MatCHMaker
Materials Characterisation & Modelling

Project Title	Open data and industry-driven environment for multiphase and multiscale Materials Characterisation and Modelling combining physics and data-based approaches
Project Acronym	MatCHMaker
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Deliverable

D6.1 Dissemination and Communication Strategy and Plan

Work Package	WP6
Lead Beneficiary	TU Wien
Contributors	All partners
Dissemination Level	Public
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Executive Summary

Deliverable 6.1 – Dissemination and Communication Strategy and Plan – of the MatCHMaker project is within the Work Package (WP) 6, Dissemination & Communication, Exploitation, Standardisation and Training. Essential to this WP are stakeholders' involvement and engagement and creating synergies with relevant EU and international initiatives.
The dissemination and communication (D&C) strategy and plan aims to maximise the project's impact by promoting visibility and awareness of its objectives, development, results, products and services, and how EU funding contributes to solving societal issues. The goal is to enhance the outreach to society and specific target groups. Strategic and targeted measures to promote the actions will be considered.
Dissemination activities aim to share project results and make the project outcomes accessible to targeted end-users. Dissemination promotes the best exploitation potential and stimulates market uptake of project innovations.
Communication activities enhance the visibility of the MatCHMaker project and awareness of the goals, topics, and relevance among target audiences and the general public. It is essential to use understandable language and multimedia assets to convey the results and impacts of the project.
The D&C strategy and plan will be updated regularly throughout the project duration. This document serves as the main thread in all relevant activities throughout the lifecycle of the project and beyond.

Version History

Version	Date	Description
V0.1	11.03.2023	Initial draft
V0.2	14.03.2023	Reviewed draft
V0.3	24.03.2023	Reviewed by all partners
V1	27.03.2023	Final Version

Validation Process

	Name	Affiliation	Role
Responsible person	Xiran Dong	TU Wien	WP6 Communication and Dissemination
Reviewer #1	Nadja Adamovic	TU Wien	WP6 Leader
Reviewer #2	Ludovic Jason	CEA	Project Coordinator

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1. Overview

The **European Green Deal** aims to decarbonise the EU economy while improving people's quality of life. It is essential to work on Europe's capacity to produce and use goods more sustainably while enhancing the resilience of European Industry. Competitiveness is a pre-requisite for meeting these goals therefore EU must keep a sustained high rate of productivity growth by strongly channelling resources within its value chain and exploiting them efficiently. In this sense, developing new and improved materials and using existing materials in new applications are crucial factors for sustaining the growth of the EU manufacturing industry. The development of **novel and integrated characterisation methods and computational modelling for designing and rapidly upscaling new sustainable materials and products** is vital to achieving this.

The project aims to support the European manufacturing industry with advanced characterisation methods and computational modelling in line with the EU Green Deal. Requirements on multiphase and multiscale materials coming from **construction, energy and mobility** sectors will be translated into specific tasks that can be addressed by an integrated approach for a reproducible and efficient way of reducing development costs, time and risks while improving sustainability. Knowledge transfer, data sharing and full interoperability between characterisation and modelling "communities" will be facilitated using data-related standards and by creating an open repository with a direct connection to design and manufacturing processes.

To ensure an early, open and transparent promotion and the efficient communication of the project, a carefully designed D&C strategy and plan aims to raise awareness of its developments and outcomes to the relevant communities and stakeholders, as well as the broader public, to maximise its impact. This document is within **WP6, Dissemination & Communication, Exploitation, Standardisation and Training**.

The D&C strategy and plan aligned with the requirements and recommendations of the European Commission regarding communication, dissemination, and exploitation of Horizon Europe projects[1] will serve as a guide to the consortium to achieve the project's endeavours in making its contribution to the European industrial manufacturing and benefits to society. This document will provide the following:

- An analysis of the mission, objectives and ambitions of the project;
- A description of stakeholders involved and target audiences;
- An outline of D&C objectives;
- A strategic and systematic approach to D&C activities to achieve the objectives;

[1] European Commission, Horizon Europe – Dissemination and exploitation, Available at: https://rea.ec.europa.eu/horizon-europe-dissemination-and-exploitation_en [Last accessed: 17.01.2023]

2. Analysis

In recent years, the research and innovation approach has evolved with the increased involvement of multiple actors and stakeholders. Partners from the industry, governments, and institutions are involved from an early stage to promote an open and collaborative approach to science[2]. Science communication has also become more interactive, with a wide range of audiences under the umbrella term 'the general public'[3]. The current chapter will elaborate on the main elements of the dissemination and communication process: the content and scientific context, the objectives and the stakeholders involved.

2.1 Project mission, objectives and ambition

2.1.1 Mission

Comprising Materials Characterisation and Modelling in its name, the **MatCHMaker** project aims to enable the integration and interoperability of complex characterisation and modelling data and workflows matching the needs of the EU manufacturing industry. Requirements on multiphase and multiscale materials stemming from the industrial sectors **construction, energy and mobility** will be translated into specific innovation challenges addressed by an integrated approach combining characterisation and modelling. This enables the establishment of process-microstructure-macroscopic properties correlation in advanced materials in a reproducible and efficient way. As a result, development costs, time and risks will be reduced, contributing to a sustainable and low-carbon economy.

2.1.2 Objectives

The objectives of the project are threefold and summarised as follows:

1. Develop a **model-based innovation process** (workflow) to accelerate advanced (multiscale and multiphase) materials design and validation, including novel characterisation (material properties/performance), modelling (data and physics-based, engineering and numerical modelling) approaches and a combination of theory with large-scale computational screening

2. Reinforce **traceability, integrity and interoperability** of C&M data and workflows through provenance facilitation and a semantic web using Elementary Multiperspective Material Ontology (EMMO) connected with Materials Characterisation Data "CHADA" and Materials Modelling Data "MODA" methods

3. Propose an **Open Data Repository** connected to design and manufacturing processes. Based on the ontological approach designed in objective 2, the repository will integrate intercorrelated concepts and data from the workflow designed in objective 1.

