

## **Deliverable D8.1**

# **Dissemination plan and activities**

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### **Executive summary**

The PULSELION consortium has drafted an initial version of the "Dissemination plan and activities," which is submitted in M6 and is the basis for the Dissemination activities carried out within the project. This document summaries activities already implemented and planned for the future of the project. It is a living document and will be updated throughout the project. At the end of the project, in M48, a final version of the "Dissemination plan and activities" will be presented, including all the dissemination activities carried throughout the project.

This document presents a comprehensive strategic framework as well as provides a clear implementation plan for making the project and its results extensively known within the European communities and stakeholders. The key objective is to maximize dissemination of project results, bring widespread awareness to a broader public through presentations at webinars, technical conferences, scientific publications, social media, and the project website.

The plan for dissemination activities includes *scientific publications and events as well as specific targeted activities* to reach out to specific stakeholders. An initial *stakeholder mapping* identified the most relevant groups to allow for selection of appropriate dissemination channels and messages. Secondly, the deliverable highlights how *dissemination and communication tools* such as project website, a social media campaign, a periodic newsletter and video material are employed to maximise the project impact.

Finally, the deliverable highlights the *dissemination rules* that are be followed by the consortium partners, including the adherence to the clause 8 of the CA and the obligation to acknowledge EU funding during all the dissemination and communication activities.





### Abbreviations

Abbreviation	Definition		
ABEE	Avesta Battery and Energy Engineering		
Ah	Ampere hour		
AIT	AIT Austrian Institute of Technology GMBH		
CA	Consortium Agreement		
CICe	Centro de Investigacion Cooperativae de Energias Alternativas Fundacion		
CNRS	Centre National de la Recherche Scientifique CNRS		
CRF	Centro Ricerche FIAT SCPA		
D	Deliverable		
EC	European Commission		
EC-PU	European Commission - Public		
EDC	Exploitation, Dissemination, Communication		
FAIR	findable, accessible, interoprable, re-openable		
GA	General assembly		
IKE	Ikerlan S. COOP		
INEGI	INEGI- Instituto de Ciencia E Inovacao em Engenharia Mecanica E Engenharia		
	Industrial		
IP	Intellectual Property		
KPI	Key performance indicator		
М	M from project start date		
NMC	Nickel Manganese Cobalt		
PNO	PNO Innovation		
PU	Public		
PULSEDEON	Pulsedeon OY		
	PUlsed Laser depoSition tEchnology for soLid State battery manufacturing		
FULSELION	supported by digitalizatiON		
R	Document, report		
RISE	RISE Research Institutes of Sweden AB		
SEN	Sensitive		
SSB	Solid state batteries		
TC	Technical coordinator		
TC	TechConcepts BV		
ToC	Table of Content		
TRL	Technology readiness level		
UL	University of Ljubljana Univerza v Ljubljani		
UPJV	Université de Picardie Jules Verne		
UPORTO	Universidade do Porto		
UPV	Universitat Politecnica de Valencia		
WP	Work package		
WPL	Work package leader		
WPLB	Work package leader board		





### **1.** Introduction

PULSELION project aims to develop a manufacturing process for generation 4b solid-state batteries (SSBs) based on lithium-metal anode, sulfide solid electrolytes, and Nickel-rich NMC cathodes. Novel pulsed laser deposition technique will be used and modified into a single-step vacuum process for safe and efficient manufacturing of anode components composed of lithium metal, protective layers, and sulfide based solid electrolytes. The cathode layer will be made based on conventional wet processing techniques. Initially, the anode and cathode layers will be developed in small scale for making coin cells and monolayer cells for optimizing the materials and process. SSB cells will be developed with optimized process routes and will be upscaled to a pilot line proof-of-concept (TRL 6) by manufacturing large scale solid-state batteries (10 Ah). Digitalization will be incorporated in the process modelling task with the inputs obtained from process upscaling and cell testing tasks, which will enable efficient process optimization. PULSELiON project will achieve these ambitious goals by developing innovative processing of materials, utilising intelligent process optimisation and favorable cell design.

### 2. Structure of the deliverable

- Section 1 provides a short summary of the project, including background.
- Section 2 explains the structure of the deliverable.
- Section 3 explains the importance of dissemination measures to maximise the project impact.
- Section 4 outlines and delineates overall dissemination context.
- Section 5 outlines planned dissemination efforts and strategy.
- Section 6 explains how dissemination activities are tracked throughout the project.
- Section 7 elaborates dissemination rules and obligations.
- Section 8 presents conclusion and next steps.

### 3. Purpose of the deliverable

The overall aim of the dissemination activities within the PULSELiON project is to maximise the dissemination of results and to express them in terms that are understandable not only to researchers and experts in the battery value chain, but also to stakeholders at governments, industry, and suppliers, in order to accelerate the implementation of the research findings and upscaling of the technological innovations.

