



**PROJECT:**

**SIDERWIN**

**Deliverable:**

**D8.2.4**

**Title:**

**Master Dissemination and Communication Plan and Updates**

Date: 31<sup>st</sup> March 2023

Version: 1.0

Website: <https://www.SIDERWIN-spire.eu/>

## D8.2.4 Master Dissemination and Communication Plan and Updates

### Status

☒ Final

☐ In Progress. Please explain: ☐ Iterative Process – This year's results have been 100% achieved.  
☐ Delay – This year's results were not fully achieved.

### Tracking Changes

|                 |     |                                   |
|-----------------|-----|-----------------------------------|
| First Draft     | 0.1 | First Draft (M66) by Tecnalia     |
| Second Draft    | 0.2 | Integration of partner's feedback |
| Initial Version | 1.0 | Issue to EC (M66)                 |

### Level of Dissemination

☐ Confidential

☒ Public

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### Executive summary

This document is a deliverable of WP8 of the European Commission funded project ΣIDERWIN (Grant Agreement no. 768788, under the H2020 framework and the SPIRE initiative) and presents the fifth release of deliverable D8.2 “Master Dissemination and Communication Plan and Updates”.

The deliverable D.8.2.4 includes an overview of the dissemination activities carried out during the last 12 months of the project life. It is associated with Task 8.1 Communication and dissemination actions, and it is under the responsibility of TECNALIA.

The deliverable aims at describing the update of the Dissemination and Communication Plan of ΣIDERWIN project. The plan will serve to disseminate and outreach the project results. The dissemination activities are mostly focused on the description of the project’s goals, the explanation of how it is planned to attain them, the forecast results and expected benefits.

The proper dissemination and communication are keys in order to ensure the maximum impact of the ΣIDERWIN project. The main goal of the planned dissemination activities is to increase the visibility of ΣIDERWIN on selected communities and target groups, at both European and International level, to promote the implementation and use of the project results (exploitation), always considering confidentiality and IPR protection aspects. All partners of the consortium will contribute to the ΣIDERWIN dissemination, according to their foreseen role and effort, and using all available tools and channels.

This deliverable outlines the ΣIDERWIN dissemination strategy in terms of identification and description of the dissemination key elements:

- the objectives of the dissemination (why, mission & vision),
- the subjects of the dissemination (what will be disseminated),
- the target audience (to whom it will be disseminated),
- the timing (when the dissemination will take place),
- the dissemination tools and channels (how to reach the target audience),
- the responsible for the dissemination (who will perform the dissemination),
- the rules for performing the dissemination activities,
- the way to evaluate and assess the impact of the dissemination activities.

It must be underlined that, this deliverable is based on the previous release D8.2.3 (M54), that has been updated to cover the activities carried out during the last 12 months of the project, that ends in M66, according to the 6 months extension approved. Therefore, the action framed in this plan is a dynamic one, which requires a continuous supervision carried out by the Dissemination and Exploitation Work package leader.

## 1 Introduction

European Union countries have agreed on a 2030 Framework for climate and energy, including EU-wide targets and policy objectives for the period between 2020 and 2030. These targets aim to help the EU achieve a more competitive, secure, and sustainable energy system and to meet its long-term 2050 greenhouse gas (GHG) reductions target [ 1 ].

The targets established for 2030 are:

- a 40% cut in GHG emissions compared to 1990 levels,
- at least a 27% share of renewable energy consumption,
- at least 27% energy savings compared with the business-as-usual scenario.

Nowadays, there are no economically feasible steelmaking technologies available having the potential to meet the EU's climate and energy targets for 2030. At best, a 15% decrease in the overall CO<sub>2</sub> intensity of the sector could be achieved throughout the widespread dissemination of technologies that could reasonably become cost-effective in the future. Therefore, breakthrough technologies are urgent and indispensable.

With this in mind, ΣIDERWIN project proposed to develop a breakthrough innovation compared to the actual steel production process bringing together steel making with electrochemical process. The electrolysis process using renewable energies will transform any iron oxide, including those inside the by-products from other metallurgies, into steel plates with a significant reduction of energy use. This process decomposes under mild conditions but at intense reaction rate naturally occurring iron oxides, such as hematite, into iron metal and oxygen gas. By offering a low CO<sub>2</sub> emissions steel production process, the project will contribute to the reduction of the total greenhouse gas (GHG) emissions.

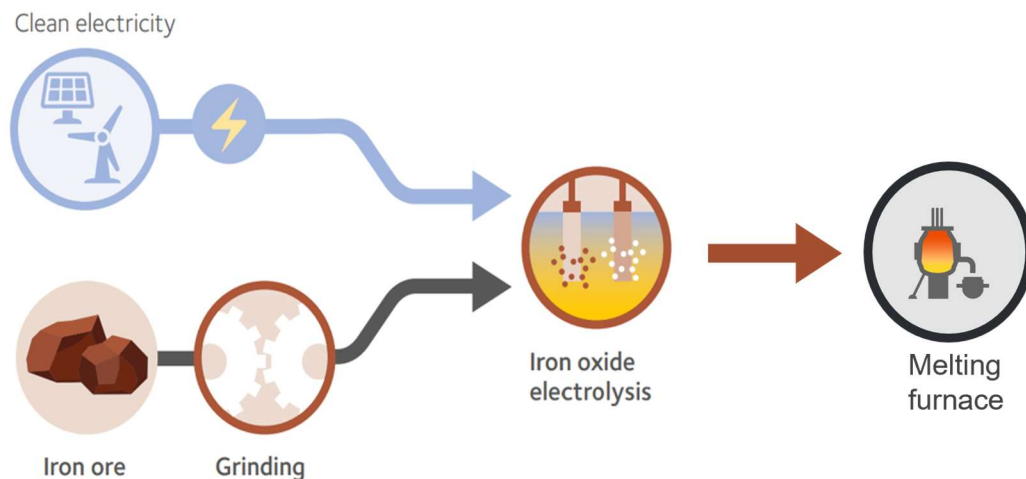


Figure 1. ΣIDERWIN route



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The technology developed within the framework of ΣIDERWIN project can provide *environmental benefits* to reach the targets established by the EU, compared to traditional steelmaking plants, such as:

- a reduction of the carbon footprint by 60-74% depending on the electricity mix [ 2 ],
- a reduction by 20% of the direct energy use [ 3 ],
- the ability to produce steel from by-products rich in iron oxides from non-ferrous metallurgy residues,
- an increased integration with renewable energies with a more flexible process,
- oxygen as by-product.

ΣIDERWIN project focused on:

- the development of an electrochemical processing route for primary steel production,
- an industrially feasible new processing route,
- an iron metal production from renewable energy,
- raw material efficiency during steel production,
- close to market research.

The following main results and key messages summarised the conclusions of the work developed during the ΣIDERWIN project:

- ΣIDERWIN technology has been scaled up:
  - a cathode size up to 1.25 m<sup>2</sup> is feasible,
  - the gas management is the key,
  - electrolyte flow uniformity is required,
  - electrolysis cell energy use has been confirmed at pilot scale.
- ΣIDERWIN technology can contribute to future carbon neutral steelmaking because:
  - there are almost no direct CO<sub>2</sub> emissions,
  - it reduces the carbon footprint by a 60% compared to traditional Blast Furnace – Blast Oxygen Furnace (BF - BOF) route,
  - it does not compromise the environmental footprint compared to BF-BOF route.
- ΣIDERWIN technology can contribute to the balance of the power system because:
  - it is a fully electrified primary production,
  - the European power system can meet the additional ΣIDERWIN demand with carbon-free means,
  - it is a flexible process at low temperature,
  - the Demand Side Response (DSR) can boost its profitability,
  - ΣIDERWIN technology can contribute to the deployment of Renewable Energy Sources (RES).
- ΣIDERWIN technology can contribute to circular economy:
  - several potential alternatives have been studied: steel industry, aluminium industry, from nickel purification, from copper and ferronickel production,
  - mill scales from steel industry were the most promising alternative material at this stage of the technology development,

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- other all alternatives were promising from lab scale studies, but more work must be done before their scaling-up.

Dissemination and communication of project results (both within and beyond the project's own community) are key activities in order to ensure the maximum impact of the ΣIDERWIN project and facilitate the exploitation activities.

This document is organised in the following sections:

- Section 1: introduces the main goals and features of the project.
- Section 2: contains the information about the scope and objectives of this deliverable.
- Section 3: presents the Dissemination and Communication Plan, illustrating the objectives of the dissemination and the main elements of the dissemination strategy (subject, timing, target audience, tools and channels and the dissemination management policy).
- Section 4: presents the activities carried out during the last 12 months of the project (M55 – M66).
- Section 5: presents the conclusions of the document.
- Annex I: presents the Technological Platforms and Associations with involvement of ΣIDERWIN partners.
- Annex II: presents some screenshots of ΣIDERWIN videos.
- Annex III: includes the 8 issues of the Newsletter.

## 2 Scope and objectives of this deliverable

This document is the deliverable D8.2.4 of WP8 of the ΣIDERWIN project and it is associated to Task 8.1. Communication and Dissemination actions. The scope of this document is to present the fifth release of the dissemination and communication plan for the ΣIDERWIN project, including the activities carried out during the last 12 months of the project (M55-M66), and the formulation of the ΣIDERWIN dissemination strategy.

Additionally, a survey of the dissemination and communication activities carried out along the whole project lifetime has been elaborated and published in M66 (deliverable D8.6 “Dissemination and communication actions survey”).

This plan represents the strategic vision of the Consortium in terms of the dissemination of the ΣIDERWIN project itself and of its achievements and outputs as well. The main objective of the planned dissemination activities is to increase the visibility of ΣIDERWIN on selected communities and target groups, at both European and International level, in order to ensure the maximum impact of the project and to promote the exploitation of the project results.

This deliverable outlines the ΣIDERWIN dissemination strategy in terms of identification and description of the dissemination key elements:

- the objectives of the dissemination (mission, vision),
- the subjects of the dissemination (what will be disseminated),
- the timing of the dissemination (when dissemination will take place),
- the target audience (to whom it will be disseminated),
- the dissemination tools and channels (how it will be disseminated),
- the responsible for the dissemination (who will perform the dissemination),
- the rules for performing the dissemination activities,
- the way to evaluate and assess the impact of the dissemination activities.

It also includes a description of the actions carried out during the last 12 months of the project (M55 – M66).

### 3 Dissemination and Communication Plan

#### 3.1 Dissemination goal and strategy

The final goal of the dissemination and communication activities is to promote the ΣIDERWIN project and spread the ΣIDERWIN's results to the largest possible concerned audience (at the national, European, and international level) to encourage the implementation and use of the project results (exploitation), always taking into account the confidentiality and IPR protection aspects.

In more detail, the objectives of the dissemination are:

- to raise public awareness about the project, its expected results and progress within defined target groups,
- to disseminate the fundamental knowledge, the methodologies and technologies developed during the project,
- to exchange experience with projects and groups working in the field, to join efforts, minimize duplication and maximize potential,
- to pave the way for a successful (commercial and non-commercial) exploitation of the project outcomes.

The objective of the dissemination strategy is to identify and organize properly the activities needed to achieve these objectives. The following sections describe the main pillars of the dissemination strategy: (i) subjects (what will be disseminated), (ii) target audience (who will most benefit from the project results and who would be interested in learning about the project findings), (iii) the timing (when dissemination will take place); (iv) tools and channels (how to reach the target audience), and (v) dissemination management and policy.

#### 3.2 Subject of Dissemination

The following general subjects of dissemination have been identified:

- ΣIDERWIN project itself: goals, approach, pilot plant, and expected benefits.
- The techniques and methodologies used for the technical development of the project in all the involved areas (simulation, modelling, monitoring, control, automation, optimization...).
- The sustainability indicators and Key Performance Indicators in the process industry.

#### 3.3 Timing of Dissemination

Dissemination activities are planned in accordance with the stage of development in the project. Although several dissemination actions took place during the whole project life, the most significant dissemination activities take place as final research results are available. It is also important to consider that plant owners' investment decision might require extensive time, so timely communication on the project results will ease the successful commercialisation of the results.

The dissemination follows the **AIDA** principle: **A**wareness to attract the attention of the target audience, **I**nterest of the target audience, **D**esire of the target audience to know more about the project, and **A**ction to lead the target audience towards get involved in the project and to

promote its results to facilitate their exploitation. According to this principle, three phases are considered:

- Initial phase (**Awareness**) (month 1 – month 12): focused on increasing the visibility of the project and mobilizing stakeholders and multipliers. At this phase, the main activities were related to the implementation of the dissemination tools (website, social networks, visual identity), preparation of dissemination material, general presentations of the ΣIDERWIN project, and launching of the ΣIDERWIN Special Interest Group.
- Intermediate phase (**Interest/Desire**) (month 13 – month 36): focused on informing and engaging to the target stakeholders when preliminary results become available. At this phase, the project results and their future applications will be presented in journals and conferences to specialized audience with the objective of stimulating the interaction with the concerned scientific and industrial community and determining the stakeholders' expectations.
- Final phase (**Action**) (month 37 – month 66): focused on encouraging further exploitation of the ΣIDERWIN outcomes (transfer to other industries, replicability...). At this phase, the results of the validation of the ΣIDERWIN approach at the pilot plant, and the transferability analysis will be presented in journals, conferences, and industrial events. One of the main dissemination actions at this phase will be the organization of the ΣIDERWIN workshop at the end of the project, as it is explained later.

### 3.4 Target audience

Considering the goal of the ΣIDERWIN project, the target audience for the dissemination activities has been divided in the following groups:

1. *Industrial Community*: raise awareness of and interest in the project results to promote the exploitation and co-operation opportunities.

ΣIDERWIN project addresses specifically the steel sector and the aluminium sector as providers of raw material within the circular economy approach, but other industrial sectors could also use the new technologies developed in the project to reduce the carbon emissions and residues, and increase their competitiveness.

