Funded by the European Union

FreeTwinEV

D5.1 Dissemination, Communication and Exploitation Strategy 1			
Project name	Fostering Research Excellence of STU in Digital Twinning for Sustainable and Safe Electric Vehicles		
Project number	101159989		
Project acronym	FreeTwinEV	**Start – End**	1 May 2024 – 30 April 2027
Dissemination level	PUBLIC	**Nature**	REPORT
Due Date:	Month 6 (October 2024), Lead beneficiary: STU		
Submission date	31.10.2024		
Version	V1.0		
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Executive Summary

The deliverable D5.1 Dissemination, Communication and Exploitation (DCE) Strategy of the project FreeTwinEV shows the objectives, approach and targets of Dissemination, Communication and Exploitation activities. It also includes visual identity of the project. FreeTwinEV started on May 1st, 2024, and is planned to end on the 30th of April 2027.

This deliverable is liked with the WP5 Dissemination, Communication and Exploitation and is an outcome from all 3 tasks of the Work package – T5.1 Establishing communication means (Lead: ADDSEN), T5.2 Establishing and Implementation of Dissemination and Communication Strategy (Lead: STU), and T5.3 Establishing and Implementation of Exploitation strategy (Lead: STU).

D5.1 is the first version of DCE out of 2 that will be submitted during the project. The second version is scheduled to be published by Month 24 (April 2026) after 2 years of the project and will update the DCE with more focus on project exploitation.

The deliverable is divided into 3 main parts representing each sub-activity: Communication, Dissemination and Exploitation.

1. Task and deliverable methodology

1.1. Methodology

The main objective of the strategy is to inform about the project's progress, communicate relevant activities to different target groups, and ensure proper exploitation of the project results, especially from the research component.

As required by the GA, the funding of the EU will be mentioned in all outcomes.

1.2. Roles of partners

ADDSEN as the task leader of T5.1 has prepared the project visual identity, design elements and brand identity (chapters 2.1, 2.2 and 2.3).

STU was responsible for collecting inputs and creating the complete version of Dissemination, Communication and Exploitation Strategy.

UTWENTE and LCM together with ADDSEN reviewed the document and added the necessary comments.

Based on the feedback obtained, the STU has finalised the D5.1.

1.3. Timeline of preparation

ADDSEN has prepared the project visual identity, design elements and brand identity (results of Task 5.1) by end of Month 3 (July 2024).

The information regarding the potential dissemination events was collected within the months 4-6.

STU was creating the document, which was send for the review to the partners.

Final version was submitted to the F&T portal on time in Month 6.

2. Communication

2.1. FreeTwinEV visual identity

A unified visual identity is a strategic asset for FreeTwinEV Horizon Europe project, contributing to its success and the effective dissemination of its results.

The aim of creation of an unique visual identity – branding to ensure a consistent visual identity for project outputs. It includes the presentation template, project logo, layouts for all project publications, leaflets, promo materials, etc.

Several logo alternatives were shared by the graphical designer and opinions of project beneficiaries were collected.

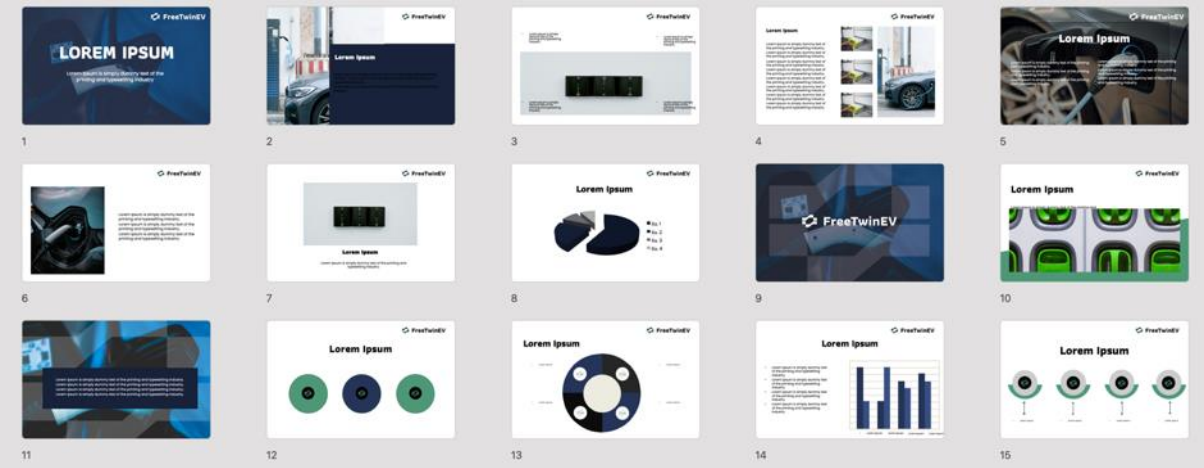
The concept was described as follows:

- An abstract sign: Intertwined lines that create a sense of movement and a continuous flow of energy. The symbol conveys a sense of infinity, which symbolises sustainability and innovation.
- Font solution: A modern, sleek font for the company name "FreeTwinEV", which emphasises the technological aspect of the company.
- Colour scheme: The main colours are green (symbolising sustainability and nature) and blue (associated with technology and reliability).
- Overall look: The logo looks dynamic and modern, conveying the idea of sustainable development and technological progress.

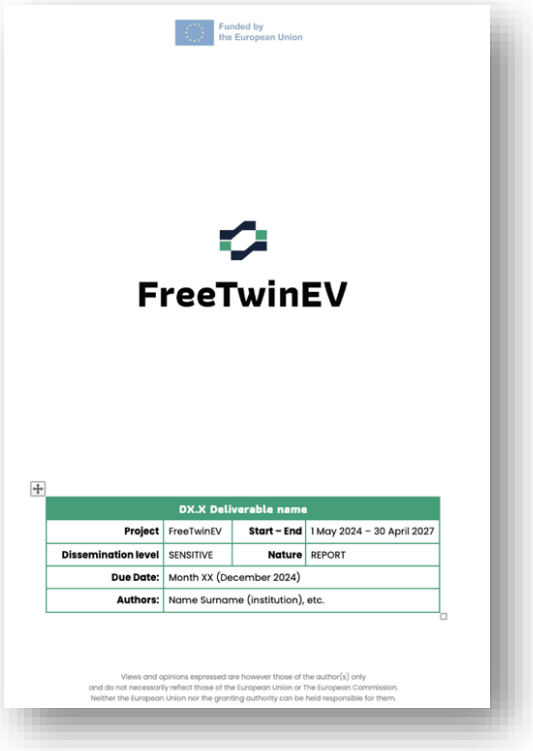
The process led to the final logo created by end of June 2024:

2.2. Design elements

Presentation template:



Deliverable template:

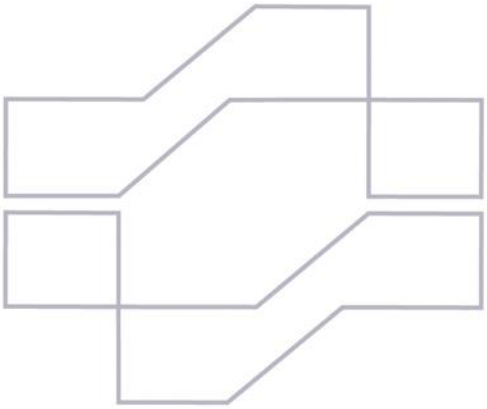


LinkedIn Header:

2.3. Brand guidelines

GRAPHIC ELEMENTS

An abstract sign: Intertwined lines that create a sense of movement and a continuous flow of energy. The symbol conveys a sense of infinity, which symbolises sustainability and innovation.



COLOUR PALETTE WHEN USING A LOGO

COLOURS THAT CANNOT BE USED

CORPORATE FONTS

Titles

Athiti

A, a B, b C, c D, d E, e F, f G, g H, hl, i J, j K, k L, l M, m O, o P, p Q, q R, r S, s T, t U, u V, v W, w X, x Y, y Z, z

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THE HEADER (Bold 48 pt.)

SUBTITLE (Medium 18 pt.)

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A, a B, b C, c D, d E, e F, f G, g H, hl, i J, j K, k L, l M, m O, o P, p Q, q R, r S, s T, t U, u V, v W, w X, x Y, y Z, z

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THE HEADER (Bold 48 pt.)

SUBTITLE (Medium 18 pt.)

Paragraphs

Poppins

A, a B, b C, c D, d E, e F, f G, g H, hl, i J, j K, k L, l M, m O, o P, p Q, q R, r S, s T, t U, u V, v W, w X, x Y, y Z, z

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Paragraphs (Regular 12 pt.)

