CABKA	VICOMTECH	Germany	M30-M36 (Jun-Dec 2023)	20 participants
STERIPACK	AITIIP	Ireland	M30-M36 (Jun-Dec 2023)	20 participants
ICPE	STAM	Romania	M30-M36 (Jun-Dec 2023)	20 participants
DEUSTO	MOSES	Spain	M30-M36 (Jun-Dec 2023)	20 participants

2.3.5 Virtual Exhibition of pilots

Partners involved: NUTAI

Objective and targets: This action consists in showcasing the five ACROBA pilots in a virtual exhibition space. It will be organized by NUTAI in the last 6 months of the project to present the final use cases and their functional operation. The targeted audience are industrials from the robotics field, the scientific community, other European projects and European Commission representatives. This online showcase will be the entry point for anyone willing to learn more about ACROBA and cognitive robotics applied to agile manufacturing.

Format: This virtual exhibition will be developed via a virtual meeting platform able to support the ACROBA global virtual technological event online. The technical aspects related to the implementation of the virtual exhibition will be defined in the second half of the project. The exhibition will be officially launched on a specific date, and a webinar will be organized to present it.

2.4 Dissemination actions targeting DIH, clusters and other EU-projects

DIH and industry associations are the first point of access to industrial ecosystems. To ensure the successful dissemination of the projects activities and results and to maximize the project replication potential to a large range of industries and sectors, the ACROBA project will strive to build strong relationships with DIH networks and industry associations. Specific dissemination actions are targeted directly at DIHs, and will help identify possible partners for the 3 Acrobathons that will be hosted by DIHs (see section 3).

2.4.1 DIH Tours

Partners involved: EMC2 and ROBOCOAST

Objective and target audiences: The DIH Tours consist of five workshops targeting robotics and industrial stakeholders from the DIH2, TRINITY, RODIN, ROSIN, and DIH.NET networks. The workshops will include a presentation of the project and explore further replication of the ACROBA concept in other sectors through a creativity seminar: These workshops will allow collecting feedback from other industrial sectors on the five ACROBA pilots, and hence will help identify desired features and replicability constraints. The DIHs will also be able to add the ACROBA's solution to their portfolio of robotics solutions to be promoted within their respective ecosystem.

KPIs: 5 workshops will be organized by EMC2 and ROBOCOAST in the last 12 months of the project.

Table 10 – List of ACROBA DIH Tours

Organizer / host	Expected timeframe	Status
EMC2	M30-M42	pending
EMC2	M30-M42	pending
EMC2	M30-M42	pending
ROBOCOAST	M30-M42	pending
ROBOCOAST	M30-M42	pending

2.4.2 DIH Robotics Days

Partners involved: EMC2 and ROBOCOAST
Objective: The DIH Robotics Days aim at exploiting synergies within the DIH networks. The aim is to raise awareness of the ACROBA platform among other DIH, which will in turn disseminate the ACROBA solution towards their networks of SMEs.

Format: EMC2, ROBOCOAST and IMR will each organize a DIH Robotics Day at their facilities.

2.4.3 Project clustering activities

Specific attention is paid to developing strong links with other relevant EU-funded projects and initiatives to exploit synergies and collaboration opportunities.
As a first step, a mapping of other EU-funded projects and initiatives in the field of robotics was done at the beginning of the project (see table 12) to identify relevant partners and opportunities. As a second steps, ACROBA partners started to establish connexions with these networks. As shown in table 11 below, between M1-M18, ACROBA partners participated in a limited number of networking events, but further developments are expected to arise in the next months, given that the project is at a more mature stage and can share some results.

Table 11 – Dissemination of ACROBA to EU networks and projects

Partner	Date	On site / online	Description
BIBA	08/02/2021	online	Presentation of ACROBA at a kick-off meeting of a new launched Erasmus+ Project (ENHANCE)
BFH	13/04/2021	online	Presentation of ACROBA at the European Robotics Forum 2021
STAM	08/06/2021	online	Presentation of ACROBA at RAIC, a virtual conference on cross-sectoral innovation.
AITIIP	23/02/2022	online	Contact established with the ACRE project
ROBOCOAST	21/06/2022	online	Presentation at online meeting organized by the Robotics4EU project with other ICT-46-2020 projects
ROBOCOAST	28/06/2022	on site	Presence at the European Robotics Forum 2022

Table 12 – Link with other R&D projects

Acronym / Duration	Partner	Know-how to be applied in ACROBA
MEGAROB	AITIIP	Development of a flexible, sustainable and automated platform for high accuracy manufacturing operations using spherical robot and laser tracker on overhead crane. The expertise will be applied for the development and implementation for the ACROBA solution.