Furthermore, the project findings will be disseminated through presentations at workshops, scientific publications, European events, etc. This document builds on initial strategies and plans outlined at





proposal stage, serves as an addition to the Grant Agreement and presents the developed dissemination strategy, including a stakeholder management plan and selection of appropriate dissemination channels.

To get a proper insight into the roles and responsibilities during the implementation of the dissemination activities as presented in GA, an interactive workshop was facilitated by TC during the PULSELION Kick-off meeting in Sweden. The objective of this workshop was to develop a first draft of the dissemination plan using section 2.2 Measures to maximise impact - Dissemination, exploitation and communication and section 3.1.2 Work Package Description of the Proposal as the starting point. To achieve this objective, TC employed a 4-step approach as presented in Figure 3-1 as a guiding principle. The main learnings from this workshop, with regards to dissemination activities, were the identification of conferences as well as journals targeted by the PULSELiON partners, as well as identification of the partners interested in those conferences and journals. The results of the workshop with regard to the dissemination activities are presented in section 5.



Figure 3-1 4-step approach towards dissemination activities

This document is a living document and will be updated on a regular basis, discussed every second month during WPLB meetings and the bi-annual General Assembly meetings. Next to this, in its role as the dissemination manager, TC tracks the dissemination activities closely (with support from WP8 leader PNO). At the end of the project, in M48, a final version of the "Dissemination plan and activities" will be presented, including all the dissemination activities carried out throughout the project. The detailed planning and tracking are supported by an Excel sheet (as described in section 6), where the input is collected from all the partners.

### 4. Context

Based, on the overall purpose, the main goal of the dissemination plan is to serve as an ongoing, concise work plan for setting out the main dissemination aspects of the PULSELiON project and for establishing suitable actions to make this project successful.

As per the EC website FAQs, there is a strong relation between dissemination, exploitation, and communication. Dissemination means sharing research results with potential users - peers in the research field, industry, other commercial players, and policymakers. By sharing research results with





the rest of the scientific community, PULSELION contributes to the progress of science in general. Whereas exploitation is the use of results for commercial purposes but also for improving public policies, and for tackling economic and societal problems. An appropriate exploitation is based on the dissemination and communication actions to promote and raise awareness of project results right from the beginning of a project. It makes research results known to various targeted project stakeholder groups (e.g., research peers, industry and other commercial actors, professional organisations, policymakers) to enable them to use project results. To ensure maximum outreach of the project activities and results, it is of paramount importance to have a plan for dissemination and exploitation and a communication strategy that outline strategic and targeted measures for promoting the project results to a multitude of audiences, including media and the public.

To ensure proper understanding of the terminology, PULSELiON follows the following distinction between the three themes as presented in Figure 4-1. This figure is inspired by the EC presentation on "Dissemination and Exploitation in Horizon 2020"<sup>1</sup>.



Figure 4-1 Distinction between Dissemination, Exploitation and Communication

Within the PULSELiON project, WP8 is designed to carry out all the Dissemination, Exploitation and Communication activities. The overall objectives of the WP8, and the related tasks as well as task leaders are presented in Table 4-1 below.

<sup>&</sup>lt;sup>1</sup><u>https://ec.europa.eu/research/participants/data/ref/h2020/other/events/2017-03-01/8</u> result-disseminationexploitation.pdf



#### Table 4-1 Objectives of WP8 and related tasks

Objectives	Related task and task
	leader
Maximize dissemination of project results, bring widespread awareness to	Task 8.2, led by TC $\rightarrow$
a broader public through presentations at webinars, technical conferences,	focus of this deliverable
scientific publications, social media, and the project website.	
Generate high impact by carrying out customized communication activities	Task 8.3, led by TC
towards battery value chain along with the relevant policy makers	
Promote awareness of worldwide IP and expertise to enlarge the EU know-	Task 8.4, led by PNO
how in the field of solid-state batteries	
Clustering activities with other projects, industry clusters and regulatory	Task 8.1, led by PNO
authorities	

Complementing the current document, PULSELiON also submits the Communication Plan (D8.2) in M6. The Dissemination plan (this deliverable D8.1) is strongly interlinked with the Communication Plan (D8.2), and given the strong interlinkages between dissemination and communication, certain repetition is unavoidable. While D8.1 focuses on dissemination activities D8.2 covers the communication plan, including the high volume and customized communication strategy to maximise project impact.

### 5. Dissemination approach and activities

The results generated by the project are disseminated as widely as possible. The stakeholders and interested target groups receive tailored information through appropriate channels as described below. The main identified stakeholders and target audience for dissemination are:

- the scientific community,
- industrial stakeholders,
- the general public and policymakers.

Broader dissemination of project results will be carried out by TC who prepares and distributes project newsletters, facilitates the planning of dissemination actions, collects the dissemination actions (with help of PNO) and maintains the dissemination tracker and database. Partners will provide input for newsletters, and report planned and performed dissemination activities.

