



D7.1 CDP - Communication & Dissemination Plan

(Final Version – M36)

Date of Submission: 31/05/2026
Author(s): PEDAL Consulting s.r.o.



**Funded by
the European Union**

Funded by the European Union under grant agreement number 101104032 . Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.

Lead Beneficiary	PEDAL Consulting s.r.o. (PEDAL)
Author(s)/Organisation(s)	Yuliya Kharchenko, Robert Miskuf, Kristína Duchoňová, Stanislava Drusková (PEDAL)
Contact Email	r.miskuf@pedal-consulting.eu , k.duchonova@pedal-consulting.eu , s.druskova@pedal-consulting.eu
Contributor(s)	All Partners
Work Package/Task	WP7, Task 7.1 Dissemination and communication activities
Delivery Date	31 May 2026
Actual Delivery Date	31 May 2026
Abstract:	The OPINCHARGE project addresses key challenges in understanding interfacial processes in lithium-ion batteries through the development of advanced operando nanoanalytical techniques and methodologies. Bringing together 10 organisations from 7 countries, the consortium combined expertise in chemical-based, isotope-based, and physics-based analytical approaches, including X-ray scattering, enhanced Raman, STEM-EELS & EDX, FIB-SIMS, neutron imaging, OEMS, and NMR. In parallel, AI and Machine Learning tools were integrated to improve data acquisition and analysis processes. Open Science practices, data sharing, and scientific collaboration have been central elements of the project, supporting the objectives of the Battery2030+ initiative and the broader European battery research ecosystem. Over the 36-month project duration, dissemination, communication, and clustering activities contributed to increasing the visibility of the project and promoting its scientific results among academia, industry, policymakers, and the wider public. This deliverable presents the final version of the Communication and Dissemination Plan (CDP), including the communication strategy, dissemination tools and channels, stakeholder engagement activities, collaboration with related initiatives, implemented dissemination actions, and monitoring of key performance indicators achieved during the project lifetime.

Document Revision History			
Date	Version	Author/Contributor/Reviewer	Summary of Main Changes
30/05/2025	V.01	Yuliya Kharchenko, Robert Miskuf (PEDAL)	Updated D7.1, including monitoring of the C&D activities.
16/07/2025	V.02	Yuliya Kharchenko, Robert Miskuf (PEDAL)	Updated D7.1 submitted to LIST for comments.
21/07/2025	V.03	Santhana Eswara Moorthy (LIST)	Review before submission of updated version at M24.
15/05/2026	V.04	Kristína Duchoňová, Stanislava Drusková (PEDAL)	Updated D7.1 in final version submitted to all partners for review.
29/05/2026	V0.5	Birger Horstmann, Lukas Köbbing, Dennis Kopljar (DLR), Christian Wolff (DFKI), Juan Miguel López del Amo (CIC ENERGIGUNE), Santhana Eswara, Sayantan Sharma (LIST), Wieland Corts, Toka Matar (FZJ), Sigita Trabesinger (PSI), Beñat Larrarte, Diego del Olmo (CIDETEC), Ece Arslan Irmak (THERMO)	Review by all partners.
31/05/2026	V1.0	Kristína Duchoňová (PEDAL), Santhana Eswara (LIST)	Final version.

Dissemination Level and Nature of the Deliverable		
PU	Public	Public
Nature	R = Report, E = Ethics or, O = Other	R

OPINCHARGE Consortium			
#	Participant Organisation Name	Short Name	Country
1	LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY (LIST)	LIST	LU
2	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS (CNRS)	CNRS	FR
3	CENTRO DE INVESTIGACION COOPERATIVA DE ENERGÍAS ALTERNATIVAS FUNDACION, CIC ENERGIGUNE FUNDAZIOA (CIC ENERGIGUNE)	CIC ENERGIGUNE	ES
4	DEUTSCHES ZENTRUM FÜR LUFT - UND RAUMFAHRT EV (DLR)	DLR	DE
5	DEUTSCHES FORSCHUNGSZENTRUM FÜR KUNSTLICHE INTELLIGENZ GMBH (DFKI)	DFKI	DE
6	FEI ELECTRON OPTICS BV (THERMO)	THERMO	NL
7	FUNDACION CIDETEC (CIDETEC)	CIDETEC	ES
8	FORSCHUNGSZENTRUM JULICH (FZJ)	FZJ	DE

9	PEDAL CONSULTING SRO (PEDAL)	PEDAL	SK
10	PAUL SCHERRER INSTITUT (PSI)	PSI	CH

NOTICE

Funded by the European Union under grant agreement number 101104032. Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.

OPINCHARGE

Grant Agreement: 101104032.

Call: HORIZON-CL5-2022-D2-01.

Topic: HORIZON-CL5-2022-D2-01-02.

Type of action: HORIZON Research and Innovation Actions.

Granting authority: European Climate, Infrastructure and Environment Executive Agency.

Grant managed through EU Funding & Tenders Portal: Yes (eGrants).

Project starting date: fixed date: 1st June 2023.

Project end date: 31st May 2026.

Project duration: 36 months.

Copyright notice: © OPINCHARGE Consortium, 2023 - 2026.

Reproduction is authorised provided the source is acknowledged.

List of Contents

1	Introduction	10
2	About the OPINCHARGE Project.....	11
3	Communication and Dissemination Strategy	12
3.1	Overview	12
3.2	Objectives.....	13
3.3	Target Audience	14
3.4	Key Messages	16
3.5	Key Assets.....	19
4	OPINCHARGE Brand Identity	20
5	Dissemination and Communication Tools and Channels	22
5.1	Activities and Dissemination Channels	23
5.2	Promotional Materials	25
5.3	Video Content.....	32
5.4	Digital Presence	33
5.4.1	OPINCHARGE Website	33
5.4.2	The OPINCHARGE Newsletter	34
5.4.3	Social Media Accounts	35
5.5	Events.....	37
5.5.1	OPINCHARGE Events.....	37
5.5.2	External Events	39
6	Collaboration with Other Projects	44
7	Publications	47
7.1	Scientific Publications	47
7.2	Non-Scientific Publications.....	48
8	Monitoring, Evaluation and Reporting	49
8.1	Monitoring and Evaluation.....	49
8.1.1	Analytics & Monitoring	49
8.2	Reporting.....	56
9	Implemented Activities and Conclusions	58
	Annexes	60

List of Figures

Figure 1 OPINCHARGE Stakeholder Mapping and Types of Stakeholder Engagement.....	16
Figure 2 OPINCHARGE Key Impact Pathways (KIPs) Overview.	19
Figure 3 OPINCHARGE Logo and Logo Variants.....	20
Figure 4 OPINCHARGE Color Palette.....	20
Figure 5 OPINCHARGE Typography.	21
Figure 6 OPINCHARGE Communication Activities.	23
Figure 7 OPINCHARGE Brochure.	25
Figure 8 OPINCHARGE Brochure.	26
Figure 9 OPINCHARGE Poster.....	27
Figure 10 OPINCHARGE Factsheet.....	28
Figure 11 OPINCHARGE Roll-up.....	29
Figure 12 OPINCHARGE Presentation.	30
Figure 13 OPINCHARGE Deliverable Template.....	31
Figure 14 OPINCHARGE PowerPoint Template.	31
Figure 15 OPINCHARGE Project Meeting Template.	32
Figure 16 OPINCHARGE Video.....	33
Figure 17 OPINCHARGE Website.....	34
Figure 18 Battery2030+ Page.	34
Figure 19 Newsletter Subscription Section.	35
Figure 20 OPINCHARGE LinkedIn.....	36
Figure 21 OPINCHARGE Twitter (X).	36
Figure 22 OPINCHARGE YouTube Channel.....	37
Figure 23 Banner for Webinar 1: SAXS/WAXS Techniques in Battery Research.....	39
Figure 24 OPINCHARGE and Large-Scale Research Initiative.	44
Figure 25 Overview of OPINCHARGE website performance and user engagement based on Google Analytics data collected throughout the project lifetime.....	50
Figure 26 Overview of traffic acquisition channels and website engagement metrics for the OPINCHARGE website based on Google Analytics data.	50
Figure 27 LinkedIn Analytics.....	51
Figure 28 Newsletter Sign-Up Window.....	53

List of Tables

Table 1 Overview of the OPINCHARGE C&D Strategy.....	13
Table 2 OPINCHARGE's Target Audience.	14
Table 3 OPINCHARGE Key Messages.	16
Table 4 OPINCHARGE Tools and Channels.	22
Table 5 OPINCHARGE Promotional Material and Graphical Identity.....	24
Table 6 OPINCHARGE Online Presence.....	24
Table 7 OPINCHARGE Events.....	24
Table 8 OPINCHARGE Publications.	24
Table 9 OPINCHARGE Target Audiences and Objectives for Social Media Channels.	35
Table 10 OPINCHARGE Webinar Series organised in Collaboration with Battery2030+ Projects.	38
Table 11 External Events Attended by OPINCHARGE Partners.	39
Table 12 Website Analytics.	49
Table 13 Social Media Analytics.	51
Table 14 Communication Content Production Overview.	52
Table 15 Newsletter Analytics.....	52
Table 16 Media Outlets and Articles Analytics.	53
Table 17 OPINCHARGE Video Analytics.	54
Table 18 Scientific Publications Analytics.	54
Table 19 Scientific Dissemination Workshops Analytics.	56
Table 20 Number of Attended Conferences (Oral Presentations and Posters).....	56
Table 21 Reporting Tools and Frequency.....	57

List of Abbreviations and Acronyms

Abbreviation / Acronym	Full Title
ABP	Advanced Battery Power
AI	Artificial Intelligence
BEPA	Batteries European Partnership Association
BIG-MAP	Battery Interface Genome – Materials Acceleration Platform
BATT4EU	Batteries European Partnership
C&D	Communication and Dissemination
CA	Consortium Agreement
CDP	Communication and Dissemination Plan
CEI	Cathode Electrolyte Interphase
CINEA	European Climate, Infrastructure and Environment Executive Agency
DLR	Deutsches Zentrum für Luft- und Raumfahrt
DMP	Data Management Plan
ECS	Electrochemical Society
ESP	Exploitation and Sustainability Plan
EU	European Union
FAIR	Findable, Accessible, Interoperable and Reusable
FIB-SIMS	Focused Ion Beam – Secondary Ion Mass Spectrometry
GA	Grant Agreement
GDPR	General Data Protection Regulation
HEU	Horizon Europe
KER	Key Exploitable Result
KPI	Key Performance Indicator
KIP	Key Impact Pathway
LIST	Luxembourg Institute of Science and Technology
MAP	Materials Acceleration Platform
ML	Machine Learning
NGO	Non-Governmental Organisation
NMR	Nuclear Magnetic Resonance
OA	Open Access
OEMS	Online Electrochemical Mass Spectrometry
ORE	Open Research Europe
OPINCHARGE	OPerando analyses and modelling of INTERface dynamics and CHARGE transport in lithium-ion batteries
PR	Project Result

R&I	Research and Innovation
SEI	Solid Electrolyte Interphase
SMA	Social Media Account
STEM-EELS	Scanning Transmission Electron Microscopy – Electron Energy Loss Spectroscopy
STEM-EDX	Scanning Transmission Electron Microscopy – Energy Dispersive X-ray Spectroscopy
TG	Target Group
WP	Work Package
XRR	X-ray Reflectivity

1 Introduction

OPINCHARGE is a **Horizon Europe Research and Innovation Action**, supported by the **European Climate, Infrastructure and Environment Executive Agency (CINEA)**, under the powers delegated by the **European Commission** and coordinated by the **Luxembourg Institute of Science and Technology (LIST)**. This deliverable presents the final version of the CDP (Communication and Dissemination Plan) for OPINCHARGE, outlining the communication and dissemination strategy implemented throughout the project lifetime to maximise the visibility, outreach, and impact of the project results.

The main objective of OPINCHARGE's CDP is to define the actions and tools used for the promotion of the project's vision, activities, and results to a wide range of stakeholders. The goal is to engage relevant audiences and strengthen scientific collaboration at local, national, and international levels, as this represents a key aspect of the BIG-MAP objectives of the [BATT4EU partnership](#) and the [Battery2030+](#) initiative. Interactions with Battery2030+ and related projects contributed to strengthening synergies between projects and supporting the common goals of large-scale European battery research initiatives.

The CDP also supports the consortium's efforts to increase awareness of OPINCHARGE activities and results among the identified stakeholder groups. This report provides an overview of the communication and dissemination activities implemented throughout the project and their contribution to the visibility, outreach, and long-term impact of OPINCHARGE.

Furthermore, it contributes to the consortium's efforts related to the exploitation and sustainability of the assets developed during the project. However, Deliverable D7.2 – Exploitation and Sustainability Plan (ESP) addresses exploitation, sustainability, and intellectual property management activities in greater detail due to the specific nature of the activities under Task 7.2 Exploitation of Project Results and Task 7.3 IP Management Strategy.

This document is structured as follows:

- **Chapters 1 and 2** provide an overview of the OPINCHARGE project and the communication and dissemination framework.
- **Chapter 3** presents the target audience, key messages, and key assets.
- **Chapter 4** presents the OPINCHARGE brand identity.
- **Chapter 5** describes the dissemination and communication tools and channels, promotional materials, video content, and digital presence of OPINCHARGE, including the website, newsletters, and social media accounts, as well as project and external events.
- **Chapter 6** describes the OPINCHARGE collaboration with relevant projects and initiatives.
- **Chapter 7** summarises the scientific and non-scientific publications generated within the project.

The second part of the document focuses on reporting activities and evaluating achievements against KPIs:

- **Chapter 8** presents the monitoring and evaluation methods used to track activities and provides an assessment of the communication and dissemination KPIs achieved during the project lifetime.
- **Chapter 9** summarises the communication and dissemination activities implemented throughout the project lifetime and presents the main conclusions and lessons learned.

The final version of the CDP also reflects the monitoring results, lessons learned, and communication and dissemination achievements obtained throughout the project lifetime.