REPLICATOR	MRNEC	Knowledge in modular robotic perception and emerging self-organized control will be applied for the ACROBA developments.
COGNITPLANT	MRNEC	Aims to develop deep learning agents for optimizing some materials production and products manufacturing. Acquired expertise will be applied to ACROBA modules' development.
DIH2	IMR	Supporting the power of robotics to transform the agility of manufacturing in Small and Medium-sized Enterprises (SMEs). ACROBA will take advantage of the connections to contribute to enable agile production.
ROSIN	-	Enhances the reach of open source packages ROS and ROS2 with focus on industrial applications. ACROBA aims to build on this and allowing ROS/ROS2 to become the centre of agile production platforms in the future.
SOFTMANBOT	SIGMA, STAM	Deformation and contact control using heterogeneous sensor information to track in real-time the changes of the product while handling them with the robot. Similar multi-modal perception strategies will be required in ACROBA but with detection of higher-level events.
SHAREWORK	STAM	Modules for safe human-robot collaboration. Design and implementation of HRC modules in manufacturing scenarios. ACROBA will take advantage of this expertise for the implementation of the platform.
R4WIN Manunet	STAM, ICPE	Development and prototyping of a robotic cell to wind the coils of electric motors. Knowledge acquired will be used for the implementation of ACROBA platform in real industrial environments.
TRINITY	-	This project is creating a network of multidisciplinary and synergistic local digital innovation hubs (DIHs) that cover a wide range of topics that can contribute to agile production. ACROBA

		will connect with TRINITY for dissemination purposes, e.g. platform promotion.
ARMION	DEUSTO	Project focused on advancing in the digitalization of the machine tool sector, moving to new HW and SW architectures, which complement the traditional automation systems. ACROBA will take advantage of the knowledge and expertise acquired about these HW and SW architectures.
VESSEDIA	DEUSTO	Project to improve the security of the Internet of Things (IoT) by making formal methods more accessible for areas of application that wish to improve the security and reliability of applications. Lessons learnt will be applied to ACROBA for guaranteeing the platform security.
MANUWORK	VICOM	Focuses on the development of an integrated platform that includes a tool for determining optimal human-automation levels for load balancing, a tool for the evaluation of worker satisfaction, and a framework for the adaptive shopfloor support based on an Augmented Reality. The expertise will be applied in ACROBA to enhance the collaboration between human and robot.
FALCON	BIBA	Developed a Virtual Open Platform to connect product-service usage information to design and development processes. ACROBA will apply an adapted version of the semantic techniques used to collect product usage data.
COALA	BIBA	The project aims to develop a human-centered digital assistant providing a more proactive approach to support operative situations involving cognitive load, time pressure and strict tolerances. ACROBA will take advantage of the shaping of the collaboration between AI-based assistant and the human.
WORKSUIT 4.0	BIBA	The project aims to bring a functional toolkit to market consisting of a wearable fibre-optic sensing system for 3D-human motion

		capturing in combination with advanced activity and process mining capabilities. The expertise and findings will be used to support the development of WP3 and WP5 tasks.

2.5 ACROBA Hackathons

2.5.1 Objectives and target

In addition to the dissemination activities listed in section 2.3, the ACROBA partners will organize a series of hackathons – namely the Acrobathons. The Acrobathons are largely inspired by the hackathons, these competition-style events where a project must be completed in a short time frame (typically 24 or 48 hours) and are designed to bring developers, designers, innovators, and other domain experts together to solve specific problems. Hackathons are inclusive, agile, multidisciplinary, and collaborative. They lead to shorter innovation cycles and hence are ideally suited to ensure that the ACROBA solution will be adopted and taken to the next level by the community.

The Acrobathons will contribute to disseminate the platform towards all targeted audience group, to build a community around the ACROBA solution, and strengthen collaboration with the robotics DIH.

The Acrobathons are thought of s as a mechanism to co-create the ACROBA platform thus increasing its excellence. They will help identify lacking features of the ACROBA solution and improve the modules of the platform. The Acrobathons runners will address pressing real-life business challenges and build ‘proof of concept’ and a Minimum Viable Product for a specific predefined manufacturing problem identified as requiring an agile production solution. Each contest will hence result in several functional basic applications of a robotic system powered under the ACROBA platform.