Summary of the dissemination tasks is hereunder:





- Task 1 Participating in conferences and publications: Participation in and co-organization of (scientific and industrial) conferences including special workshops, tutorials, or industry days where feasible and publishing in peer reviewed journals.
- Task 2 Project website: Set-up and maintenance of a dedicated project website, with regular input from partners. TC bi-annually monitors the website's visits and reports on the evolution of visits.
- Task 3 Press release and bi-annual newsletters: A press release (general flyer) at the beginning of the project; A bi-annual newsletter sent out containing news concerning the project, future events related to the project and information and events from other project of interest within a specific field or community.
- Task 4 Social media campaign: Design and execution of a the social media campaign, creation and maintenance of the social media profiles for the most popular social media platforms (e.g. Twitter, LinkedIn) featuring tags #H2020Transport, @inea\_eu, @EU\_Commission, @EU\_H2020.
- Task 5 Video material: Video material like short interviews and "Letting the specialist tell" and "letting the stakeholder tell" will be produced and disseminated through the project website and the PULSELiON social media channels.

Each of the above tasks is elaborated hereunder:

### Task 1 Participating in conferences and publications

The partners that promote the PULSELION project participate in several technical international associations and platforms relevant to PULSELION. This network actively used to promote the project, maximising the impact. The associations include EARPA – European Automotive Research Partners Association, BEPA The Batteries European Partnership Association / BATT4EU – co-programmed Partnership established under Horizon Europe, 2Zero Towards zero emission road transport, Slovenian Strategic and Innovation Partnership (SRIP) Mobility and SRIP Networks for the transition to Circular economy, IEA International Energy Agency, Battery Cluster Portugal, Batteries Europe. Dissemination activities within PULSELiON strongly ensure a broad outreach to stakeholders. In particular, open access publication and scientific conferences will be used to target the scientific communities, while workshops and conferences will be carried out to reach both scientific and non-scientific stakeholders.

Key targeted conferences and peer-reviewed journals are presented in Table 5-1 and Table 5-2 respectively. The actual planning and tracking of the conferences and publications is described in chapter 6.



#	Targeted conferences	Lead
		Partner
1	The Battery Show Europe	ТС
2	AABC Europe/USA/Asia	тс
3	Life Cycle Management Conference	INEGI
4	International Battery Association (IBA) 2024	CNRS,
		UPJV
5	MRS Fall and Spring Meetings	CNRS,
		UPJV
6	International Society of Electrochemistry Meetings	CNRS,
		UPJV
7	International Conference in Solid State Ionics (Annual meeting)	CICe
8	An International Bunsen Discussion Meeting (IBDM) 2024	CICe
9	ECS Meeting organized by The Electrochemical Society	CNRS,
		UPJV
10	International meeting on Lithium Batteries	тс
11	International Congress for Battery Recycling – ICBR	ABEE
12	The Battery Show Europe 2023 or/and 2024	ABEE
13	Battery Innovation Days 2023 or/and 2024	ABEE
14	Autosalon January 2023 – Brussels	ABEE

### Table 5-1 Key targeted conferences and lead partners

### Table 5-2 Targeted journals, topic, and lead partner

Торіс	Targeted journals	Lead Partner		
Li-sulfide thin	Energy and Environmental Science CICe			
film multilayer	ACS Energy Letters	CICe		
& Cathode	Advanced Functional Materials	CICe		
	Journal of Materials Chemistry A	CICe		
	Journal of Energy Chemistry	CICe		
	ACS Applied Materials & Interfaces	CICe		
	Materials Today Energy			
	CICe			
	ACS Applied Energy Materials	CICe		
	Advanced Materials Interfaces	CICe		
	Energy & Al	CNRS, UPJV		
	Nature Machine Intelligence	CNRS, UPJV		





Modelling of	Journal of Power Sources	CNRS, UPJV			
manufacturing	Batteries & Supercaps CNRS, UP				
process	Joule	CNRS, UPJV			
	Energy Storage Materials	CNRS, UPJV			
	ACS Energy Letters	CNRS, UPJV			
Design, Cell	Applied Energy	UPV			
performance	Energy Conversion and Management UPV				
and safety	Journal of Energy Storage UPV				
results	International Journal of Heat and Mass Transfer	UPV			
LCA and cost	Journal Cleaner Production;	INEGI			
optimisation	Environmental Management	INEGI			
	Sustainability	INEGI			
	Industrial Ecology	INEGI			

Assignment of lead partner per conference and journal, have created a monitoring tool for PULSELiON employed during the project to ensure that its dissemination strategy is on target and the relevant dissemination KPIs are achieved.