[2] Verhoeff, R. and Kupper, F. (2020) Science in Dialogue. In: *Science Communication. An Introduction*, ed. Frans van Dam, Liesbeth de Bakker, Anne M. Dikstra and Eric A. Jensen (Singapore: World Scientific Publishing), 71.

[3] Wehrmann, C. and Dijkstra, A.M. (2020) The Process of Communicating Science. In: *Science Communication. An Introduction*, ed. Frans van Dam, Liesbeth de Bakker, Anne M. Dikstra and Eric A. Jensen (Singapore: World Scientific Publishing), 46-47.

Develop a model-based workflow to accelerate advanced materials design

Multiphase and multiscale materials offer improved opportunities to develop high-performance materials with a reduced environmental impact and materials for electricity/hydrogen generation and construction. It is necessary to have a better understanding of the morphology, structure, and chemistry of these materials from various scales because the properties of these materials depend on the multiscale and multidimensional organisation of the various phases as well as their intrinsic properties. To comprehend and capture their properties requires advanced characterisation and modelling techniques. The MatCHMaker project aims to develop, verify and validate innovative workflows integrating artificial intelligence tools.

Reinforce traceability, integrity and interoperability of characterisation and modelling data and workflows

Retrieving data from multiple databases is difficult since the available application programming interfaces (APIs) differ from one database to another. The development of an ontology-based platform increases the level of interoperability. This will enable the horizontal link between services across vertical marketplaces and addresses the entire materials development cycle. The creation of a digital twin of materials on which various actions can be performed explores the synergies between physics-based and data-driven modelling further.

Propose an open data repository

The MatCHMaker Open Repository will enable users to have a large number of models and data documented in an interoperable manner; APIs support an OPTIMADE endpoint - serving the data using the OPTIMADE API specification; All the data pipeline and data structure to be exploited within such machine learning functionalities will be standardised and made available in a Common European Artificial Intelligence marketplace and designed following best practices in terms of explainability and transparency to ensure the efficient use of such tools in an easy way providing support to material science users.

2.1.3 Ambition

MatCHMaker's ambition is to increase the **industrial impact of materials** bridging the gap between advanced characterisation, modelling methods and rapid evaluation of materials available at the industry level. Starting from industrial needs related to **multiphase and multiscale materials understanding**, the project will focus on the following:

- Multiphase and multiscale materials design;
- Characterisation and Models Development, Verification and Validation;
- Data management infrastructure and interoperability.

The MatCHMaker project will develop and validate the proposed objectives for three Use Cases (UC) representatives of low-carbon and clean industry. Applications of both physics-based and data-based modelling approaches are considered. Three industrial sectors corresponding to three materials will be addressed:

- UC1: Construction - Cement;
- UC2: Energy - Solid Oxide Fuel Cells/Solid Oxide Electrolysis Cells (SOFC/SOEC);
- UC3: Mobility - Proton-Exchange Membrane Fuel Cells (PEMFC).

The common trait of the three UCs is the need to enhance the understanding of the link between properties and microstructural features.
Last but not least, the project will foster synergies and collaboration with the European Materials Modelling Council (EMMC) and the European Materials Characterisation Council (EMCC).

2.2 Dissemination and Communication Objectives

This document aims to create a basis to disseminate and communicate the project and results in a coherent and timely manner and to promote the project's visibility and awareness. D&C activities are mandatory as required by the European Commission (EC). The two terms are different, but they are guided by the common goal: **to maximise the project's impact**.

Measures to achieve this are distinguished into activities aimed at

- creating a strong and unique identity for the MatCHMaker project
- Promoting the action, raising awareness and communication beyond the project's internal and external communities to broader audiences, including the media and the general public;
- building a solid ecosystem of actors and stakeholders, fostering interest through the dissemination of the benefits of the innovative technology proposed in the project
- supporting policy dialogues and complementary strategic planning activities in close collaboration with the European Councils EMMC and EMCC

The dissemination objectives are to share the project results and make the project outcomes accessible to target end-users. The dissemination of knowledge and results promote the best exploitation potential and stimulates market uptake of project innovations.

Communication activities aim to enhance the MatCHMaker project's visibility and awareness of the goals, topics, and relevance. The target audience is broader, and it is essential to use understandable language to convey the results and impacts of the project.

2.3 Stakeholders and Target Groups

Before planning communication and dissemination activities, defining the target audiences to whom the messages are addressed is crucial. This section maps out the internal and external stakeholders and elaborates on the approaches to strengthen stakeholder involvement and enhance engagement.

Internal Stakeholders
All project partners of the consortium as well as the MatCHMaker Advisory Board comprising high-level experts are considered internal stakeholders. They are actively involved in the project development, contributing to the success and impact of the project.

The consortium has provided a list of stakeholder groups encompassing professionals and experts in relevant fields and cross-disciplinary, industrial end-users, (inter-)governmental bodies and policymakers. Project partners are highly encouraged to contribute to communicating information and reach out to their relevant national entities.

Additionally, collaboration with communication practitioners from each project partner institute/company will be fostered to improve the quality and coherence of D&C activities within the project.

External Stakeholders

Scientific Communities, Industry and Developers
Scientists, researchers and their affiliated institutes in materials science and computer science are foremost interested in the performances of the MatCHMaker tools and models, the results for the Use Case datasets and how to use the MatCHMaker open data repository.

Industrial end-users and manufacturers closely linked to materials innovation in their products are interested in the performances of MatCHMaker solutions to address specific industrial challenges, therefore, the results for the Use Cases.

ICT/AI/Data analytics developers are more interested in the capabilities of the MatCHMaker machine learning tools and open repository.

It is important to raise awareness among the stakeholders mentioned above about available services after the project ends for technology transfer. This will be done through participation in conferences, symposia, workshops and publications in the media.

Intergovernmental Bodies and Policy Makers
Materials-related EU and international Councils and Clusters such as the European Materials Modelling Council (EMMC), European Materials Characterisation Council (EMCC), International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM), and the Global Cement and Concrete Association (GCCA) are also part of the external stakeholders. The key message to them consists of the objectives and results of the project to ensure synergy with their agendas and to obtain endorsements.

