



Air Carbon Recycling for Aviation Fuel Technology

4AirCRAFT Website

DELIVERABLE 5.3

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List of Acronyms

JST Japan Science and Technology Agency

WP Work Package

Executive Summary

This document summarises the content of the webpage for 4AirCRAFT project. The homepage has been designed and developed within the first 6 months of the project. The website was launched during the fourth week November 2021.

The project website has been registered as “other type of deliverable: websites, patents, filling, etc.”. Nevertheless, this document included basic information and screenshots to evidence its timely publication.

The project website is hosted at www.4aircraft-project.eu

1. Introduction

The project website aims to become the main information showcase of 4AirCRAFT. The domain of the website is www.4aircraft-project.eu.

The website has been designed during the first six months of the project with the idea to target all groups: general public, scientific community, stakeholders, etc.

The website map is designed to offer a complete overview of the project, main concept, objectives and challenges, etc., and an easy access to the partnership and roles, 4AirCRAFT activities and latest news and publications.

The website will be maintained and updated during the project and of a couple of years after the project ends.

2. Website Design

The website design was an outsourced process carried out by professionals in both graphic design and web development. In that way, quality and security of the website will be guaranteed during its lifetime, essential and key aspects for this type of project.

The development of the website is based on the *WordPress* system, which provides an understandable interface that facilitates its use and updates. The design and development of the website has been based on the criteria of clarity and accessibility for anyone interested in the project, as well as usability, so that updating the content does not entail any kind of problem.

4AirCRAFT website design development has been led by Aragon Hydrogen Foundation with validation of all partners within the framework of the project.

In addition, the Aragon Hydrogen Foundation, as leader of WP5 (Communication, dissemination, outreach activities and exploitation), will be in charge of keeping the website updated with the latest news and publications of the project. All the uploaded content will aim at the dissemination and divulgation of knowledge about the project, always avoiding sharing compromised information for the development of the project. The 4AirCRAFT header is formed by the project logo and links to the five sections of the webpage (Figure 1):

- Project: Motivation and Challenge, Concept and Approach, Ambition and Objectives, Impact,
- Consortium: including the entities involved in the project, short description of the research group and leaders' knowledge and expertise. Main partners roles and links to the participant's websites are also included.
- News: this section will be used to publish and announce participation in conferences, symposiums, workshops, etc. Press releases and other 4AirCRAFT news as e.g. project meetings will be also published. This section will be also used to announce the organization of the scientific and technical workshop organized by 4AirCRAFT.
- Publications: this section will contain all the public information, documents, scientific publications and public deliverables related to the project. This section will be divided into 3 different sub-sections: Scientific publications; Project Public Deliverables; Presentations.
- Contact.



[Home](#)
 [Project](#)
 [Consortium](#)
 [News](#)
 [Publications](#)
 [Contact](#)

Figure 1. 4AirCRAFT website header

The footer (Figure 2) is always fixed in every section and sub-section. On the one hand, it contains the project logo, as well as the acknowledge sentence displaying the EU emblem and JST logo. Legal notice, cookies policy and data protection policy are also linked in the footer.



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Figure 2. 4AirCRAFT website footer

3. Website Structure

To maximize the clarity and accessibility of the website, the preliminary website structure provided at the time of *D5.2 Communication, Dissemination and Awareness Plan* submission (July 2021) has been modified.

Figure 3 shows the sitemap of the 4AirCRAFT website including sections and sub-sections.

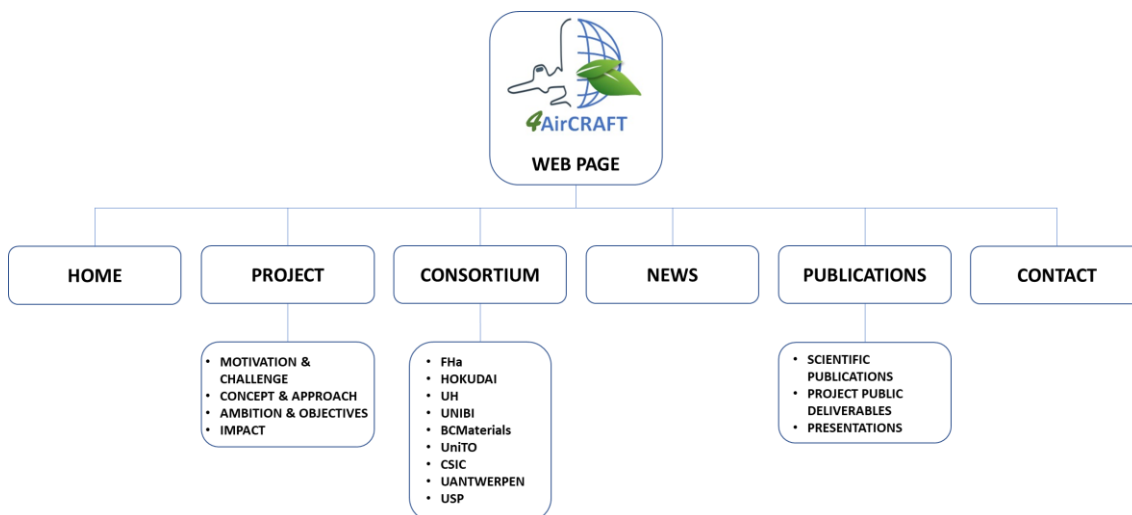


Figure 3. 4AirCRAFT sitemap

4AirCRAFT main information including all basic information that the reader must get at first is presented in the main page (see Figure 4):

- The main topic of 4AirCRAFT project.
- 4AirCRAFT Fact&Figures.
- Acknowledgements and Funding Agencies.