Poppins

A, a B, b C, c D, d E, e F, f G, g H, hl, i J, j K, k L, l M, m O, o P, p Q, q R, r S, s T, t U, u V, v W, w X, x Y, y Z, z

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Paragraphs (Regular 12 pt.)

CORPORATE COLOURS

Colour scheme: The main colours are green (symbolising sustainability and nature) and blue (associated with technology and reliability).

#010101 CMYK 91 79 62 97 RGB 1 1 1	#49A078 CMYK 72 14 63 1 RGB 73 160 120
#172238 CMYK 100 87 46 54 RGB 23 34 59	#F8F7F7 CMYK 4 3 3 0 RGB 248 247 247

PRINTED MATERIALS

Leaflets

PRINTED MATERIALS

Poster

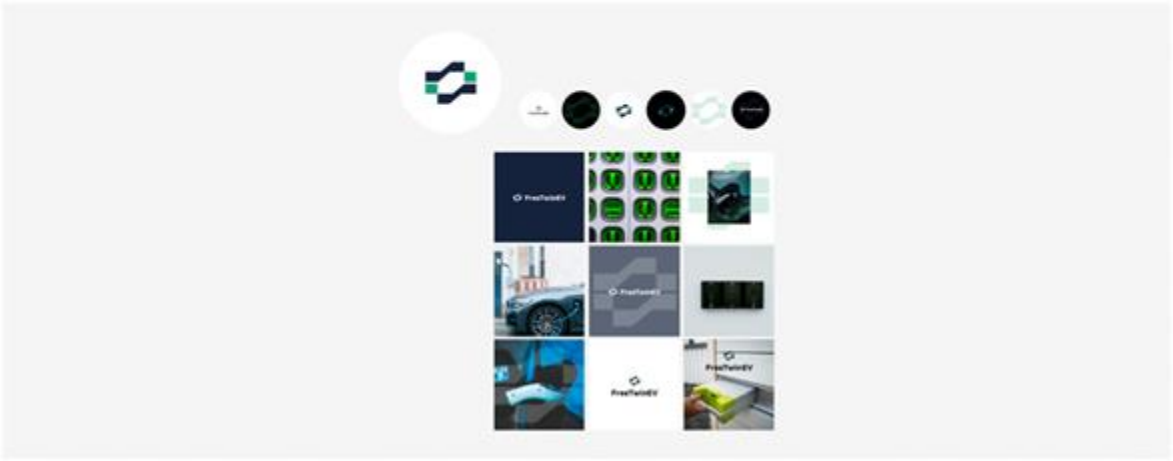
17

PRINTED MATERIALS

T-Shirt

SOCIAL NETWORKS

Instagram



SOCIAL NETWORKS

Linkedin

2.4. Project website

The official website for the FreeTwinEV project serves as the primary platform for outreach, engagement, and communication with diverse audiences, from project partners to the broader public.

The website's aim is to provide accessible, up-to-date information on the project's goals, progress, and outcomes, fostering a transparent and collaborative approach to project activities and results. Consortium made sure that the visibility of the project funding is mentioned and visible on the website. The website is created in the domain https://freetwinev.stuba.sk/

Website Structure and Content

The website consists of various parts that gives an overview of the project activities, partners, events and general project updates.

The categories go as follows:

- **About the Project:** The section provides a comprehensive overview of the FreeTwinEV project, highlighting its primary goals, strategic importance, and the innovative solutions it seeks to implement. Here, visitors can learn about the project's vision and how it contributes to advancements in sustainable technology, international collaboration, and research. This section is designed to be an accessible entry point for newcomers, helping them quickly understand the essence of FreeTwinEV and why it matters.
- **Consortium**: The section showcases organizations that are involved in FreeTwinEV project. Each partner brings unique expertise and resources to the project, and this section includes profiles, descriptions of each organization's role, and contact information. By exploring this page, users can gain insight into the collective expertise driving FreeTwinEV forward and the extensive collaborative network that underpins its success.
- **Deliverables**: This section gives users access to the public outputs generated throughout the FreeTwinEV project's lifecycle. The page will host public reports, strategic documents, tools, and resources produced by the project, making it a valuable resource for those interested in the technical details and results achieved.
- **Milestones**: The page highlights significant achievements within the project's timeline, marking the successful completion of key phases, innovations, and project goals. Each milestone is accompanied by a short description and, where possible, relevant data or media to illustrate its impact.
- **Resources and Publications**: The page will serve as a repository for academic and technical materials, making it a central hub for stakeholders interested in the project's research base and evidence-driven approach.