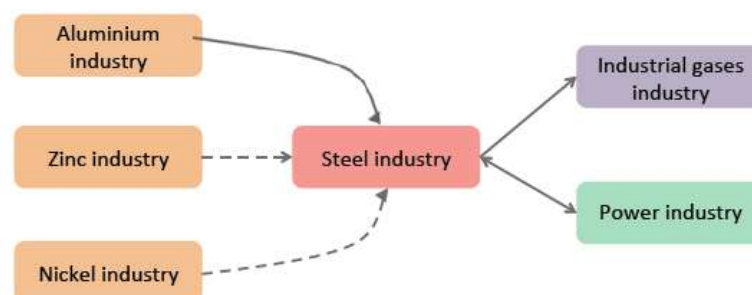


Figure 2. Synergies between the steel industry and other European industries thanks to ΣIDERWIN technology

The project will disseminate the results to business stakeholders to make them aware of the expected impact of the project and promote the exploitation of its results. So, from the exploitation side, the target audiences from the industrial community will be:

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- a. Steel industry: European Union is the second largest producer of steel in the world after China. Its output is over 136,2 million tonnes of steel a year, accounting for a 7% of global output [ 4 ] [ 5 ].
- b. Aluminium industry: The aluminium industry's presence spans across Europe, with a total of more than 600 plants in all 27 EU Member States, including alumina, metal supply (primary and recycling) and semis production (i.e. extrusion presses, rolling mills) [ 6 ].
- c. Other metallurgies where iron oxides are produced as by-products of their processes.
- d. Mining industry and particularly iron ore industry.
- e. Electricity producers from renewable energy sources.
- f. Oxygen gas producers.

The message for this audience would be:

"Increased economic competitiveness and reduced environmental impact due to a breakthrough production process by applying electrochemical method to steelmaking, reducing CO<sub>2</sub> emissions and direct use of energy. This will allow producing steel from by-products rich in iron oxides from non-ferrous metallurgy residues such as the aluminium industry allowing further processing of these by-products and increase the integration with renewable energies by flexible and interruptible operation."

2. *Scientific Community* (universities and research centres): enlarge the knowledge and facilitate the communication among European researchers in the research field of the ΣIDERWIN project (industrial process modelling, control and optimization, alternative raw material, techno-economic and environmental assessment).
3. *Financial Community*: financial instruments are a key point for investments in low carbon technologies. The project will disseminate the results to existing Public-Private Financial and Insurance schemes available for Energy Intensive Industries (i.e., Public funds, Private Equity Funds, Mezzanine) with the aim to promote the direct investments by innovative financial-insurance schemes.
4. *Policy makers*: raise awareness of the relevance and economic impact of exploited research results obtained by EU-funding (the European Commission's DG develops policies and actions for the re-industrialization of Europe and an innovative, modern, and sustainable economy). Dissemination among national and European decision-makers is to encourage them to develop/support policies that promote the development and implantation of low carbon technologies as the technologies developed in ΣIDERWIN.
5. *"Internal" Community (ΣIDERWIN partners)*: Ensuring effective internal communication and dissemination among the consortium partners is a key element for the development of the project, and also because some of the partners represent "influencers" due to their great position on the associated industrial sectors. Particularly, ΣIDERWIN consortium partners comprise important market players in various segments, and this constitutes a natural channel for the dissemination of the project and its results to other potential users. Therefore, it is important to communicate information about the project and its results to partners' managers, consultants, and people responsible for their marketing and sales, and to encourage them to share this information further to their customers and business partners.

6. *General public*: the goal is that the audience can be aware of the general impacts of the project for the society in general (i.e., sustainability, environmental impact), and let them aware of the positive impacts generated and the relevance of the EU funded research industry.

Dissemination activities must be tailored in such a way to reach the audiences most efficiently through appropriately selected dissemination tools and channels.

### 3.5 Dissemination tools and channels

This section describes the main tools and channels that are implemented/used by the ΣIDERWIN partners for the dissemination of the project and its results. Some of the tools are of general purpose, while other ones are oriented to specific target groups.

#### 3.5.1 ΣIDERWIN Website

The ΣIDERWIN website (<https://www.SIDERWIN-spire.eu>) is the main interface for communication to the public. It contains information on the ΣIDERWIN objectives, the consortium, the proposed activities, and the foreseen/achieved results. It also allows having access to the dissemination material and to facilitate the interaction between partners and interested parties by means of the contact formulary. In order to maximize its visibility, free or affordable methods to increase page ranking on search engines are being used. When possible, links from the homepages of all the partners will also be established to the ΣIDERWIN site.

#### 3.5.2 Social networks

To reach a broad target audience while establishing two-ways communication channels, the presence of the ΣIDERWIN project in social media has been encouraged. A Twitter account ([https://twitter.com/SIDERWIN\\_spire](https://twitter.com/SIDERWIN_spire)) is used as an instant dissemination instrument for reaching the general public. To reflect the relation of the project with the SPIRE community, references to @A.SPIRE in the ΣIDERWIN tweets was included whenever possible. On the other hand, a LinkedIn (<https://www.linkedin.com/in/SIDERWIN-spire-15b185154/>) page was used for reaching stakeholders and industry professionals.

The website has direct access to these social networks by clicking over the icons situated on a visible part of the website. In this way, it is easy for every user to participate in these social networks when the website is visited.

Finally, YouTube was used for the publication of videos produced within the course of the project, if this does not imply any property right conflict.

#### 3.5.3 Visual Identity and dissemination material

The visual identity (logo and style) of the project helps external audience to easily identify ΣIDERWIN and contribute to the project visibility by providing a clear identity from the very beginning of the project. Communication and dissemination tools (such as project website, Twitter, LinkedIn page...), dissemination material (such as flyers, presentations, posters...), and deliverables apply the visual identity defined for the project.

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Different dissemination material is produced along the project lifetime, such as:

- Project flyers (hardcopy and electronic version) to provide our audiences with an attractive and written project overview and summary of the main project objectives and results. Two flyers were scheduled in the project: one at the beginning of the project focused on the project's objectives and vision (<https://www.SIDERWIN-spire.eu/content/others>) and another at the end of the project highlighting the key results of the pilot plant. The flyers are able to be distributed in printed form (handed out at conferences or other events) and/or in electronic version (PDF file). The flyers are also available for download through the project website.
- Short Project presentations (electronic version) describing the objectives and the main achieved results for presenting the project in different forums, such as internal presentations inside of the partners, presentations at schools/universities, visits with clients, etc. These presentations are available for download through the website (<https://www.SIDERWIN-spire.eu/content/others>).
- Videos to communicate the project's vision, objectives, and results. Two videos are scheduled: one animation at start of the project (<https://youtu.be/0SG421hiKXA>) and one video focusing on the results at the pilot plant. These videos are accessible through the website and are uploaded in YouTube channel.

Finally, the deliverables also offer a good mean for disseminating the performed activities and achieved results. Public deliverables are accessible through the website, meanwhile confidential deliverables are used to spread the knowledge within the partners' organizations.

### 3.5.4 Special Interest Group (SIG)

The "SIDERWIN Special Interest Group" was created at the beginning of the project to engage stakeholders with the SIDERWIN consortium. The SIG is an informal group of external stakeholders interested in the project (i.e., possible beneficiaries, end users...). Participation in this group is under accepted subscription, and it is managed through the website to ease the contact of the interest people/entities.

For this purpose, a specific section is available through the website vertical navigation bar where a form to be completed by people/entities interested in being part of the SIG is available. They received periodically via email a newsletter starting from May2019 with information about relevant news, events, and results of the project. There were 8 editions (May 2019, November 2019, April 2020, October 2020, March 2021, October 2021, March 2022, and March 2023). They were also informed of relevant events of the project, such as webinars.

The main interest of the Special Interest Group is to get feedback from experts outside the consortium about usability of SIDERWIN developments, market potential, and additional technologies that may improve or complement SIDERWIN.

### 3.5.5 Channels offered by the European Commission and SPIRE

The SIDERWIN consortium made use of the tools offered by the European Commission and SPIRE to maximize the diffusion of the project.



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### *European Commission*

The EC offers different tools such as:

- The “projects and results” service from CORDIS that provides: (i) “project information” based on the project’s grant agreement, (ii) “report summaries” that come from the publishable summaries of periodic and final reports submitted by the project participants and approved by the project officer, and (iii) “Results in Brief” written by CORDIS science editors based on each report summary.
- CORDIS Wire to publish articles on the CORDIS News and Events service.
- research\*eu Results Magazine that features highlights from the most exciting EU-funded research and development projects.

### *A.SPIRE*

A.SPIRE is the European Association which is committed to manage and implement the SPIRE Public-Private Partnership. It represents innovative process industries, 20% of the total European manufacturing sector, and more than 130 industrial and research process stakeholders from over a dozen countries spread throughout Europe. A.SPIRE’s offers different communication tools/channels for dissemination of project outputs such as:

- A dedicated page on the SPIRE website where information about all SPIRE projects and links to project-dedicated websites are published (<https://www.spire2030.eu/printpdf/projects/our-spire-project/2218>).
- A section of the SPIRE website, SPIRE Newsletter and Twitter account where project related announcements can be published.
- Annual projects brochure.
- SPIRE event (such as Impact workshop, SPIRE projects’ conference, etc.).

### **3.5.6 National and European technology platforms and associations**

The link of the ΣIDERWIN partners with several relevant national/European platforms and associations, closely related with the ΣIDERWIN objectives, provide a great chance for disseminating the project activities and increasing the number of reached stakeholders. The Annex I gathers information of some of these platforms and associations together with the type of involvement of the partners. An updated list of the platforms and associations where the partners are involved was available in the ΣIDERWIN SharePoint.

### **3.5.7 Scientific and trade journals**

Scientific publications are an effective way to disseminate high-level project information and to attract the interest of representatives of the various target groups. Similarly, publications in trade journals can attract the attention of potential beneficiaries of the ΣIDERWIN results. The industrial and academic partners individually and in collaboration published and presented scientific advances in scientific journals (peer reviewed or not) and trade magazines, considering confidentiality and IPR protection aspects.

Table 1 provides some examples of scientific and trade journals where the ΣIDERWIN partners submit papers along the project.

### 3.5.8 National and international conferences

National and international conferences are a good opportunity to share the results with experts in the field, and therefore, to achieve an effective dissemination of the project.

Table 2 provides some examples of national and international conferences where the project and its results were presented.

### 3.5.9 Workshops and trade fairs

Finally, workshops and large events such as trade fairs were attended by the partners to disseminate both the techniques developed during the project and the achieved results to the targeted beneficiaries of the ΣIDERWIN project.

Table 3 provides some examples of events.

### 3.5.10 Media and social media coverage

ΣIDERWIN news in the media (newspapers, magazines, radio...) informed to general public about the project and reflect the impact of EU research and innovation funding on European industry and environment.

### 3.5.11 ΣIDERWIN workshop

At the end of the project, the ΣIDERWIN concluding webinar was organized to show the achieved results and to give the opportunity to meet potential interested clients (either on public or private field), investors and researchers. Target audience included different players in the scientific, industrial, financial, and social fields, as well as journalists. Announcement of the ΣIDERWIN webinar was done through all the available channels (web, Twitter, LinkedIn, EU/SPIRE tools, related Platforms and Associations, etc.) to reach the maximum audience as possible.

### 3.5.12 Other activities

Presentations of the project at the universities were carried out, mainly by the academic partners, in order to promote the research fields of the ΣIDERWIN project.

Direct proactive communication with stakeholders during visits/meetings and internal meetings inside of the partners organizations helped raising awareness of the goal/benefits of the project.

## D8.2.4 Master Dissemination and Communication Plan and Updates

**Table 1. Scientific and trade journals**

| Journal/Magazine Name                    | Type       | Journal/Magazine topics  | Indexed (Yes/No) | Other relevant information  |
|--|------------|--|------------------|---|
| Electrochimica Acta                      | Scientific | Analytical Electrochemistry; Bioelectrochemistry; Electrochemical Energy Conversion and Storage; Electrochemical Materials Science; Electrochemical Process Engineering and Technology; Molecular Electrochemistry Physical Electrochemistry   | Yes              | Q1 Chemical Engineering (Miscellaneous) – SJR 2020 1.53   |
| Journal of the Electrochemical Society   | Scientific | Energy storage and conversion; Corrosion; Electrodeposition; Electrocatalysis; Double layer phenomena; Sensors; Bioelectrochemistry; Electrochemical engineering; Electroanalytical chemistry  | Yes              | Q1 Condensed Matter Physics – SJR 2020 1.26   |
| SIDENEWS                                 | Trade      | Technological field where new products, innovation in production processes and introduction of new technologies of companies in the steel sector   | No               | Managed by SIDEREX (the Spanish Association of Steelworks Exporters) whose main goals are to promote Spanish steel exports. |
| International Journal of Hydrogen Energy | Scientific | Original research, both analytical and experimental, covering all aspects of Hydrogen Energy, including production, storage, transmission, utilization, enabling technologies, environmental impact, economic and international aspects of hydrogen and hydrogen carriers such as NH <sub>3</sub> , CH <sub>4</sub> , alcohols, etc. | Yes              | Q1 Condensed Matter Physics – SJR 2021 1.201  |
| Symmetry                                 | Scientific | International, peer-reviewed, open access journal covering research on symmetry/asymmetry phenomena wherever they occur in all aspects of natural sciences.  | Yes              | Q2 Multidisciplinary Sciences – SJR 2021 2.940  |

#### D8.2.4 Master Dissemination and Communication Plan and Updates

| Journal/Magazine Name                     | Type       | Journal/Magazine topics  | Indexed (Yes/No) | Other relevant information                                 |
|---|------------|--|------------------|--|
| Frontiers in Energy Research              | Scientific | Multidisciplinary journal that explores sustainable developments and technological advances in all fields of energy research to help produce reliable and affordable energy sources.   | Yes              | Q2 Economics and Econometrics – SJR 2021 0.71              |
| Hydrometallurgy                           | Scientific | Compile studies on novel processes, process design, chemistry, modelling, control, economics and interfaces between unit operations, and to provide a forum for discussions on case histories and operational difficulties.  | Yes              | Q1 Industrial and Manufacturing Engineering – SJR 2021 0.8 |
| Materials                                 | Scientific | Materials provides a forum for publishing papers which advance the in-depth understanding of the relationship between the structure, the properties, or the functions of all kinds of materials. Chemical syntheses, chemical structures and mechanical, chemical, electronic, magnetic, and optical properties and various applications will be considered.   | Yes              | Q2 Condensed Matter Physics – SJR 2021 0.6                 |
| Johnson Matthey Technology Review Journal | Scientific | Science enabling cleaner air, good health and efficient use of natural resources. Areas of application and fundamental science will be considered in the fields of: Advanced materials, Catalysis, Characterisation, Electrochemistry, Emissions control, Fine and speciality chemicals, Historical, Industrial processes, Materials and metallurgy, Modelling, PGM and specialist metallurgy, Pharmaceutical and medical science, Surface chemistry and coatings, Sustainable technologies. | Yes              | Q2 Metals and Alloys – SJR 2021 0.51                       |