Standardisation Bodies and Policy Makers will be reached out to regarding technical guidelines for materials standardisation and policy recommendations.

Conferences and workshops will be organised, and fact sheets will be created to achieve this.

General Public
Outreach activities to inform the broader audience about the MatCHMaker project aims to promote the understanding of non-professionals, citizens and organisations about the beneficial socio-economic impacts, such as creating new jobs and opportunities.

Digital communication campaigns will be planned to raise awareness on social media channels, using captivating visual assets. Open fairs, workshops and other significant events will be sought, as well as media publications.

Dissemination and communication are crucial for the achievement of the expected impact of the project. The common usage of digital communication is essential for disseminating research developments and results in the project among the broader public to access information. A systematic strategy, a concrete plan, targeted audiences, and adequate evaluation of key performance indicators (KPIs) are needed to fulfil the dissemination and communication objectives.

3. Strategy and Plan

The D&C strategy and plan set the basis for effective and timely activities to ensure that the project's messages will reach the targeted audiences. There are three main phases, each with a different focus.

Phase I: Raising interest among stakeholders (M1-M15)
First, a unique visual identity and consistent communication style will be associated with the project to create visibility and facilitate recognition. The project and its preliminary results will be launched during a dedicated opening event to which representatives from the other sister projects will be invited. This event will take place in the first year in concomitance with a relevant EU/EMMC/EMCC event. In this phase, stakeholders are engaged to collect insights for the optimal design of MatCHMaker innovations.

Phase II: Exploitation-oriented dissemination of results (M15-M30)
Once the results are mature enough to clearly show the beneficial impacts of the MatCHMaker project, activities such as publishing papers and articles in peer-reviewed journals and at relevant conferences, workshops and other events will increase. The training plan will also start in this phase.

Phase III: Promotion of the overall outcomes beyond the project (M30-M42)
The final phase aims to stimulate the engagement of potential future clients. MatCHMaker will use the communication channels of EMMC and EMCC to reach large stakeholder groups working in the field of materials modelling and characterisation as well as materials producers, software developers and product manufacturers in general.

3.1 Brand Identity

A distinct brand identity helps to create visibility and promote recognition by the public across all means and formats of communication. This section elaborates on the logo, corporate colours, symbols and templates of the project. The corporate design guides all published or publicly presented material related to the project.

Logo
The MatCHMaker brand comprises a combination mark incorporating an abstract logo and words. The goal is to create an easily recognisable and topic-related logo. The loop symbolises interoperability among data and workflows, while the project acronym 'MatCHMaker' is further explained as 'Materials Characterisation & Modelling'. This way, the logo provides several visual clues about the project to help the audience to remember it.

The standard logo is coloured and should be primarily used against white backgrounds. To ensure the clarity of the logo, it has to be in high contrast with the background. It is not recommended to use the standard logo on coloured backgrounds.

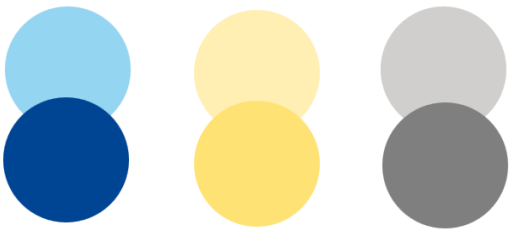
The grayscale logo shall be used for black and white prints.

Figure 1 Standard logo

Figure 2 Grayscale logo

Corporate Colours
Colours are essential for the brand identity and need to be consistently applied. The MatCHMaker corporate colours consist of three colours which were decided jointly during a meeting of WP6. The initial idea was to have three distinct colours for the three Use Cases which will be displayed more in detail in the section 'Symbols'.

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement Nº 101091687.



CMYK **RGB** **HTML**	39|12|0|0 148|213|241 #94D5F1	0|0|3|0 255|239|179 #FFEFB3	23|17|18|1 204|204|204 #CCCCCC
CMYK **RGB** **HTML**	100|80|0|0 0|68|148 #004494	0|11|55|0 255|226|116 #FFE274	 127|127|127 #7F7F7F

Figure 3 Corporate colours

CMYK: The CMYK colour code is used for all printed materials. CMYK stands for cyan, magenta, yellow and black (K).

RGB: The RGB colour scale will be generally used on the website, presentations, and other digital applications. RGB stands for red, green and blue.

HTML (#): The Hex code is usually used for web design.

Fonts

For the standardisation and consistency of the typography, two font designs have been chosen: Lato Thin (bold) and Calibri (regular and light).

Lato Thin bold will be used for the titles and subtitles, while Calibri (regular) will be used for the text body. This applies to all project-related written material, such as presentations, documents and promotional items.

For internal uses such as digital communication and documentation, Calibri light and regular will be used to avoid unexpected issues regarding different availability of the corporate fonts on individual equipment.

Title and subtitle

Lato Thin Bold
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!%/()=*-+@#&

Calibri Light

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 !%/()=*-+@#&

Text body

Calibri
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!%/()=*-+@#&

Symbols

Applications

To facilitate the understanding and to visually engage the audience, symbols have been created for the three use cases in construction, mobility and energy which are envisioned to be reused.

Figure 4 Symbols for the three application areas

FAIR Data

Providing FAIR (**F**indable, **A**ccessible, **I**nteroperable, **R**eusable) data is important for European research projects. According to the FAIR principles, knowledge transfer and data sharing align with the open science concept. Providing open access to scientific information which are free of charge and reusable improves scientific research, societal involvement and the promotion of innovation. To demonstrate the FAIR data concept, the following graph has been created in the corporate colours of the MatCHMaker project, which also align with the colours of the EU.

Figure 5 Symbol for FAIR principles

Templates

Templates for presentations and deliverables have been created to ensure that the project has a consistent style in all internal and external publications.