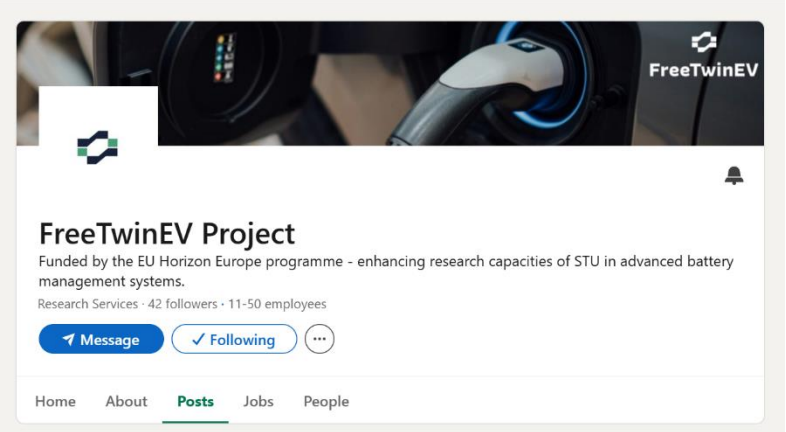
Visitors, especially researchers and industry professionals, can refer to this library for deeper knowledge and relevant findings. The page will be linked with the open-source repository Zenodo.

- **Events**:
    - Calendar: A dynamic calendar marking upcoming project events, such as workshops, summer schools, webinars, etc, ensuring visibility of key gatherings and updates.
    - Plan of Guest Lectures and webinars: his sub-section provides a table of planned guest lectures and webinars, complete with active links to video recordings or live-streamed sessions if applicable. These lectures will bring expert insights from various fields, supporting knowledge sharing and engagement with project audiences.
- **Blog**: The page for storytelling, project updates, and insights from the team. This section will feature articles that explore the experiences, challenges, and achievements encountered along the way. Each post is paired with engaging photos and visual content to provide an immersive look at the project's activities and milestones.
- **Contact**: Links to social media and contact channels to encourage public engagement and facilitate communication.

The website will be continuously updated to reflect the project's progress, providing a reliable source of information for all interested stakeholders.

2.5 Social media

The LinkedIn channel for the FreeTwinEV project was created at the very beginning of the project. It is dedicated to sharing updates, insights, and achievements with a professional audience, including researchers, industry experts, and policy stakeholders. As a key platform for communication, LinkedIn allows us to connect to the wider scientific and business communities, promoting the project's goals, progress, and outcomes in a highly interactive environment.



Through this channel, FreeTwinEV will regularly share:

- Project Milestones and Updates: Highlighting significant achievements, events, and developments.
- Research Insights and Publications: Sharing links to reports, deliverables, and findings to enhance knowledge exchange.
- Events and Engagement Opportunities: Announcing upcoming workshops, conferences, and guest lectures, with options to register or join virtually.
- Networking and Collaboration: Engaging with followers to foster discussions, partnerships, and potential collaborations.

By actively leveraging LinkedIn, the project aims to build a strong professional presence, enhance visibility among key stakeholders, and create opportunities for meaningful connections within the community.

3. Dissemination

Dissemination is a core element of the projects under Horizon Europe, aiming to ensure that project results and knowledge generated throughout the program are effectively shared with relevant stakeholders and the public. Dissemination involves strategically communicating project findings, innovations, and outcomes beyond the immediate consortium to maximize impact, foster knowledge exchange, and inspire new initiatives.

Publishing papers and attending conferences are vital components of the FreeTwinEV project's dissemination strategy, ensuring that the project's findings, methodologies, and innovations reach a broad audience in both academic and industry circles. Through peer-reviewed publications, the project contributes to the body of knowledge within its field, sharing rigorously validated insights and data with researchers and practitioners. Conference participation, meanwhile, allows FreeTwinEV to actively engage with experts, present findings, and gather feedback in real time.

These dissemination activities aim to:

- **Enhance Knowledge Exchange:** By publishing in reputable journals and presenting at international conferences, the project shares valuable knowledge with the scientific community.
- **Build Awareness:** Engaging with audiences at conferences raises visibility of FreeTwinEV's mission, goals, and contributions within the field.
- **Foster Collaboration:** Conference attendance and networking opportunities help establish connections with potential collaborators, creating pathways for future partnerships and joint research.
- **Promote Sustainability and Impact:** Through shared insights and impactful publications, the project advances dialogue around sustainable innovations and creates a foundation for long-term impact.