## D8.2.4 Master Dissemination and Communication Plan and Updates

**Table 2. National and international conferences**

| Conference Name  | Scope         | Conference topics   | Type of audience  | Organiser  |
|--|---------------|---|---|--|
| Electroceramics Conference   | International | Different aspects and themes of Electroceramics materials   | Academics and industrial researchers, young scientists, and PhD students                  | Electroceramics Network                                  |
| Panhellenic Conference on Metallic Materials                                       | International | Innovative international research and developments in the science and technology of all types of metallic material systems  | Academic, engineers and industry  | University of Patras                                     |
| MMME – International Conference on Mining, Material, and Metallurgical Engineering | International | Annual conference in fields related to mining, material and metallurgical engineering   | Academics and industrial researchers, young scientists, and PhD students                  | International ASET Inc.                                  |
| ESTAD – European Steel Technology and Application Days                             | International | Steelmaking, Rolling, Environmental and energy  | Researchers and practitioners from equipment suppliers, plant manufacturers & steelmakers | ASMET, AIM, A3M, Steel Institute VDEh and Jernkontoret   |
| Electrification Europe International Summit  | International | Highlight solutions for a decarbonized future for Europe  | Academics and industrial researchers, young scientists, and PhD students                  | EDF & Electric Power Research Institute (EPRI)           |
| Industrial Efficiency  | International | Industrial efficiency, accelerating decarbonisation   | Academic, engineers and industry  | European Council for an Energy Efficient Economy (eceee) |
| Electrochemical Society Meeting  | International | Forum for sharing the latest scientific and technical developments in electrochemistry and solid state science and technology   | Academics and industrial researchers, young scientists, and PhD students                  | ECS  |
| Bauxite Residue Valorisation   | International | Cover the whole chain of bauxite residue, from production to applications: From bauxite to a modified bauxite residue, Neutralisation, revegetation and beyond, Recovery of Fe, Al, Ti, | Academics and industrial researchers, young scientists, and PhD students                  | Redmud   |

#### D8.2.4 Master Dissemination and Communication Plan and Updates

| Conference Name  | Scope         | Conference topics  | Type of audience  | Organiser   |
|--|---------------|--|---|---|
|  |               | Recovery of minor elements and REE, Cement, concrete and inorganic polymers, Ceramics, Other novel applications                        |   |   |
| Meeting of Physical Chemistry  | Portugal      | Latest advances in Physical Chemistry, with special emphasis on the work developed by the national scientific community                | Researchers from all areas of Physical Chemistry  | University of Coimbra   |
| International Conference on Raw Materials and Circular Economy               | International | Wide range of technological developments and future challenges regarding Raw Materials with emphasis given on Circular Economy aspects | Academic community, engineers, early-stage scientists as well as senior scientists, industry executives, stakeholders and policy makers, and other professionals in the field of raw materials                                    | Technical Chamber of Greece, the School of Mining and Metallurgical Engineering of the NTUA and the Greek Raw Materials Cluster |
| TMS Annual Meeting and Exhibition  | International | Global minerals, metals, and materials fields for a comprehensive, cross-disciplinary exchange of technical knowledge                  | Engineers, scientists, business leaders, and other professionals in the minerals, metals, and materials fields  | The Minerals, Metals & Materials Society (TMS)  |
| International Conference on Nanomaterials Science and Mechanical Engineering | International | Modern Problems of Nanomaterials Science and Mechanical Engineering  | Academics and industrial researchers, young scientists, and PhD students  | University of Aveiro  |
| Hydrogen Days 2023   | International | Development and deployment in the energy sector. Development and deployment in transportation. Cross cutting and overarching issues    | Commercial, scientific, research, and educational entities active in the field of advanced hydrogen and related technologies, investors, businesspeople, general public, and decision-makers interested in hydrogen technologies. | GUARANT International spol. s r.o.  |

## D8.2.4 Master Dissemination and Communication Plan and Updates

**Table 3. Events (Workshops and Fairs)**

| Fair/workshop Name                             | Scope         | Event topics   | Audience profile                                 | Web   | Organiser                             |
|--|---------------|--|--|---|---------------------------------------|
| Electrochemical Society Meetings               | International | Solid-state and Electrochemical Science and Technology   | Professionals, researchers, experts and students | <a href="https://www.electrochem.org/meetings/">https://www.electrochem.org/meetings/</a>                   | The Electrochemical Society           |
| METEC – International metallurgical trade fair | International | Metallurgy; Steelmaking  | Researchers and practitioners                    | <a href="http://www.metec-tradefair.com/">http://www.metec-tradefair.com/</a>                               | GIFA, METEC, THERMPROCESS and NEWCAST |
| European Steel Day                             | International | Promote industry's activity and discuss about the future challenges it faces   | Professionals, researchers and experts           | <a href="https://www.eurofer.eu/">https://www.eurofer.eu/</a>   | EUROFER                               |
| Hydrometec                                     | International | Primary and secondary raw materials and their treatments through hydrometallurgical processes to extract valuable metals and to promote circular economy in raw materials sectors. | Metallurgists, engineers and students            | <a href="https://eitrawmaterials.eu/project/hydrometec/">https://eitrawmaterials.eu/project/hydrometec/</a> | EIT Raw Materials                     |
| Steel Tech Congress & Expo                     | International | A unique meeting point for knowledge transfer and to promote inter-sectoral relations and networking   | Professionals, researchers, experts and students | <a href="https://steeltech.bilbaoexhibitionscentre.com/">https://steeltech.bilbaoexhibitionscentre.com/</a> | Steel Tech                            |

### 3.6 Dissemination management

A special section in the ΣIDERWIN SharePoint was created for the management of the dissemination activities (planning, monitoring, storing dissemination material...).

#### 3.6.1 Distribution of responsibilities

According to the Article 29.1 of the Grant Agreement “*each beneficiary must — as soon as possible — ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium)*”. Therefore, every possible opportunity was embraced, by individual partners or on collective basis through joint appearance by more than one partner, to make ΣIDERWIN project known among technicians, and general public as well.

TECNALIA acted as Dissemination and Communication Manager of the project coordinating and supervising all the dissemination activities. On the other hand, all partners of the consortium contributed to the ΣIDERWIN dissemination according to their foreseen role and effort, and using all available tools and channels (thus for instance by participating and giving presentations at conferences and workshops, publishing papers, networking, attending to fairs and showcases where technical achievements and prototypes can be shown to stakeholders, etc.) for the purpose of the project results adoption, and successful future commercialization of ΣIDERWIN outputs.

#### 3.6.2 Dissemination policy and rules

Dissemination activities in the ΣIDERWIN project are deeply joined with the intellectual property rights protection and confidentiality aspects that are clearly stated in the articles 23a and 36 of the Grant Agreement, respectively, and adjusted in the Consortium Agreement. It is important to find out a good equilibrium among the interests of academia and industry partners. Usually, the academia partners tend to publish all information they have at disposal, which is caused by academia common motivation systems, while the industrial partners’ decision whether, when and where to publish can depend on commercial considerations.

The basic regulation of the dissemination activities in the Consortium Agreement states that:

*During the Project and for a period of 3 year after the end of the Project, the dissemination of own Results by one or several parties including but not restricted to publications and presentations, shall be governed by the procedure of Article 29.1 of the Grant Agreement subject to the following provisions:*

- *Prior notice of any planned publication shall be given to the other Parties at least 45 calendar days before the publication.*
- *Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing 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.*

*An objection is justified if:*

- (a) *the protection of the objecting Party’s Results or Background would be adversely affected*
- (b) *the objecting Party’s legitimate academic or commercial interests in relation to the Results or Background would be significantly harmed.*



*(c) The proposed publication contains Confidential Information of the objecting Party.*

*The objection has to include a precise request for necessary modifications.*

*If an objection has been raised the involved Parties shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting Party shall not unreasonably continue the opposition if appropriate measures are taken following the discussion.*

*The objecting Party can request a publication delay of not more than 90 calendar days from the time it raises such an objection. After 90 calendar days the publication is permitted, provided that appropriate measures are taken that remove the justification of the objection.*

***A Party shall not include in any dissemination activity another Party's Results or Background without obtaining the owning Party's prior written approval unless they are already published.***

The project partners followed the open access principle, according to the article 29.2 of the Grant Agreement. They published their results based on the green model ([http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/oa\\_pilot/h2020-hioa-pilot-guide\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hioa-pilot-guide_en.pdf)) and used their organisation's existing institutional repositories to offer free online access to scientific journal articles and reports to increase the visibility and availability of ΣIDERWIN output. The Dissemination manager (TECNALIA) has its own repository following the 'green' open access model. According to the Grant Agreement:

*The bibliographic metadata must be in a standard format and must include all of the following:*

- *the terms "European Union (EU)" and "Horizon 2020";*
- *the name of the action, acronym and grant number;*
- *the publication date, and length of embargo period if applicable, and*
- *a persistent identifier.*

According to the article 29.4 of the Grant Agreement, unless the Commission requests or agrees otherwise or unless it is impossible, it is necessary to include the European emblem and the following statement of financial support in all the dissemination documents and applications for protection of results:

*"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 768788".*



When displayed together with another logo, the EU emblem must have appropriate prominence. According to the article 29.5, any dissemination of results must include the following Disclaimer excluding Commission responsibility:

*"This [insert type of activity] reflects only the author's views and the Commission is not responsible for any use that may be made of the information contained therein."*

Finally, in addition to the acknowledgement to the EU, all the dissemination material will include:

- the acronym of the project: ΣIDERWIN.
- the logo of the project, if feasible.
- the project's website URL (<https://www.SIDERWIN-spire.eu/>).

### 3.6.3 Dissemination activities planning and follow-up

As described in the previous sections, a key element for the dissemination of the project results is their presentation in scientific and technical publications, trade journals and magazines, national and international relevant scientific conferences, workshops, exhibitions, fairs, and the media (Press releases, radio, TV...).

For the planning and follow-up of these activities, a section in the ΣIDERWIN SharePoint was designed to create and store the “Dissemination reports” of each activity. The goal of these reports is to collect the most relevant information of each activity, and to allow its monitoring from the moment of its planning until its execution. In this way, the partners started filling the report as soon as they decide to perform an activity and then, when the activity was finished, they finished the report.

Five different types of reports were defined depending on the type of activity: (i) paper on a journal/magazine, (ii) presentation in a conference, (iii) participation in an event (fair, workshop...), (iv) presence in the media (press, TV...) and (v) any other type of activity. The templates for each one of the reports were included in the Annex II, but mainly they included:

- general information about the event (name, type, scope, audience...).
- information about the action (title, topic, authors...).
- feedback gathered by the respective partners from the target audience (if applicable) and eventually gained contacts for further dissemination purposes.

### 3.6.4 Evaluation and assessment

The evaluation of the ΣIDERWIN dissemination activities and the assessment of their impact was carried out through different means. On the one hand, the partners had set up several Key Performance Indicators (KPI), together with their main metrics and a numerical target. The target was estimated taking into account the individual partner's input, and considering a minimum threshold to have proper dissemination. It was foreseen that the number of dissemination actions (papers, conferences, workshops, fairs,...) would increase as the project progresses and results were achieved. If needed, new KPIs/metrics could be defined along the project.

During the WP8 meetings and/or the Project progress meetings organised every 6 months, the real and planned values of the KPIs were analysed, and, if needed, contingency plans could be defined in case the threshold was not reached. This last update of the deliverable 8.2 Master Dissemination and Communication plan and Updates at month 66 also analysed the real performance of the KPIs for the final stage of the project. Additionally, at the end of the project, the deliverable “D8.6. *Dissemination and communication actions survey*” will analyse all the activities performed and collect the final performance of the KPIs.

On the other hand, for the updates of the Dissemination and Communication plan, the partners carried out an internal evaluation of the project dissemination effectiveness in order to detect the potential weaknesses, and propose further actions to improve the dissemination plan. This internal evaluation was performed through a specific questionnaire implemented in the ΣIDERWIN Sharepoint and based on questions like:

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1. What do you think of the current information of the website? (Home, Objectives, Workpackages, Consortium, Documents, News, Events, Special Interest Group)
2. Can you contribute to include additional information in any of the website sections? (Home, Objectives, Workpackages, Consortium, Documents, News, Events, Special Interest Group)
3. Any other comments or suggestions about the website?
4. What do you think of the dissemination actions done until the date? (Flyer, Video, Newsletter, Twitter, LinkedIn, Conferences papers/presentations, Scientific magazines paper, Contacts with industrial associations, contacts with industries, communication to general public)
5. Can you contribute to any dissemination action? (Flyer, Video, Newsletter, Twitter, LinkedIn, Conferences papers/presentations, Scientific magazines paper, Contacts with industrial associations, contacts with industries, communication to general public)
6. Any other comments or suggestions about the dissemination actions?

In addition, all events organized by the consortium were evaluated afterwards by questionnaires to participants. These evaluations were used as input to improve later such events.

The figure displays three sequential screenshots of a Google Forms questionnaire titled 'D&C internal evaluation questionnaire'.

**First Screenshot (Questions 1 and 2):**

Question 1: 'What do you think of the current information on the website? Please, answer the questions below.' It includes a table for rating different website sections.

| Full of that apply     | Needs to be updated      | Some changes needed      | It is enough             | It is ok                 | It is great              |
|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Home                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Objectives             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Workpackages           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Consortium             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Documents              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| News                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Events                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Special Interest Group | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Question 2: 'Can you contribute to include additional information in any of the website sections?' It includes a table for rating contributions.

| Full of that apply     | Yes                      | No                       |
|------------------------|--------------------------|--------------------------|
| Home                   | <input type="checkbox"/> | <input type="checkbox"/> |
| Objectives             | <input type="checkbox"/> | <input type="checkbox"/> |
| Workpackages           | <input type="checkbox"/> | <input type="checkbox"/> |
| Consortium             | <input type="checkbox"/> | <input type="checkbox"/> |
| Documents              | <input type="checkbox"/> | <input type="checkbox"/> |
| News                   | <input type="checkbox"/> | <input type="checkbox"/> |
| Events                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Special Interest Group | <input type="checkbox"/> | <input type="checkbox"/> |

**Second Screenshot (Questions 3 and 4):**

Question 3: 'Any other comments or suggestions about the website?' It provides a text area for input.