2 About the OPINCHARGE Project

OPINCHARGE stands for **OP**erando analyses and modelling of **IN**terface dynamics and **CHARGE** transport in lithium-ion batteries. The project focused on the development of advanced operando nanoanalytical techniques and methodologies to improve the understanding of interfacial processes in batteries at an unprecedented level of detail. The consortium brought together **10 organisations from 7 countries**, combining complementary expertise and infrastructure to address key challenges in battery interface characterisation and modelling.

The project activities were structured around **three main pillars of technique innovation**: chemical-based, isotope-based, and physics-based approaches. The main operando techniques addressed within the project included X-ray scattering, enhanced Raman spectroscopy, STEM-EELS & EDX, FIB-SIMS, neutron imaging, OEMS, and NMR. In parallel, the consortium integrated AI and Machine Learning support to improve data acquisition and analysis processes, contributing to more efficient and meaningful data processing.

Data treatment and sharing have been central components of the project, as **Open Science practices** and **scientific collaboration** are recognised as key elements of the BIG-MAP objectives, the BATT4EU partnership, and the Battery2030+ initiative.

The **36-month project** was organised into **7 work packages** distributed among the consortium partners according to their expertise, with LIST acting as the project coordinator. Dissemination, communication, and exploitation activities contributed to increasing the visibility and impact of the project results through the active promotion of project activities, outputs, and scientific achievements.

PEDAL, as the leader of WP7, coordinated the dissemination and communication activities throughout the project lifetime (M1–M36), supporting the implementation of the communication and dissemination strategy and contributing to the visibility and outreach of OPINCHARGE. The implementation of the dissemination strategy relied on the active involvement of all consortium partners, who contributed to communication activities, dissemination actions, stakeholder engagement, scientific publications, and participation in external events.

Throughout the project, the consortium followed predefined dissemination and communication guidelines to support stakeholder engagement, visibility of results, and appropriate management of Key Exploitable Results (KERs). The communication approach was regularly adjusted based on project developments, communication needs, and lessons learned from implemented activities.

The Communication and Dissemination Plan was initially developed at M6 and updated at M24. This final version at M36 reflects the communication and dissemination activities implemented throughout the entire project lifetime, including monitoring results and KPI achievements. The OPINCHARGE website, launched at M2, will remain available for at least 3 years after the end of the project, supporting the long-term visibility and accessibility of project results, publications, and dissemination materials.

3 Communication and Dissemination Strategy

The communication and dissemination strategy was designed to support the effective promotion of OPINCHARGE activities, results, and achievements throughout the project lifetime. It combined appropriate tools, channels, and communication actions tailored to the identified target audiences and aligned with the project's progress.

3.1 Overview

Internal communication approach:

Effective internal communication played an important role in supporting the implementation of dissemination and communication activities throughout the project. OPINCHARGE consortium partners regularly shared information, updates, and dissemination-related materials to ensure coordinated communication and timely reporting of activities.

At the beginning of the project, the consortium established regular WP7 discussions and coordination exchanges to support the planning of dissemination and communication activities, updates to the CDP, and coordination of content creation activities. Throughout the project lifetime, these exchanges contributed to a more systematic C&D approach across the consortium and supported partner engagement in dissemination activities.

In addition to regular online coordination, the consortium met in person approximately every six months during project meetings. These meetings supported more effective communication between partners, facilitated dissemination planning, and strengthened collaboration across work packages.

The project coordinator established a shared **SharePoint workspace** to facilitate internal communication, document exchange, and collaborative work among partners. The platform was used to store project documentation, dissemination materials, reporting templates, and communication assets. It also allowed partners to upload and update content when relevant. Over time, SharePoint became a central platform for dissemination reporting and coordination activities within the consortium.

External communication and dissemination approach:

The consortium communicated and disseminated project activities and results through media channels, scientific and non-scientific publications, conference presentations, workshops, exhibitions, and collaboration with European initiatives and industry stakeholders. Project results were promoted through reports, scientific publications, technical articles, newsletters, social media activities, and the [OPINCHARGE website](#).

C&D activities also supported **Open Science** principles by increasing the visibility and accessibility of publicly available project results and publications while facilitating scientific exchange among relevant stakeholder groups.

All consortium partners contributed to C&D activities throughout the project lifetime. Where relevant, partners translated selected communication materials into national languages and supported outreach towards local stakeholder communities, media channels, and scientific networks. C&D

activities were monitored through the **Dissemination and Communication Tracker** coordinated by PEDAL.

Throughout the project lifetime, the C&D approach was regularly reviewed and adjusted based on project developments, KPI monitoring results, stakeholder engagement, and collaboration opportunities with related European initiatives and projects. Collaboration with sister projects and initiatives under Battery2030+ additionally supported the visibility, outreach, and dissemination potential of OPINCHARGE activities and results.

To support the implementation and monitoring of the communication and dissemination strategy, the key elements presented in Table 1 were regularly reviewed throughout the project lifetime.

Table 1 Overview of the OPINCHARGE C&D Strategy

WHY?	TO WHOM?	WHAT?	HOW?	WHO?	WHEN?	HOW MUCH?
Objectives	Target audience	Key messages	Channels and Tools	Contributors	Schedule	Assessment

3.2 Objectives

The OPINCHARGE CDP defined the communication and dissemination framework implemented throughout the project lifetime to support the visibility, outreach, and impact of the project results. The strategy supported the coordination of consortium-wide C&D activities and contributed to the dissemination of OPINCHARGE results through clustering activities, workshops, webinars, conferences, publications, and collaboration with relevant European initiatives.

Following the **Open Science** approach of the project, the consortium supported the visibility and accessibility of project results while balancing openness with the appropriate protection of **Key Exploitable Results (KERs)**. The CDP also defined the overall communication approach, partner involvement, dissemination responsibilities, and monitoring activities implemented throughout the project duration.

The main objectives of the OPINCHARGE communication and dissemination strategy were the following:

1. Increase the visibility of the project and awareness of OPINCHARGE results.
2. Support communication activities targeted towards relevant stakeholder groups and audiences.
3. Promote the dissemination and accessibility of project results beyond the consortium.
4. Maintain the OPINCHARGE website as a central platform for project news, results, publications, and events.
5. Strengthen synergies with Horizon Europe initiatives and Battery2030+ activities through joint dissemination and collaboration activities.
6. Develop and utilise promotional and dissemination materials, including brochures, posters, presentations, factsheets, newsletters, and videos.

7. Support communication activities through social media, press releases, website articles, and newsletters.
8. Promote scientific dissemination through conferences, workshops, webinars, and scientific publications.
9. Establish and maintain a consistent visual and brand identity for the project.

To support these objectives, the consortium implemented a structured C&D approach focused on stakeholder engagement, content creation, dissemination monitoring, KPI tracking, and collaboration with relevant European initiatives and projects.

Throughout the project lifetime, the implementation of the CDP evolved through three main phases:

- an awareness-raising phase (M1–M12),
- a scientific cooperation phase (M1–M24),
- and an exploitation-focused phase (M24–M36).

3.3 Target Audience

The OPINCHARGE communication and dissemination strategy targeted a broad range of stakeholder groups relevant to the battery research and innovation ecosystem. The objective was to communicate project activities, scientific results, and key achievements to audiences with different levels of technical expertise and interest, thereby maximising the visibility, outreach, and impact of the project.

The main stakeholder groups identified as the most relevant for OPINCHARGE are presented in Table 2.

Table 2 OPINCHARGE's Target Audience.

Target Group	Description	Interest
Academia & Scientific Community	Students, professors, researchers, and scientists involved in battery research, electrochemistry, interface dynamics, and the study of SEI and CEI interphases.	The scientific results, datasets, and methodologies generated within the project are relevant for further research activities, scientific collaboration, and the development of future battery-related innovations.
Battery industry	Battery developers, manufacturers, and industrial stakeholders involved in battery design, production, and performance optimisation.	Project outputs, including advanced analytical techniques, modelling approaches, and high-throughput analysis methods, may contribute to improving battery performance, safety, and efficiency, while supporting innovation within the European battery industry.
Engineering and consultancy firms	Engineering companies and consultancy firms collaborating with battery manufacturers on innovation activities and industrial problem-solving.	The development of new tools, methodologies, and analytical approaches may support companies in addressing production bottlenecks and developing

Target Group	Description	Interest
		improved battery-related products and technologies.
End users	End users from sectors relying on battery technologies, including e-mobility, consumer electronics, renewable energy systems, biomedical devices, and electronics applications.	Improvements in battery performance, durability, and safety may contribute to the development of more reliable, efficient, and higher-performing technologies.
Policymakers	Government officials, policymakers, and experts involved in the development of policies and regulatory frameworks related to energy, sustainability, and battery technologies.	Policymakers may benefit from a better understanding of battery-related research developments, analytical methodologies, and sustainability aspects relevant to the future development of the battery sector.
General Public	The general public includes individuals interested in battery technologies, innovation, sustainability, and emerging energy solutions.	Communication activities may contribute to increasing public awareness and understanding of battery technologies, their applications, and their relevance for everyday life and sustainable development.
Media	Media outlets, journals, and communication channels interested in battery technologies, sustainability, and scientific innovation.	Media stakeholders may be interested in project news, scientific achievements, research developments, and collaboration activities related to battery innovation and sustainability.

OPINCHARGE applied the Stakeholder Classification Model developed by Emerson Wagner Mainardes, Helena Alves, and Mário Raposo. The model (Figure 1) categorises stakeholder groups based on parameters such as their level of influence, interest in the project outcomes, participation in the project, and overall relevance to project activities.

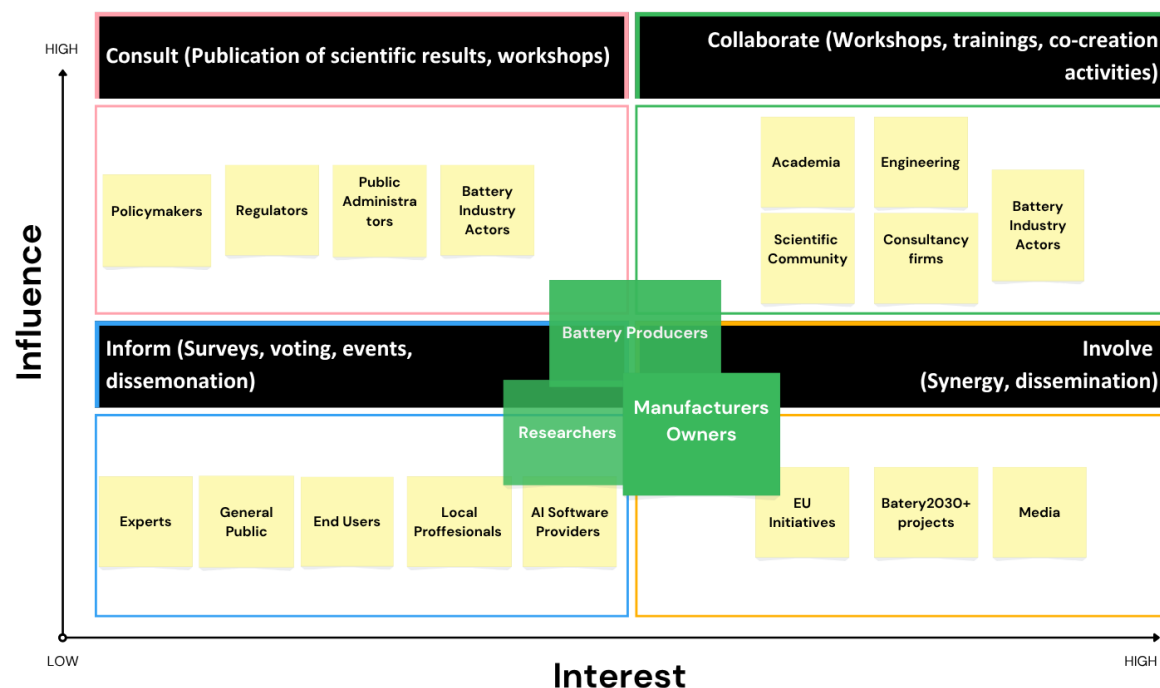


Figure 1 OPINCHARGE Stakeholder Mapping and Types of Stakeholder Engagement.

3.4 Key Messages

The key messages communicated to the target groups are essential components of an effective communication and dissemination strategy. OPINCHARGE's key messages have been updated and optimised based on dissemination monitoring results and stakeholder engagement activities.

Table 3 outlines the project's key messages for each target group and their corresponding needs:

Table 3 OPINCHARGE Key Messages.

Target Group	Needs	Messages
Academic Community (PhD candidates, Professors, BSc students, MSc students).	- To keep up with scientific and technological developments in the battery sector. - To access innovative educational approaches and training opportunities related to battery research and technologies. - To identify educational gaps and strengthen collaboration among stakeholders. - To access data and laboratory methodologies supporting further research and innovation activities.	- Promote best practices in battery research, interface dynamics, and the study of SEI and CEI interphases. - Inform the academic community about novel technologies and trends in the energy sector. - Support education and training activities related to battery technologies. - Strengthen scientific and technical skills within the battery research community.