Figure 7 Template for presentations

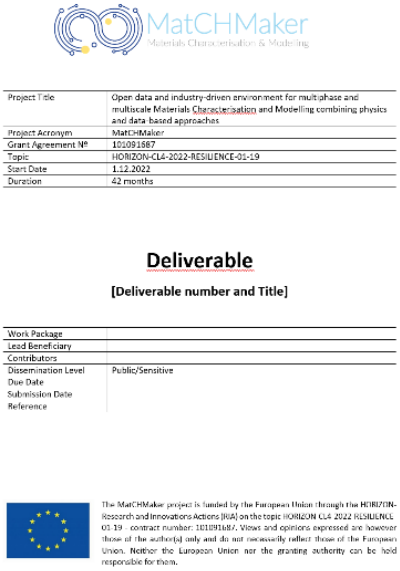


Figure 6 Template for deliverables

Promotional Material
Especially for events attended in person, promotional material such as a poster, leaflet, roll-up and other physical items will be designed to introduce the project and highlight its work in the three industrial sectors construction, energy, and mobility. The poster and leaflet are attached as Annex at the end of the document.

3.2 Content Development

Content serves as the fundamental basis of digital communication and dissemination. Developing meaningful and engaging content includes creating original content involving relevant project partners, collecting 'evergreen' content, and curating content from trusted sources, identifying potential synergies with external stakeholders.

All content needs to be adapted for targeted audiences and the functions of the platforms. For example, a new publication in a peer-reviewed journal can be summarised for social media channels. Against the backdrop that most digital channels have a small-scale word limit and specific parameters, the content structure almost always has to be modified to capture attention. With the most interesting information at first sight (usually from the conclusion), the key findings and implications on a wider scale, such as societal impacts, shall be emphasised. It is also important to indicate where to find the publication and to promote open access.

3.2.1 Original Content

Various formats
A variety of content formats ensure that the provided information is engaging to a wide range of audiences. Verbal content such as written posts, blogs, articles, as well as published papers is the most usual format of dissemination and communication. Visual content such as images and videos are increasingly pivotal in digital communication to grab attention and convey complex messages. Furthermore, auditory content in interviews and podcasts is also on the rise. Physical and virtual attendance at events and webinars is also a way to absorb new information and learn about the project.

Seasonal
The original content aims to stay up-to-date and communicate news and events timely. It is, therefore, often seasonal and linked to specific events. To be able to plan the content and implement campaigns on various channels actively, it is important to involve all stakeholders and collaborate with the communication departments of the project partners to identify and grasp all relevant information as early as possible.

3.2.2 Evergreen Content

Scientific findings take time and are often in the work-in-progress status, while scientific results often provide ambiguity to questions for which the general public looks for clear answers[4]. Therefore, the 'Evergreen' content to fill in the gaps between research results and events is desirable. Evergreen content refers to topics which are of continuing relevance and interest. It is more sustainable and long-lasting than seasonal content because it is unrelated to a specific time or event. Promoting evergreen content also saves time and energy, needing minor adjustments to the original content[5].

To ensure continuous content growth, evergreen content helps to increase the project's impact over the long run. Evergreen content is also easier to plan. Below are some examples in the context of the MatCHMaker project:

- **General information about the project**: The ambitions and objectives of the project have been outlined from the beginning.

- **Information about project partners**: The MatCHMaker project involved 12 partners from 9 European countries and the cross-disciplinary collaboration among them should be highlighted. Introducing the partners in different formats creates evergreen content which stays relevant throughout the project's life cycle;

- **Description of Use Cases**: The three use cases, construction, energy and mobility, have a direct impact on the public and are, therefore, more tangible;

- **Glossary**: Scientific information often contains jargon only experts can understand; translating complex concepts into understandable language helps audiences to learn more about the topic areas and renders the project more memorable;

- **FAQs**: Answering questions from people unfamiliar with the topic informs the audience about the issues and promotes the objectives of the project at the same time;

3.2.3 Curated Content

Curated content refers to sharing and reposting external content from blogs or social media channels. It also saves the time and energy needed for creating original content and finding suitable visual assets. Additionally, it fosters relationships with others in related fields. Quality over quantity is the guiding principle when selecting external content. It is important that they carry messages in line with the core values and objectives of the project.

Trustworthiness is an essential factor in achieving communication goals. The source of information decides whether the audience sees the provided content as attention-worthy, influencing their acceptance of the information[6].

For the MatCHMaker project, external content sources curated on its digital communication channels are EU bodies and institutions, sister projects and other EU-funded projects, and the online presence of project partners and affiliated companies.

[4] Wehrmann, C. and Dijkstra, A.M. (2020) The Process of Communicating Science. In: *Science Communication. An Introduction*, ed. Frans van Dam, Liesbeth de Bakker, Anne M. Dikstra and Eric A. Jensen (Singapore: World Scientific Publishing), 50.
[5] Oladipo, Tamilore (2022) The Beginner's Guide to Creating Evergreen Content. *Buffer*. Available at: https://buffer.com/library/evergreen-content/ [Last accessed: 09.03.2023]
[6] Wehrmann, C. and Dijkstra, A.M. (2020) The Process of Communicating Science. In: *Science Communication. An Introduction*, ed. Frans van Dam, Liesbeth de Bakker, Anne M. Dikstra and Eric A. Jensen (Singapore: World Scientific Publishing), 51.

3.3 Channels and Tools

To maximise the project's impact, various channels and tools will be used for communication activities to promote the action and raise awareness to a wider public.

3.3.1 Project Website

A project website has been created which provides details about the project. It serves as the main source of information from the project to its audiences. All project partners are introduced with a short description and link to their home pages. New developments, events, training, and results will also be published and updated.

The website aims to convey the objectives and messages of the project as clearly as possible, and the user interface has been designed according to contemporary best practices.

3.3.2 Social Media

Additional to the project website, social media accounts will enhance the online presence of the MatCHMaker project. The content and frequency of the posts will be tailored to the targeted audiences and the different parameters of the social media channels. A social media calendar and monthly content plans will be prepared and shared with relevant partners to ensure coherence and continuity. Wherever information about the project is disseminated and hashtags are common, consistency in using the following hashtags is highly encouraged: #HorizonEU, #MatCHMakerProject, #materialsengineering, and #advancedmaterials.