Question 4: 'What do you think of the dissemination actions done until the date? Please, answer the questions below.' It includes a table for rating different dissemination actions.

| Full of that apply                    | Needs to be updated      | Some changes needed      | It is enough             | It is ok                 | It is great              |
|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Flyer                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Video                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Newsletter                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Twitter                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| LinkedIn                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Conference papers/presentations       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Scientific magazines papers           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Contacts with industrial associations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Contacts with industries              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Communication to general public       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Third Screenshot (Questions 5 and 6):**

Question 5: 'Can you contribute to any dissemination action?' It includes a table for rating contributions.

| Full of that apply                    | Yes                      | No                       |
|---------------------------------------|--------------------------|--------------------------|
| Flyer                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Video                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Newsletter                            | <input type="checkbox"/> | <input type="checkbox"/> |
| Twitter                               | <input type="checkbox"/> | <input type="checkbox"/> |
| LinkedIn                              | <input type="checkbox"/> | <input type="checkbox"/> |
| Conference papers/presentations       | <input type="checkbox"/> | <input type="checkbox"/> |
| Scientific magazines papers           | <input type="checkbox"/> | <input type="checkbox"/> |
| Contacts with industrial associations | <input type="checkbox"/> | <input type="checkbox"/> |
| Contacts with industries              | <input type="checkbox"/> | <input type="checkbox"/> |
| Communication to general public       | <input type="checkbox"/> | <input type="checkbox"/> |

Question 6: 'Any other comments or suggestions about the dissemination actions?' It provides a text area for input.

Figure 3. D&C internal evaluation questionnaire

## 4 Activities done during M55-M66

This section describes the main dissemination and communication activities carried out during the last 12 months of the project (M55 to M66).

The main activities done during this period were:

- 3 papers on International Conferences were presented and published.
- 3 papers on Scientific Journals were published.
- 2 papers on Scientific Journals are under review.
- 1 MSc Thesis Defence.
- 1 video was published on the YouTube channel: recording of the ΣIDERWIN concluding webinar.
- Final newsletter was produced and sent to the SIG members and is available on the website.
- Final flyer will be produced and upload to the website once deliverable D5.7 Final test results is available.
- The web page was regularly updated. There were 4,452 visits to the ΣIDERWIN web during this period (average: 371 visits per month).

### 4.1 Update of the ΣIDERWIN Web page

The ΣIDERWIN website <https://www.SIDERWIN-spire.eu/> is available since month 3 of the project and it was described in the deliverable D8.1. Project website. Oriented to the dissemination, the website provides essential information related to the project and the partners through different sections (see Figure 4):

- *Home*: provides an overview of the project. Apart from a direct access to the ΣIDERWIN video, a carrousel of photos and direct access to the ΣIDERWIN webinar video have been included in this section.
- *Objectives*: provides a description of project objectives and the background.
- *Workpages*: describes the eight WPs and the relation between them.
- *Consortium*: present the involved partners and a link to their websites.
- *Documents*: provides access to public documents of the project (public deliverables, open access papers, etc.) and dissemination material (flyers, presentations, videos,...). In this section are also uploaded the newsletters sended to people registered to the SIG and shared through social networks.
- *Cocreation area*: provides a link to the Collaborative platform.
- *News*: provides general information (both internal and external) related to the project.
- *Events*: provides information about events organised/attended by the consortium (meetings and dissemination events).
- *Special Interest Group*: manages the subscription of the interested people/entities on being part of the SIG.

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- **Contact us:** provides the public audience the contact points where asking for more information about the project.

The screenshot displays the SIDERWIN website interface. At the top, the SIDERWIN logo is prominently featured alongside the tagline 'Development of new methodologies for Industrial CO<sub>2</sub>-free steel production by electroWINning'. A navigation menu on the left includes links to Home, Objectives, Work Packages, Consortium, Documents, Cocreation area, News, Events, Special Interest Group, and Contact Us. The main content area highlights a webinar titled 'The decarbonization strategy of ArcelorMittal – How and why is iron electrowinning a promising for the future of steel?' scheduled for March 23rd, 2023, featuring Jean-Paul Allemand from ArcelorMittal. Below this, there are links to previous and next webinars, and a section for the SIDERWIN webinar 2021 recording. A video player shows a presentation titled 'Iron ore Electrowinning'. The footer section lists various project partners and sponsors, including ArcelorMittal, John Cockerill, EDF, CFDS, Quantis, tecnalia, universidade de aveiro, MMTLINDS, Dynergie, NTNU, and recoy. It also includes contact information and legal notices.

An electrolytic process, flexible enough to be supplied by renewable energies, will transform iron oxides, including those inside the byproducts from other metallurgies, into steel plate with a significant reduction of energy use.

This process decomposes under mild conditions but at intense reaction rates naturally occurring iron oxides such as hematite into iron metal and oxygen gas. By offering a CO<sub>2</sub>-free steel production process, the project will contribute to the reduction of the total greenhouse gas emissions. Compared to traditional steelmaking plants, this innovative technology has several positive impacts such as:

- a reduction by 87% of the direct CO<sub>2</sub> emissions,
- a reduction by 31% of the direct energy use,
- the ability to produce steel from by-products rich in iron oxides from non-ferrous metallurgy residues, and
- an increased integration with renewable energies with a more flexible process.

The project is led by ArcelorMittal, the world's leading steel and mining company. The company has been working for 12 years on the development of the technology to bring it from the TRL 0 to TRL 4 through the manufacturing of 5 different pilots, proving the potential of the technology. With this solid background, ArcelorMittal surrounded by 11 additional innovative European partners, aims at developing a 3 metre-long new experimental pilot to validate the technology at TRL 6.

LLCOWIN PILOT Cell Versions Iron samples

770mm long 4kg 4.3mm thick

ARCORMITTAL John Cockerill EDF CFDS

Quantis tecnalia universidade de aveiro MMTLINDS

NTNU Dynergie recoy

General information of the project:

- Project Title: Development of new methodologies for Industrial CO<sub>2</sub>-free steel production by electrowinning
- Acronym: SIDERWIN
- Participants: ArcelorMittal (Coordinator), John Cockerill (Belgium), EDF (France), CFDS-Homerics (France), QUANTIS (Switzerland), TECNALIA (Spain), UVA (Portugal), HYDRONEX (Greece), NTUA (Greece), N-Side (Belgium), Dynergie (France), NTNU (Norway)
- Proj. ID: 764788
- Duration: October 2017 - September 2022 (60 months)

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Based on this premise, SIDERWIN project proposes a breakthrough innovation, compared to the actual steel production process, bringing together steel making with electrochemical process.

Figure 4. Screenshot of SIDERWIN updated homepage and footer

The SIDERWIN website provides links to H2020 and SPIRE websites, and to the SIDERWIN Twitter account and LinkedIn page. It also allows using the Google Analytics utilities to monitor the website access: number of visitors, duration of the visits, geographical area, pages of the website more visited...

The website is being updated regularly by the website-manager upon with inputs of partners.

### Analysis of the SIDERWIN website visits (until 31<sup>st</sup> March 2023)

SIDERWIN uses Google Analytics to monitor the behaviour of the website. This allows the project to steer the strategy with the main aim of reaching the right audience. From the analytics

## D8.2.4 Master Dissemination and Communication Plan and Updates

collected over a period of 12 months (1<sup>st</sup> April 2022 to 30<sup>th</sup> March 2023) the total number of users of the ΣIDERWIN website is 4,452 of which 4,421 are new users. In total 6,303 sessions have been opened with an average of 1.42 sessions per user and an average duration of 00:01:45. Figure 5 shows the evolution of the number of users and sessions along this period and Figure 6 the channels used for the access to the website and the evolution of the number of users per month. Now about 32.6% of the visitors to the ΣIDERWIN website come through organic searches, 45.8% through a direct access, 18.2% through referral and 3.4% from the social networks.

Figure 7 shows the most visited pages of the website. After the homepage with the 48.42% of visitors, the second position corresponds to the page with the objectives of the project (8.12%) followed by the deliverables (6.49%) and news (4.63%) sections.

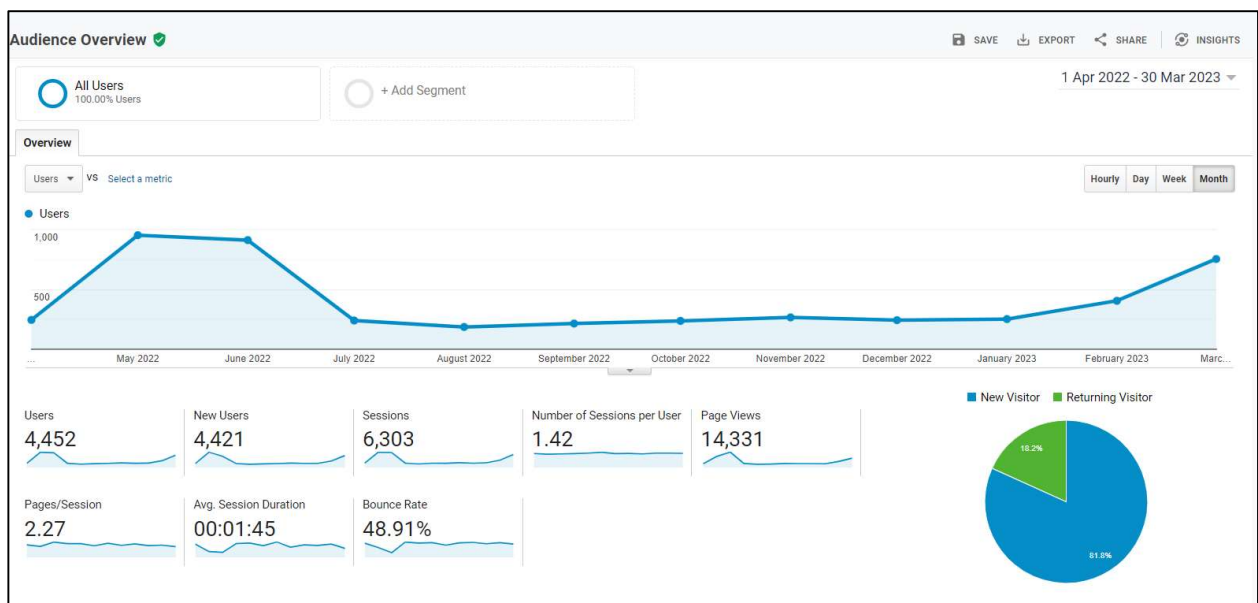


Figure 5. Users' evolution to ΣIDERWIN website (1<sup>st</sup> April 2022- 30<sup>th</sup> March 2023)

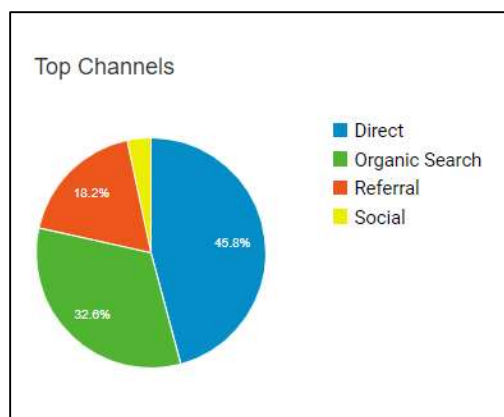


Figure 6. Traffic in ΣIDERWIN website



## D8.2.4 Master Dissemination and Communication Plan and Updates

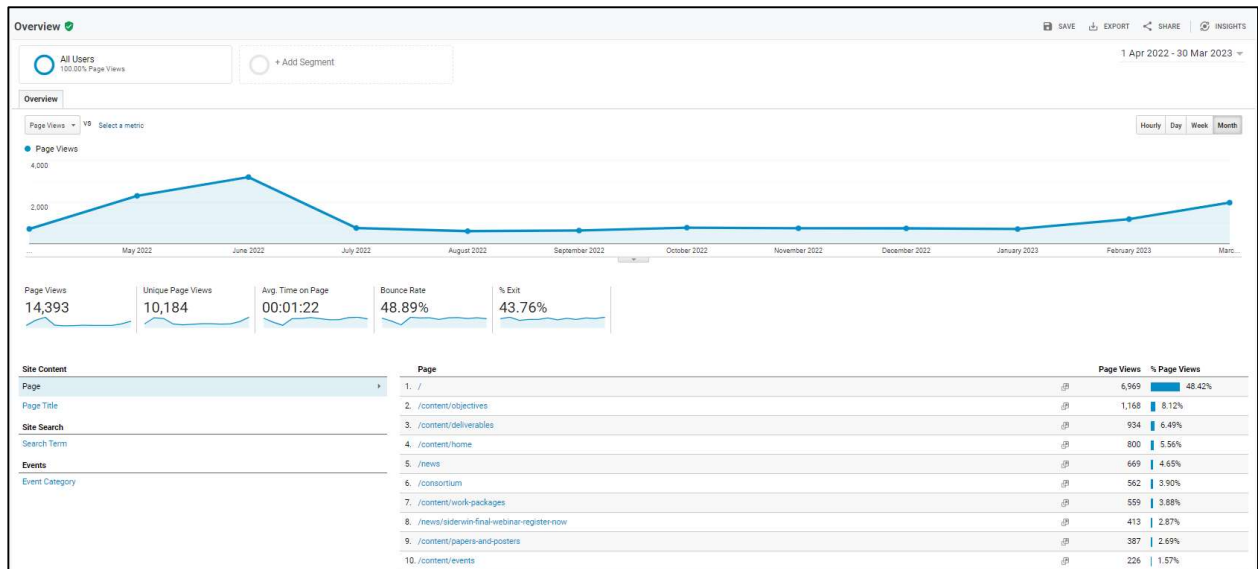


Figure 7. Most visited pages of SIDERWIN website

Figure 8 shows the percentage of visits per country. It is remarkable that the first position is still occupied by USA (21.86%). The second, third and fourth positions are occupied by: France (10.54%), Germany (6.53%) and India (4.47%), respectively. Looking at the world map, it could be said that the visibility of the project website is spread to worldwide.