Target Group	Needs	Messages
		● Increase awareness of advanced data and laboratory methodologies. ● Support the further use and development of project results within battery research and electrochemistry-related fields. ● Contribute to knowledge exchange and capacity building among PhD students and early-stage researchers.
Scientific Community (engineers, experts, designers, environmental associations).	● To keep up with research and development activities related to new battery technologies. ● To better understand interfacial processes and dynamics in batteries. ● To increase understanding of scientific developments related to battery technologies.	● Encourage interdisciplinary collaboration in battery research. ● Promote research and innovation results generated within the project. ● Support knowledge transfer and innovation activities at the scientific level. ● Support scientific exchange and discussion to address technological challenges in battery research. ● Increase understanding of interfacial processes in batteries at an unprecedented level of detail.
Battery Industry	● To improve battery design, efficiency, and performance. ● To access project outputs, including analytical tool innovations and high-throughput analysis methods. ● To stay informed about battery research trends and emerging technologies. ● To strengthen collaboration with battery scientists and researchers. ● To support employee training and innovation uptake.	● Project outputs, including analytical tool innovations and high-throughput analysis methods, may contribute to improving battery performance, safety, and efficiency within the European battery industry. ● Inform industrial stakeholders about novel technologies and trends in the energy and battery sectors. ● Strengthen collaboration between industry, academia, research organisations, and relevant stakeholders. ● Support the exchange of knowledge and best practices related to battery innovation and research.
Engineering and	● To address technical and innovation-related challenges in collaboration with battery manufacturers.	● The development of new tools, methodologies, and analytical approaches may support companies in addressing production bottlenecks and

Target Group	Needs	Messages
Consultancy Firms	● To benefit from the know-how developed within the project. ● To gain access to new tools, methodologies, and analytical approaches.	developing improved battery-related products and technologies.
End Users	● To benefit from batteries with improved performance, durability, and stability. ● To reduce performance-related limitations of battery-powered technologies. ● To access technologies with enhanced features and efficiency.	● Highlight the societal and environmental benefits of battery innovation. ● Increase awareness of developments and trends in the battery sector. ● Promote a better understanding of battery technologies and their applications in everyday life.
Policymakers	● To access data and information related to current needs and challenges in the battery sector. ● To support the development of policies contributing to energy and sustainability targets.	● OPINCHARGE contributes to research and innovation activities supporting the competitiveness of the European battery sector. ● The project contributes to more informed policy discussions through analytical techniques, data analyses, degradation models, and research results. ● OPINCHARGE supports the development of new research methodologies and approaches related to battery technologies.
General Public	● To increase awareness and understanding of battery technologies and innovation. ● To access understandable information about the societal relevance of battery research.	● Communication activities contribute to increasing public understanding of battery technologies, innovation, and their relevance for sustainable development and everyday applications.
Media	● To access relevant information about battery innovation, sustainability, and scientific developments.	● Provide information about project activities, scientific achievements, collaboration initiatives, and developments related to battery innovation and sustainability.

3.5 Key Assets

The OPINCHARGE project advanced the understanding of interfacial processes in batteries through the development and application of operando analytical techniques, modelling approaches, and data analysis methodologies. The project results addressed relevant needs of the battery research and innovation community while supporting scientific collaboration and knowledge exchange across the European battery ecosystem.

The following key assets and outcomes were identified throughout the project lifetime:

- **Outcome 1:** Development and optimisation of advanced methods for studying electrode/electrolyte interfaces in liquid-based batteries, as well as solid-state and buried interfaces.
- **Outcome 2:** Development of models and analytical approaches supporting the understanding of battery interface degradation processes.
- **Outcome 3:** Improved understanding of the formation and evolution of battery interfaces, contributing to research on battery lifetime, safety, and performance, while supporting future battery innovation activities within Europe.

In addition to scientific and technical results, the project also contributed to knowledge exchange, Open Science practices, scientific dissemination, and collaboration activities with related European initiatives and projects.

OPINCHARGE generated impact beyond the immediate scope and duration of the project through scientific dissemination, stakeholder engagement, collaboration activities, and the long-term accessibility of project results and materials.

Figure 2 presents an overview of the OPINCHARGE Key Impact Pathways (KIPs).

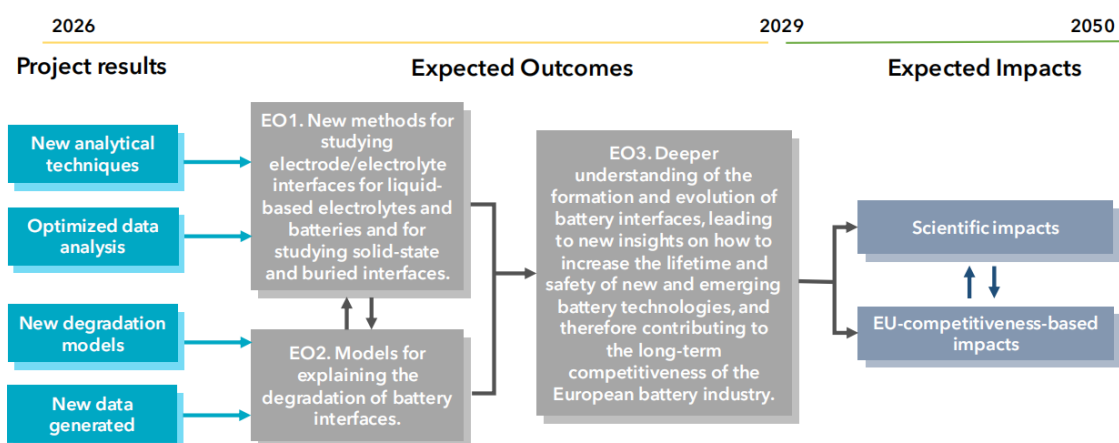


Figure 2 OPINCHARGE Key Impact Pathways (KIPs) Overview.

4 OPINCHARGE Brand Identity

OPINCHARGE Brand Guidelines were created at the beginning of the project in **M1** and further updated in **M2** in alignment with the visual guidelines of Battery2030+. The main objective of the brand identity was to establish a distinctive visual identity for the project and support a consistent communication approach across all dissemination and communication activities.

The developed Brand Guidelines define the project colour palette, typography, font codes, logo variants, and visual elements to be used across online communication channels, dissemination materials, and offline events.

Additionally, the consortium defined the OPINCHARGE motto through an internal brainstorming process and a partner survey coordinated by PEDAL. The selected project motto was: **“Reinventing the way we invent batteries.”**

The Brand Guidelines are in Annex 2 to D7.1.

The logo was selected by the consortium and used across dissemination and communication materials throughout the project lifetime.

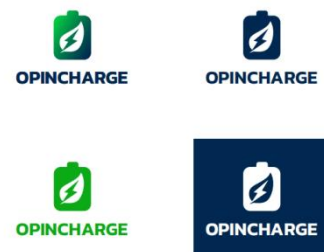


Figure 3 OPINCHARGE Logo and Logo Variants.

The visual identity was developed in line with consortium preferences and adapted to the Battery2030+ visual requirements.

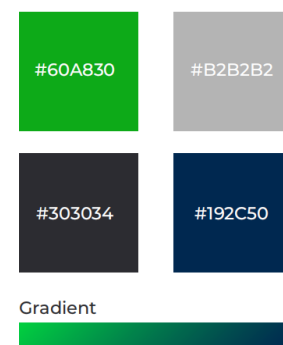


Figure 4 OPINCHARGE Color Palette.

The selected typography and font codes were consistently used across project communication and dissemination materials.

INTER

AaBbCc

AaBbCc

AaBbCc

AaBbCc

Figure 5 OPINCHARGE Typography.

5 Dissemination and Communication Tools and Channels

The OPINCHARGE CDP implemented multiple dissemination and communication tools and channels to ensure that project activities, results, and outputs reached a wide range of stakeholder groups throughout the project lifetime.

The communication and dissemination approach evolved through three main phases:

- I. **An awareness-raising phase (M1–M12)** focused on establishing the project’s communication channels, visual identity, and initial stakeholder community.
- II. **A scientific cooperation phase (M1–M24)** focused on strengthening scientific dissemination, collaboration with related projects and initiatives, and increasing the visibility and accessibility of research outputs.
- III. **An exploitation-focused phase (M24–M36)** focused on supporting the dissemination, uptake, and future exploitation of project results through workshops, webinars, clustering activities, and stakeholder engagement actions.

Table 4 presents the main OPINCHARGE dissemination and communication tools and channels, including their objectives, target audiences, and implementation approaches.

Table 4 OPINCHARGE Tools and Channels.

WHAT?	TO WHOM?	HOW?	Type of Activity
Public results	All	Project website, social media	Dissemination
Basic project information and main public results	All	Press releases	Communication
Project status and upcoming activities	Website subscribers, industry, academia	Project newsletter	Communication
Project scientific results	Industry, academia	Scientific papers	Dissemination
Scientific data supporting Open Science practices, replication, and research quality	Industry, academia	Open Access repositories for research data	Dissemination
Main public results and best practices	Industry, academia	Scientific dissemination workshops (in collaboration with sister projects)	Dissemination
Project scientific results	Industry, academia	Conferences, trade fairs, exhibitions	Dissemination

5.1 Activities and Dissemination Channels

The OPINCHARGE dissemination activities focused on Open Access to peer-reviewed papers. This brought additional benefits, such as greater transparency in the research process, better opportunities for scientific collaboration, and increased efficiencies, as research did not need to be repeated but could instead be shared, reproduced, and replicated. Project partners contributed to peer-reviewed scientific publications throughout the project lifetime. Following the project, the impact of these publications can continue to be measured through citations.

The consortium also established scientific and technical cooperation with projects funded under the same topic, HORIZON-CL5-2022-D2-01-02, as well as with other relevant European initiatives and projects. The project contributed to common dissemination activities, joint technical and scientific workshops, and collaboration activities supporting knowledge exchange and dissemination of results.

The OPINCHARGE consortium was part of a dynamic research and innovation community focused on battery monitoring technologies. Consequently, several partners actively contributed to initiatives such as BIG-MAP and BATT4EU. This created additional opportunities to improve the outreach of the project through collaborative presentations, workshops, clustering activities, and technical knowledge exchange.

The following dissemination channels and activities were implemented throughout the project lifetime:

- **Consortium networks** supported the dissemination of project outcomes.
- **Third-party events** enabled OPINCHARGE partners to participate in industrial exhibitions, trade fairs, conferences, and workshops in the fields of batteries, energy, and renewable technologies.
- **Project events, such as workshops, awareness-raising activities, mutual learning workshops, and policy roundtables, supported dissemination and stakeholder engagement throughout the project lifetime.**
- **Communication activities** implemented through the OPINCHARGE website, social media channels, and collaboration with related projects supported the dissemination of OPINCHARGE results and activities.

Furthermore, Figure 6 provides an overview of the tools, channels, and dissemination activities implemented throughout the project lifetime.

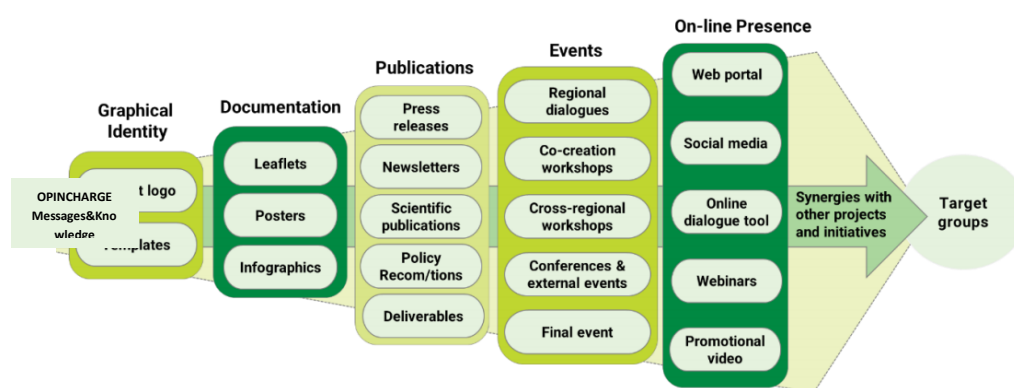


Figure 6 OPINCHARGE Communication Activities.

The OPINCHARGE promotional materials and graphical identity are listed in Table 5.

Table 5 OPINCHARGE Promotional Material and Graphical Identity.

The OPINCHARGE promotional materials and graphical identity include:	
● Project logo ● Project visual and graphical identity ● Trifold leaflet ● Poster	● Presentation template ● Publication template ● Letterheads ● Promotional video

Additional ad hoc promotional materials were also developed throughout the project lifetime when needed.

The OPINCHARGE online presence was supported through the tools and channels listed in Table 6.

Table 6 OPINCHARGE Online Presence.

The OPINCHARGE online presence includes:	
● A web portal ● Newsletter ● Press releases (articles, social media posts)	● A LinkedIn account ● A YouTube channel ● A Twitter (X) account

To support Open Science practices, replication, and the quality of research, the consortium utilised the Zenodo repository to provide Open Access to selected research data and publications for stakeholders from academia and industry.

Table 7 provides an overview of the OPINCHARGE events and their types.

Table 7 OPINCHARGE Events.

The OPINCHARGE events comprise:	
● OPINCHARGE-organised events ● Representation of OPINCHARGE at external events	● Events supporting synergies with Battery2030+ projects ● Trainings, technical and policy workshops, and webinars

Table 8 provides an overview of the OPINCHARGE publications and their types.

Table 8 OPINCHARGE Publications.

The OPINCHARGE publications included:	
● Project deliverables. ● Scientific publications related to the project.	● Non-scientific publications, such as articles and press releases related to the project.

- Other publications in different media channels.

5.2 Promotional Materials

The promotional materials of OPINCHARGE were developed during the early stages of the project. The materials were utilised during internal and external project events to support project visibility and attract relevant stakeholders. The main OPINCHARGE promotional materials developed at the beginning of the project included presentations, brochures, posters, factsheets, roll-ups, and promotional videos.

All promotional materials (Figures 7 to 15) were made available on SharePoint and approved by the consortium.



Figure 7 OPINCHARGE Brochure.



About OPINCHARGE

Operando analyses and modelling of Interface dynamics and CHARGE transport in lithium-ion batteries – OPINCHARGE project is an ambitious research initiative focused on advancing the understanding and optimization of lithium-ion batteries (LIBs).

They are widely used in various applications such as electric vehicles and portable electronics.