3.3.3 Newsletter

The subscription to the project's newsletters will be promoted on all channels and newsletters with the latest news and events will be produced periodically. The newsletters will be published on the website, and subscribers will receive a notification first-hand. The publication timeframe is at least one newsletter every six months.

Integrated into the website based on WordPress, a newsletter plugin will be used to send out emails with the newsletter with updates, milestones, and upcoming events.

3.3.4 Media and Press Releases

To further promote the project, contacts with the regional and national media, such as newspapers, television and radio programmes, will be sought from different countries to improve the project's impact on the general public. Publications in other national languages are also encouraged.

Whenever appropriate, ideas and suggestions for press releases will be shared among project partners for dissemination through media channels.

3.4 Networks and Synergies

3.4.1 Internal and External Training

Internal training sessions aim to facilitate knowledge transfer among project partners from multidisciplinary backgrounds to support understanding and collaboration in different areas. The first internal webinar on D&C guidelines took place on 3. February 2023. Other internal sessions are planned for topics such as ontology, exploitation and standardisation with the relevant partners.
External training targets external stakeholders such as SMEs, universities, and technology centres. For external training, MatCHMaker will foster collaboration with EMMC and EMCC. Training materials will be prepared for periodic training sessions.

3.4.2 Cooperation with Partners

All partners are highly encouraged to engage with and share the communication materials designed for the project when attending events and on their respective social media channels. The project envisions collaborating with the official accounts of all project partners to receive support from existing networks. Furthermore, existing EU social media channels are reliable sources for curated content and engagements with them will be pursued.

Furthermore, the MatCHMaker project will explore synergies and collaboration with sister projects within the same topic area (RESILIENCE-01-19-Advanced materials modelling and characterisation (RIA)):

- AddMorePower

Advanced Modelling and Characterisation for power semiconductor materials and technologies

- CHARISMA

Characterisation and Harmonisation for Industrial Standardisation and advanced Materials

- CoBRAIN

Integrated Computational/Experimental Material Engineering of Thermal Spray Coatings

- D-STANDART for Durability Modelling of Composites

- KNOWSKITE-X

Knowledge-driven fine-tuning of perovskite-based electrode materials for reversible Chemicals-to-Power devices

3.4.3 European Commission

The European Commission provides cost-free channels for projects which have achieved outstanding results relevant to citizens. The MatCHMaker project aims to benefit from these platforms to publish results and outcomes.

- Cordis Results in Brief,
- CORDIScovery podcasts,
- Research & innovation success stories,
- Horizon Magazine and events such as the R&I Days[7].

[7] European Research Executive Agency, Communicating about your EU-funded project. Available at: https://rea.ec.europa.eu/communicating-about-your-eu-funded-project_en [Last accessed: 10.03.2023]

3.5 Dissemination Activities

3.5.1 Project Website

The key information about the project, news, and planned events will be collected on the dedicated website. Public deliverables, reports, results, and recorded external training sessions will also be uploaded there. Furthermore, the website possesses an integrated newsletter function. The domain name of the project will be: www.he-matchmaker.eu.

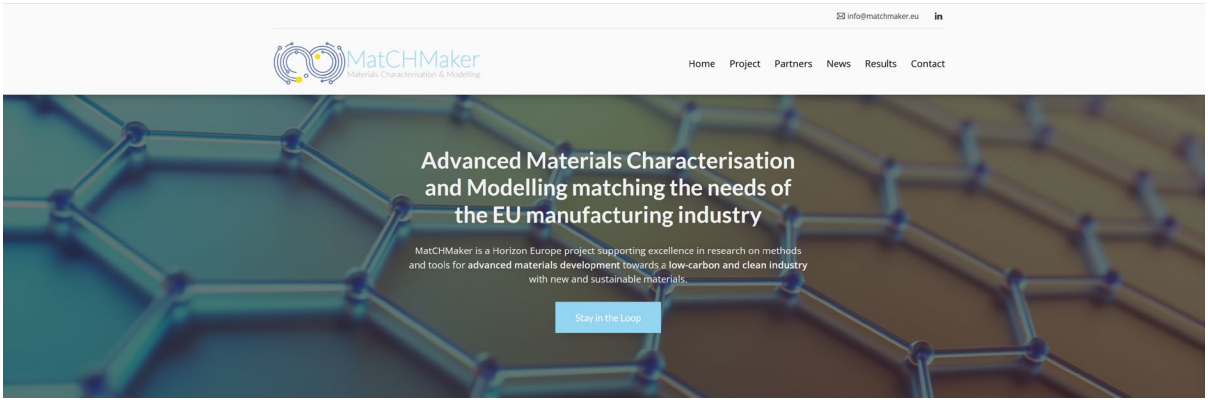


Figure 8 Project website landing page

3.5.2 Journals

Relevant project results will be publicised in relevant peer-reviewed scientific journals. The project partners have provided a provisional list of journals they aim to publish. The time of publication is difficult to foresee and is more likely to occur starting from the second half of the project. The table below will be updated according to the developments of the project.

Table 1 Scientific and peer-reviewed journals

Scientific Journals	Involved Partners
Applied Intelligence	AIMEN
IEEE Transactions on Pattern Analysis and Machine Intelligence	AIMEN
Journal of Applied Physics	AIMEN
npj Computational Materials	AIMEN
Cement and Concrete Research	CEA Saclay, HM TU Wien IMWS
Cement and Concrete Composites	CEA Saclay, HM, TU Wien IMWS
Construction and Building Materials	CEA Saclay, HM, TU Wien IMWS
Applied Energy	CEA Liten, GENVIA
Journal of Power Sources	CEA Liten, GENVIA
International Journal of Hydrogen Energy	CEA Liten, GENVIA
Nature Energy	CEA Liten, GENVIA
Engineering Applications of Artificial Intelligence	CEA Liten

3.5.3 Events

The MatCHMaker project will be committed to contributing and participating in relevant European international conferences and events. Promotional material such as a poster, brochure, roll-up and leaflets will be distributed or displayed by all partners attending various events. Presentations at conferences, workshops and webinars on-site and online will also promote the project and its results.