By contributing to leading journals and participating in key conferences, FreeTwinEV actively supports the advancement of its field, ensuring that project outcomes have lasting value and influence in both research and practice.

The first plan of the conferences that are planned to be attended is given below:

No.	Conference	Project year	Location	Dates	Participation goals

	19th A3PS Conferece Eco-Mobility 2024 Sustainable Energy Carriers and Innovative Propulsion Systems in a Circular Economy	1	Vienna, Austria	14-15 November 2024	Attendance, Networking (LCM)
	3rd IACM Digital Twins in Engineering Conference (DTE 2025) & 1st ECCOMAS Artificial Intelligence and Computational Methods in Applied Science (AICOMAS 2025)	1	Paris, France	17-21 February 2025	Presentation, Networking (LCM)
	XI International Conference on Coupled Problems in Science and Engineering	1st	Villasimius (Sardinia), Italy	26-29 May 2025	Presentation, Networking
	The Battery Show Europe	2nd	Stuttgart, Germany	3-5 June 2025	Attendance, Networking
	38th International Electric Vehicle Symposium &	2nd	Gothenburg, Sweden	June 15-18, 2025	Attendance, Networking, tentative presentation (UT)

	Exhibition (EVS38)				
	2025 IEEE/AIAA Transportation Electrification Conference and Electric Aircraft Technologies Symposium (ITEC+EATS)	2nd	Anaheim, California	June 18-20, 2025	Poster
	European congress on computational methods in applied sciences and engineering	2nd	TBA	Annual congress - TBA	Planned Active participation
	DMSRE34	2	Possibly in Pavlov, Czechia	Sept 8-12,2025	Planned participation
	17th World Congress on Computational Mechanics – ECCOMAS 2026	3	Munich, Germany	19-24 July 2026	Planned Presentation
	IEEE Cybernetics & Informatics	2	Busan, Republic of Korea	23-28 August 2026	Presentation
	ANSYS Users Group Meeting and Conference	2	TBA	TBA	Presentation, Best Practice

	International conference on applied physics of condensed matter	3	TBA	TBA	Poster, Networking
	International Slovak-Polish Scientific Conference on Machine Modelling and Simulations				
	IFAC Conferences oriented to modelling, simulation and optimization	2-3	TBA	TBA	Various
	IEEE Cybernetics & Informatics	2	Busan, Republic of Korea	23-28 August 2026	Tentative, Presentation
	BATTERY 2030+ (annual conference)	2	TBA	2026	Tentative, Attendance, Networking
	IEEE PES Innovative Smart Grid Technologies (ISGT) Conference	3	TBA	TBA	Tentative presentation and attendance (UT)

The consortium also identified the number of international journals that will be targeted for the publishing of the results. Those are:

Name of journal	**Publisher**
Journal of Energy Storage	Elsevier

IEEE Transactions on Transportation Electrification	IEEE
IEEE Transactions on Vehicular Technology	IEEE
Journal of Cleaner Production | ScienceDirect.com by Elsevier	Elsevier
Applied Energy | Journal | ScienceDirect.com by Elsevier	Elsevier
IEEE Transactions on Intelligent Transportation Systems	IEEE
IEEE Journal of Emerging and Selected Topics in Power Electronics	IEEE
Power & Energy Magazine	IEEE
Digital Twins and Applications	IET

The dissemination will be done also through other project activities such as summer schools, round tables with industries, staff exchanges, preparation of project proposals, etc.

4. Exploitation

The exploitation strategy of the FreeTwinEV project is designed to maximize the use and value of the project's outcomes, ensuring that innovations, methodologies, and knowledge generated translate into real-world applications and create lasting impact. In FreeTwinEV, the exploitation approach identifies pathways to leverage project results for scientific, commercial, and societal benefits, aligning with both the project's goals and broader European objectives.

The table below summarizes the Key Exploitable results of the research component:

Partner	**Key Exploitable Result of the Research Component**	**Protection/Exploitation route**
All	Method for advanced SOH estimation using digital twin	Open-source algorithm and models published on the project website
All	Distributed intelligent thermal management system design	Open-source system architecture, models and control algorithm published on the project website
All	Documentation on experiment design and procedures	Open-source document, published on website, open database
All	Experimental dataset	Open post-project dissemination, open database

FreeTwinEV is targeting any relevant stakeholders, however, the consortium has identified the following five main target groups: **researchers, students, businesses, policymakers and the general public**. All the communication and dissemination activities will be designed to ensure the direct involvement of the selected target groups. They will be objectively responding to the needs of target groups by appropriate messaging, language and channels used.