The participants will be engineering students. The events will also involve researchers & experts as mentors, as well as Manufacturing companies (R&D engineers, start-up developers) as use case providers. The pitch session and the award ceremony will be open to

a general audience (industrials, innovation hubs, students, press, local authorities) to enhance the impact of the event.

2.5.2. Acrobathons schedule and logistics

11 mini-Acrobathons will be organized between M20 to M36, including:

- 8 mini-Acrobathons organized by consortium members (see table 8).
- 3 mini-Acrobathons organized by DIH. DIH orchestrators will have to provide a use-case of agile production coming from a manufacturer of their region. Two DIH will be supported by ROBOCOAST, and one by EMC2, with guidelines and meetings at their facilities two days ahead of the event to help to settle the details and promote ACROBA with a dedicated booth on site during the event. The DIH organizing the further 3 mini-hackathons will be selected on the bases of a call for expressions of interest that will include the capacity to provide SME industrial use case as basis for the mini-hackathon challenge.

Each mini-Acrobathon will gather 9 teams of 3 participants each. The winning team of each of the 11 mini-Acrobathons will be invited to the final Master-Acrobathon to be held around M40 and organized by EMC2. In total, the Acrobathons should involve around 300 participants.

The first mini-Acrobathon will be organized by EMC2 in M25 or M26. The other Acrobathons will be organized in the course of 2023. A common framework is currently in preparation and the official communication campaign will be launched in the Fall 2022 (M21-M23).

Table 13 - ACROBA Mini-Hackathons description and scope

Organizer	Country	Title of the Mini-hackathon	Use-case
BIBA	Germany	AI for safety-critical industrial applications	Specific: Human-Robot collaborative assembly of power transformers
DEUSTO	Spain	Innovative robotic architectures	Generic: technical challenges of WP1
EMC2	France	Industrial system for manufacturing extra-large parts	Specific: Additive manufacturing of metal parts such as moulds

IMR	Ireland	Generic Robot Manipulation Skills	Generic: IMR Generic test bed
ROBOCOAST	Finland	Intelligence for a production line	Specific: Manufacturing of plastic or metal parts.
SIGMA	France	Robotic Perception & Control	Generic: technical challenges of WP2
STAM	Italy	Human-robot collaboration	Generic: WP5 use cases
VICOMTECH	Spain	Real-time robot simulation	Generic: Specific robot integration, Object tracking, Parameter identification

Teams will be able to register online for the Acrobathons. Selection criteria will involve gender consideration to encourage the participation of female developers, as well as the relevance of each team's experience. The jury members will be selected by each hosting partner, considering the gender balance and giving priority to the members of the External Experts Board.

This jury will have to evaluate on the following criteria:

- Technical complexity
- Originality
- Usefulness (adaptability)
- Impact on productivity

There will be two kinds of rewards for hackathon runners. No money will be directly awarded to the winners, however ACORBA will define in-kind prices:

• **Mini-Acrobathons:** Award will be selected to be attractive to participants and maximize team registration (to the equivalent value of €1000 per team for the 3 teams ranking 1st, 2nd, & 3rd).

• **Master-Acrobathon:** Award will be equivalent value of €1000 per team, for the 3 teams, ranking 1st, 2nd, & 3rd) in addition to a one-pager article in a relevant international magazine such as "service robots" of the International Federation of Robotics.

2.6. ACROBA On-Site Lab (AOSLs) for manufacturing SMEs

The ACROBA On-Site Lab aims to stimulate the uptake of the ACROBA solution by manufacturing SMEs from the EU. The AOSLs will be implemented by ROBOCOAST and IMR, which are both DIH and DIH2 partners. The objective of an AOSL is the implementation of a robotics solution to answer a current manufacturing problem the SME is facing on their Digital Transformation (DT) journey. The robotics solutions must be developed, integrated, and "powered" under the ACROBA platform. The AOSLs will therefore enhance and accelerate the "Assessing feasibility and replicability of the platform" as detailed in Task 6.4.
The AOSLs are described into details in the D8.7 due in M21.

3. Communication and Dissemination process and monitoring

3.1 Monitoring process

EMC2 as WP7 leader oversees and monitors partners dissemination efforts. A continuous monitoring of the communication and dissemination activities has been implemented to measure the quantitative and qualitative impact of WP7 activities and implement corrective actions whenever needed.