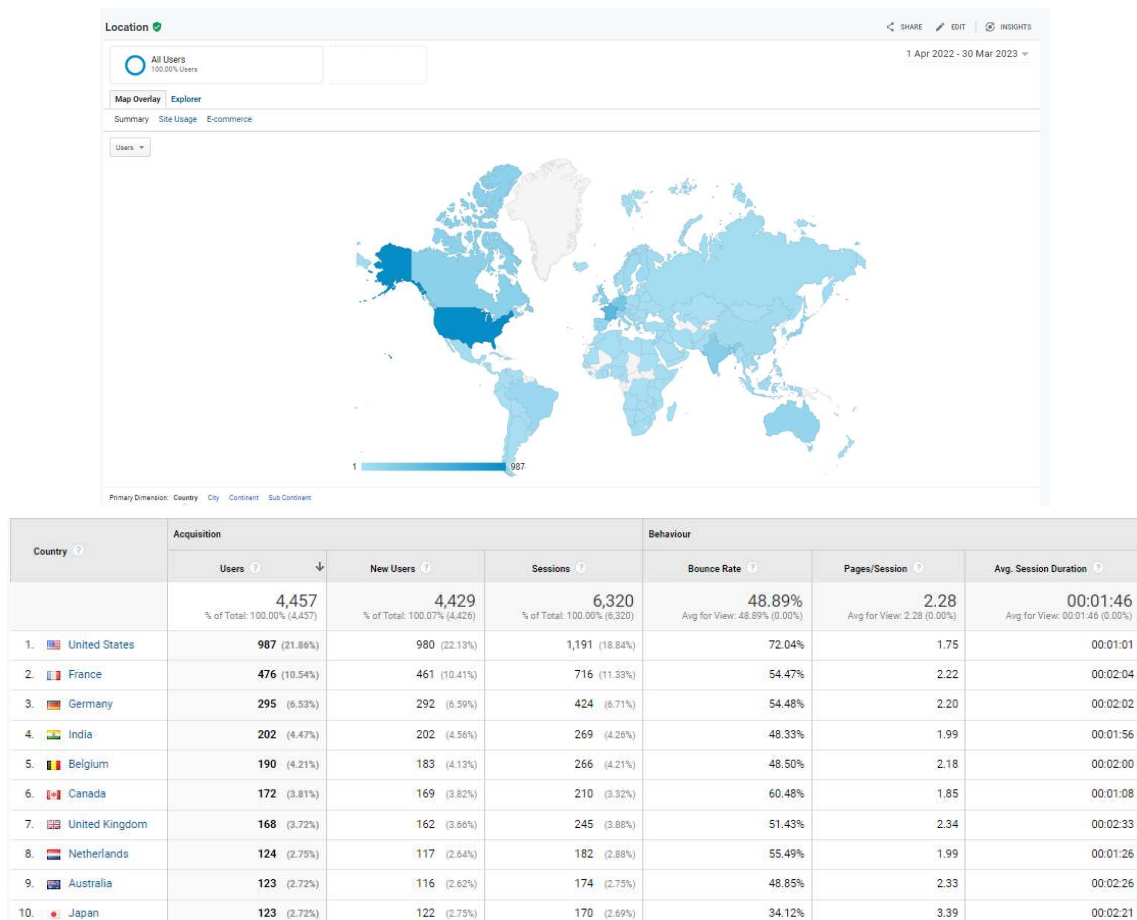


Figure 8. SIDERWIN website users by country

## 4.2 $\Sigma$ IDERWIN at social networks

The Twitter account for the project @ $\Sigma$ IDERWIN\_Spire and the LinkedIn profile are already available (see Figure 9), and they are used to publish announcement and relevant information about the project.

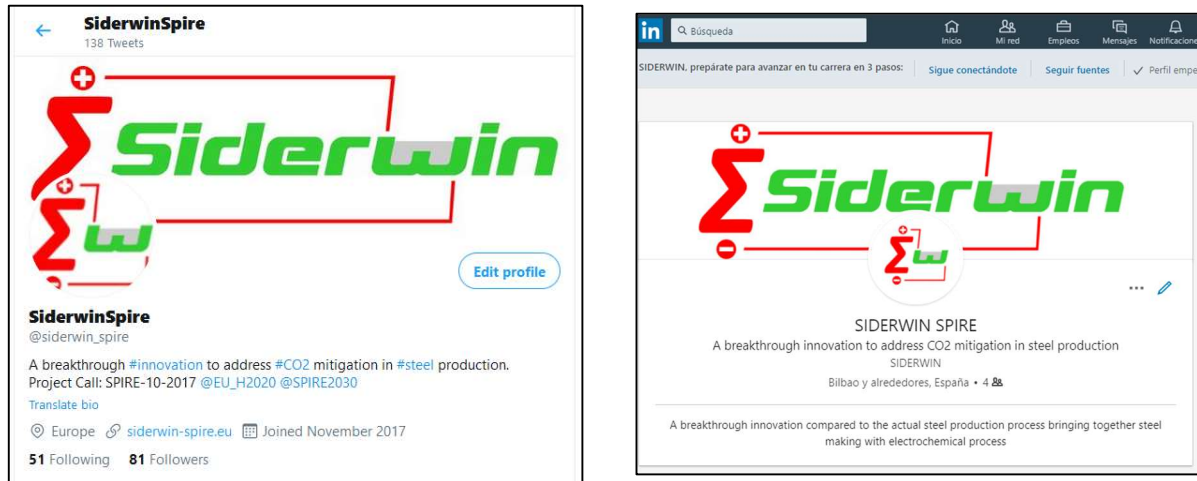
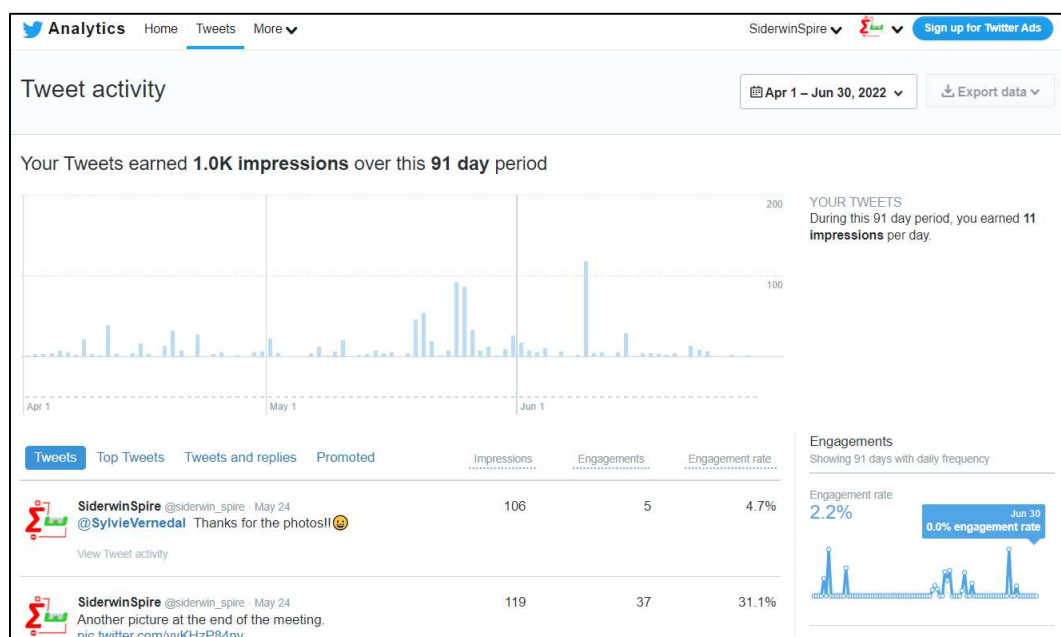


Figure 9.  $\Sigma$ IDERWIN Twitter account and LinkedIn profile

### Analysis of the $\Sigma$ IDERWIN Twitter activity (April 2022 till March 2023)

Figure 10 depicts the activity of the project's Twitter account since April 2022 until the end of March 2023, and the list of top tweets with the largest number of impressions. There were between 60-1,100 impressions per month, with an average of 317 impressions per month during this period. The first position is occupied by the tweet about the countdown till concluding webinar (345 impressions), followed by a tweet about the iron metal plates produced at the pilot plant (110 impressions).





## D8.2.4 Master Dissemination and Communication Plan and Updates

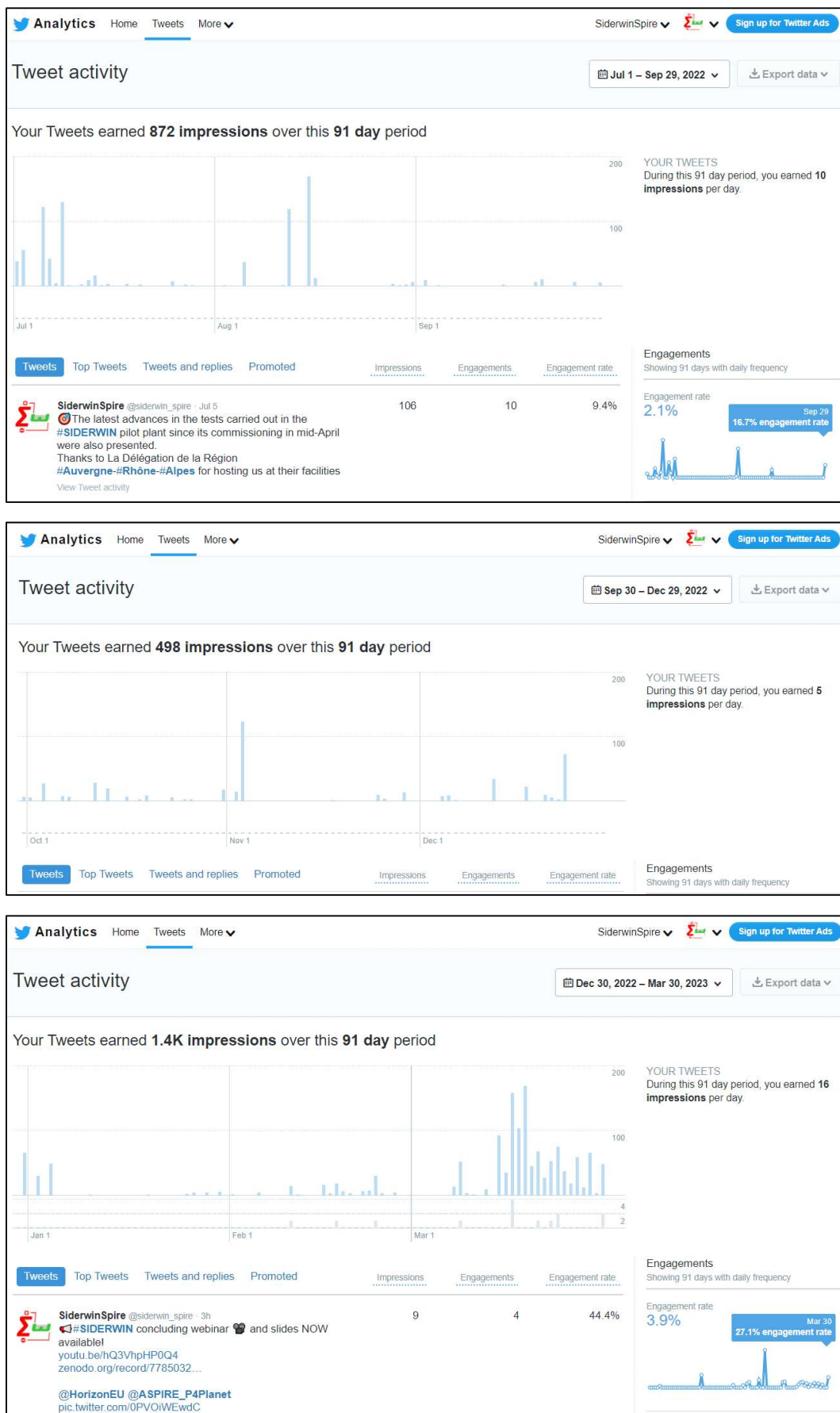


Figure 10. SIDERWIN Twitter activity register and Top Tweets

### 4.3 Preparation of dissemination material

During the last 12 months several public deliverables (see Table 4) were prepared and released for download through the website.

**Table 4. List of public deliverables produced by the ΣIDERWIN consortium during last 18 months**

| Deliverable Title   | Deliverable description  |
|---|--|
| D7.4 Environmental life cycle assessment final report (Public)              | This deliverable includes the assessment of the environmental performance of the investigated novel process by means of environmental Life Cycle Assessment (LCA)  |
| D8.2 Master dissemination and communication plan and updates (M66) (Public) | Dissemination and communication activities done during the last 12 months of the project.  |
| D8.3 Data Management Plan (Public)  | This document presents the obligations of the ΣIDERWIN project in terms of data management and describes how Open Access and FAIR (Findable, Accessible, Interoperable and Re-usable) are practically applied. It provides the guidelines for the consortium partners to deal with the different types of data generated during the lifespan of the project. |
| D8.6 Dissemination and communication actions survey (M66) (Public)          | Dissemination and communication actions survey of the whole project  |

The ΣIDERWIN concluding webinar, held on the 23<sup>rd</sup> of March 2023, was recorded, and uploaded to the YouTube channel of the project.

A final flyer highlighting the results of the project is planned to be published at the end of the project. It will be prepared with the main information gathered in Deliverable *D5.7 Public final test report*. At the time of writing this deliverable, the *public final test report* is not yet ready. But the final flyer will be prepared in the coming weeks, and once it is ready, it will be shared through the website and announced in social networks.

### 4.4 Creation and management of the Special Interest Group (SIG)

The rules for the management of the SIG have been agreed between the partners and the mechanism for the subscription of the members were available through the website, where a special section was created for this purpose in the vertical navigation bar (<https://www.SIDERWIN-spire.eu/content/special-interest-group>). The SIG was launched by the 7<sup>th</sup> month and 46 people have registered during the 66 months of duration of the project.