FreeTwinEV 's target groups are characterized as follows:

Researchers	Researchers at the partner's organizations, researchers outside the consortium organizations, young researchers after their PhD. studies, senior researchers.
Students	Primarily focusing on PhD. students and undergraduate Master's degree students in the last year of their studies
Businesses	National and international innovative businesses active in the project's research domain.
Policymakers	On the EU level: European Commission. The European Battery Alliance (EBA) launched in 2017 by the European Commission, EU countries, industry, and the scientific community. As declared: Batteries are a strategic part of Europe's clean and digital transition and a key enabling technology, essential to the automotive sector's competitiveness. Therefore, the Commission aims to make Europe a global leader in sustainable battery production and use. On national level: Representatives of relevant Slovak public bodies responsible for the state policy framework, including legislation and decisions on investments into research areas.
General public	Citizens interested in the research domain but with no scientific expertise in the research field.

5. Summary of DEC activities and their KPIs

To maximize the visibility, reach, and impact of the FreeTwinEV project, the summary of the DEC activities is shown at the table below. It utilizes multiple channels and tailored activities to engage a diverse audience, ranging from the general public to specialized research communities and industry stakeholders. Each activity has designated partners, target audiences, specific means, and key performance indicators (KPIs) to measure its success.

Project result (tool/activity)	**Partners concerned**	**Dissemination and Communication Activity**	**Target Audience**	**Means & KPIs**
Project website	All	Regular updates will be shared in the form of blog posts. Project activities will be advertised and followed up. Project public deliverables will be uploaded.	General public, students, researchers	No. of unique visitors: 100, No. of page views: 1000
Knowledge hub	STU	Storage of presentations and recordings from training, summer schools, and other events	Researcher (young incl. PhD. stud.)	No. of downloads: 50
Press releases, press articles	STU	Inform about important project activities (beginning of the project, winning proposal, etc.)	Regional and national news media	No. of expected press releases: 4
Social media Campaigns	All	Information about	Students, researchers,	No. of views: 5000

		upcoming events (summer schools, online events, workshops etc.), during and after events. Presentation of research results in attractive form via eye catchy graphic.	general public	No. of reposts: 100
International Conference[1]	All	To disseminate the research results from the research component and ensure their future usage, contributing to project exploitation (active participation will be preferred)	Researchers	No. of researchers participating : 15
Online podcasts	STU	Information about project activities translated into the language of public	General public, students, businesses	No. of podcast participation : 4
Visual identity	All	A successful project dissemination needs attractive and visually effective branding.	Partners, businesses, researchers, students, stakeholders	Project logo, Project e-banner, ppt template, etc.

Open access publications Publication of joining research papers in current content journals and conference proceedings	All	Presentation of new information achieved during project. As far as applicable, publications will be available online at no charge, as green open access. They will also be published in a repository on the project website and in institutional repositories. Scientific outputs will be disseminated via high-impact peer reviewed open access journals	Researchers, industry stakeholders	No. of publications: publications indexed in WOS or Scopus (4/year), Q1 or Q2 total increase by 65%

6. Conclusion

The D5.1 Dissemination, Communication, and Exploitation (DCE) Strategy establishes a framework for promoting the FreeTwinEV project's visibility, ensuring meaningful engagement with target audiences, and maximizing the impact of its results. Through a diverse set of tools and activities—including the project website, social media, academic publications, and participation in high-profile conferences—FreeTwinEV will share insights, foster collaborations, and drive innovation within its field.

This strategy's approach to exploitation further ensures that project outcomes will be accessible and useful, not only for researchers and industry stakeholders but

also for policymakers, students, and the general public. By implementing carefully planned metrics and key performance indicators, FreeTwinEV will continuously monitor and enhance its outreach efforts to align with the objectives of Horizon Europe.

In line with EU policies and Horizon Europe's goals, this deliverable outlines a pathway for FreeTwinEV to create lasting impact and contribute to the advancement of digital twin technology in sustainable and safe electric vehicle development. The project team remains committed to transparent, impactful, and inclusive dissemination and communication practices throughout the project lifecycle.