Figure 4 – ACROBA Communication and dissemination monitoring process

A common Excel file has been set up to collect data on all dissemination and communication activities undertaken by project partners. Each partner must report in this Excel file their activities, and provide information such as the type of activity, the date, the place, the target group(s) addressed, the geographical coverage (local, national, European or international), the number of people reached. Pictures, attendance lists and feedback must be saved in the relevant folder on the Teams repository. This monitoring file serves as a basis to complete the technical periodic reports, to keep track of the KPIs and facilitates the identification of risks and deviations related to established objectives and performance indicators previously set.

3.2 KPIs

The Key Performance Indicators have been established as follows:

Table 8 – Communication and dissemination KPIs

#	Indicator	Description	Method of measurement	Target	Update M18	Left
1	Project website / Stats		No. of unique visitors	5000	1600	3400
2	Peer-reviewed articles	Publications in scientific journals	No. of published articles	8	0	8
3	Articles in industry magazines		No. of published articles	16	1	15
4	Participation at conferences (no. of visitors >1000), target events with presentation/ papers	scientific conferences (paper, poster) industrial fairs and exhibitions (oral presentation, booth)	No. of conferences, workshops, events, for attended	12	9	3
5	Participation at conference, target events with		No. of visitors to presentation / poster /	1000	320	680

	presentation/poster/paper in proceedings		conference booth			
6	Organisation of Hackathons	11 mini-hackathons will be organized (8 by consortium members and 3 by DIH) and 1 final Master-hackathon. In total, around 300 people will be involved as participants	No. of successful Hackathons completed	12	0	12
7	Organisation of target events	ACROBA-specific events (webinars, demonstrations, trainings, lectures, AOSL)	No. of events organised	6	1	5
8	Organisation of target events		No. of participants	400	30	470
9	Dissemination to networks and on-going projects. e.g. DIH2, AI Europe, AI4EU, ...	- Participation in common events (ERF…) - DIH Tour - DIH Robotics Day - Project clustering activities	No. networks and on-going projects	10	6	4
10	Dissemination to networks and on-going projects		No. of professionals/ organisations	1000	200	800

11	Relevant stakeholders' peer-to-peer contact	AOSL Workshops Webinars Direct pitch External Experts Board	No. of relevant stakeholders contacted	200	477	-277
12	Relevant stakeholders involved		No. of relevant stakeholders involved	100	477	-377
13	Interviews with public media		No. interviews on media	3	2	1
14	Movie/clips	1 introduction video Virtual exhibition of pilots	No. of published movies/clips	2	1	1
15	Press release		No. of press releases published	3	1	2

