

D5.1 Project website and logo

CATCHER

Creation of innovative “humidity to electricity” renewable energy conversion technology towards sustainable energy challenge



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catcher



Project factsheet

Acronym: **CATCHER**

Title: **Creation of innovative “humidity to electricity” renewable energy conversion technology towards sustainable energy challenge**

Coordinator: **COFAC COOPERATIVA DE FORMACAO E ANIMACAO CULTURAL CRL (Ulusofona)**

Reference: **101046307**

Type: **HORIZON-EIC**

Program: **Horizon Europe**

Start: **1st April 2022**

Duration: **48 months**

Website: catcherproject.eu

Consortium: **COFAC Cooperativa de Formacao e Animacao Cultural CRL**, Portugal (Ulusofona), Coordinator

Ecole Royale Militaire - Koninklijke Militaire School, Belgium (RMA)

Cascatachuva LDA (CASCATA), Portugal (CASCATA)

Donetsk institute for physics and engineering named after o.o. Galkin of the national academy of Sciences of Ukraine, Ukraine (DIPE)

Nanotechcenter LLC, Ukraine (NANOTECHCENTER)

SYNYO GmbH, Austria (SYNYO)

LAVOLA 1981 SAU, Spain (ANTHESIS LAVOLA)

Deliverable factsheet

Number: **D5.1**

Title: **Project Website and logo**

Lead beneficiary: **SYNYO**

Work package: **Dissemination, Exploitation, and Communication**

Task: **T5.1 Setup a project inform website**

Dissemination level: **PU**

Submission date: **31.05.2022**

Contributors: **CASCATA**

Document history:

| Revision | Date | Main modification | Author |
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| 3 | 31/05/2022 | Final Version | Steiner (SYNYO) |

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Abbreviations

EAB: Expert and Advisory Board

EC: European Commission

FAQ: Frequently Asked Questions

PWS: Project Website

Executive Summary

This report provides information on the main digital resources and channels, which were implemented as part of the CATCHER project. First of all, the structure of the project website is explained and its content is highlighted. Some selected screenshots illustrate the design, the functions and the sections and subsections of the site. Then, the report documents various logo drafts which were developed in context of the project identity. As well, the main communication activities and channels are presented.

Finally, we would like to remark that the website will be regularly updated, possibly including new sections, and it represents only a first step of our communication and dissemination activities. In the future, further social media channels (e.g., Twitter, ResearchGate) may be set up whenever the consortium considers it necessary.

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1 Introduction

This report provides information on the CATCHER project website, which will serve as one of the main digital resources implemented in the CATCHER project. First of all, the structure of the project website is explained and its content is highlighted. Some selected screenshots illustrate the design, the functions and the sections and subsections of the site. Then, the report documents various logo drafts which were developed as part of the project identity. We would like to remark that the website will be regularly updated, possibly including new sections, and it represents only a first step of our communication and dissemination activities. In the future, further social media channels (e.g., Twitter, ResearchGate) may be set up whenever the consortium considers it necessary.

2 Project website

The project website can be accessed through <https://catcherproject.eu/>

2.1. Structure

The structure of the CATCHER website is illustrated in Figure 1. In the following, each subsection will be described with more details.

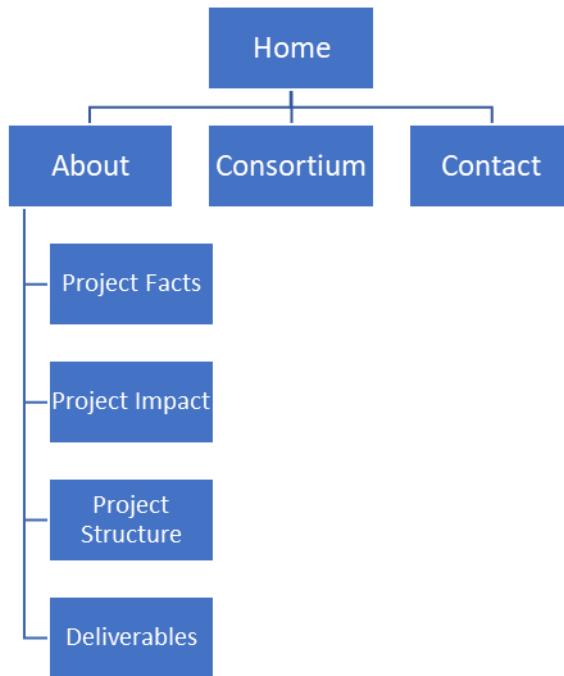


Figure 1: Structure of catcherproject.eu

Figure 1 shows the high-level sitemap of the website. The main menu includes the most frequently required links like shortcut to the home page, About section, Consortium page and contact.