The project brings together a consortium of leading organisations, such as:

- research institutions
- experts in the field of battery technology
- consulting companies

OPINCHARGE – Innovation in producing safe and long-lasting batteries

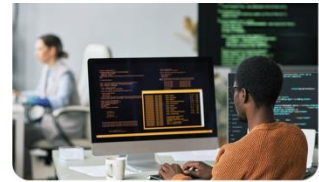
Our goal

The main objective of OPINCHARGE is to investigate the fundamental processes and degradation mechanisms that occur at the interfaces within LIBs.

These interfaces, where active materials, electrolytes, and other components meet, play a crucial role in the performance and lifespan of the batteries.

By gaining a deeper understanding of the interfacial phenomena, the project aims to improve the design and functionality of LIBs, leading to safer, more efficient, and longer-lasting battery systems.

Ultimately, the OPINCHARGE project strives to contribute to the advancement of battery technology, supporting the transition towards a greener and more energy-efficient future.



Multidisciplinary approach

To achieve our goal, OPINCHARGE uses:

- experimental techniques,
- advanced characterization methods, computational modeling.

Key areas of research:

- Interface Dynamics And Evolution
- Charge Transport Characterization
- Isotopes-Based Interfacial Characterization

By combining these research efforts, the OPINCHARGE project aims to provide a holistic understanding of LIB interfaces, from atomic and nanoscale interactions to mesoscale transport phenomena. The insights gained from this research will enable the development of innovative battery designs and materials, leading to safer, higher-performing, and more sustainable lithium-ion batteries for a wide range of applications.

Figure 8 OPINCHARGE Brochure.


OPINCHARGE

Innovation in producing safe and long-lasting batteries

Reinventing the way we invent batteries

Advancing the understanding and optimization of lithium-ion batteries

Developing nano-scale and sub-nano-scale techniques and methodologies.

Improving the design and functionality – safer and long lasting batteries.


 ThermoFisher
SCIENTIFIC

 cidetec
energy storage

 CIC energigUNE
POWER OF NUCLEAR RESEARCH
A TECHNOLOGY ALLIANCE

 JÜLICH
Forschungszentrum

 PEDAL
CONVERTING

 dfki
ai

 PAUL SCHREIBER INSTITUT
FEI

 Funded by
the European Union

The OPINCHARGE project "Operando analyses and modeling of interface dynamics and CHARGE transport in lithium-ion batteries" is funded by the European Union under grant agreement number 101104032. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.

Figure 9 OPINCHARGE Poster.



OPINCHARGE

Reinventing the way we invent batteries

Battery innovation has played a major role in the development of new energy production and transport technologies, becoming true enablers of a clean, affordable and secure energy economy. However, innovation is currently being hindered by the lack of understanding of the processes happening at atomic levels in the batteries' interfaces and interphases.

Thus, the OPINCHARGE consortium aims to develop a set of effective operando nanoanalytical techniques and methodologies to understand the interfacial processes in batteries in unprecedented level of detail.

OPINCHARGE is a multidisciplinary research project unlocking the potential of lithium-ion batteries (LIBs) through cutting-edge science and innovation. By unraveling the mysteries of battery interfaces and charge transport, we're shaping the future of energy storage. It is exciting journey of scientific discovery as we revolutionize battery technology for a greener and more sustainable world.

PROJECT ID

Project name: OPERando analyses and modelling of Interface dynamics and CHARGE transport in lithium-ion batteries.
 Project acronym: OPINCHARGE
 Project number: 101104032
 Type of action: HORIZON Research and Innovation Actions
 Call identifier: HORIZON-CL5-2022-D2-01
 EU funding: 4,996,340 EUR
 Project starting date: 1. June 2023
 Duration: 36 months
 Coordinator: LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY (LIST)

CONTACT

-  @OPINCHARGE
-  @opincharge_eu
-  www.opincharge.eu
-  info@opincharge.eu

OPINCHARGE is part of the large-scale BATTERY 2030+ research initiative that aims to invent the batteries of the future by providing breakthrough technologies to the European battery industry.


















**Funded by
the European Union**

Funded by the European Union under grant agreement number 101104032. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.

Figure 10 OPINCHARGE Factsheet.



Reinventing the way we invent batteries

1. Safe and long-lasting batteries
2. Less carbon footprint
3. Climate-neutral energy

- 10 Partners
- 7 Countries
- 36 Months
- 4,99 Million Euros founding

 #OPINCHARGE

 @opincharge_eu

 www.opincharge.eu

 info@opincharge.eu



The OPINCHARGE project "Optimizing analysis and modelling of battery dynamics and CHARGE transport in lithium-ion batteries" is funded by the European Union under grant agreement number 101104032. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (ECIEA). Neither the European Union nor the granting authority can be held responsible for them.

Figure 11 OPINCHARGE Roll-up.

Figure 12 introduces OPINCHARGE's Presentation:



Figure 12 OPINCHARGE Presentation.

A template for OPINCHARGE deliverables was also developed (Figure 13).



Figure 13 OPINCHARGE Deliverable Template.

Figure 14 presents the OPINCHARGE PowerPoint template:



Figure 14 OPINCHARGE PowerPoint Template.

Figure 15 shows the OPINCHARGE project meeting template.



Figure 15 OPINCHARGE Project Meeting Template.

5.3 Video Content

A promotional video was created in M6 to support the visibility of the project and attract the attention of relevant stakeholders and followers using the following elements:

1. Simple and accessible introductory content for the general public;
2. More scientific and technical content presented afterwards;
3. A colour palette incorporating green elements to align with the visual identity of Battery2030+.

All partners were invited to review the video content and provide feedback and suggestions for improvement. The feedback from partners, together with the final video materials, was stored on the OPINCHARGE SharePoint platform.

The video was uploaded to [OPINCHARGE YouTube channel](#), the project website, and the OPINCHARGE social media accounts (LinkedIn and Twitter (X)). A screenshot of the video is presented in Figure 16.



Figure 16 OPINCHARGE Video.

The video was also shared through the [Battery2030+ website](#). Information on the number of views is provided in Chapter 8 – Monitoring, Evaluation, and Reporting.

5.4 Digital Presence

Following the objective of reaching a wide range of stakeholders, OPINCHARGE established a strong online presence through the creation of a website, newsletter, and social media accounts (SMAs).

5.4.1 OPINCHARGE Website

The [OPINCHARGE website](https://www.opincharge.eu/) (<https://www.opincharge.eu/>) was launched in M2 and will remain available for at least 3 years after the end of the project. The main objective of the website is to connect the project with stakeholders and the general public and to provide access to project results, news, publications, and events. Figure 17 presents the OPINCHARGE website.

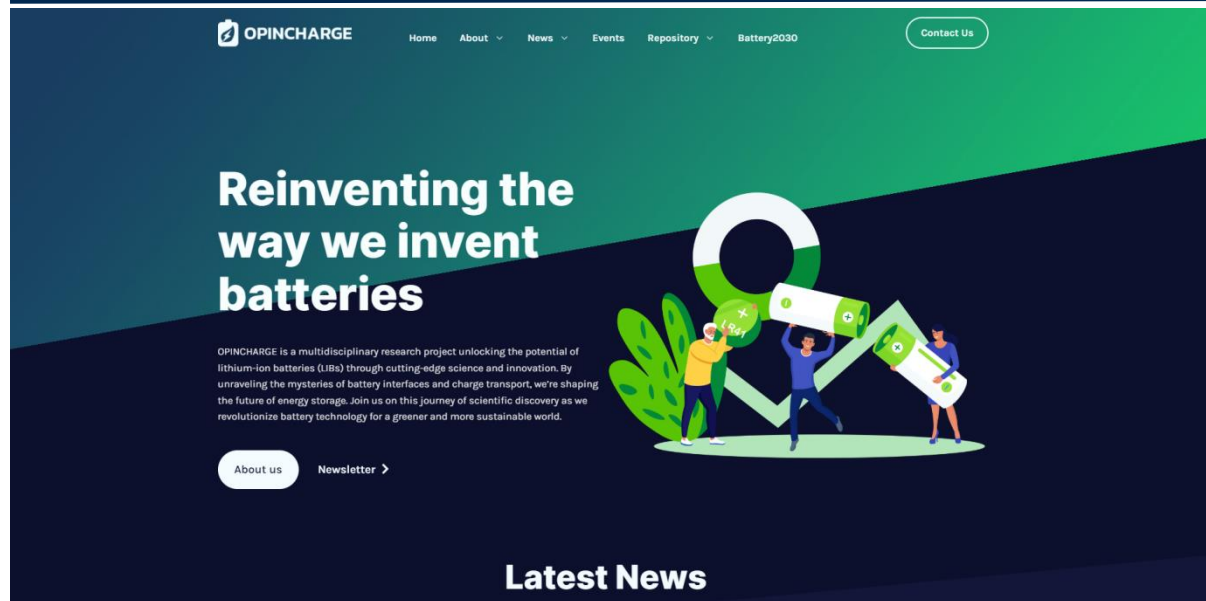


Figure 17 OPINCHARGE Website.

In M5, a dedicated [page related to Battery2030+](#) was added to the website. Figure 18 presents the Battery2030+ page.



Figure 18 Battery2030+ Page.

5.4.2 The OPINCHARGE Newsletter

The newsletters (Figure 19) supported stakeholder engagement and provided regular updates about the project's progress and activities. They included updates on project developments, dissemination activities, publications, events, and other relevant project news.

Stakeholders could subscribe to the newsletter through the project website: <https://www.opincharge.eu/newsletter/>

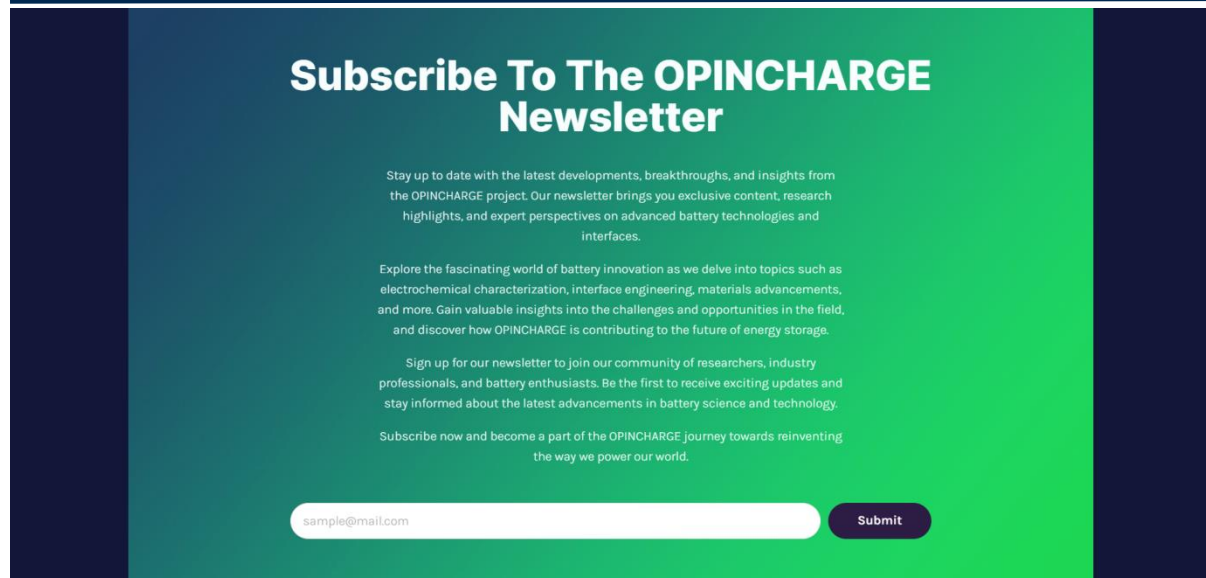


Figure 19 Newsletter Subscription Section.

5.4.3 Social Media Accounts

Social media represented an important part of the OPINCHARGE communication and dissemination strategy, providing accessible and direct channels for promoting project activities and results. LinkedIn, Twitter (X), and YouTube accounts were established in M1.

The main objective of the social media channels was to build an online community of followers and stakeholders interested in battery research, innovation, and project activities. Table 9 presents the OPINCHARGE social media channels, target audiences, and communication objectives.

Table 9 OPINCHARGE Target Audiences and Objectives for Social Media Channels.

Social Media	OPINCHARGE Target Audience	Objectives
Twitter (X)	- Battery end users - Technology providers and advisors - Battery producers - EU policymakers - Policy advisors - Governments and local authorities - NGOs - Environmental organisations - Research centres and groups - Individual researchers and universities	- Share updates and knowledge related to the project and its developments - Promote project events, activities, and dissemination actions - Increase the visibility of project content and results

LinkedIn	● Academia ● Researchers ● Battery producers ● EU policymakers ● Policy advisors ● Governments and local authorities ● NGOs ● Environmental organisations ● Research centres and groups ● Individual researchers ● Universities and educational institutions ● Financial institutions ● Consultancy firms ● Engineers ● Waste management companies	● Connect with professionals and organisations in the battery sector ● Share updates and knowledge related to the project and its developments ● Foster collaborations and partnerships with other organisations ● Promote project events, activities, and dissemination actions ● Strengthen the visibility and positioning of OPINCHARGE within the battery research and innovation community
YouTube	● Policymakers ● Environmental organisations ● Community organisations ● Energy companies ● Universities and research institutions ● NGOs ● Consumers interested in sustainable living practices ● General public ● Academic community ● Researchers	● Upload and promote the project's promotional video and video-related content ● Increase the visibility of the project and its activities

Figure 20 presents the OPINCHARGE Twitter (X) account, while Figure 21 presents the OPINCHARGE LinkedIn account.



Figure 21 OPINCHARGE Twitter (X).



Figure 20 OPINCHARGE LinkedIn.

The OPINCHARGE YouTube channel was also established in M1 as an additional communication channel to host project videos and support the visibility of project activities and results. Figure 22 presents the OPINCHARGE YouTube channel.