### Task 2 Project website

Project website address is <u>www.project-pulselion.eu</u> and some project webpages have been designed. The progress and/or outcomes of the project are shown on the public website for anyone interested in PULSELiON. As shown in

Figure 5-1, the website has an easy menu structure and gives a brief overview. Partners' logos and links to their website are included. Newsletters and technical project publications as well as links to EC documents and related activities will be posted on the website. The aim is to update the website 8 times or more per year and to have more than 500 views per year.





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#### Figure 5-1 PULSELiON website screen shot

#### Task 3 Press release and bi-annual newsletters

Due the project kick-off meeting, the PULSELiON project press release was published to raise awareness of the project. Please see Annex A for more details.

During the project 8 newsletters are planned. TC has made an initial overview of the newsletters, the date it will be published as well as candidate topics addressed. This overview could be found in Table 5-3.

Newsletter number	Date	М	Candidate topics (and candidate contributors)
Newsletter 1	4/30/2023	7	2nd consortium meeting in Finland (TC + RISE) D3.1 Reference cell definition and Round Robin Test (SEN) - (CICe) D8.2 Communication plan and generic project description project flyer (EC-PU)-(TC)
Newsletter 2	9/30/2023	13	D2.1 (Milestone 2): Cell specifications and testing protocols (SEN) - (CRF) D5.1 (Milestone 7): Safe handling & testing protocol (SEN) - (AIT) D7.2 (Milestone 10): SSB recycling process flow design (SEN) - (ABEE) Milestone 9: Digital Data Platform (SEN)-(INEGI)
Newsletter 3	4/30/2024	19	BEPA 2-yearly report contribution (TC) Milestone3: Stable Li metal thin film anode (SEN)-(CICe) Introduction of all partners (TC) Project concept video (TC)
Newsletter 4	9/30/2024	25	D3.2 (Milestone 4): NMC-sulfide cathode by wet processing (SEN) - (CICe)
Newsletter 5	4/30/2025	31	D3.3 Li anode / sulfide electrolyte multilayer stack by PLD (SEN) - (PULSEDEON) D3.4 (Milestone 5): Full cell chemistry and pouch cell manufacturing (SEN) - (CICe) Milestone 6: PLD process (equipment capabilities and targets) upscaled (SEN)-(ABEE)

#### Table 5-3 Newsletter planning





Newsletter 6	9/30/2025	37	D4,1 Report on validation (coin-cell) of upscaled PLD process for Li metal, barrier, and sulfide electrolyte (SEN) - (PULSEDEON) D4.2 Report on 1Ah & 10 Ah pouch cell prototype cell design & assembly definitions and manufacturing (SEN) - (ABEE) D4.3 Design of battery module (SEN) - (IKE)
Newsletter 7	4/30/2026	43	<ul> <li>BEPA 2-yearly report contribution (TC)</li> <li>D7.1 Environmental Performance and Cost Assessment (PU) - (INEGI)</li> <li>D6.1 Documentation on the newly developed manufacturing modelling framework (SEN) - (CNRS)</li> <li>D6.2 Documentation on newly developed multiscale</li> <li>electrochemical performance model of the full cell (SEN) - (CNRS)</li> <li>D6.3 Validation of electrochemical performance model on experimental results from WP5 (SEN) - (UL)</li> <li>D6.4 Manufacturing models in GitHub repository (PU)-(CNRS)</li> <li>D6.5 Report on digital twin of the manufacturing process (SEN) - (UL)</li> </ul>
Newsletter 8	8/30/2026	48	Overall project results (RISE + TC) D5.2 Report on the electrochemical, aging and safety tests, and post-mortem analysis (SEN) - (AIT) D5.3 Report on the testing and demonstrative of the prototype cells (SEN) - (RISE) D5.4 Testing and evaluation of battery module (SEN) - (IKE) D7.3 Report on recycling process and upscaling requirement (SEN) - (ABEE) D8.3 Final Business Models and Exploitation plan (EC-PU)- (PNO) D8.4 Final report on exploitation activities (EC-PU)-(TC)

### Task 4 Social media campaign

Along with the project website, social media plays an important role in effective communication with the broader audience. The project team has set up individual project accounts on Twitter and LinkedIn and screenshots of respective social media are shown in Table 5-4 hereunder. Furthermore, all partners have been provided with the social media guide, as highlighted in Annex B.







Table 5-4 Social media screenshots

Every second week, starting the 1<sup>st</sup> of February, partners of the project are introduced to the public using the project LinkedIn profile. The schedule for these introductions is hereunder in Table 5-.





Date planned	Торіс	Contributors
2/1/2023	introducing RISE	RISE
2/15/2023	introducing ABEE	ABEE
3/15/2023	introducing CNRS / UPJV	CNRS
3/29/2023	introducing CICe	CICe
5/31/2023	introducing AIT	AIT
6/14/2023	introducing TC	TC
6/28/2023	introducing CRF	CRF
7/12/2023	introducing UL	UL
7/26/2023	introducing PULSEDEON	PULSEDEON
8/9/2023	introducing UPV	UPV
8/23/2023	introducing UPORTO	UPORTO
11/15/2023	2023 introducing PNO PNO	
11/29/2023	introducing IKE (last partner introduced)	IKE

#### Table 5-5 LinkedIn partner introductions

### Task 5 Video material

Video material like short interviews and "letting the specialist tell" and "letting the stakeholder tell" will be produced and disseminated through the project website and the social media channels. Initially planned video are presented in Table 5-6.