Figure 4. 4aircraft-project.eu/home/ (screenshot).

The home section of a website is the reader's first contact with the project. For this reason, a summary of what the project symbolises is given. First there is a summary table with the main project data (start date, project duration, number of partners, and the project coordinator). This is followed by a section (*What is 4AirCRAFT?*) explaining the ambitious project. This section also contains information about the main sources of funding, the importance of the international cooperation of the project, the technological innovation involved, and an outline of the general idea of the project.

4. Sections Description

4.1 Section Project

The “Project” section is divided in 4 sub-section or categories: Motivation and Challenge, Concept and Approach, Ambition and Objectives, Impact. It includes information about the strategic goals of the project and specific objectives (Figure 5).

Project

1 Motivation and Challenge, 2 Concept and Approach, 3 Ambition and Objectives, 4 Impact

1 Motivation and Challenge

The intensive exploitation of fossil fuels by mankind brought our civilization to the edge of a cliff. While their increasingly visible consequences on the planet drove mankind year after year, we find ourselves challenged in a worldwide effort to curb anthropogenic greenhouse gas emissions and to accelerate the green transition of modern society to a more sustainable and circular economy.

Emissions
Concentrations for methane emissions across the globe are rising at an alarming rate, and the world energy demand will...

Efficiency
All transport modes to be used will have to be more efficient and use less energy. This will require...

2 Concept and Approach

The air transport sector is responsible for two to three per cent of global CO₂ emissions and one of the sectors particularly hard to decarbonize as a key challenge.

The efficient use of water and CO₂ as a starting material to platform molecules, value-added chemicals, and fuels offers a central role to bring this vision closer to reality.

Understanding catalytic reactions and their mechanisms is essential to design more efficient catalytic systems. This will be achieved by combining state-of-the-art and emerging technologies in catalysis and the development of new materials for catalysis.

The 4AirCRAFT technology uses an innovative catalytic reactor to conduct the conversions.

3 Ambition and Objectives

At the core of 4AirCRAFT innovation is the synergistic combination of fossil electro-chemo- and bio-catalysis and their controlled spatial distribution within application-tuned catalytic carrier structures.

The aim is to achieve the synthesis of platform molecules with low CO₂ emissions and high energy efficiency. This will be achieved by combining state-of-the-art and emerging technologies in catalysis and the development of new materials for catalysis.

4 Impact

The project addresses the European Green Deal as well as the 2030 Agenda for Sustainable Development Goals (SDGs) adopted by the United Nations (UN), in which it performs Goal 5 "Gender Equality", Goal 7 "Affordable energy", and Goal 9 "Innovation and infrastructure".

4AirCRAFT's approach to reduce CO₂ emissions by producing platform molecules like methyl acetate, dimethyl carbonate and ethyl acetate. The project is a key enabler for the development of a sustainable and circular economy.

Research Areas:

- 1 Synthetic
- 2 Advanced
- 3 Catalytic
- 4 Mechanistic
- 5 Overall

Objectives

4AirCRAFT will develop a novel catalytic reactor for the synthesis of platform molecules with low CO₂ emissions and high energy efficiency. This will be achieved by combining state-of-the-art and emerging technologies in catalysis and the development of new materials for catalysis.

The technology might also be extrapolated to the production of other liquid fuels and chemical building blocks.

Single Catalytic Reactor

The main goal is the process intensification by a single cascade reactor and the effective low temperature synthesis of alternative long-chain hydrocarbons from residue materials streams and renewable feedstocks.

General expected results are:

- Reduction in CO₂ emissions
- Calculation of carbon footprint
- Minimization of the production of the hydrocarbons
- High efficiency for obtaining the platform molecules

All of this will be achieved by reducing the energy consumption and temperature while boosting integration degree by direct conversion in a compact sized single cascade reactor.

Logos: 4AirCRAFT, European Union, JST

Figure 5. 4aircraft-project.eu/project/ (screenshot).

4.2 Section Consortium

The “Consortium” section (Figure 6) includes the logos and information about every partner involved in the project, as well as a short description of the CV of the coordinators and main researchers of each institution and a link to their website where the reader can obtain more information about the work carried out by each institution.