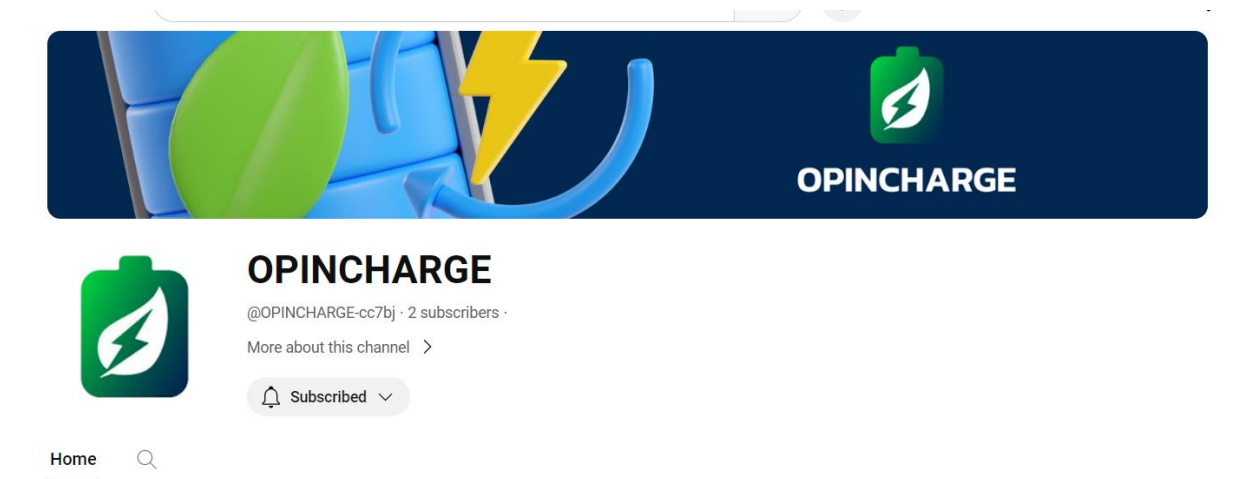


Figure 22 OPINCHARGE YouTube Channel.

5.5 Events

The consortium partners participated in events as part of the scientific and technical cooperation established with projects funded under the same Horizon Europe topic, HORIZON-CL5-2022-D2-01-02. collaboration with sister projects and related European initiatives through:

- Common dissemination activities;
- Joint technical and scientific workshops;
- Collaboration activities supporting policy and research and innovation (R&I) discussions.

Events created additional opportunities to improve the outreach of the OPINCHARGE project, support the collaborative presentation of results, and facilitate technical knowledge exchange among relevant stakeholders.

5.5.1 OPINCHARGE Events

As part of the dissemination and communication activities defined in the Grant Agreement (GA), several workshops and webinars were organised throughout the project lifetime. These events supported the dissemination of project activities and results while promoting scientific collaboration and stakeholder engagement within the European battery research community.

OPINCHARGE contributed to the organisation of the *European Workshop on Battery Interfaces: High-Resolution Techniques and Multiscale Modelling* held in Córdoba, Spain, in collaboration with the OPERA project within the Battery2030+ framework. The workshop showcased research progress and scientific findings related to battery interfaces, operando characterisation techniques, and modelling

approaches, while supporting scientific exchange across different battery chemistries and methodologies.

About the event: <https://www.opincharge.eu/european-workshop-on-battery-interfaces-high-resolution-techniques-and-multiscale-modelling/>

Number of participants: 69 registrations. Registration KPI achieved (345%).

Book of Abstracts_European Workshop on Battery Interfaces_2025:

https://www.opincharge.eu/wp-content/uploads/2025/04/Book-of-abstracts_EWBI2025.pdf

Following the workshop activities, OPINCHARGE collaborated with the [OPERA](#) and [ULTRABAT](#) projects on the organisation of the **webinar series** entitled “*Time and Length-Scale Operando Bridging Techniques to Study Battery Interfaces*”, implemented in collaboration with [Battery2030+](#). The webinar series focused on advanced operando techniques, battery interface characterisation, spectroscopy methods, and computational modelling approaches related to battery research.

The webinar series supported scientific dissemination, knowledge exchange, and collaboration among researchers and stakeholders from academia and industry. All webinars were organised online and targeted researchers, industry representatives, and stakeholders interested in battery technologies and operando characterisation techniques.

The targeted number of participants for each workshop/webinar was 15–20 participants. Table 10 presents an overview of selected OPINCHARGE events organised during the project lifetime.

Table 10 OPINCHARGE Webinar Series organised in Collaboration with Battery2030+ Projects.

Event	Date	Number of Participants	Main Topic
European Workshop on Battery Interfaces in Cordoba	2–4 April 2025	69	High-resolution techniques and multiscale modelling for battery interfaces
Webinar 1	23 October 2025	67	Operando techniques and battery interface analysis
Webinar 2	20 November 2025	35	Advanced operando techniques
Webinar 3	22 January 2026	50	Advanced operando characterisation techniques
Webinar 4	19 February 2026	40	Non-linear spectroscopy in battery science
Webinar 5	26 March 2026	40	Computational modelling in battery research

WEBINAR SERIES

Time and length scale bridging operando techniques to study battery interfaces

Topic
SAXS/WAXS techniques for 1D, 2D and 3D mapping of structural changes in battery materials

Speaker
Sandrine Lyonnard (CEA Grenoble)

**23 October 2025
15:00 (Online)**

Logos at the bottom: UltraBat, OPINCHARGE, OPERA, BATTERY 2030+

Figure 23 Banner for Webinar 1: SAXS/WAXS Techniques in Battery Research.

5.5.2 External Events

In addition to organising project-related events, consortium partners also participated in external conferences, workshops, meetings, and scientific events throughout the project lifetime. These events supported the dissemination of OPINCHARGE activities and results, scientific networking, stakeholder engagement, and collaboration with the broader battery research and innovation community.

Table 11 presents an overview of selected external events attended by OPINCHARGE partners during the project lifetime.

Table 11 External Events Attended by OPINCHARGE Partners.

No.	Event	Organiser	Target Audience	Format	No. of Participants	Disseminated Content	Date	Partner
1	GRC Liquid Phase Electron Microscopy 2024 (GRC-LPEM)	Gordon Research Conference Organisation	Academia	Conference	121	Abstract presentation and student scholarship	28 January – 2 February 2024	CNRS

No.	Event	Organiser	Target Audience	Format	No. of Participants	Disseminated Content	Date	Partner
2	DPG Spring Meeting	Deutsche Physikalische Gesellschaft	Academia	Meeting	6000	Abstract presentation	17–22 March 2024	DLR
3	Bunsen-Tagung 2024	Deutsche Bunsen-Gesellschaft	Academia	Conference	N/A	Oral and poster presentations	25–27 March 2024	FZJ
4	Advanced Battery Power (ABP 2024)	Haus der Technik	Academia	Conference	1000	Abstract presentation	9–11 April 2024	DLR
5	245th ECS Meeting	The Electrochemical Society (ECS)	Academia and industry	Conference	N/A	Oral and poster presentations	26–30 May 2024	FZJ
6	Battery2030+ Annual Conference 4	Battery2030+	Industry and academia	Conference	320	Scientific results	28–29 May 2024	LIST
7	SiMET Study Day at MAHLE	SiMET (DFG RTG)	Academia	Conference	50	Scientific results	3 June 2024	DLR
8	Thermo Fisher Scientific Technology Conference 2024	Thermo Fisher Scientific	Industry and academia	Conference	N/A	Oral presentation	17–19 June 2024	THERMO
9	Journées d'électrochimie (JE 2024)	Société Française de Chimie (SCF)	Academia	Conference	~50	Scientific dissemination	1–5 July 2024	CNRS
10	SiMET Study Day at Leclanche	SiMET (DFG RTG)	Academia	Conference	50	Scientific results	9 July 2024	DLR
11	SXNS 17	SXNS Conference	Academia	Conference	N/A	Poster presentations	15–18 July 2024	FZJ
12	International Symposium on Beyond Li-Ion Batteries 2024 (BeLi24)	University of Padova, ISE, Società Chimica Italiana and others	Academia	Conference	N/A	Abstract presentation	1–6 August 2024	PSI
13	European Microscopy Congress 2024 (EMC-2024)	European Microscopy Society	Industry and academia	Conference	1500	Abstract presentation	25–30 August 2024	CNRS
14	17th European Microscopy Congress 2024	European Microscopy Society	Academia and industry	Conference	1500	Scientific results	25–30 August 2024	LIST

No.	Event	Organiser	Target Audience	Format	No. of Participants	Disseminated Content	Date	Partner
15	Swiss Battery Days 2024 (SBD 2024)	Empa, PSI and Swiss Battery Association iBAT	Academia	Conference	300	Abstract presentation	26–28 August 2024	PSI
16	SRI 2024	SRI Conference	Academia and industry	Conference	N/A	Poster presentation	26–30 August 2024	FZJ
17	E-MRS Fall Meeting 2024	European Materials Research Society	Academia	Conference	N/A	Poster presentation	15–19 September 2024	DLR
18	Pacific Rim Meeting on Electrochemistry and Solid State Science (PRiME2024)	ECS	Academia	Conference	~1000	Abstract presentation	6–11 October 2024	DLR
19	Journées de la Matière Condensée (JMC-2024)	Société Française de Physique (SFP)	Academia	Conference	600	Scientific Results	28–31 October 2024	LIST
20	MRS Fall Meeting 2024	Materials Research Society	Academia and industry	Conference	4000	Oral presentation	1–6 December 2024	LIST
21	MEEHCON	NIT Kozhikode	Academia and industry	Conference	250	Oral presentation	20–21 December 2024	LIST
22	DESY User Meeting	DESY	Academia	Conference	N/A	Poster presentations	20–24 January 2025	FZJ
23	ModVal 2025	ModVal Conference	Academia	Conference	N/A	Oral presentation	10–12 March 2025	DLR
24	XOPT 2025	XOPT Conference	Academia	Conference	N/A	Poster presentation	21–25 April 2025	FZJ
25	AABC Europe 2025	Advanced Automotive Battery Conference Europe	Industry and academia	Conference	N/A	Poster presentation and networking	2025	CIC ENERGIG UNE
26	Power Our Future 2025 (POF 2025)	Power Our Future	Industry and academia	Conference	N/A	Oral presentation	2025	CICe

No.	Event	Organiser	Target Audience	Format	No. of Participants	Disseminated Content	Date	Partner
27	European Workshop on Battery Interfaces & OPINCHARGE Meeting (EWBI 2025)	OPINCHARGE and related projects	Academia and industry	Workshop and consortium meeting	~70	Clustering discussions and scientific exchange	2025	Full consortium
28	Advanced Automotive Battery Conference 2025	Cambridge EnerTech	Industry and academia	Conference	N/A	Oral presentation	23–26 June 2025	CIC ENERGIG UNE
29	Microscopy Conference 2025	Coventus	Academia and industry	Conference	1000	Oral presentation	31 August – 4 September 2025	LIST
30	76th Annual Meeting of the International Society of Electrochemistry	International Society of Electrochemistry	Academia and industry	Conference	N/A	Oral and Poster presentations	7–12 September 2025	LIST, FZJ
31	17th Multinational Congress on Microscopy	Slovene Society for Microscopy and European Microscopy Society	Academia and industry	Conference	~500	Scientific Results	7–12 September 2025	LIST
32	16th International Fischer Symposium	Fischer Symposium	Academia	Conference	N/A	Poster presentation	15–19 September 2025	FZJ
33	Applications of Nuclear Magnetic Resonance in the Solid State – VI International School	Spanish National Research Council	Academia	International school	~100	Invited lecture and scientific dissemination	20–22 October 2025	CiCe
34	DESY Photon Science Users' Meeting 2026	DESY (Deutsches Elektronen-Synchrotron)	Academia and industry	User meeting	N/A	Poster presentation	26–30 January 2026	FZJ
35	Inauguration of the Berlin Battery Lab	Bundesanstalt für Materialforschung und -prüfung (BAM)	Academia and industry	Laboratory inauguration event	N/A	Scientific networking and dissemination	18–21 March 2026	CIC ENERGIG UNE

No.	Event	Organiser	Target Audience	Format	No. of Participants	Disseminated Content	Date	Partner
36	Advanced Battery Power 2026	Haus der Technik	Academia and industry	Conference	N/A	Poster presentation	14–16 April 2026	DLR
37	Battery2030+ Annual Conference	Battery2030+	Academia and industry	Conference	250	Oral presentation	7–8 May 2026	LIST
38	249th ECS Meeting	The Electrochemical Society (ECS)	Academia and industry	Conference	~1000	Oral presentation	24–28 May 2026	DLR

The objective of participation in external events was to reach a broad audience relevant to the battery and research sector. During these events, consortium partners carried out the following dissemination and communication activities:

- Presenting the project, including its concept, objectives, and approach;
- Promoting the project's findings and research results;
- Promoting OPINCHARGE activities and events;
- Expanding synergies and networking opportunities with relevant projects and initiatives;
- Engaging relevant stakeholders in project activities;
- Promoting the project's dissemination channels, including the website, social media accounts, and Zenodo repository;
- Supporting future exploitation and collaboration opportunities related to OPINCHARGE results.

During participation in OPINCHARGE-related events, consortium partners used the official promotional materials and visual identity of the project, including brochures, posters, factsheets, roll-ups, promotional videos, and OPINCHARGE presentation templates.

Partners informed the Dissemination Manager (PEDAL) about relevant external dissemination activities in advance whenever possible to support dissemination through the project communication channels. Following the events, partners contributed dissemination materials, short summaries, and photos for communication purposes, including website articles and social media posts published through the OPINCHARGE channels.

6 Collaboration with Other Projects

The OPINCHARGE project, coordinated by LIST, is one of the large-scale research initiatives within Battery2030+. OPINCHARGE was implemented within the framework of the BATT4EU Partnership and the Battery2030+ initiative. The Battery2030+ project received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101104022.

The OPINCHARGE consortium is part of a vibrant research and innovation community focused on battery monitoring technologies, as several partners actively contribute to initiatives such as BIG-MAP and BATT4EU.