Video	Date	Candidate topics
video #1	5/1/2023	PLD process (PULSEDEON),
		interviews with RISE and
		PULSEDEON (TC) at GA in
		April 2023 in Finland
video #2	9/1/2023	Project concept animation
		video (TC)
video #3	5/15/2024	Results so far and interview
		with RISE (TC) at GA in April
		2024

#### Table 5-6 Planned videos and candidate topics





video #4	5/15/2025	Results so far and interview with RISE (TC) at GA in April 2025
video #5	15/5/2026	Results so far and interview with RISE (TC) at GA in April 2026
video #6	15/10/2026	Eend-result and interview with RISE (TC) at GA in September 2026

Furthermore, to ensure proper privacy of various individuals participating in the project, TC has gathered GDPR consent forms from all the partners. A template of such GDPR consent could be found in Annex C.

### 5.1. KPIs for PULSELiON dissemination activities

Quantification of PULSELION objectives for dissemination activities (KPIs), as presented in the proposal, is presented in the Table 5-7 below.

Dissemination measure	Purnosa	Key performance	Targeted Audience	
Dissemination measure	i uipose	Ney performance	Talgeted Addience	
		indicators		
Project updates on	General	8 updates/year	General public	
PULSELION website and	information	500 views/year		
social media.				
Project videos	General	1 video – concept	General public and	
	information	5 low-cost videos	scientific community	
Organization of	Knowledge	1 workshops/year	EV and battery	
workshops	exchange		Community	
Participation in	Knowledge	>20 conferences	Energy, battery and EV	
Conferences, meetings	exchange		Community,	
			standardisation	
			Committee	
Open Access	Research	> 5-10 publications	Scientific Community	
publications				

### Table 5-7 KPIs for Dissemination Activities





Online publishing	General	7 newsletters (half-	General Public
(online magazines,	information	yearly)	
newspapers,			
newsletters, blogs)			

Apart from the conferences and journals, PULSELiON also uses its project website (projectpulselion.eu) to dissemination the concept, project achievements, publications, recent developments, individual partner descriptions, contact details, conferences of interest, etc. Thus, non-confidential information made widely available to the scientific community, the broad public, and to other stakeholders. The PULSELiON public website is the project's predominant tool for dissemination results about the project and, in the end, for disseminating results aiming at reaching a broad public as well as stakeholders and scientists in the field and creating continuous awareness of the project's activities. The look, feel and structure of the PULSELION website has been elaborated in details in the D8.2, which is submitted in parallel to this document.

#### 5.2. **Open Science practices and research data management**

Deliverable D1.4 Data Management Plan is submitted in M6 and outlines how the project makes research data FAIR (findable, accessible, interoprable, re-openable).

Open access to the peer reviewed scientific publications of the project will be provided with the highest standard when possible. Public deliverable holding high dissemination value will be delivered in a public form and, whether necessary, digested or adapted to specifically target intended audiences. Additionally, given the high value of and efforts spent on producing the content, adequate protection of project and EC's image as well as the content integrity (e.g., against decontextualization) is crucial . All public project materials are available through the project website, open access data repository Zenodo (www.zenodo.org) and are promoted through the project communication channels.

The PULSELION partners will ensure Open Access to peer-reviewed scientific publications relating to their results, the first choice being the "gold" Open Access model. Machine readable copies will be made available on suitable open access repositories, connected to specific platforms (i.e., Open Research Europe<sup>2</sup>), which will grant access to the publications and to bibliographic metadata in a standard format, including information requested by the EC. Other platforms also examined at the beginning of the project like www.re3data.org. The newly established EC Journal Checker Tool (https://journalcheckertool.org/) for assessing if different journals' open access policy is aligned to the Horizon Europe FAIR requirements will be used.

<sup>2</sup> Open Research Europe | Open Access ... | Open Research Europe (europa.eu) PULSELION - GA no. 101069686 Funded by



### 6. Dissemination tracker

TC, with the support from PNO as the WP8 leader, tracks the dissemination activities closely. The detailed planning and tracking are supported by an Excel sheet, with an input collected from the partners in the project. The Excel sheet and the disseminated documents are stored in the PULSELiON Project Place (RISE Sharepoint) in the folder <u>Dissemination Tracker - ALL DISSEMINATION activities</u>. The Excel document (PULSELiON Dissemination tracker.xlsx) is a living document. The lists of realized conference participations and journal publications will be submitted to the EC in M48, in the final version of D8.1. Figure 6-1 and Figure 6-2 highlight the inputs collected for realized conference participations and journal the partners in the Dissemination Tracker.