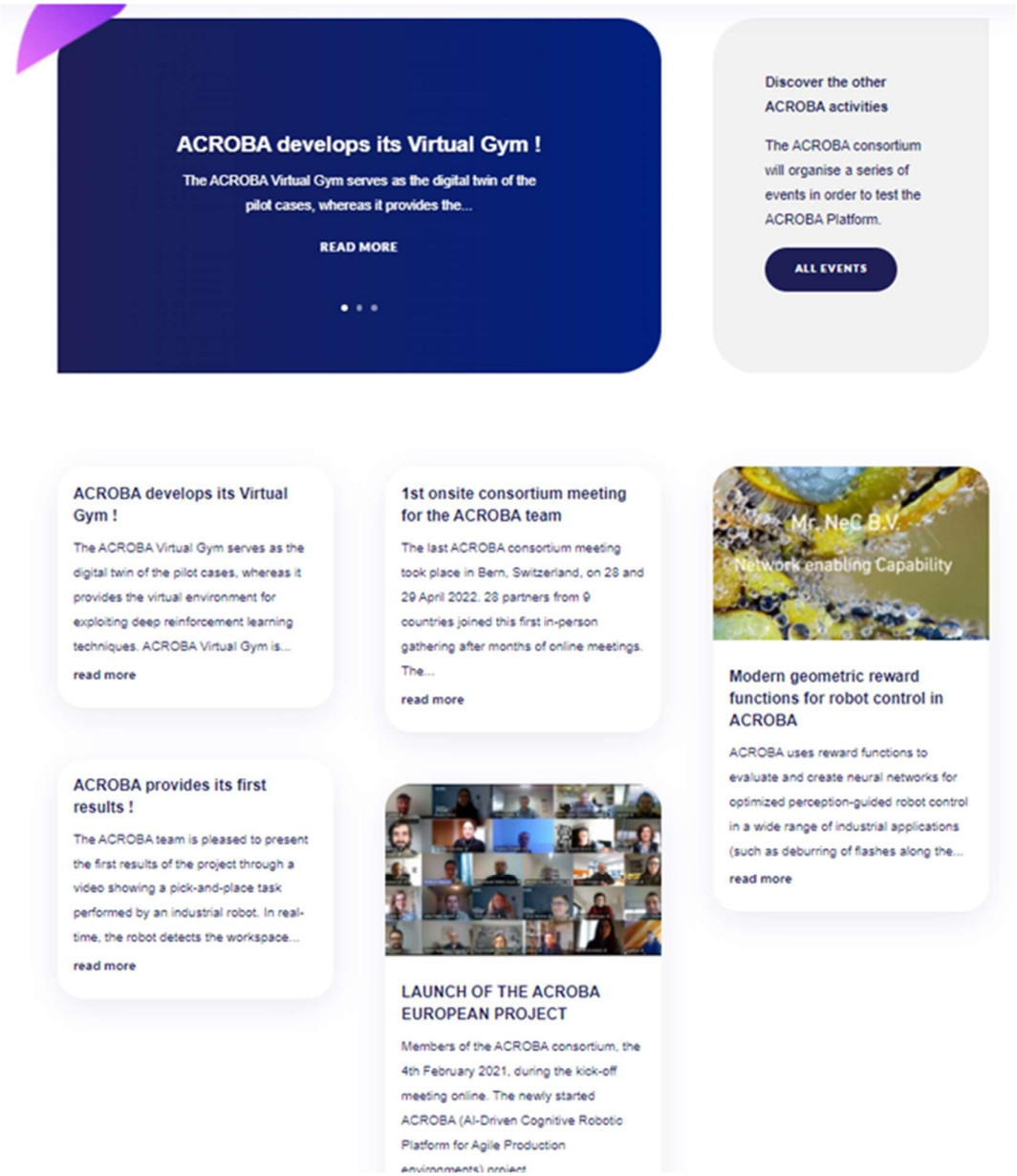
4. Conclusion

This communication and dissemination plan is a flexible and living plan. Based on the defined target groups and objectives described, the strategy aims at maximizing the use of breakthrough developments in the project and all regular project deliverables to spread relevant news through a wide and diverse scope of channels. In doing so, dialogue and information exchange with the scientific community as well as with relevant industries and a broader public will be stimulated so that the ACROBA project development can constantly adapt to existing and future user needs.

5. Annexe

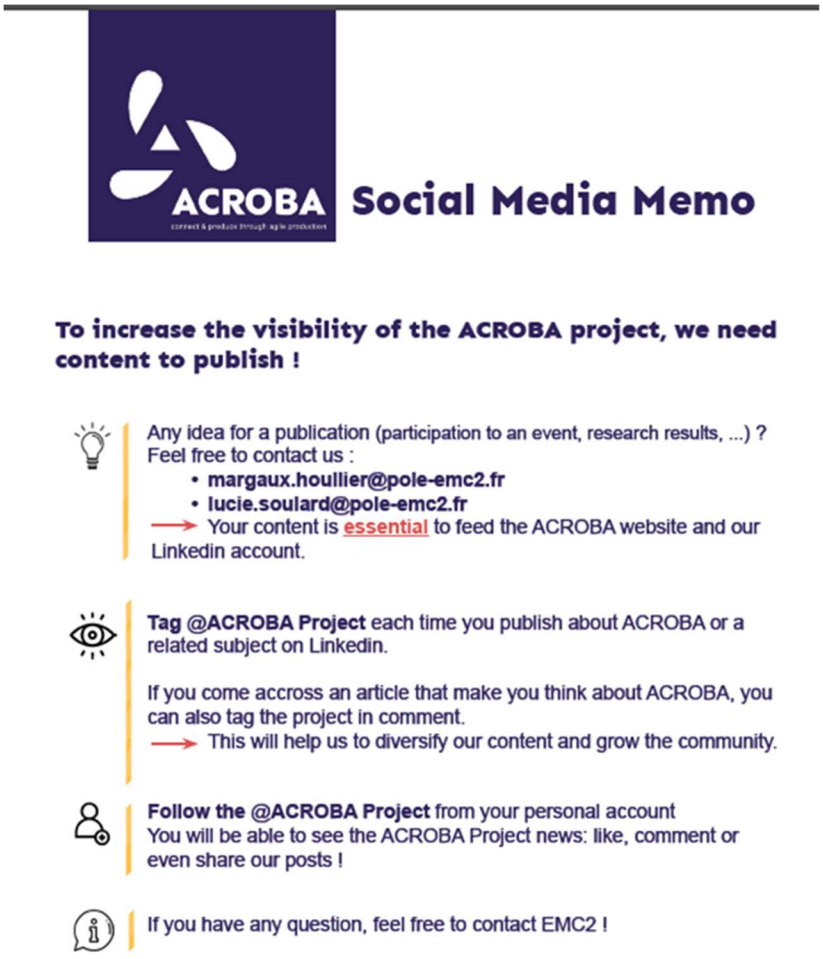
Annex 1

Overview of the articles and videos published on the ACROBA website:



Annex 2

Guidelines provided to the ACROBA partners to enhance the impact of social media communication:



ACROBA Social Media Memo

To increase the visibility of the ACROBA project, we need content to publish !

Any idea for a publication (participation to an event, research results, ...) ?
Feel free to contact us :
- **margaux.houllier@pole-emc2.fr**
- **lucie.soulard@pole-emc2.fr**

→ Your content is essential to feed the ACROBA website and our Linkedin account.

Tag @ACROBA Project each time you publish about ACROBA or a related subject on Linkedin.

If you come accross an article that make you think about ACROBA, you can also tag the project in comment.
→ This will help us to diversify our content and grow the community.

Follow the @ACROBA Project from your personal account
You will be able to see the ACROBA Project news: like, comment or even share our posts !

If you have any question, feel free to contact EMC2 !

Annex 3

ACROBA publication procedure

PUBLICATION PROCEDURE

1. Introduction

The present publication approval procedure is put in place to allow timely review of the content of the publications and the protection of sensitive or confidential information by parties. This procedure is established in accordance with the ACROBA Consortium Agreement. This procedure does not violate the confidentiality obligations defined in the section 10 of the ACROBA Consortium Agreement.

During the project and for a period of one (1) year after the end of the project, the dissemination of results by one or several parties including, but not restricted to, publications and presentations, shall be governed by the procedure of Article 29.1 of the Grant Agreement. The provisions are as follows:

2. Approval procedure for scientific publications and conference proceedings

a. The author sends by email **to the whole consortium** the following parameters **at least 45 calendar days** before the submission of the publication:
   - full name of the Journal or name and date of the event, including the website
   - short summary of the paper
   - brief description of the parts that are sensitive for other partners
   - deadline for submission of abstract/paper
   - (in case of conference) name and affiliation of the persons giving the talk.

b. Any objection to the planned publication shall be communicated in writing to the coordinator and to the Party or Parties proposing the publication, within **5 calendar days after receipt of the notice**. If no objection is made within the time limit stated above, the publication is permitted.

c. The objections to publication must be justified and sent by the review parties to the author(s) as well as the coordinator**.** An objection is justified if:
   - the protection of the objecting party's results or background would be adversely affected
   - the objecting Party's legitimate interests in relation to the Results or Background would be significantly harmed
   - the proposed publication includes Confidential Information of the objecting party.

d. If an objection is raised, the publication is put on hold until the issue is resolved. The objection must include a **precise request for modifications**. The involved Parties shall discuss how to overcome the justified reasons for the objection on a timely basis. After the discussion appropriate measures shall be taken, for example: amendment to the planned publication and/or excluding confidential information before publication. The objecting Party shall not unreasonably continue the opposition afterwards.

e. In the case of patentable foreground, the publication is put on hold until the IP protection has been adequately secured.

f. The final draft must be shared with the whole consortium **at least 5 days before the deadline for final submission of the publication.**

g. The final version of the publication shall be sent as a pdf file to the WP7 leader (lucie.soulard@pole-emc2.fr) within **24 hours** of the deadline for submission. Then, the WP7

leader informs the whole consortium by publishing a message on the General Channel in Teams and uploads the publication in the relevant folder:

General channel →WP7 – Dissemination and Communication → 5. Dissemination activities → Scientific publications

3. Approval procedure for videos, and PowerPoint presentations

For videos and PowerPoint presentations, there is no need for approval prior public release. It is the partner's own responsibility to make sure that the release to public is not jeopardizing the confidentiality of other partner's work or IP. The contents shall be communicated to the consortium after publishing.

4. Dissemination of another party's unpublished results or background

A party shall not perform any dissemination activity that includes another party's results or background without obtaining the owning Party's prior written approval, unless these results are already published.

5. Acknowledgment of financial support

All dissemination materials (scientific papers, conference proceedings, video, etc.) stemming from the project must display the EU emblem (whenever possible) and include the following acknowledgement:

"This research was carried out within the project ACROBA which has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101017284."