The sitemap is also created as XML Sitemap and connected to SEO (Search Engine Optimizer) for better indexing and searching on search engines like Google, Bing, Yahoo and more.

2.2. Outline of the content

The front page ("Home") highlights the main facts in brief and provides information on the project and the funding scheme as well as the project number and the coordinator. It also highlights the main targets and partners within the project.

PROJECTS' VISION

CATCHER's vision is based on the collective dream of humanity to get "ENERGY from AIR".

The pioneer of the experiments on capturing electricity from the atmosphere was Nikola Tesla (1932). Tesla's intent was to condense the energy trapped between the earth and its upper atmosphere and transform it into an electric current.

Although recently some work has appeared on the conversion adsorption energy of moisture to electricity, there is not much R&D available on the conversion of the atmospheric humidity into electricity, considering it as a new source of renewable energy.

The CATCHER's highly innovative "atmospheric humidity to electricity" technological solution is the direct conversion of the humidity adsorption energy to electrical energy thanks to the functional heteroconjunction effect. That is a chain of physico-chemical, physical, and electrochemical processes that happen on activated nanomaterials particles—adsorbs surface and adsorbs water molecules from the air.

The deployment of that technology means fulfilling humanity's dream of realizing Tesla's idea to "capture electricity from air" and creating an eco-friendlier, fairer society.

[Find out more](#)

LINKS

- About the project
- Consortium
- General terms and conditions

CONTACT

■ PIC 987605425, CAMPO GRANDE 376, LISBOA 1749-024, Portugal
■ a.lyubchyk@cascatachuva.com

SOCIAL

[Twitter](#) [Facebook](#) [LinkedIn](#)

SYNO

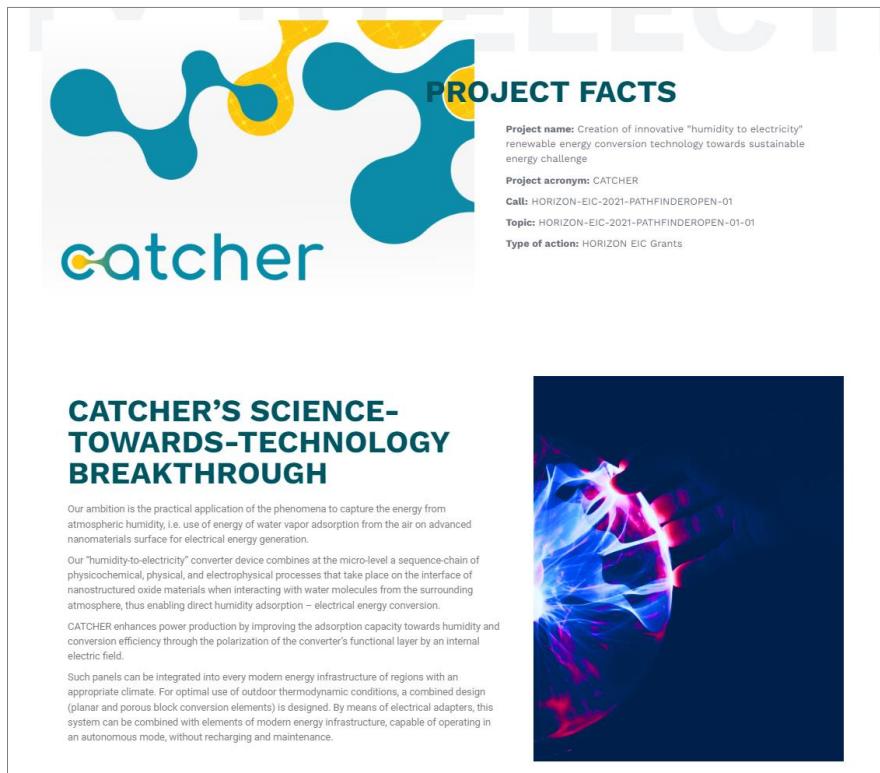
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Figure 2: CATCHER Homepage

2.2.1 About

Project Facts

The subsection provides a project overview and presents the main facts. It includes a brief introduction in the background of the project. The subpage also briefly describes CATCHER's science towards technology breakthrough.