PU	LSELION	Dissemination activ	Dissemination activities - Conferences and workshops				
Number 💌	Dissemination type 🔻	Event name	Title of presentation 💌	Lead partner	Authors 💌	Place 💌	Comments 💌

Figure 6-1 Inputs collected from partners regarding realized conferences and workshops

F	ULS	Lion	Peer-revie	wed publicatior	IS									
	Type of publicati	Title of		Title of the Journal/ Proceedings/		When no DOI available: provide link to article on journal/publisher	Number, date or frequency of the journal/proce	Releva nt			Place of	Year of	Repositor	
NO. •	on 👻	publicatio *	Author(	book	DOI	website	edings / boo 👻	Page •	ISBN 🝷	Publishe	publication	publicatie	y Link 💌	Comment

Figure 6-2 Inputs collected from partners regarding realized peer-reviewed publications

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The broader dissemination of project results will be carried out by TC, as described in chapter 5. TC disseminates the available information to the broader world, via the project website and other dissemination channels, including the relevant EC and BEPA/BATT4EU platforms. The broad dissemination activities of PULSELiON scheduled so far, have been summarized (see Table 6-1) in an Excel document. TC (with support from PNO) uses the Excel document for monitoring the progress. The lists of realized broad dissemination activities will be submitted to the EC in M48, in the final version of D8.1.

Date				
planned	Торіс	Contributors	Status	Comments
2/1/2023	Introducing RISE	RISE		
2/15/2023	Introducing ABEE	ABEE		
3/1/2023	D3.1	CICe		
3/15/2023	Introducing CNRS / UPJV	CNRS		
3/29/2023	Introducing CICe	CICe		
4/12/2023	Preparing consortium meeting II	RISE		
4/20/2023	Consortium meeting II	ТС		
5/1/2023	Newsletter 1	ТС		
5/17/2023	Video #1	ТС		
5/31/2023	Introducing AIT	AIT		
6/14/2023	Introducing TC	ТС		
6/28/2023	Introducing CRF	CRF		
7/12/2023	Introducing UL	UL		
7/26/2023	Introducing PULSEDEON	PULSEDEON		
8/9/2023	Introducing UPV	UPV		
8/23/2023	Introducing UPORTO	UPORTO		
9/6/2023	Video #2	ТС		
9/20/2023	D2.1	CRF		
10/4/2023	Newsletter 2	ТС		
10/18/2023	D5.1	AIT		
11/1/2023	D7.2	ABEE		
11/15/2023	Introducing PNO	PNO		
11/29/2023	Introducing IKE (last partner introduced)	IKE		
12/13/2023	Merry Christmas and happy holidays	ТС		
4/30/2024	Newsletter 3	ТС		
5/15/2024	Video #3	тс		
9/30/2024	Newsletter 4	ТС		





4/30/2025	Newsletter 5	TC	
5/15/2025	Video #4	TC	
9/30/2025	Newsletter 6	тс	
10/15/2025	Video #5	ТС	
4/30/2026	Newsletter 7	TC	
8/30/2026	Newsletter 8	TC	

### 7. Dissemination rules

The dissemination of results adheres to the clause 8 of the Consortium Agreement. Accordingly, prior notice of any planned publication will be sent to partners at least 45 calendar days before the publication. In case of conference presentations, prior notice will be at least 15 calendar-days. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the Coordinator and to the partners who planned the dissemination within 30 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

Furthermore, all dissemination activities are obligated to acknowledge EU funding, and use the Microsoft Word and Microsoft Powerpoint templates established for the PULSELiON project, which are stored on the Project Place (RISE Sharepoint, map <u>Templates</u>).

The templates developed for PULSELiON define a distinct visual identity for the project and create a distinct branding that ensures a professional, consistent visual appearance of the project across all outreach activities. TC has designed several key design elements including the project Logo, color scheme and the corresponding communication material (Microsoft Word, Microsoft Powerpoint templates). D8.2 Communication plan, which is also submitted in M6 elaborates the PULSELiON visual identity and branding in detail.

### 8. Conclusion and next steps

Transparent and continuous internal communication ensures that partners are kept fully informed about any dissemination activities throughout the course of the project. PULSELiON aims for a three-step approach to ensure constant internal updates by all partners to keep the Dissemination Tracker up to date.

 Obligation of each partner to announce their dissemination activities via Project Place hosted by RISE. Partners are required to update the Excel file with the name and details of the activity, along with an upload of the Powerpoint presentation or a Word document.





- During each WPLB and GA meeting information is gathered from partners about any planned dissemination activities, while reminding them of their obligation to disseminate.
   PNO as a WP8 leader facilitates the collection of this information from the partners and transfers it to TC.
- Once the dissemination tracker is updated, TC disseminates that information to the broader world, via the project website and other dissemination channels, including the relevant EC and BEPA/BATT4EU platforms.