## D8.2.4 Master Dissemination and Communication Plan and Updates

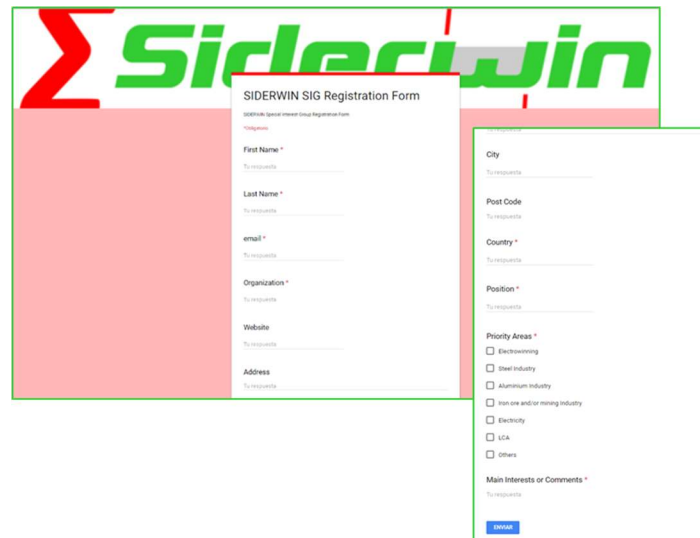


Figure 11. SIDERWIN SIG registration form

At the end of the project, the SIG is composed of forty-six members from which EU (59%), USA (6%), UK (2%) and other countries (33%). They have been classified depending on their position: members related with universities (28%), companies' management (28%), experts and researchers (15%) and the rest of members (29%) includes engineers (13%), business developers (7%), and consultants (5%).

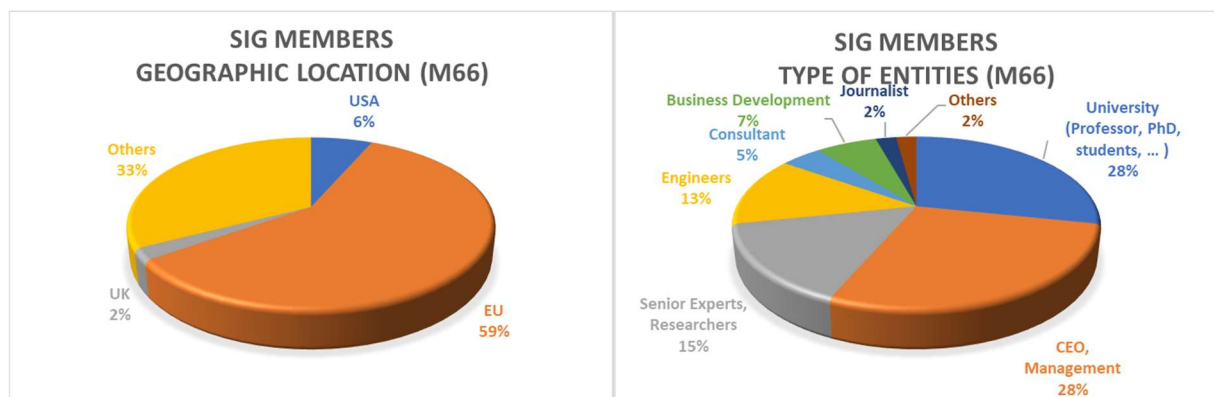


Figure 12. SIDERWIN SIG distribution M66 (46 members)

The main interest of the Special Interest Group is to get feedback from experts outside the consortium about usability of SIDERWIN developments, market potential, and additional technologies that may improve or complement SIDERWIN.

The consortium planned an online meeting with the SIG members to discuss about the price of the premium for low carbon steel. Finally, this event didn't take place because there are steelmakers within the SIG. Therefore, it is forbidden by the EU law to have such a discussion on price between competitors. This could be considered an attempt to find an anti-competitive agreement.

### 4.5 Newsletters

The Final issue of the Newsletter was launched in March 2023. It has 5 pages with a summary of the most relevant activities of the project from the technical and dissemination point of view during the last months.

The Newsletters is available at the project webpage and it was also distributed by email to the SIG members and interested contacts of each partner.

The Figure 13 shows the first page of the final Newsletter.



Figure 13. Final issue of SIDERWIN Newsletter

### 4.6 Publications in scientific and trade journals

The partners published the project activities and results in various scientific and professional journals. Table 5 shows the status of the publications planned during this period, indicating whether they were completed, cancelled, rejected or planned for the near future.

## D8.2.4 Master Dissemination and Communication Plan and Updates

**Table 5. List of publications done and planned since month 55**

| Name   | Date | Partner coordinating action | Status                 | Title   |
|--|------|-----------------------------|------------------------|---|
| Hydrometallurgy  |      | AMMR                        | Planned                | Measurement of the electrochemical reactivity iron oxides from residues   |
| Hydrometallurgy  |      | Tecnalia                    | Planned                | Simulation tool of an iron ore electrowinning cell  |
| Fuel   | M56  | UA                          | Done                   | Catalytic O <sub>2</sub> -steam gasification of biomass over Fe <sub>2</sub> -Mn <sub>2</sub> O <sub>3</sub> oxides supported on ceramic foam filters |
| Journal of The Electrochemical Society                         | M58  | NTNU                        | Done                   | Production of Iron Alloy by Direct Electrolytic Reduction Using Suspension Electrolysis in an Alkaline Electrolyte                                    |
| Journal of Industrial and Engineering Chemistry                |      | AMMR                        | Cancelled              | Electrification of primary Steel production   |
| Chemical Engineering Research and Design                       |      | AMMR                        | Cancelled              | Thermodynamical design of primary steel production  |
| Journal of the Electrochemical Society                         | M68  | UA                          | Done                   | Low-temperature electrowinning from mixed hematite/magnetite alkaline suspensions   |
| Frontiers in Energy Research (or Frontiers in Energy Research) | M60  | UA                          | Done                   | Prospects and challenges of the electrochemical reduction of iron oxides in alkaline media for steel production: a review                             |
| Journal of Sustainable Metallurgy                              |      | NTUA                        | Cancelled              | Reduction of current efficiency during time in the electrolysis of Bauxite Residue  |
| Electrochimica Acta  | N/A  | NTUA                        | Cancelled              |   |
| Journal of Sustainable Metallurgy                              | N/A  | NTUA                        | Cancelled but Replaced |   |
| Ceramics International   | N/A  | UA                          | Cancelled              | Red mud based cellular ceramics for catalytic and electrocatalytic applications   |
| Electrochimica Acta  | N/A  | UA                          | Cancelled              | Prospects for Fe-electrowinning from red mud suspensions  |
| Electrochimica Acta  | N/A  | NTNU                        | Cancelled              |   |
| Electrochimica Acta  | N/A  | NTNU                        | Cancelled              |   |
| Electrochimica Acta, J. Electrochem. Soc., ...                 |      | UA                          | Planned                | Assessment of Fe-electrowinning from alkaline suspensions under simulated conditions of intermittent power supply                                     |
| Journal of the Electrochemical Society                         |      | UA                          | Planned                | Iron electrowinning from an industrial metallurgical residue  |
| Journal of The Electrochemical Society                         | M62  | NTNU                        | Done                   | Production of Iron Alloy by Direct Electrolytic Reduction Using Suspension Electrolysis in an Alkaline Electrolyte                                    |

The paper submitted by TECNALIA to Hydrometallurgy was finally rejected, but it will be submitted to another journal that focuses on software and technologies in the near future.

### 4.7 Presentations at national and international scientific conferences

The partners presented the project activities and results at national and international conferences. Table 6 gathers the main information of the presentations planned by the partners up to now and their current status for different national and international conferences. A total number of 5 conferences were identified, one was not attended in the end, another one was cancelled, and therefore three of them were held during the last period.

**Table 6. List of national and international conferences identified for coming months**

| Name   | Date | Partner coordinating action | Status                           |
|--|------|-----------------------------|----------------------------------|
| BR 2022  | 2022 | NTUA                        | Planned but finally Not Attended |
| 5th International Conference on Nanomaterials Science and Mechanical Engineering |      |                             | Done                             |
| ICNSME   | 2022 | UA                          | Done                             |
| Jornadas CICECO 2022   | 2022 | UA                          | Done                             |
| 3th Electrochemical Society Meeting  | 2023 | NTNU                        | Cancelled                        |
| HydrogenDays2023   | 2023 | UA                          | Done                             |

### 4.8 Events

The main event that occurred in this period was the Defense of the Master of Science Thesis of Francisco Duarte from the University of Aveiro in March 2023: “Valorization of an industrial iron-rich residue by electroreduction for steel production”.

Dr. Daniela Lopes and Dr Aleksey Lisenkov fellows at CICECO – University of Aveiro Institute of Materials, Portugal, partners of the ΣIDERWIN project supervised the MSc Thesis exploring the possibility of using an industrial iron-rich residue from a nickel producing industry as a feedstock for the iron electrodeposition as a CO<sub>2</sub>-free steelmaking route within the scope of the ΣIDERWIN project.

### 4.9 Webinar

The ΣIDERWIN concluding webinar was held on the 23<sup>rd</sup> of March 2023 from 15:00 to 17:15 CET. Afternoon timetable was selected to facilitate the participation of people from other time regions, and because according to the questionnaire submitted after the 2021 webinar, the afternoon timetable made easier the attendance of people.

#### D8.2.4 Master Dissemination and Communication Plan and Updates

The date was announced on website and social media some weeks before the event, and the registration form was available on the website. In addition, an email was sent to the SIG members and to other 45 people identified as possible attendees, to encourage them to register.

The participation in the event was free of charge but registration was required. The platform used for the event was GoToWebinar.

The final agenda of the event *SIDERWIN: A breakthrough technology to decarbonize primary steel production through direct electrification* was:

| Time        | Topic   | Speaker   |
|-------------|---|---|
| 15.00-15.10 | Welcome and introduction to the Webinar.  | José Ignacio Barbero (TECNALIA)                               |
| 15.10-15.20 | SIDERWIN Project General Overview.  | Valentine Weber-Zollinger (ArcelorMittal)                     |
| 15.20-15.35 | The decarbonization strategy of ArcelorMittal – how and why is iron electrowinning a promising for the future of steel? | Jean-Paul Allemand (ArcelorMittal)                            |
| 15.35-15.45 | Iron Electrowinning – Lessons learned.  | Daniela V. Lopes (Uni. Aveiro)                                |
| 15.45-15.55 | Alternative feeding materials.<br>Current status and future perspectives.   | Dimitrios Panias (NTUA)                                       |
| 15.55-16.15 | Iron production by electrolysis at pilot scale.   | Thierry Conte (CFD Numerics)<br>Salah Touhami (ArcelorMittal) |
| 16.15-16.30 | The flexible potential of SIDERWIN process for the future European power system.  | Morgan Barberousse (EDF)                                      |
| 16.30-16.50 | What is the environmental impact and cost of steel decarbonization with SIDERWIN?                                       | Roland Kahmann (RECOY)  |
| 16.50-17.00 | Conclusions and Perspectives.   | Valentine Weber-Zollinger (ArcelorMittal)                     |
| 17.00-17.15 | Questions & Answers (Final Round).  | José Ignacio Barbero (TECNALIA)                               |

Figure 14. SIDERWIN concluding webinar agenda

The master of ceremony of the webinar was Jose Ignacio Barbero from TECNALIA. The introductory session *“The decarbonization strategy of ArcelorMittal – how and why is iron electrowinning a promising for the future steel?”* was made by Jean-Paul Allemand. He is R&D process portfolio director in charge of strategic initiatives at ArcelorMittal.

Then, Daniela Lopes from UA was in charge of presenting the first section of the webinar *“Iron electrowinning – Lessons learned”*. Next Professor Dimitrios Panias from NTUA talked about *“Alternative feeding materials. Current status and future perspectives”*. After him, Thierry Conte from CFD-Numerics and Salah Touhami from ArcelorMittal presented *“Iron production by electrolysis at pilot scale”*.

Morgan Barberousse from EDF focused on *“The flexible potential of SIDERWIN process for the future European power system”*. To finalise, Roland Kahmann from RECOY disserted about *“What is the environmental impact and cost of steel decarbonization with SIDERWIN?”*.

Just before the questions and answers final round, the project coordinator, Valentine Weber-Zollinger from ArcelorMittal, wrapped up the webinar with the final conclusions and perspectives.

During the webinar, attendees could submit their questions by typing in the GoToWebinar chat. Some of them were answered after each main section, and there was also a dedicated time slot at the end of the webinar. However, due to the large number of questions received that could not be replied during the event, all of them were gathered in a document to be answered by the speakers and that would be available later. At the moment of writing of this deliverable, the document is not yet finalised, and therefore it will be provided to the attendees some weeks after the event, and it will also be upload in the webpage.



## D8.2.4 Master Dissemination and Communication Plan and Updates

The webinar was recorded and made it available in the YouTube channel of the project where it reached 85 views in one week. The link to the video is available at the website and social media. The slides of the presentation were also made available at the website in the section Documents>Others>Presentations and Others.

The webinar allowed to achieve and spread the  $\Sigma$ IDERWIN project to the largest possible concerned audience. A total of 180 people registered to the online event.

The day of the event there was a great participation (65% of the people registered), with a total of 116 attendees from 57 companies. At the end of the webinar, a questionnaire was sent to the attendees, and 27 (23%) of them provided their feedback. In general, the attendees were satisfied with the event. The graphs in Figure 15 show the answers to the questions.

There were also open questions where the participants described the most interesting topics for them, the special needs in their industrial processes where any of the  $\Sigma$ IDERWIN developments could be applied, or any other comment nor suggestions.

The results achieved on the pilot, the lessons learned, the technology itself and its promising future, the alternative feeding materials for the  $\Sigma$ IDERWIN process, the flexible potential, ... are some of the most interesting topics highlighted by the attendees.

Attendees showed their interest in obtaining the slides shown during the webinar, and more documentation to extend the knowledge gained during the webinar.