Table 2 Conferences, Workshops and Webinars

Events	Involved Partners	Year
EMMC International Workshop	AIMEN, CEA, HM, SINTEF, TU Wien	2023
ICCC Conference International Congress on the Chemistry of Cement	HM	2023
ICIAM 10. International Congress on Industrial and Applied Mathematics	HM	2023
ICMCTA 18. International Conference on Materials Characterization Techniques and Analysis	AIMEN	2024
ICMSAI 18. International Conference on Materials Science and Artificial Intelligence	AIMEN	2024
ECS Conference European conference on fuel cell (PEMFC and SOFC/SOEC)	CEA Liten, Toyota	2024-2025
ECS Conference International conference in the areas of electrochemistry: focused on fuel cell (PEMFC and SOFC/SOEC)	CEA Liten, Toyota	2024-2025
FEMS EUROMAT CONFERENCE	AIMEN	2025
EURO-C Computational Modelling of Concrete and Concrete Structures	CEA Saclay, HM, TU Wien IMWS	2026
EMI Conferences Engineering Mechanics Institute Conferences of the American Society of Civil Engineers	TU Wien IMWS	yearly
DAS Symposia Danubia Adria Symposia on Experimental Methods	TU Wien IMWS	yearly

3.6 Communication Activities

3.6.1 Social Media Channels

LinkedIn

To reach targeted stakeholders with a scientific background, professionals in relevant fields, and people interested in research and science, LinkedIn is the most suitable platform. LinkedIn posts usually only display up to the third line of the text (220-230 characters), and then users have to click on 'see more' to continue reading. Therefore, to capture attention and encourage users to read the entire post, the first sentences are crucial and should contain the most interesting information.

Target audiences: scientific community and researchers, industry, ICT/AI/Data analytics developers, EU councils and clusters, standardisation bodies and policymakers

Official LinkedIn account: https://www.linkedin.com/company/he-matchmaker/

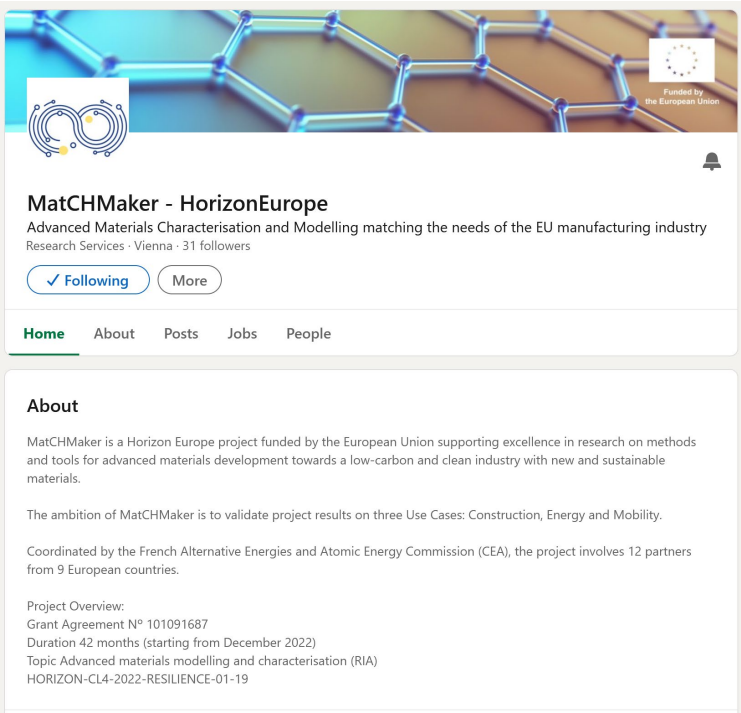


Figure 9 LinkedIn page of MatCHMaker

YouTube

YouTube is one of the most dominant platforms for audio and visual content. It also provides a streaming service and enables users to engage with the content providers. With over two billion users as of 2022, a user spends 30 minutes per session on average[8]. Especially for interviews and webinars, YouTube is suitable for the MatCHMaker project to upload video and audio files, such as the project video(s), interviews and podcasts.

[8] Barnhart, Brent (2022) Social media demograhics to inform your brand's strategy in 2022. S*prout Social*. Available at: https://sproutsocial.com/insights/new-social-media-demographics/ [Last accessed: 13.03.2023]

Target audiences: scientists and researchers, industrial end-users, ICT/AI/Data analytics developers, EU councils and clusters, standardisation bodies and policymakers, general public

Instagram/ Twitter
In a last step, the MatCHMaker project will consider opening a Twitter and Instagram account to reach out more to the general public. Precise and eye-catching content is best for both platforms since users usually scroll through their feeds. Discussions are more likely to happen on Twitter through retweets and comments. Instagram relies on images and short videos to provide more engaging content.

It needs to be kept in mind that not all users have a scientific background or limited knowledge of the topics. Therefore, the language should be kept simple and understandable. The best way to make information memorable is to create a visual image with the help of pictures, illustrations, infographics and videos.

Target audiences: scientists and researchers, industrial end-users, ICT/AI/Data analytics developers, EU councils and clusters, standardisation bodies and policymakers, general public

3.6.2 Social Media Calendar

To capture key dates to post specific content, e.g., to promote events and milestones or follow trends related to holidays and anniversaries, a social media calendar will be created with the support of all beneficiaries. Additionally, collaborations between the communications departments of each project partner will be sought to maximise the effect.

Monthly content plans serve the purpose to document the content (text and pictures/videos) planned and published on the website and social media channels. It will also facilitate the planning of digital campaigns.

3.7 Evaluation

The evaluation of D&C activities is vital for improving their effectiveness and efficiency through reflections on how the actions were performed, which ones excelled and which did not achieve the expected result and why.