### 9. Annexes

Annex A: PULSELiON project press release

- Annex B: Social media guide
- Annex C: GDPR consent forms



#### Annex A PULSELiON project press release

# PULS LION PRESS RELEASE

### Next generation battery manufacturing: PULSELiON -PUIsed Laser depoSition tEchnology for soLid State battery manufacturing supported by digitalizatiON

A consortium of 15 interdisciplinary European partners will develop manufacturing technology for Generations 4a – 4b solid-state batteries, that can improve the energy density and safety of lithium metal solid state batteries

28 September 2022 – Lithium-ion battery cells with conventional active materials are reaching their limits in terms of energy densities and suffer from safety issues that become even more critical in the future. Solid-state batteries can solve these issues, but they are not yet manufactured on a large scale. Hence, there is an urgent need for the development of manufacturing technologies for solid-state batteries, as a next step to significantly enhance battery energy density and safety. The new research project PULSELiON, sets out new pulsed laser deposition based technologies for solid-state battery manufacturing. Funded through the European Union's Horizon Europe Framework Programme for Research and Innovation, the project will receive EUR 7 million over the next four years. PULSELiON is coordinated by RISE and the consortium kicks off its activities today with a meeting at the Stockholm premises of RISE in Sweden.

Lithium-ion battery cells with conventional active materials are reaching their limits in terms of energy densities. Also, safety issues arise with the utilization of liquid organic electrolyte, which is becoming even more critical with the recent introduction of advanced materials made to increase cell voltage and fast-charging rates. Hence, there is an urgent need for the development of innovative scalable manufacturing technologies based on new solid electrolytes that can also be combined with metallic lithium at the anode, leading to significantly enhanced energy density. In this context, solid-state electrolytes enable overcoming current battery cells limitations in terms of voltage and safety (reducing the Lithium dendrite formation risk) leading to an increased intrinsic thermal and electrochemical stability.

PULSELION project aims to develop a manufacturing process for Generation 4b solid-state batteries that are based on a lithium-metal anode, a sulfide solid electrolyte, and a nickel-rich NMC cathode. A novel pulsed laser deposition technique, already developed by project partner PULSEDEON, will be adapted and modified into a single-step vacuum process for safe and efficient manufacturing of anode components composed of lithium metal, protective layers, and sulfide-based solid electrolytes. The cathode layer will be based on conventional wet processing techniques.

Initially, the anode and cathode layers will be developed in small-scale to make coin cells and monolayer cells for optimising the materials and process. Solid-state cells will be developed with optimised process routes and will be upscaled to a pilot line proof-of-concept (TRL 6) by large scale manufacturing of 10 Ah solid-state batteries. Digitalisation will be incorporated in the process modeling (digital twinning) task with the inputs obtained from process upscaling and cell testing tasks, which will enable efficient process optimisation.

The PULSELiON consortium, responsible for this novel battery manufacturing process, brings together top EU experts from research institutes, technological / industrial partners, a battery end user from the automotive industry, and dissemination and exploitation partners, from Sweden, Finland, The Netherlands, Belgium, France, Spain, Portugal, Italy, Slovenia and Austria. The project officially kicks off its activities with a first meeting taking place at the premises of RISE on 28 September 2022.



PULSELION - GA no. 101069686



#### Annex B Social media guide



#### Dear partners,

This is a guide for using our PULSELiON communication channels on social media and the internet. Furthermore, we encourage you to share information about project PULSELiON in your own network!

#### GENERAL INSTRUCTIONS

In your communications, make sure to acknowledge the EU funding, by using the EU emblem.



The PULSELION logo and the EU emblem can all be found on the sharepoint. As well as the Press Release

#### WEBSITE

The website can be reached via URL <u>www.project-pulselion.eu</u>. Please be invited to share this URL in your network to people interested in the project.

Initially, the website will only contain the PULSELiON kick-off press release. Over the next months, the content and design of the website will be upgraded to include all relevant information about the PULSELiON project

#### LINKEDIN

You can reach the project PULSELION account via <a href="https://www.linkedin.com/showcase/pulselion">https://www.linkedin.com/showcase/pulselion</a>. We would like to invite you to follow PULSELION on LinkedIn and to connect with people in your network. Please feel free to tag @CINEA; @European\_Commission, and to use hashtags #HorizonEU

#### TWITTER

You can reach the PULSELION twitter account via <u>www.twitter.com/PULSELION\_EU</u>. In your tweets about the project, please tag the @PULSELION\_EU account and/or use the hashtag #PULSELION\_EU.