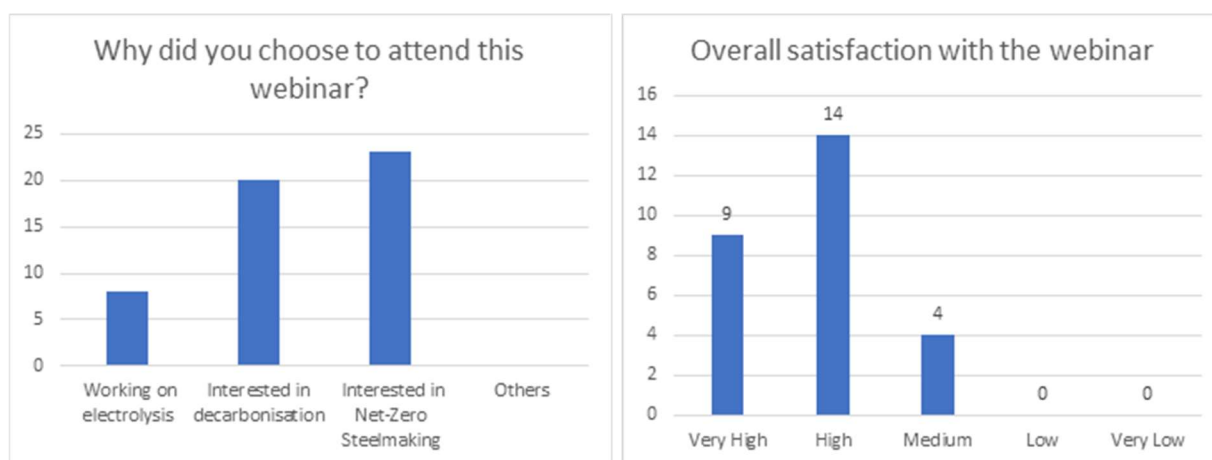


Figure 15. Answers to concluding webinar's questionnaire

### 4.10 Participation at exhibitions, fairs, and workshops

The 2<sup>nd</sup> edition of the Steel Tech Congress and Expo 2023 will be held at the end of October with the participation of TECNALIA.

### 4.11 Other activities

The partners conducted internal presentations/communications at their organisations to show the goals/progress of the project and contributed to the project dissemination with communications in the media and in their day-to-day during visits with clients or meetings with other parties.

## D8.2.4 Master Dissemination and Communication Plan and Updates

Amanda Jasi wrote an article about green steel made through electrowinning for The Chemical Engineer feature, in its February 2023 issue, where she talked about the SIDERWIN project.



Figure 16. The Chemical Engineering Feature - Electrochemistry for Greener Steel (February 2023)

In addition, a few days after the SIDERWIN concluding webinar, the independent journalist Hanno Böck who has been covering climate change in various publications (mostly German) for more than a decade, wrote a dedicated article in his Industry Decarbonization Newsletter.

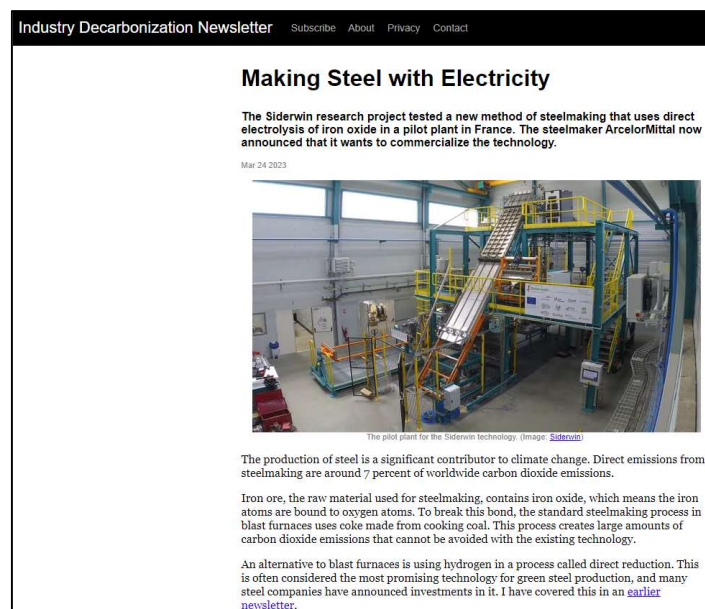


Figure 17. Industry Decarbonization Newsletter by Hanno Böck (March 2023)

## 4.12 KPIs performance and evaluation

Some quantitative indicators have been defined for the purposes of evaluating the SIDERWIN dissemination activities. Table 7 shows the real values for each metric of defined KPIs in the M1- M18, M19-M36 and M37-M54 periods, as well as the target and real values for M55-M66.



## D8.2.4 Master Dissemination and Communication Plan and Updates

Regarding the publications in journals, conferences and trade journals, the estimated numbers turned out to be very ambitious and there are deviations in the specified KPIs during the last 12 months of the project. It is worth mentioning that TECNALIA and UA have two papers under revision at the time of writing this deliverable.

The KPI4 indicates the expected attendees to the ΣIDERWIN concluding webinar, this number was slightly exceeded, and a total of 180 people registered to the event. Some of them were not able to join the live webinar and sent an email to request the recording.

**Table 7. Key Performance Indicators and metrics for the evaluation of the dissemination activities, real values for M18, M36 and M54, and planned and real values for final stage (M55-M66)**

| ID   | Indicator   | Metrics   | Real Value (M1-M18)  | Real Value (M19-M36) | Real Value (M37-M54) | Target Value (M55-M66) | Real Value (M55-M66) |
|------|---|---|----------------------|----------------------|----------------------|------------------------|----------------------|
| KPI1 | General public awareness through the website and social media | Number of visits on the project website   | 108 visits per month | 181 visits per month | 319 visits per month | 400 visits per month   | 371 visits per month |
|      |   | Number of presentations uploaded to the Website/SlideShare  | 2                    | 2                    | 2                    | 3                      | 1 (+1*)              |
|      |   | Number of videos uploaded to Website/YouTube  | 1                    | 2                    | 4                    | 4                      | 1                    |
| KPI2 | Awareness of the Scientific Community interest                | Number of papers in scientific journals   | 0                    | 2                    | 6                    | 10                     | 4 (+1**)             |
|      |   | Number of presentations in scientific conferences/workshops   | 2                    | 7                    | 6                    | 10                     | 3                    |
| KPI3 | Awareness of the industrial Community interest                | Number of papers in trade journals  | 3                    | 2                    | 1                    | 6                      | 3                    |
|      |   | Number of participations at events with industry (fairs, exhibitions, workshops...)   | 3                    | 2                    | 2                    | 4                      | (+1***)              |
|      |   | Number of interest expressions from industry to receive more information + industrial members of the Special Interest Group (SIG) | 16                   | 16                   | 9                    | 15                     | 5                    |
| KPI4 | ΣIDERWIN concluding webinar                                   | ΣIDERWIN final workshop (Number of people attending to the final ΣIDERWIN workshop)   | N/A                  | N/A                  | N/A                  | 100                    | 116                  |
| KPI5 | First ΣIDERWIN webinar  | First ΣIDERWIN webinar  | N/A                  | N/A                  | 78                   | 78                     | 78                   |

\* Soon available

\*\* To be submitted

\*\*\* Planned for October 2023

## 5 Conclusions

This report corresponds to the fifth release of the “Master Dissemination and Communication plan and updates” for the ΣIDERWIN project, and describes the key elements of the strategy that have been defined by the consortium for achieving proper project dissemination:

1. **The objectives** (*why*, mission & vision) → to spread the ΣIDERWIN’s results to the largest possible concerned audience (at the national, European and international level) in order to promote the implementation and use of the project results (exploitation).
2. **The subjects** (*what* will be disseminated) → the ΣIDERWIN project itself and its results together with the all the techniques/methodologies used for the project technical development.
3. **The timing** (*when* dissemination will take place) → three main phases are considered: 1) initial phase (*Awareness*) focused on increasing the project visibility and mobilising stakeholders and multipliers; 2) intermediate phase (*Interest/Desire*) focused on informing and engaging to the target stakeholders when preliminary results become available; 3) final phase (*Action*) focused on encouraging further exploitation of the ΣIDERWIN outcomes (transfer to other industries, replicability...).
4. **The target audience** (*to whom* it will be disseminated) → Industrial Community, Scientific Community, Financial Community, Policy makers, “Internal” Community (ΣIDERWIN partners) and General public.
5. **The tools and channels** (*how* to reach the target audience) → website, social networks, channels offered by the EC and A.SPIRE, dissemination material distribution, ΣIDERWIN Special Interest Group creation and mainly the presentation of the ΣIDERWIN results at scientific & trade journals, conferences, workshops and trade fairs. The report provides a list of potential journals, conferences, and fairs where the ΣIDERWIN results could be presented.
6. **The responsible** (*who* will perform the dissemination) → all partners of the consortium will contribute to the ΣIDERWIN dissemination during the whole project lifetime.
7. **The rules** for performing the dissemination activities.
8. **The way to evaluate and assess the impact** of the dissemination activities, defining and monitoring KPIs for the different period of the project.

The report also includes a description of the actions carried out during the final stage of the project (M55-M66). The main results of the activities performed until the writing of this report are:

- 3 papers on International Conferences have been presented and published.
- 4 papers on Scientific Journals have been published.
- 4 papers on Scientific Journals are planned for the near future.
- 1 MSc Thesis Defense by Francisco Duarte from the University of Aveiro.
- One video has been published on the web: ΣIDERWIN concluding webinar recording.

#### D8.2.4 Master Dissemination and Communication Plan and Updates

- Final newsletter has been produced, sent to the SIG members, and made available on the web.
- Final flyer will be produced and upload to the website once deliverable D5.7 Final test results is available.
- The web page has been regularly updated. There have been 4,452 visits to the ΣIDERWIN web in this period (average: 371 visits per month).

## References

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- [ 2 ] [SIDERWIN Webinar-SlidesPack 20230323.pdf; DOI: 10.5281/zenodo.7785032](#)
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- [ 4 ] [https://ec.europa.eu/growth/sectors/raw-materials/industries/metals/steel\\_en](https://ec.europa.eu/growth/sectors/raw-materials/industries/metals/steel_en)
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- [ 6 ] <https://www.european-aluminium.eu/>

## Annex I: Technological platforms and Associations with involvement of ΣIDERWIN partners

|   |   |        |
|---|---|--------|
| Acronym                                 | Axelera   |        |
| Name                                    | AXELERA   |        |
| Web                                     | <a href="https://www.axelera.org/">https://www.axelera.org/</a> |        |
| Profile                                 | Cluster   |        |
| Domain                                  | Chemical and environmental sectors                              |        |
| Scope                                   | French  |        |
| Partners involved & Type of involvement | CFD – Numerics  | Member |

|   |   |        |
|---|---|--------|
| Acronym                                 | ESNL  |        |
| Name                                    | Energy Storage NL   |        |
| Web                                     | <a href="https://www.fme.nl/brancheverenigingen/energy-storage-nl">https://www.fme.nl/brancheverenigingen/energy-storage-nl</a> |        |
| Profile                                 | Interest Group  |        |
| Domain                                  | Energy Storage  |        |
| Scope                                   | Netherlands   |        |
| Partners involved & Type of involvement | RECOY   | Member |

|   |   |  |
|---|---|--|
| Acronym                                 | ESTEP   |  |
| Name                                    | European Steel Technological Platform                   |  |
| Web                                     | <a href="https://www.estep.eu">https://www.estep.eu</a> |  |
| Profile                                 | Technological Platform                                  |  |
| Domain                                  | Steel   |  |
| Scope                                   | European  |  |
| Partners involved & Type of involvement | AM  | Member                                   |
|   | TECNALIA  | Working groups (Automotive, Environment) |

## D8.2.4 Master Dissemination and Communication Plan and Updates

|  |   |        |
|--|---|--------|
| <b>Acronym</b>                                     | EURELECTRIC   |        |
| <b>Name</b>  | The Union of the Electricity Industry                               |        |
| <b>Web</b>   | <a href="http://www.eurelectric.org">http://www.eurelectric.org</a> |        |
| <b>Profile</b>                                     | European electricity association                                    |        |
| <b>Domain</b>                                      | Electricity industry  |        |
| <b>Scope</b>                                       | Europe  |        |
| <b>Partners involved &amp; Type of involvement</b> | EDF   | Member |

|  |   |        |
|--|---|--------|
| <b>Acronym</b>                                     | EUROFER   |        |
| <b>Name</b>  | The European Steel Association                                |        |
| <b>Web</b>   | <a href="http://www.eurofer.org/">http://www.eurofer.org/</a> |        |
| <b>Profile</b>                                     | Technological Platform  |        |
| <b>Domain</b>                                      | Steel   |        |
| <b>Scope</b>                                       | European  |        |
| <b>Partners involved &amp; Type of involvement</b> | AM  | Member |

|  |   |   |
|--|---|---|
| <b>Acronym</b>                                     | European Aluminium  |   |
| <b>Name</b>  | European Aluminium Association  |   |
| <b>Web</b>   | <a href="https://www.european-aluminium.eu/">https://www.european-aluminium.eu/</a> |   |
| <b>Profile</b>                                     | Association representing the Aluminium industry in Europe                           |   |
| <b>Domain</b>                                      | Aluminium   |   |
| <b>Scope</b>                                       | European  |   |
| <b>Partners involved &amp; Type of involvement</b> | Mytilineos  | Member of the Alumina and Primary Aluminium Producers |

#### D8.2.4 Master Dissemination and Communication Plan and Updates

|  |   |        |
|--|---|--------|
| <b>Acronym</b>                                     | FAN   |        |
| <b>Name</b>  | Flexible power Alliance Network                                     |        |
| <b>Web</b>   | <a href="https://flexible-energy.eu">https://flexible-energy.eu</a> |        |
| <b>Profile</b>                                     | Technological Platform  |        |
| <b>Domain</b>                                      | Power Industry  |        |
| <b>Scope</b>                                       | European  |        |
| <b>Partners involved &amp; Type of involvement</b> | RECOY   | Member |

|  |   |        |
|--|---|--------|
| <b>Acronym</b>                                     | FME   |        |
| <b>Name</b>  | Federatie Metaal - en Elektrotechnische Industrie   |        |
| <b>Web</b>   | <a href="https://www.fme.nl">https://www.fme.nl</a> |        |
| <b>Profile</b>                                     | Interest Group                                      |        |
| <b>Domain</b>                                      | Industry wide                                       |        |
| <b>Scope</b>                                       | Netherlands   |        |
| <b>Partners involved &amp; Type of involvement</b> | RECOY   | Member |