3.7.1 Performance Indicators

Key Performance Indicators (KPIs) are quantifiable indications to measure the outputs of dissemination and communication activities. Outcomes refer to the effectiveness of outreach reflected in the number of audiences reached, exposure rate, publicity volume and deliverables[9].

The table below summarises the key components of the D&C strategy together with the performance indicators where applicable.

[9] European Commission, Communication Network Indicators. Available at: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/dg-comm-communication-network-indicators_en.pdf [Last accessed: 08.03.2023]

Table 3 Communication channels, objectives and targets

Means/Channel	Objective, target and quantifiable indicators
Project visual identity and public image	Development of a common public image/branding for the project to allow an easier identification by the public and ensure visibility and recognition. MatCHMaker will adopt a **captivating project logo** and common **graphics** for the project template and promotional items.
Digital Marketing Strategy	A **captivating website** will be developed, and social media profiles (LinkedIn, YouTube etc.) and newsletter will be activated since the early beginning of the project, creating worldwide scale visibility and synergies with other initiatives and partners' profiles. They will contribute to increasing the number of visitors to the website and the visibility of the results. ❖ Visits per year: <1000 = poor; 1000-5000 = good; >5000 = excellent ❖ Material downloads per year: <100 = poor; 100-250 = good; >250 = excellent
Project communication toolkit materials (brochure, flyers, posters, banners)	Promotional project brochure, leaflets, and flyers for the large non-specialist community and the community of relevant stakeholders will be developed. A general project poster along with banners/roll-ups will also be developed to be used for events and exhibitions, while a first leaflet/brochure shortly after the beginning of the project, oriented to raise awareness and provide visibility ❖ Shared flyers: <500 copies/yr=poor; 500-1000 copies/yr=good; >1000 copies= excellent
Project video and/or audio-visual interviews	Two **project videos and/or audio-visual interviews with a storytelling approach** will be created, presenting 1) The project's objectives and vision; and 2) How to use MatCHMaker (training-based) ❖ Video promotion via the website and social media
Project media presentation	The opportunity to present the project on generalised and/or specialist media such as local or national press, magazines, radio and TV programmes will also be sought.
Training	Online webinars and external training to inform on the project results, to reach the general public and internal training to inform and educate project partners in multi-disciplines, support understanding and collaboration ❖ 5 internal training sessions (M6-M42) ❖ 3 external training sessions (M21-M42)
Open Workshops	Together with other related projects, the project will contribute to EMMC international workshops organised every two years.

3.7.2 Impact Assessment

D&C activities will be assessed periodically by the responsible team for Dissemination and Communication at TU Wien. According to the agreed plan, assessments will take place in the following timeframes:

- M4 Deliverable D6.1 – Dissemination and Communication Strategy and Plan
- M18 First Review Meeting
- M21 Deliverable D6.2 – Report on Dissemination, Communication and Training Activities
- M30 Mid-term Review Meeting
- M42 Deliverable D6.5 – Report on the Collaboration and Contributions to EMMC & EMCC
- Final meeting

During Consortium Meetings and regular WP6 meetings, the ongoing D&C activities will be discussed, planned, and reviewed. All project partners are encouraged to collect activities performed, describe

the difficulties and challenges they encountered and identified, and share the planned short-term activities.

Online analytics of the website and social media, as well as feedback from events (e.g., in the form of surveys) will help evaluate the quality of project outcomes, providing insight into the needs, expectations and understandings of stakeholders. This helps to assess the impact and trigger adjustments to the D&C strategy and plan needed for better results.

4. Commitments

As stated in the Grant Agreement (GA), all project partners must actively engage in communicating and disseminating the project and its results. Specific parameters are laid out in the GA and the Consortium Agreement (CA).

4.1 Prior Notice

Beneficiaries must disseminate their results as soon as feasible, in a publicly accessible format, subject to any restrictions due to the protection of intellectual property, security rules or legitimate interests. Prior notice of any planned publication shall be given to the other Parties at least 45 calendar days before the intended date of submission for publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement by written notice to the Coordinator and to the Party or Parties proposing 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.

By exception to the 45 calendar days' notice, the prior notice period shall be reduced to 15 calendar days (**except for July and August months during which the prior notice shall be of 20 calendar days**) for the following dissemination activities: poster presentations, slides and abstracts for oral presentations at scientific meetings. In this case, any objection to the planned dissemination shall be made in writing to the Coordinator and to the Party or Parties proposing the dissemination within 10 calendar days after receipt of the notice (**15 calendar days during July and August**). If no objection is made within the time limit stated above, the dissemination is permitted.

Prior notice of communication activities according to WP6 "Dissemination & Communication, Exploitation, Standardization and Training" of the Description of the Action of the Grant Agreement, namely: newsletters, targeted interviews, and success stories; will be given to the other Parties at least five calendar days before the planned publication. If no objection is made within this period, the publication is permitted.

4.2 Open Access

As described in Article 17 of the GA, beneficiaries must ensure open access to peer-reviewed scientific publications. Open access refers to online access to research data and publications free of charge to end-users will be granted. It aims to contribute to the Open Science approach, enabling a scientific process based on open and cooperative work, tools and knowledge transfer.

The MatCHMaker project will follow all requirements to align with the Open Science concept as defined in the Horizon Europe guidelines, including:

- at the latest at the time of publication, a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication is deposited in a trusted repository for scientific publications;
- immediate open access is provided to the deposited publication via the repository under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a licence with equivalent rights; for monographs and other long-text formats, the licence may exclude commercial uses and derivative works (e.g. CC BY-NC, CC BY-ND) and
- information is given via the repository about any research output or any other tools and instruments needed to validate the conclusions of the scientific publication.

4.3 EU Funding Acknowledgement and Disclaimer

It is important to note that any dissemination activities will display the EU emblem and include information on EU funding. As specified under Article 17 of the GA, recipients of EU funding programmes are **legally obliged** to acknowledge that the project has received EU funding to ensure visibility and transparency. If a beneficiary breaches the obligations under this Article, the grant may be reduced.