Open Science practices, FAIR data management, and scientific collaboration represented important elements of the project and its collaboration activities within the Battery2030+ ecosystem.

Battery2030+ supports collaboration and coordination across the European battery research landscape. OPINCHARGE contributed to these activities through scientific collaboration, dissemination actions, clustering activities, and participation in joint initiatives. Figure 24 presents the position of OPINCHARGE within the large-scale research initiative framework.



Figure 24 OPINCHARGE and Large-Scale Research Initiative.

OPINCHARGE contributed to advanced data acquisition, operando characterisation, and collaborative data-sharing approaches supporting battery interface research. The project also supported the use of data-driven and AI-assisted approaches for battery research and interface dynamics analysis at relevant spatial and temporal levels, in line with the objectives of the BIG-MAP initiative. In this context, OPINCHARGE supported the connection between operando characterisation of battery interfaces and the Materials Acceleration Platform (MAP) within the Battery2030+ roadmap.

Within the project, CIDETEC led WP6 focused on Research Data Management, FAIR principles, and liaison activities with Battery2030+. The work included the development and implementation of the Research Data Management Plan, support for FAIR-based data exchange approaches, and collaboration activities connecting OPINCHARGE with the broader Battery2030+ community.

Throughout M1–M36, CIDETEC actively collaborated with Battery2030+ and related projects to strengthen synergies across the European battery research landscape. Collaboration activities included interactions with projects such as BIG-MAP, SPARTACUS, and projects funded under related Horizon Europe call topics.

The Battery2030+ CSA3 project, funded under the HEU-2022-CL5-D2-01-08 call, coordinated several joint collaboration activities within the initiative. In this context, CIDETEC contributed to activities related to:

- Communication and dissemination activities
- Exploitation and IPR strategy
- Guidelines and best practices for data sharing
- FAIR data principles
- Educational activities and curricula development
- Roadmap and infrastructure development
- Interoperability activities

The OPINCHARGE project was implemented to maximise the impact of its activities and results in line with the objectives and expected outcomes of the Horizon Europe funding topic. OPINCHARGE formed part of the broader Battery2030+ portfolio and related European initiatives contributing to the advancement of battery research and innovation across Europe.

The main objective of the OPINCHARGE CDP was to define the communication and dissemination actions and tools supporting the promotion of the project's vision, activities, and results towards relevant stakeholder groups. The project supported scientific collaboration and stakeholder engagement at local, national, and international levels, in line with the objectives of the BIG-MAP initiative, the Batteries Partnership, and the Battery2030+ ecosystem.

Interactions with Battery2030+ and related projects strengthened synergies between projects and supported collaboration across the European battery research landscape.

To support collaboration with Battery2030+ and related projects, OPINCHARGE became part of the Battery2030+ Communication Board. Regular coordination meetings with Battery2030+ partners took place throughout the project lifetime. The following activities were implemented within the framework of this collaboration:

- 1) The OPINCHARGE brand identity was aligned with the Battery2030+ visual guidelines
- 2) The [webpage dedicated to Battery2030+](#) was developed and incorporated into the OPINCHARGE website.
- 3) Project information and updates were shared with the Battery2030+ Communication Manager and published on the [dedicated webpage on the Battery2030+ website](#).
- 4) OPINCHARGE contributed scientific publications and Open Access publication links to the Battery2030+ [“Publications and Reports”](#) section.

The collaboration with Battery2030+ supported a broad range of dissemination and communication activities, including:

- Sharing project news and updates
- Co-authoring and publishing articles
- Disseminating information through social media channels
- Strengthening collaboration with sister projects through the Battery2030+ Communication Board
- Organising conferences, workshops, and events
- Delivering webinars and dissemination workshops

- Contributing to joint event coordination activities

The collaboration activities supported outreach towards a broad target audience, including academia, industry representatives, researchers, policymakers, and the general public through workshops, webinars, conferences, exhibitions, and related dissemination activities.

7 Publications

The results achieved throughout the project were disseminated to the scientific community and industry through open-access peer-reviewed publications, presentations, and participation in national, European, and international conferences and workshops. Scientific dissemination activities included publications in high-impact journals, conference proceedings, and scientific presentations related to battery research and operando characterisation techniques.

In parallel, several partners explored the potential protection and exploitation of selected project results through intellectual property and innovation-related activities where relevant.

Project results and activities were also communicated to broader stakeholder groups through the OPINCHARGE website, newsletters, and social media channels, supporting awareness of battery research and its societal relevance.

According to the dissemination strategy, the consortium targeted the publication of at least 12 scientific and general-interest publications throughout the project lifetime. In addition to these publications, partners contributed to additional dissemination materials and scientific outputs supporting the visibility and promotion of project results.

Relevant scientific journals included:

1. Energy Technology
2. Electrochimica Acta
3. Journal of the Electrochemical Society
4. Energy Storage Materials
5. ACS nano
6. ACS Applied Materials & Interfaces
7. Journal of Power Sources
8. Batteries & Supercaps
9. Chemistry of Materials

The consortium also supported collaborative co-authorship approaches to strengthen the quality, visibility, and scientific impact of project publications.

7.1 Scientific Publications

The scientific results of the OPINCHARGE project were disseminated following the Open Access (OA) principles described in the Grant Agreement (GA), including Section 1.2.6 related to Open Science. The OPINCHARGE consortium supported full and immediate Open Access to peer-reviewed scientific publications related to project research outputs, in accordance with Article 17 of the Horizon Europe Model Grant Agreement.

Following D6.1 – Data Management Plan, the knowledge, outputs, tools, and instruments generated within the project were made available according to the principle “as open as possible and as closed as necessary,” while safeguarding intellectual property where relevant. Scientific publications and

related outputs were deposited in trusted repositories under appropriate Open Access conditions, including the use of Creative Commons licences where applicable.

In parallel, the consortium encouraged publication through the Open Research Europe (ORE) platform to support compliance with European Commission Open Science policies and facilitate accessible dissemination of research results.

The scientific and technological results generated within OPINCHARGE contributed to ongoing battery research activities and supported further research and innovation in areas related to electrochemistry, operando characterisation, and battery interface analysis.

The consortium disseminated its findings through scientific paper publications, conference presentations, and related scientific dissemination activities. A list of target scientific journals and planned publications was established during the project implementation.

PEDAL, as Dissemination Manager, supported the coordination and monitoring of dissemination activities related to scientific publications in collaboration with LIST as project coordinator. Publications submitted to leading scientific journals reflected the scientific achievements of the OPINCHARGE project and supported dissemination towards stakeholders from academia and industry.

7.2 Non-Scientific Publications

Non-scientific publications targeted the general public and broader stakeholder groups beyond the scientific community. These activities supported the wider visibility of the project and contributed to increasing awareness of battery research, innovation, and related societal benefits.

OPINCHARGE communicated project activities and results through website articles, social media posts, newsletters, brochures, leaflets, posters, presentations, and media-related activities. The communication activities focused on presenting the relevance and potential benefits of battery research and innovation for battery end users and society more broadly.

8 Monitoring, Evaluation and Reporting

8.1 Monitoring and Evaluation

A monitoring process was established at the beginning of the project to support the effective implementation of the Communication and Dissemination Plan (CDP). The monitoring activities supported the identification of potential gaps, stakeholder needs, communication opportunities, and good practices throughout the project lifetime.

Throughout the project, the CDP and related communication activities were reviewed and adjusted where necessary based on monitoring results, project developments, stakeholder engagement, and dissemination needs.

To evaluate the impact of the communication and dissemination activities, a set of Key Performance Indicators (KPIs) was defined. PEDAL, with the support of consortium partners, monitored the quantitative indicators and dissemination metrics throughout the project lifetime. In addition, qualitative feedback collected during workshops, webinars, meetings, and dissemination events supported the evaluation of the communication and dissemination approach.

The key indicators for communication and dissemination activities were aligned with the indicators defined in the Grant Agreement (GA).

8.1.1 Analytics & Monitoring

Throughout the project lifetime, the OPINCHARGE website attracted **6,521 sessions**, significantly exceeding the KPI target of 500 visitors per year. Considering the three-year project duration, this corresponds to **434.7% of the planned target value**. Website traffic originated primarily from direct visits (4,593 sessions), followed by organic search (977 sessions) and referrals (601 sessions), demonstrating successful outreach through both project communication activities and external dissemination channels.

In total, the website generated **1,989 engaged sessions**, with an overall **engagement rate of 30.5%** and **31,416 recorded events**, indicating sustained user interaction with the published content. The most visited pages included the homepage, project description, partners section, newsletter page, and project news articles, confirming continued interest in OPINCHARGE activities, results, and dissemination materials throughout the project lifetime.

Website Analytics is presented in Table 12, and Figures 25 and 26 below:

Table 12 Website Analytics.

Activity Name	Results Disseminated	Target Group	KPI/Target	KPI Fact	% KPI Achieved
Website	Public	All	500 visitors / year	~6521 / 3 years	~435%

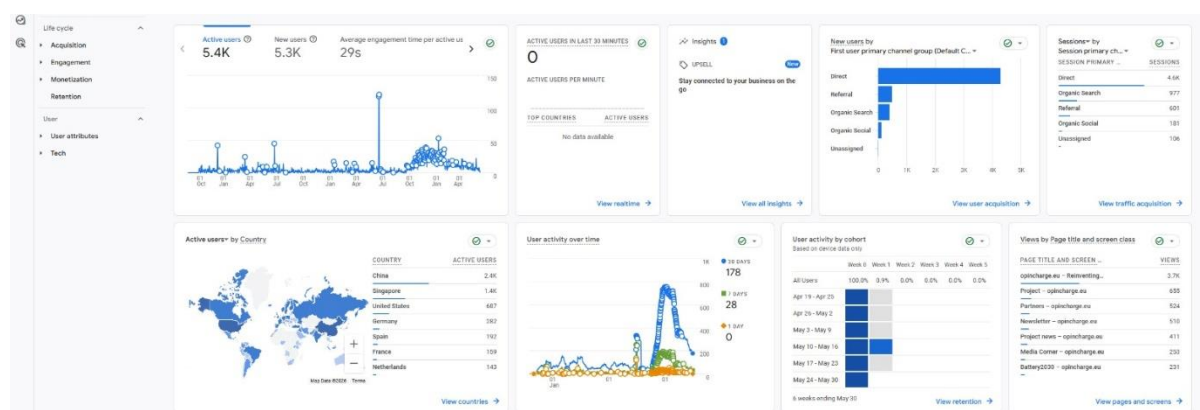


Figure 25 Overview of OPINCHARGE website performance and user engagement based on Google Analytics data collected throughout the project lifetime.



Figure 26 Overview of traffic acquisition channels and website engagement metrics for the OPINCHARGE website based on Google Analytics data.

Social Media Analytics

The OPINCHARGE project established its online presence early in the project to maximise visibility and stakeholder engagement from the outset. The LinkedIn and X (formerly Twitter) accounts were launched.

The KPI related to follower growth on X (formerly Twitter) was only partially achieved during the project lifetime. Changes in user behaviour and the gradual shift of parts of the scientific community away from the platform following the change in platform ownership affected audience growth and engagement on X.

At the same time, LinkedIn activities significantly exceeded the defined KPI targets. While the target for LinkedIn followers was 200, the OPINCHARGE LinkedIn account exceeded 500 followers during the project lifetime, making LinkedIn the project's strongest social media C&D channel.

The LinkedIn page reached 545 followers by the end of the project. Throughout the project, the engagement rate consistently exceeded the target value of 0.6%, ranging from approximately 1.8% to over 7%, with an average engagement rate of around 5.33%.

Social Media Analytics is presented in Table 13. **LinkedIn Analytics** are presented in Figure 25 below:

Table 13 Social Media Analytics.

Platform	Followers	Target Group	KPI/Target	% KPI Achieved
LinkedIn	545 (5.33% ER)	All	200 followers (0.6% ER)	272.55%
Twitter (X)	38 followers	All	100 followers	38%

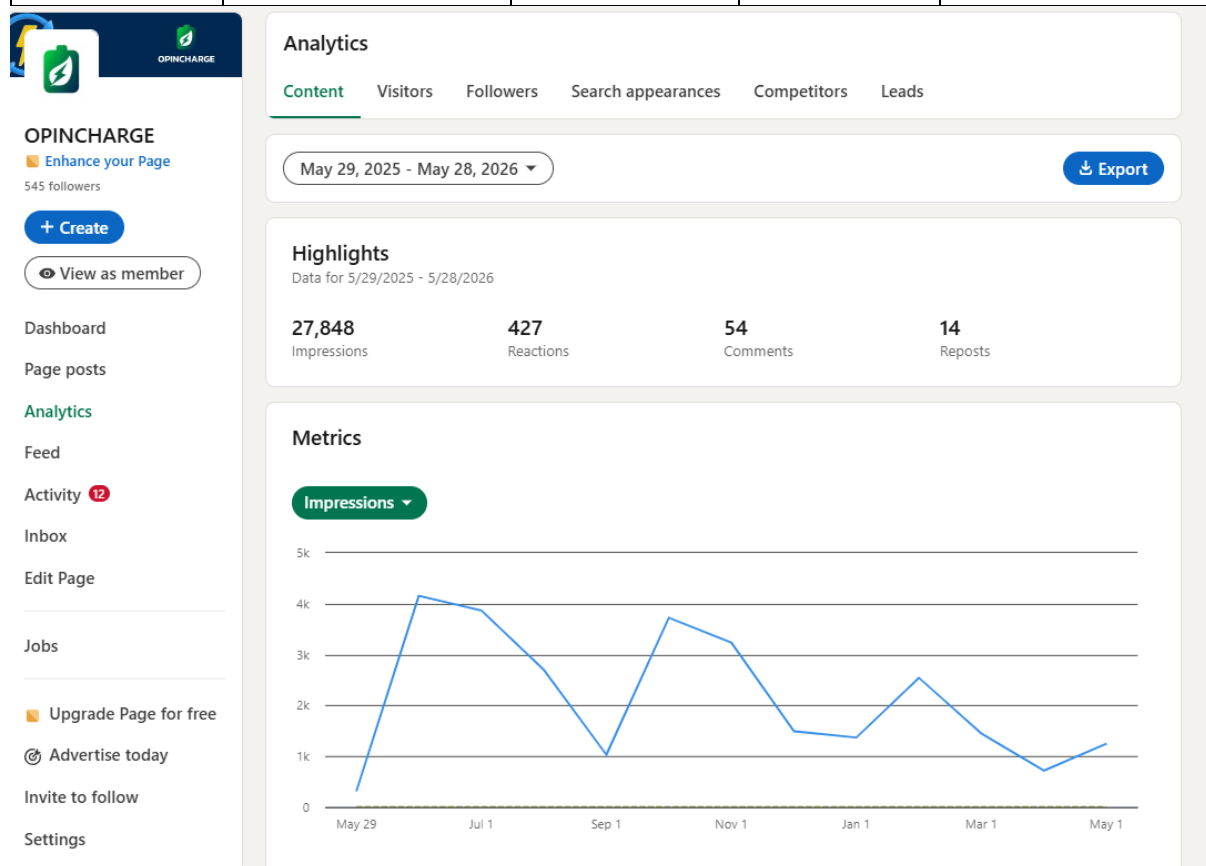


Figure 27 LinkedIn Analytics.