#### D8.2.4 Master Dissemination and Communication Plan and Updates

|  |  |                              |
|--|--|------------------------------|
| <b>Acronym</b>                                     | FoF / EFFRA  |                              |
| <b>Name</b>  | <p>FoF - Factories of the Future</p> <p>EFFRA - European Factories of the Future Research Association</p>  |                              |
| <b>Web</b>   | <p><a href="https://ec.europa.eu/research/industrial_technologies/factories-of-the-future_en.html">https://ec.europa.eu/research/industrial_technologies/factories-of-the-future_en.html</a></p> <p><a href="http://www.effra.eu">www.effra.eu</a></p> |                              |
| <b>Profile</b>                                     | <p>FoF – PPP of H2020</p> <p>EFFRA - Association representing the FoF PPP Private Side</p>   |                              |
| <b>Domain</b>                                      | Advanced manufacturing   |                              |
| <b>Scope</b>                                       | European   |                              |
| <b>Partners involved &amp; Type of involvement</b> | TECNALIA   | Member of the Advisory Group |

|  |   |        |
|--|---|--------|
| <b>Acronym</b>                                     | H2 Platform   |        |
| <b>Name</b>  | H2 Platform   |        |
| <b>Web</b>   | <a href="https://opwegmetwaterstof.nl">https://opwegmetwaterstof.nl</a> |        |
| <b>Profile</b>                                     | Interest Group  |        |
| <b>Domain</b>                                      | Hydrogen  |        |
| <b>Scope</b>                                       | Netherlands   |        |
| <b>Partners involved &amp; Type of involvement</b> | RECOY   | Member |



#### D8.2.4 Master Dissemination and Communication Plan and Updates

|  |   |                                  |
|--|---|----------------------------------|
| <b>Acronym</b>                                     | MANUFUTURE  |                                  |
| <b>Name</b>  | Future Manufacturing Technologies                                   |                                  |
| <b>Web</b>   | <a href="http://www.manufuture.org/">http://www.manufuture.org/</a> |                                  |
| <b>Profile</b>                                     | European Technological platform                                     |                                  |
| <b>Domain</b>                                      | Process Industry, advanced manufacturing                            |                                  |
| <b>Scope</b>                                       | European  |                                  |
| <b>Partners involved &amp; Type of involvement</b> | TECNALIA  | Member of the Steering Committee |

|  |   |  |
|--|---|--|
| <b>Acronym</b>                                     | A.SPIRE   |  |
| <b>Name</b>  | Sustainable Process Industry through Resource and Energy Efficiency |  |
| <b>Web</b>   | <a href="https://www.spire2030.eu/">https://www.spire2030.eu/</a>   |  |
| <b>Profile</b>                                     | PPP of HORIZON 2020   |  |
| <b>Domain</b>                                      | Process Industry  |  |
| <b>Scope</b>                                       | European  |  |
| <b>Partners involved &amp; Type of involvement</b> | AM  | Member   |
|  | NTNU  | Member   |
|  | TECNALIA  | Participant of the Steering Committee and all the working Groups (Feed, Process, Application, Waste) |

#### D8.2.4 Master Dissemination and Communication Plan and Updates

|  |   |  |
|--|---|--|
| <b>Acronym</b>                                     | UFE   |  |
| <b>Name</b>  | Union Française de l'Electricité  |  |
| <b>Web</b>   | <a href="http://www.ufe-electricite.fr">http://www.ufe-electricite.fr</a> |  |
| <b>Profile</b>                                     | French electricity association  |  |
| <b>Domain</b>                                      | Electricity industry  |  |
| <b>Scope</b>                                       | France  |  |
| <b>Partners involved &amp; Type of involvement</b> | EDF   | Chairmans of the following Commissions: Marchés et Système Electrique; Electricité Renouvelable et Territorie; Prospective et Innovation |

## Annex II: ΣIDERWIN videos

This annex depicts some screenshots of the ΣIDERWIN videos.



Figure 18. Some screenshots of first ΣIDERWIN video with subtitles



Figure 19. John Cockerill Awards 2020 to ΣIDERWIN



Figure 20. ΣIDERWIN Pilot Plant Building erection

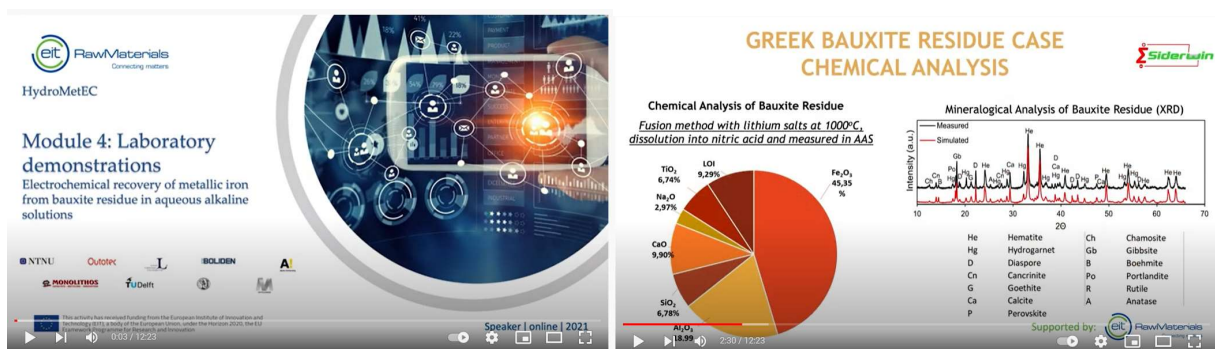


Figure 21. Some screenshots of NTUA video for HydroMetEC Learning Course

## D8.2.4 Master Dissemination and Communication Plan and Updates

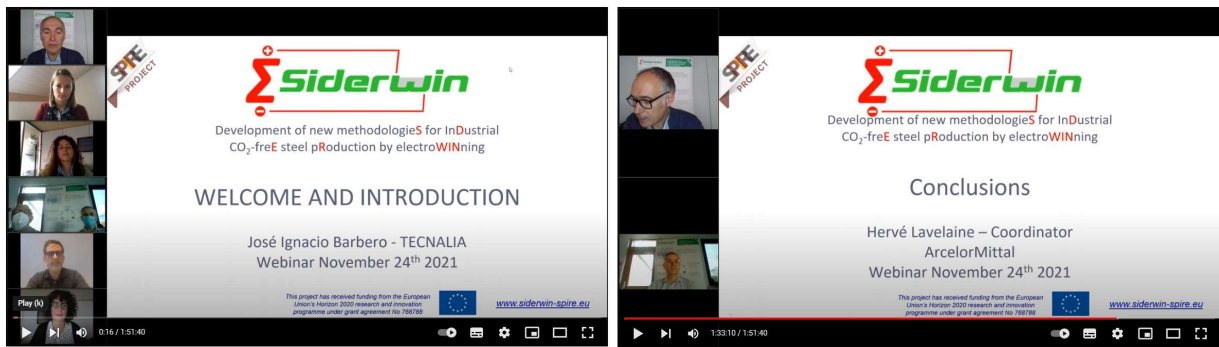


Figure 22. SIDERWIN webinar 2021/11/24

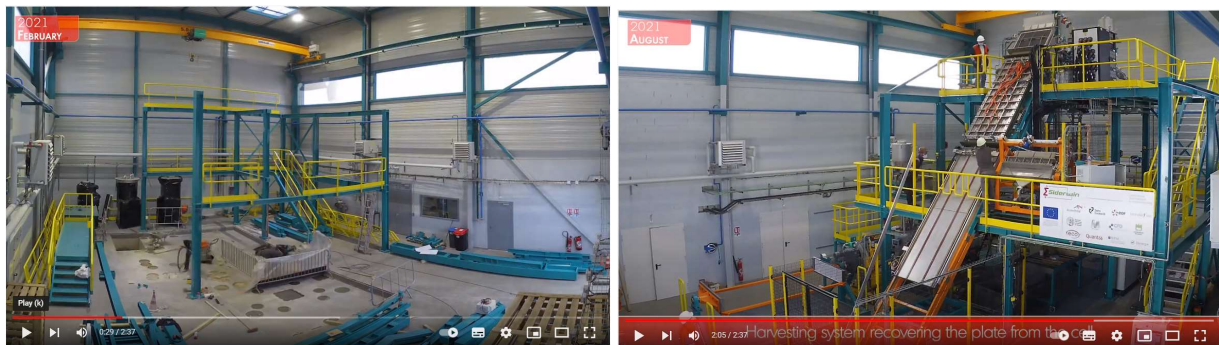


Figure 23. SIDERWIN full-size pilot installation time-lapse video

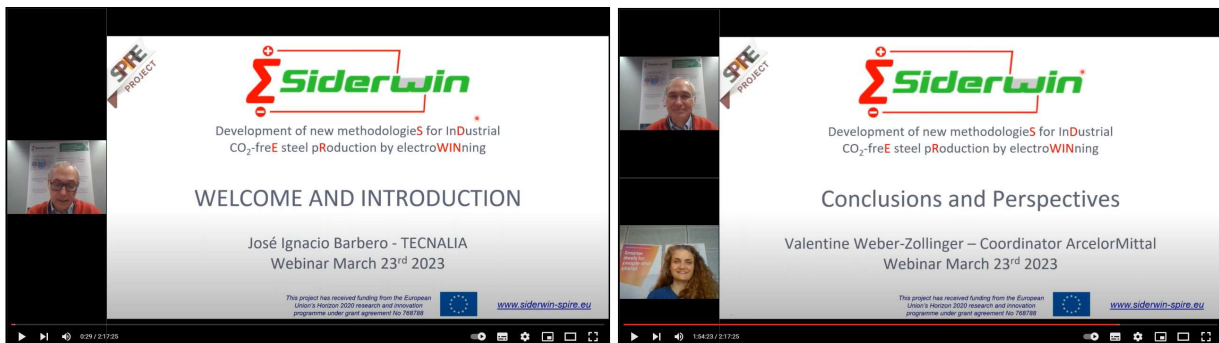


Figure 24. SIDERWIN webinar 2023/03/23



## D8.2.4 Master Dissemination and Communication Plan and Updates

### Annex III: SIDERWIN Newsletter

This annex depicts the eight issues of the SIDERWIN Newsletters.

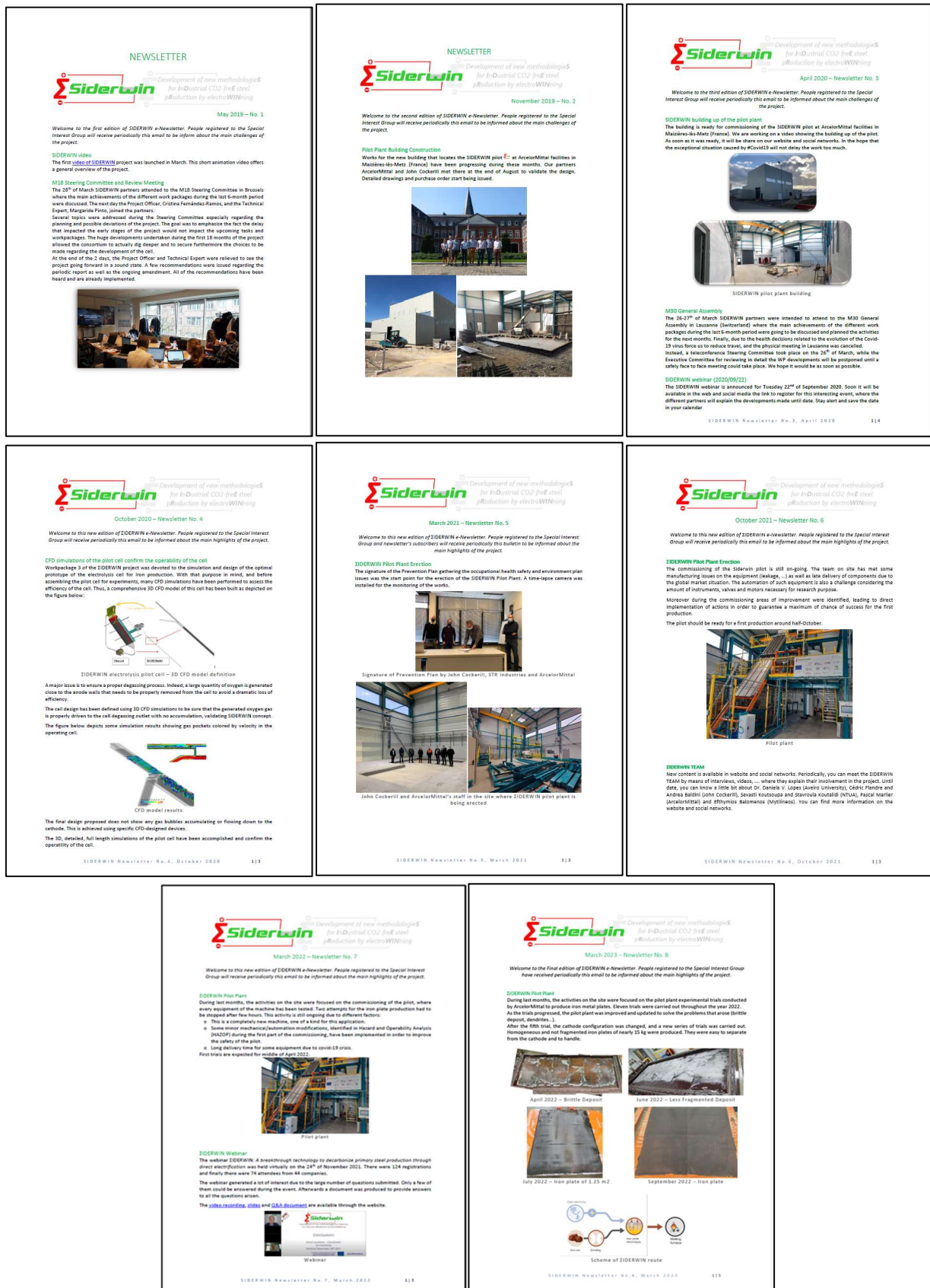


Figure 25. SIDERWIN newsletters front pages