> The obligation requires all beneficiaries, managing authorities and implementing partners of EU funding to acknowledge the support from the European Union on all communication materials. An important element in this regard is the European Union emblem and the funding statement, which must be displayed prominently on all printed and digital products, websites, social media channels and other communication products:
>
> 1. Make sure to display the European flag (emblem), do not use the European Commission logo
> 2. Add the funding statement (in local languages, where appropriate)[10]

The EU emblem must appear with the acknowledgement of funding referring to the programme and the GA number. As displayed in *Figure 10*.

[10] European Research Executive Agency, Communicating about your EU-funded project. Available at: https://rea.ec.europa.eu/communicating-about-your-eu-funded-project_en [Last accessed: 27.03.2023]

Figure 10 Acknowledgement of EU funding

It cannot be modified by adding other visual assets or text. When displayed with other logos, such as a logo of beneficiaries or sponsors, the EU emblem must be at least as prominently and visibly as the other logos. This applies especially to presentations, posters and distribution materials with project results.

For scientific papers, reports, etc., with project results, the acknowledgement must be included in the publication (e.g., conclusion or a separate page with acknowledgement):

> This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement № 101091687.

To ensure the quality of information, all D&C activities must use factually accurate information. Especially relevant for blog posts, articles, and the like, it must be indicated that the EU nor the granting authority are responsible for the opinions and views expressed.

> Funded by the European Union. Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them.

5. Conclusion

This Deliverable (D6.1) documents the information relevant for dissemination and communication activities within the Horizon Europe Project MatCHMaker. It contains an analysis of the project's vision and ambition, the objectives of D&C, and the relevant stakeholders involved. A dissemination and communication strategy has been laid out regarding the visual identity designed, content development details, channels and tools identified, and networks and synergies. Against this backdrop, a dissemination and communication plan will be implemented accordingly, reflected in the activities defined, the performance indicators for evaluation, and the communication policy to be considered.

The document will be updated regularly in collaboration with relevant consortium members to correctly reflect the dissemination and communication during the project's entire lifecycle at any given stage.

Annex – MatCHMaker Flyer and Poster

Coordinator

aimen TECHNOLOGY CENTRE

asro ORGANISMUL NAȚIONAL DE STANDARDIZARE

GENVIA

RINA

SIMAVI

SINTEF

TU WIEN TECHNISCHE UNIVERSITÄT WIEN

Funded by the European Union

MatCHMaker

Materials Characterisation & Modelling

Visit us:
www.he-matchmaker.eu

MatCHMaker - HorizonEurope

Open data and industry-driven environment for materials characterisation and modelling combining physics and data-based approaches

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N° 101091687

MatCHMaker aims to reduce the time, cost and risks of developing and optimising advanced materials.
This contributes to the **European Green Deal** to decarbonise the industry while enhancing people's quality of life.

USE CASES

Construction

Low carbon cement
Decrease CO2 emission in the production
Maximum substitution of clinker with alternative materials with equal/superior performance

Energy

Solid Oxide Fuel/Electrolysis Cells (SOFC/SOEC)
Produce hydrogen without CO2 emissions and achieve the highest efficiency

Mobility

Proton-Exchange Membrane Fuel Cells (PEMFC)
Produce zero-emission power in multiple applications in transportation

OBJECTIVES

Accelerate advanced materials development
Develop a model-based innovation process to accelerate the materials' design, validation, characterisation methods and computational modelling

Traceability, Integrity and Interoperability
Enhance the interoperability and integration of characterisation and modelling data and workflows through a semantic approach

Open Data Repository
Create an open data repository based on semantic representation to connect design and manufacturing processes

MatCHMaker
Materials Characterisation & Modelling

Advanced materials modelling and characterisation are crucial to designing and upscaling new materials which are more sustainable and resilient.

Requirements on multiphase and multiscale materials from the industrial sectors of **construction, energy and mobility** will be translated into specific innovation challenges.

In construction, **MatCHMaker** helps to build a predictive model for the strength of supplementary cementitious materials (SCM) as a function of the replacement level, clinker mineralogy and fineness.

In energy, **MatCHMaker** will focus on cell technology, aiming to improve performance and mechanical robustness of electrochemical cells implemented in SOEC/SOFC with advanced modelling and characterisation.

In mobility, **MatCHMaker** aims to develop new future high performance material by enhancing analytical and computational analysis. The hydrogen fuel cell system has the flexibility to be used in cars, and tests for its use in boats and trains are under way.

The MatCHMaker project aligns with the **UN Sustainabile Development Goals**, especially with SDG Nr.9 ***Industry, Innovation and Infrastructure*** towards building a resilient infrastructure, inclusive and sustainable industrialisation and fostering innovation.

MatCHMaker
Materials Characterisation & Modelling

Open data and industry-driven environment for multiphase and multiscale Materials Characterisation and Modelling combining physics and data-based approaches

MatCHMaker aims to reduce the time, cost and risks of developing and optimising advanced materials. This contributes to the European Green Deal to decarbonise the industry while enhancing people's quality of life.

Greener, carbon free Europe

OBJECTIVES

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Traceability, Integrity and Interoperability

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Open Data Repository

Create an open data repository based on semantic representation to connect design and manufacturing processes

USE CASES

Construction

Decrease CO2 emission and waste of cement production
Maximum substitution of clinker while maintaining equal/superior performance

MatCHMaker helps to build a predictive model for the strength of limestone calcined clay cements as a function of the replacement level, clinker mineralogy and fineness.

Energy

Solid Oxide Fuel/Electrolysis Cells (SOFC/SOEC)
Produce hydrogen without CO2 emissions and achieve the highest efficiency

MatCHMaker will focus on cell technology, aiming to improve performance and mechanical robustness of electrochemical cells implemented in SOEC/SOFC via advanced modelling and characterisation.

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Proton-Exchange Membrane Fuel Cells (PEMFC)
Produce zero-emission power in multiple applications

The hydrogen fuel cell system has the flexibility to be used in cars, and tests for its use in boats and trains are under way. MatCHMaker aims to develop new future high performance material by enhancing analytical and computational analysis.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

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