Please feel free to tag @CINEA; @HorizonEU

#### E-MAIL

The official email address of PULSELiON is <u>pulselion@project-pulselion.eu</u>. E-mails sent to this address are received by Anwar, Maxim and Kris

#### GETTING STARTED

In case you want to get started with posting / sharing, please be invited to use the wording:

project PULSELiON is lauched The 15 consortium partners in this @HorizonEU #Research project have started the development of a novel #manufacturing process for next generation solid-state #batteries. Find our press release: www.project-pulselion.eu



PULSELiON - GA no. 101069686



#### Annex C GDPR consent forms



This GDPR consent form is has been drawn up by:

BENEFICIARY FULL NAME, PIC CODE, established in ADDRESS OF REGISTRATION, PLACE OF REGISTRATION, POSTAL CODE OF REGISTRATION, COUNTRY OF REGISTRATION, acting as beneficiary in Horizon Europe project "PULSELION" under GA no. 101069686, hereinafter referred to as "the beneficiary", and represented by PERSON NAME who is acting as GDPR officer in project "PULSELION" on behalf of the beneficiary in the project,

#### and is directed to:

TECHCONCEPTS BV, PIC 889377481, established in BENEDENKERKSEWEG 108, STOLWIJK 2821 LE, Netherlands, acting as one of the two partners responsible for Communication and Dissemination activities in project "PULSELION", hereinafter referred to as "TC", and represented by Willar Vonk who is the leading person of TechConcepts BV in project "PULSELION",

#### and,

PNO INNOVATION, PIC 992330080, established in EXCELSIORLAAN 51, ZAVENTEM 1930, Belgium, acting as one of the two partners responsible for Communication and Dissemination activities in project "PULSELION", hereinafter referred to as "PNO", and represented by Isadora Reis Rodrigues who is the leading person of PNO Innovation in project "PULSELION",

and,

RISE RESEARCH INSTITUTES OF SWEDEN AB, PIC 999613422, established in BRINELLGATAN 4, BORAS 501 15, Sweden, acting as the project coordinator, hereinafter referred to as "RISE", and represented by Anwar Ahniyaz who is the leading person of RISE in project "PULSELION".

together hereinafter referred to as "the Parties", or individually as "Party",

#### 1. Subject Matter

Use of personal data, photographic pictures and/or audio/visual recordings of team members of the beneficiary that participate in the Horizon Europe project "PULSELION"

#### 2. Background

A consortium led by RISE is performing project "PULSELION", a project funded by the European Union under GA no. 101069886. During the project, the project coordinator and the two partners responsible for Communication and Dissemination activities in project "PULSELION" might publicly publish material that is subject to the GDPR

Each beneficiary has selected one team member from the team participating in project PULSELION to act as their GDPR officer in project "PULSELION". The GDPR officer will be the first contact person for the beneficiary for the project "PULSELION" management team and partners responsible for Communication and Dissemination for GDPR related issues. The GDPR officer is also the first contact person for GDPR related issues regarding project "PULSELION" for the team members of the beneficiary.



PULSELION - GA no. 101069686



# PULSELION

### **Declaration of GDPR consent**

#### 3. Purpose

The purpose of the consent form is to allow the project "PULSELION" Project Coordinator RISE and the partners responsible for Communication and Dissemination PNO and TC to undertake the following activities:

#### 3.1 use of pictures, personal data and short profiles

- Graphic editing and publication of photographs and short profiles (short profiles to be provided by the beneficiary) including personal data such as name, surname and e-mail address on the "PULSELION" project website and social media channels, with a purpose to present the project team and the various contact persons, and to inform about project activities
- Graphic editing and publication of photographs and short profiles in relation to the "PULSELiON" project communication materials (print/digital) such as leaflets and posters as well as electronic newsletters
- Provision of pictures to relevant stakeholders in the context of defined external project communication activities such as the distribution of press releases or organisation of workshops

#### 3.2 Use of audio and/or visual recordings

- Editing and publication of audio and/or visual recordings on the "PULSELION" project website and social media channels, with a purpose to present the project team and the various contact persons, and to inform about project activities
- Provision of audio and/or visual recordings to relevant stakeholders in the context of defined external project communication activities such as the distribution of press releases or the organisation of workshops

#### 4. Consent

With signature of this document, the GDPR officer of the beneficiary for project PULSELION declares to have checked and received the consent of the team members of the beneficiary participating in project "PULSELION" to the free use their photographs, short profiles and audio and/or visual recordings for the purposes described above, with the exemption of the beneficiary team member PERSON NAME, PERSON NAME.

It is not permitted to use the photographs for purposes other than those described or to place them on the market by making them available to third parties. The lawfulness of the processing is based on Art. 6, para. 1, letter A GDPR (General Data Protection Regulation).

The consent given by the beneficiary team members is voluntary. If it is not given, there will be no disadvantages. The consent can be revoked at any time with effect for the future.

We expressly point out that digital images can be accessed worldwide, for example on the project "PULSELION" website, and further use by third parties cannot be ruled out.

5. Signature

Location, Date

Signature



PULSELION - GA no. 101069686