Communication Content Production

Throughout the project lifetime, OPINCHARGE regularly published communication and dissemination content through the project website and social media channels to support the visibility of project activities, scientific results, events, and collaboration initiatives.

Table 14 Communication Content Production Overview.

Activity Type	Number
Website articles	39
LinkedIn posts	103
Twitter (X) posts	103
Newsletters issued	6
Promotional videos	1

Newsletter Analytics

As part of the OPINCHARGE CDP, newsletters were issued to share key project updates, promote events, and highlight partner activities, scientific developments, and dissemination outputs.

Newsletter Analytics is presented in Table 15 below:

Table 15 Newsletter Analytics.

Activity Name	Results Disseminated	Target Group	KPI/Target	KPI Fact	% KPI Achieved
● Newsletter #1 ● Newsletter #2 ● Newsletter #3 ● Newsletter #4 ● Newsletter #5 ● Newsletter #6	● Project status ● Workshop in Córdoba ● Open Access articles ● Webinar series ● Webinar series, Scientific publication series ● Project summary	● Industry, ● Academia, ● General Public	150 subscribers <i>OR: 17%</i>	103 subscribers <i>OR: ~34.4%</i>	M24: 68.7% <i>OR: 202.4%</i>

The OPINCHARGE newsletters served as an effective communication tool for targeted dissemination towards relevant stakeholder groups and complemented the project's broader digital communication strategy.

While the initial KPI target of 150 newsletter subscribers was not fully achieved, the project reached 103 subscribers by the end of the project lifetime. At the same time, the newsletter open rate

significantly exceeded the defined KPI target of 17%, demonstrating strong engagement and interest among subscribers and stakeholders reached through the newsletters.

To support newsletter visibility and stakeholder outreach, additional dissemination actions were implemented throughout the project lifetime, including newsletter promotion through the project website, social media channels, and partner networks.

Figure 26 presents the newsletter subscription window implemented on the OPINCHARGE website.

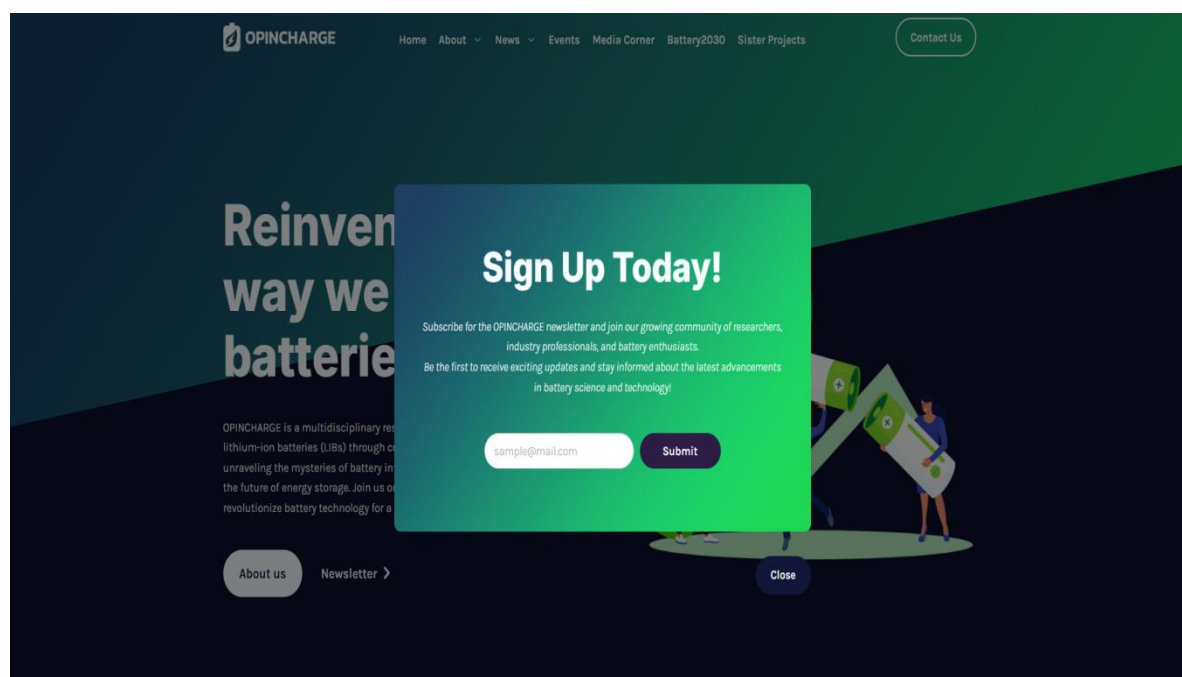


Figure 28 Newsletter Sign-Up Window.

Press Release/Articles Analytics

As part of the CDP, the OPINCHARGE project issued website articles, press releases, and dissemination-related communication outputs, while also sharing project information through Battery2030+, BEPA, partner communication channels, and social media activities targeting European stakeholders. These activities supported awareness raising related to the project's objectives, activities, scientific developments, events, and collaboration initiatives.

Press Release/Articles Analytics is presented in table 16:

Table 16 Media Outlets and Articles Analytics.

Activity Name	Results Disseminated	Target Group	KPI/Target	KPI Fact
Media engaged and coverage	Project activities, scientific developments, dissemination events, collaboration activities, and communication outputs	General public	50 media outlets / articles covered	KPI achieved

The KPI related to media engagement and coverage was achieved through combined dissemination efforts implemented across the consortium throughout the project lifetime. Dissemination activities included OPINCHARGE website articles, project press releases, partner website publications, Battery2030+ dissemination activities, stakeholder-oriented communication outputs, and social media dissemination activities.

All consortium partners contributed to dissemination and communication activities through institutional communication channels, websites, scientific networks, events, and stakeholder outreach activities. In addition, OPINCHARGE dissemination activities and project events were further amplified through communication support from Battery2030+, sister projects, and external stakeholders, particularly during the webinar series and collaborative dissemination activities described in Chapter 5.5.1.

The Dissemination Manager (PEDAL) alone implemented more than 50 dissemination-related outputs throughout the project lifetime, including website articles, press releases, and social media dissemination activities.

OPINCHARGE Video Analytics

The OPINCHARGE project video was published at M6. Link: <https://www.opincharge.eu/>

Video Analytics is presented in table 17:

Table 17 OPINCHARGE Video Analytics.

Channel	Results Disseminated	Target Group	KPI/Target	KPI Fact	% KPI Achieved
● YouTube ● Website ● LinkedIn ● Battery2030 +	Promo Video	All	300 views	412 views	137.3%

Scientific Publications Analytics

Table 18 Scientific Publications Analytics.

Activity	Results Disseminated	Target Group	KPI/Target	KPI Fact	% KPI Achieved

Scientific papers	Project scientific results	Industry, Academia	12 papers	13 papers	108.3%
-------------------	----------------------------	--------------------	-----------	-----------	--------

The list of 13 scientific publications:

1. Silicon Nanowires as Anodes for Lithium-Ion Batteries: Full Cell Modelling:
<https://zenodo.org/records/14974624>
2. Slow Voltage Relaxation of Silicon Nanoparticles with a Chemo-Mechanical Core–Shell Model: <https://zenodo.org/records/14974741>
3. Electrochemical Removal of HF from Carbonate-based LiPF₆-containing Li-ion Battery Electrolytes: <https://zenodo.org/records/14975380>
4. Elliptical Silicon Nanowire Covered by the SEI in a 2D Chemo-Mechanical Simulation: <https://zenodo.org/records/14987003>
5. Investigation of Li accumulations in LLZO based solid state batteries via operando neutron imaging and ex-situ correlative structural and chemical analysis: <https://zenodo.org/records/14999833>
6. Impact of Surface Enhanced Raman Spectroscopy in Catalysis: <https://zenodo.org/records/15000679>
7. Dynamics of transition metal dissolution and cross-contamination in operating Lithium-ion batteries: <https://zenodo.org/records/15000630>
8. Operando visualization of Li distribution in solid-state batteries using focused ion beam-secondary ion mass spectrometry imaging: <https://zenodo.org/records/15781178>
9. Solid-State NMR Investigation of Electrolyte Effects on Silicon–Graphite Composite Anode: Solid Electrolyte Interphase Formation and Failure Mechanisms: <https://zenodo.org/records/19729337>
10. X-ray reflectivity from micrometre-scaled surfaces using nanobeams: <https://zenodo.org/records/19908902>
11. "X-ray Coulomb Counting" to Understand Electrochemical Systems: <https://zenodo.org/records/19909498>
12. Advanced methods for characterizing battery interfaces: Towards a comprehensive understanding of interfacial evolution in modern batteries: <https://zenodo.org/records/19911150>
13. Progress and perspectives on reference electrodes for Li-ion batteries: <https://zenodo.org/records/20307031>

Repository:

Two repositories were created: BIG MAP and Zenodo. Open Access articles are available on Zenodo: <https://zenodo.org/communities/opinchARGE/records?q=&l=list&p=1&s=10>

Workshops / Webinars Monitoring is presented in table 19 bellow. More about the workshops is chapter 5.5.1 OPINCHARGE Events.

Table 19 Scientific Dissemination Workshops Analytics.

Activity	Results Disseminated	TG	KPI/Target	KPI Fact	% KPI Achieved
Scientific dissemination workshops	Project scientific results	Industry, Academia	4 workshops / webinars	1 workshop 5 webinars	150%

Conferences Monitoring is presented in Table 20. The OPINCHARGE partners have participated in 39 dissemination events. More information about the conference (*conference place, dates, presenting author, complete list of authors, title of presentation, type of presentation - oral/poster*) is available in the [Dissemination and Communication Tracker](#). It is also available in **Table 11**.

Table 20 Number of Attended Conferences (Oral Presentations and Posters).

Activity	Results Disseminated	TG	KPI/Target	KPI Fact	% KPI Achieved
Conferences, trade fairs, exhibitions, etc. attended	Project scientific results	Industry, Academia	18 events	38 events	211%

8.2 Reporting

To support the monitoring of dissemination, communication, and stakeholder engagement activities implemented throughout the project lifetime, a reporting template was developed in M1. The reporting and documentation of communication and dissemination activities represented an important part of the overall monitoring process.

Throughout the project, consortium partners reported their dissemination and communication activities on a regular basis by using the Communication and Dissemination Tracker coordinated by the Dissemination Manager (PEDAL).

Reported activities included, for example, the organisation and participation in events, informal meetings, interviews, communication campaigns, dissemination of newsletters and promotional materials, social media activities, website articles, and scientific and non-scientific publications.

The dissemination monitoring tools and their specified reporting frequency are listed in the following Table 21:

Table 21 Reporting Tools and Frequency.

Reporting Document	Reporting Content	Reporting Frequency
Communication and Dissemination Tracker	Dissemination activities (articles, social media posts)	Monthly
	Conference	3-14 days after the event
	Scientific papers	1-3 days after publication

9 Implemented Activities and Conclusions

The communication and dissemination activities implemented within OPINCHARGE followed the strategy defined in the Communication and Dissemination Plan and evolved throughout the project lifetime according to project progress, stakeholder needs, and dissemination opportunities.

At the beginning of the project, PEDAL coordinated the development of the OPINCHARGE visual identity, including the project logo, brand guidelines, communication templates, promotional materials, and dissemination assets. The project website, social media channels, and dissemination monitoring tools were established during the initial phase of the project and subsequently maintained throughout the entire project duration.

The [OPINCHARGE website](#) served as the central communication hub for the project, providing access to project information, news, publications, dissemination materials, workshops, webinars, and newsletters. The website remained continuously updated and recorded approximately 1,724 visits during the project lifetime. To ensure long-term visibility of the project results, the website will remain available for at least **three years after the end of the project**.

Communication activities were supported through regular publication of website articles, social media content, newsletters, and promotional materials. By the end of the project, the [LinkedIn page](#) had reached 545 followers and maintained an average engagement rate of approximately 5.3%, significantly exceeding the target value defined in the Communication and Dissemination Plan. The project [newsletter series](#) consisted of six editions and reached 103 subscribers, achieving an average open rate of approximately 34.4%.

To support public awareness and stakeholder engagement, the consortium developed a range of dissemination materials, including a project factsheet, poster, roll-up, presentation templates, and a promotional video. The [promotional video](#) was disseminated through the project website, social media channels, partner networks, and Battery2030+ website.