The screenshot displays the 'Consortium' section of the 4AirCRAFT website. It features a grid of logos for partner institutions, including H2, CSIC, UASP, Aragon Hydrogen Foundation, Hokkaido University, BC Materials, Bielefeld University, University of Antwerp, University of Helsinki, University of Turin, Consejo Superior de Investigaciones Científicas, and IMMA/ICV. Below the logos, there are detailed profiles for several key personnel:

- Dr. Javier Sánchez-Lainez**: Associate Professor at Aragon Hydrogen Foundation, focusing on CO2 conversion to value-added products.
- Dr. Vanessa Gil**: Researcher at Aragon Hydrogen Foundation, working on hydrogen storage materials.
- Dr. Natalia Carolina Rosero-Navarro**: Assistant Professor at Hokkaido University, focusing on hydrogen storage materials.
- Dr. Roberto Fernández**: Researcher at BC Materials, focusing on advanced catalysts.
- Dr. Stefano Wuttke**: Professor at BC Materials, focusing on advanced catalysts and membranes.
- Dr. Jonaas Gurauskis**: Researcher at University of Antwerp, focusing on hydrogen storage materials.
- Dr. Mario Aparicio**: Researcher at University of Helsinki, focusing on hydrogen storage materials.
- Dr. Joke Hademann**: Researcher at University of Turin, focusing on hydrogen storage materials.
- Dr. Harald Gröger**: Researcher at Consejo Superior de Investigaciones Científicas, focusing on hydrogen storage materials.
- Dr. Pedro Camargo**: Researcher at Consejo Superior de Investigaciones Científicas, focusing on hydrogen storage materials.
- Dr. Francesca Carla Bonino**: Researcher at University of São Paulo, focusing on hydrogen storage materials.
- Dr. Reinaldo Gladici**: Researcher at University of Turin, focusing on hydrogen storage materials.

Figure 6. 4aircraft-project.eu/consortium/ (screenshot).

4.3 Section News

The idea behind this is to keep the Web updated with all the news and events related to the project.

Some examples that will be found in this section are:

- Press releases about 4AirCRAFT, from the project partners.
- Participation of 4AirCRAFT project and partners in conferences, congresses, symposiums, workshops, etc.
- Important dates, external events, 4AirCRAFT workshops, etc...
- 4AirCRAFT meetings.

All the news will be accompanied by a picture or image. If no images are available, the default picture will be the European Commission + JST logo or 4AirCRAFT logo of the project related news. An example of the post about the Kick-off-meeting is shown in Figure 7.



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Figure 7. 4aircraft-project.eu/news/ (screenshot).

4.4 Section Publications

In “Publications” section (Figure 8), public content related to any type of open access scientific and technical contribution developed by members of the Consortium in the framework of the project on national and international professional magazines and associations. In the D5.2 Communication, Dissemination and Awareness Plan were identified those potential channels for dissemination. This section will be divided into 3 different sub-sections: Scientific publications; Project Public Deliverables; Presentations.

In addition, any report of the deliverables, necessary to meet the requirements related to the diffusion of any results catalogued as of public character carried out for the project will be published in the “Presentations” sub-section.

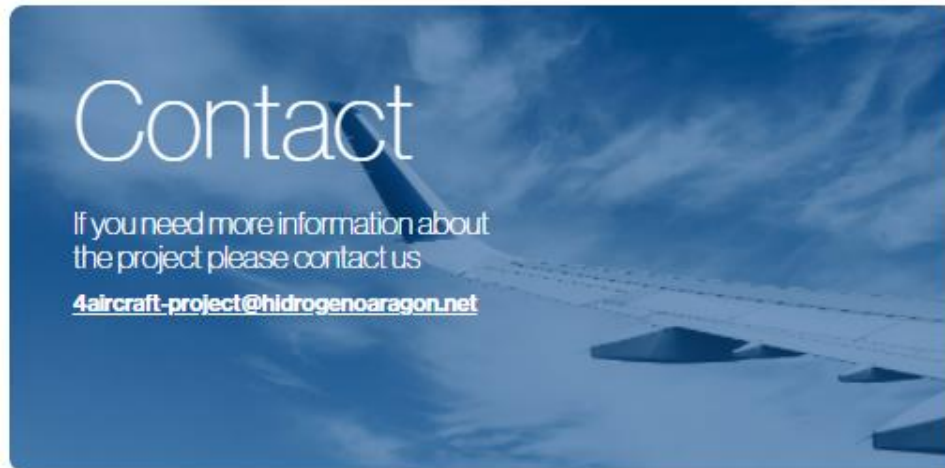


Figure 8. 4aircraft-project.eu/publications/ (screenshot).

4.5 Section Contact

A contact form has been implemented in order to ease the exchange of information between the user and the project partners. An email (4aircraft@hidrogenoaron.org) is sent to the coordinator, which will oversee forwarding or replying to the contact request.

Besides, contact information of the coordinator (FHa) and partners leaders is available at the webpage.












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Figure 9. 4aircraft-project.eu/contact/ (screenshot).

5. Conclusions

The project website 4AirCRAFT has been designed and developed as first communication tool to let all the public know about the project and its progress, maximizing the impact.

The website will be constantly updated as it contains some dynamic sections like “News” and “Publications”, but it will also be necessary for the partners to disseminate any news, events or updates on the website using their own social media channels.

The results and impact of the webpage, as well as the number of visits and other relevant statistics will be updated and communicated through the Dissemination and Communication Plan and the updates.

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