Scientific dissemination represented one of the main pillars of the communication strategy. Throughout the project, consortium partners actively disseminated project results through scientific publications, conference presentations, workshops, webinars, and collaboration activities with related initiatives. The consortium produced numerous scientific publications and promoted Open Science principles through the use of Open Access channels and the [OPINCHARGE Zenodo community](#).

A major dissemination milestone was the successful organisation of the European Workshop on Battery Interfaces: High-Resolution Techniques and Multiscale Modelling in Córdoba, Spain. The event brought together researchers and stakeholders from across Europe and strengthened collaboration between OPINCHARGE and related Horizon Europe projects.

Building upon this collaboration, OPINCHARGE joined forces with [OPERA](#) and [ULTRABAT](#) to organise a webinar series focused on operando battery characterisation techniques and battery interfaces. The webinars provided an additional platform for knowledge exchange and dissemination of project results to the wider scientific community.

The consortium actively participated in clustering and networking activities throughout the project lifetime. Collaboration with [Battery2030+](#) played a particularly important role in increasing project visibility and facilitating exchanges with other Horizon Europe battery projects. OPINCHARGE participated in Battery2030+ communication meetings, annual conferences, collaboration board

activities, and joint dissemination initiatives. Additional collaboration activities were established with [16 sister projects](#).

The project also engaged with the [Batteries European Partnership Association \(BEPA\)](#), which supported the promotion of selected OPINCHARGE dissemination activities and contributed to increasing awareness of project results among relevant industrial stakeholders.

The monitoring activities presented in this final version of the CDP demonstrate that the majority of the communication and dissemination KPIs were successfully achieved or exceeded. The implemented activities contributed to increasing awareness of OPINCHARGE among academia, industry, policymakers, and the wider public while supporting **Open Science principles** and facilitating access to project results.

The project established a sustainable communication legacy through the continued availability of the OPINCHARGE website, publications, dissemination materials, and the Zenodo community repository. These assets will remain accessible beyond the project duration and will continue to support the visibility, uptake, and long-term impact of the knowledge generated within OPINCHARGE.

Overall, the communication and dissemination activities successfully supported the project's objectives, strengthened collaboration within the European battery ecosystem, and contributed to maximising the impact of OPINCHARGE results beyond the lifetime of the project.

Annexes

1. The Dissemination Reporting Template - [Dissemination and Communication Tracker](#) is available on SharePoint:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	Post title	Post link	Created date	Audience	Impressions	Views	Clicks	Click through	Likes	Comment	Reposts	Engagement rate	Content Type	Partner
1	We're glad to continue our fruitful collaboration	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/27/2025	All followers	639	219	38	0.059467919	16	3	0	0.089201875	Video	PEDAL
2	The Battery Young Researcher Award is coming	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/24/2025	All followers	647	29	29	0.044822257	6	1	2	0.05873261	Video	PEDAL
3	Shaping the Future of Batteries with OPINCHARGE	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/18/2025	All followers	1607	713	146	0.090852521	31	3	3	0.11387679	Video	PEDAL
4	Exciting day ahead for the OPINCHARGE project	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/11/2025	All followers	418	28	28	0.066956444	5	2	1	0.086124405	Video	PEDAL
5	Open Access Research	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/10/2025	All followers	330	232	36	0.067824529	14	1	1	0.098113209	Video	PEDAL
6	Connect to Power Up! Do not miss the workshop	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/5/2025	All followers	164	7	7	0.042682927	3	0	0	0.060975611	Video	PEDAL
7	Science is a continuous journey. There is always	https://www.linkedin.com/feed/update/urn:li:activity:69722025	5/30/2025	All followers	326	185	22	0.067484662	4	1	2	0.088957056	Video	PEDAL
8	Coming Soon: The OPINCHARGE Newsletter	https://www.linkedin.com/feed/update/urn:li:activity:69722025	5/26/2025	All followers	213	226	20	0.093896717	6	1	1	0.131455392	Video	PEDAL
9	OPINCHARGE Showcases Battery Interface In	https://www.linkedin.com/feed/update/urn:li:activity:69722025	5/21/2025	All followers	750	332	42	0.056000002	9	1	2	0.071999997	Video	PEDAL
10	Breakthrough Conversations at the European Workshop	https://www.linkedin.com/feed/update/urn:li:activity:69722025	4/7/2025	All followers	1816	131	131	0.072136566	37	1	9	0.098017618	Video	PEDAL
11	Unlabeled Support Behind the European Workshop	https://www.linkedin.com/feed/update/urn:li:activity:69722025	4/3/2025	All followers	893	22	22	0.024636058	11	1	4	0.04255319	Video	PEDAL
12	Thank You to the University of Córdoba Europe	https://www.linkedin.com/feed/update/urn:li:activity:69722025	4/1/2025	All followers	186	8	8	0.043010753	9	0	0	0.091397852	Video	PEDAL
13	Meet a Key Figure in Battery Research: Patric	https://www.linkedin.com/feed/update/urn:li:activity:69722025	3/28/2025	All followers	206	11	11	0.053398058	9	2	0	0.106796116	Video	PEDAL
14	Meet the host: Celia Polop European Workshop	https://www.linkedin.com/feed/update/urn:li:activity:69722025	3/27/2025	All followers	433	33	33	0.076212473	18	2	1	0.12471132	Video	PEDAL
15	Meet the Host: Dr. Santhana Eswara European	https://www.linkedin.com/feed/update/urn:li:activity:69722025	3/21/2025	All followers	1052	61	61	0.057984792	35	4	5	0.098089885	Video	PEDAL
16	Speaker Spotlight: Anara Agaduro European	https://www.linkedin.com/feed/update/urn:li:activity:69722025	3/10/2025	All followers	1001	42	42	0.041958041	14	2	8	0.065934069	Video	PEDAL
17	Speaker Spotlight: Erik J. Berg European	https://www.linkedin.com/feed/update/urn:li:activity:69722025	3/9/2025	All followers	738	35	35	0.047254575	19	2	8	0.086720869	Video	PEDAL
18	Welcome to contribute with your abstract to the B	https://www.linkedin.com/feed/update/urn:li:activity:69722025	2/26/2025	All followers	918	27	27	0.029411765	20	1	3	0.055555556	Video	PEDAL
19	Speaker Spotlight	https://www.linkedin.com/feed/update/urn:li:activity:69722025	2/24/2025	All followers	2389	98	98	0.041021347	58	2	8	0.069485143	Video	PEDAL
20	Speaker Spotlight: Jeff Sakamoto European	https://www.linkedin.com/feed/update/urn:li:activity:69722025	2/17/2025	All followers	698	21	21	0.03008596	16	2	6	0.064469911	Video	PEDAL
21	Join Us at the European Workshop on Battery	https://www.linkedin.com/feed/update/urn:li:activity:69722025	1/10/2025	All followers	2268	89	89	0.039241623	37	5	16	0.064814813	Video	PEDAL
22	Cutting-edge materials	https://www.linkedin.com/feed/update/urn:li:activity:69722025	10/25/2024	All followers	2230	1117	218	0.097757846	47	2	2	0.120627806	Video	PEDAL
23	Register for the BATTERY 2030+ Excellence	https://www.linkedin.com/feed/update/urn:li:activity:69722025	10/17/2024	All followers	1796	50	50	0.027398444	22	1	3	0.042316258	Video	PEDAL
24	INSPIRING YOUNG SCIENTISTS at Battery2030	https://www.linkedin.com/feed/update/urn:li:activity:69722025	8/27/2024	All followers	913	408	72	0.078860901	20	0	1	0.101861991	Video	PEDAL
25	Explore the insights from CNRS's collaboration	https://www.linkedin.com/feed/update/urn:li:activity:69722025	7/25/2024	All followers	471	210	44	0.093418255	13	1	0	0.12314225	Video	PEDAL
26	More opportunities for PhD students and PostDoc	https://www.linkedin.com/feed/update/urn:li:activity:69722025	7/12/2024	All followers	194	7	7	0.036082473	3	0	0	0.051546391	Video	PEDAL
27	Get ready for the latest insights with OPINCHARGE	https://www.linkedin.com/feed/update/urn:li:activity:69722025	7/11/2024	All followers	275	97	36	0.130909085	8	1	0	0.163636357	Video	PEDAL
28	Fascinating realm of lithium-ion battery research	https://www.linkedin.com/feed/update/urn:li:activity:69722025	7/10/2024	All followers	1242	410	125	0.10644119	15	1	0	0.113526568	Video	PEDAL
29	Check out our progress in reimagining the way we	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/27/2024	All followers	3206	1500	234	0.072988145	47	1	9	0.090767309	Video	PEDAL
30	OPINCHARGE Project Meeting in Switzerland	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/18/2024	All followers	324	527	26	0.08024691	13	1	2	0.129629627	Video	PEDAL
31	OPINCHARGE at Batter	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/11/2024	All followers	606	210	25	0.041254126	7	1	1	0.056109561	Video	PEDAL
32	Unveiling the Power of Communication: Dive in	https://www.linkedin.com/feed/update/urn:li:activity:69722025	6/4/2024	All followers	521	224	27	0.051823415	11	0	1	0.074856043	Video	PEDAL
33	Uncover the latest in battery research with OIDE	https://www.linkedin.com/feed/update/urn:li:activity:69722025	5/7/2024	All followers	1579	1139	68	0.043065231	14	1	1	0.051398226	Video	PEDAL
34	Unlocking the Secrets of Batteries: Odyssey of	https://www.linkedin.com/feed/update/urn:li:activity:69722025	4/29/2024	All followers	2288	1061	186	0.08129371	44	1	1	0.101398602	Video	PEDAL
35	BATTERY 2030+ is a pioneering European res	https://www.linkedin.com/feed/update/urn:li:activity:69722025	4/11/2024	All followers	167	5	5	0.029540119	0	1	0	0.035928145	Video	PEDAL
36	Unlocking the World of Battery Research with	https://www.linkedin.com/feed/update/urn:li:activity:69722025	4/10/2024	All followers	2424	850	62	0.025577558	23	1	1	0.03589109	Video	PEDAL
37	Discover Battery Research with the OPINCHARGE	https://www.linkedin.com/feed/update/urn:li:activity:69722025	3/15/2024	All followers	3769	1442	67	0.017776599	57	1	2	0.03369594	Video	PEDAL
38	BENEFITS OF OPINCHARGE – THE CATALYST	https://www.linkedin.com/feed/update/urn:li:activity:69722025	10/20/2023	All followers	85	3	3	0.035294119	1	0	0	0.047058824	Video	PEDAL
39	OPINCHARGE plan TO ADVANCE BATTERY	https://www.linkedin.com/feed/update/urn:li:activity:69722025	10/14/2023	All followers	465	12	12	0.025806451	12	0	0	0.051612902	Video	PEDAL
40	Discover the OPINCHARGE Project Goals	https://www.linkedin.com/feed/update/urn:li:activity:69722025	10/6/2023	All followers	151	4	4	0.026490066	6	0	0	0.066225164	Video	PEDAL
41	EXCITING TIMES AHEAD FOR THE EU BATTERY	https://www.linkedin.com/feed/update/urn:li:activity:69722025	10/2/2023	All followers	349	8	8	0.022922637	7	1	0	0.045845274	Video	PEDAL
42	OPINCHARGE Consortium We are thrilled to in	https://www.linkedin.com/feed/update/urn:li:activity:69722025	9/26/2023	All followers	101	3	3	0.029702971	1	0	0	0.03960396	Video	PEDAL
43	OPINCHARGE Consortium Grateful for having	https://www.linkedin.com/feed/update/urn:li:activity:69722025	9/22/2023	All followers	89	3	3	0.033707865	1	0	0	0.044943821	Video	PEDAL
44	OPINCHARGE Consortium We are thrilled to	https://www.linkedin.com/feed/update/urn:li:activity:69722025	9/20/2023	All followers	340	2	2	0.005882353	4	0	0	0.0176476	Video	PEDAL
45	OPINCHARGE Consortium Let us introduce yo	https://www.linkedin.com/feed/update/urn:li:activity:69722025	9/12/2023	All followers	100	2	2	0.02	3	0	0	0.050000001	Video	PEDAL
46	OPINCHARGE Consortium We are delighted to	https://www.linkedin.com/feed/update/urn:li:activity:69722025	9/8/2023	All followers	90	5	5	0.055555556	2	0	0	0.077777781	Video	PEDAL
47	OPINCHARGE Consortium We are thrilled to p	https://www.linkedin.com/feed/update/urn:li:activity:69722025	9/4/2023	All followers	77	1	1	0.012987013	3	0	0	0.051948052	Video	PEDAL
48	OPINCHARGE Consortium We are honored to	https://www.linkedin.com/feed/update/urn:li:activity:69722025	8/29/2023	All followers	104	6	6	0.057692308	3	0	0	0.086538464	Video	PEDAL
49	OPINCHARGE Consortium We are happy to co	https://www.linkedin.com/feed/update/urn:li:activity:69722025	8/25/2023	All followers	315	3	3	0.00952381	1	0	0	0.012698413	Video	PEDAL
50	OPINCHARGE Consortium We are thrilled to	https://www.linkedin.com/feed/update/urn:li:activity:69722025	8/22/2023	All followers	100	0	0	0	1	0	0	0.01	Video	PEDAL
51	OPINCHARGE Consortium OPINCHARGE proj	https://www.linkedin.com/feed/update/urn:li:activity:69722025	8/18/2023	All followers	125	3	3	0.024	5	0	0	0.040000003	Video	PEDAL
52	OPINCHARGE Consortium MEET OPINCHARGE	https://www.linkedin.com/feed/update/urn:li:activity:69722025	8/16/2023	All followers	451	12	12	0.02680754	5	0	2	0.042128604	Video	PEDAL
53	Introducing OPINCHARGE project to you! Welc	https://www.linkedin.com/feed/update/urn:li:activity:69722025	7/28/2023	All followers	270	8	8	0.029629629	9	0	2	0.070370369	Video	PEDAL

2. The Brand Guidelines - [OPINCHARGE Brand guidelines v02.pdf](#) is available on SharePoint.