PROJECT FACTS

Project name: Creation of innovative "humidity to electricity" renewable energy conversion technology towards sustainable energy challenge

Project acronym: CATCHER

Call: HORIZON-EIC-2021-PATHFINDEROPEN-01

Topic: HORIZON-EIC-2021-PATHFINDEROPEN-01-01

Type of action: HORIZON EIC Grants

CATCHER'S SCIENCE-TOWARDS-TECHNOLOGY BREAKTHROUGH

Our ambition is the practical application of the phenomena to capture the energy from atmospheric humidity, i.e. use of energy of water vapor adsorption from the air on advanced nanomaterials surface for electrical energy generation.

Our "humidity-to-electricity" converter device combines at the micro-level a sequence-chain of physicochemical, physical, and electrophysical processes that take place on the interface of nanostructured oxide materials when interacting with water molecules from the surrounding atmosphere, thus enabling direct humidity adsorption – electrical energy conversion.

CATCHER enhances power production by improving the adsorption capacity towards humidity and conversion efficiency through the polarization of the converter's functional layer by an internal electric field.

Such panels can be integrated into every modern energy infrastructure of regions with an appropriate climate. For optimal use of outdoor thermodynamic conditions, a combined design (planar and porous block conversion elements) is designed. By means of electrical adapters, this system can be combined with elements of modern energy infrastructure, capable of operating in an autonomous mode, without recharging and maintenance.



Figure 3: Project Facts & description on science-towards-technology breakthrough

Project Impact

An overview on the main project impacts will be given in this subsection. The section describes, how CATCHER will contribute to S&T advances in four of the total six EU Key Enabling Technologies.



PROJECT IMPACT

The project brings innovation to harness the planet's abundant natural resource – atmospheric humidity, which then meets society's needs. CATCHER will significantly advance the innovative concept of "atmospheric humidity to electricity" direct conversion via fundamental knowledge advancement, proof of technological feasibility of the concept-driven R&D and demonstration of its sustainable benefits.

The CATCHER will contribute by S&T advances in four of the total six EU Key Enabling Technologies: Micro- and Nanoelectronics, Nanotechnology, Advanced Materials, and Advanced Manufacturing Technologies. CATCHER's contribution is in the fields of solid-state physics and nano-electronics, chemistry and surface science, and electro-physics and nanoengineering.

CATCHER has a high positive societal and economic impact. The CATCHER's "deep-tech" supports Europe's economic growth and job creation driven by innovation. By 2050 is expected around 2800 billion EUR investments in the renewable energy sector, bringing 6.1 million people to workspaces, from the current 2.7 million. Through CATCHER, the EU will fortify the EU Renewable Energy market by trailblazing a disruptive new product capable of supplementing current technologies and solving significant energy efficiency challenges.

The application of the CATCHER technology and its impact can be efficiently maximized because of its modularity. It can be adapted to a variety of appliances ranging from a large-scale energy production plant to a household or a non-profit organization in tropical and sub-tropical countries – in all environments where humidity and steam are produced via heating or cooling systems.

Figure 4: Overview on Project Impact

Project Structure

The project structure (work packages, tasks & deliverables) is described in this section.

PROJECT STRUCTURE

Wp1 Technological Advancement of the “Humidity to Electricity” Prototype

Task 1.1. Development and Optimization of the Innovative nano-structured Active Coating of the “humidity to electricity” converter
 Task 1.2. Development and Optimization of the Innovative nano-structured humidity to electricity converter Functional Porous Block “Quantum Diode” structure
 Task 1.3 Development and Optimization of Functional absorber layer
 Task 1.4 Prototype elaboration. Optimization of design features

Wp2 Fundamental knowledge advancement of the “humidity to electricity” concept-driven research

Wp3 Proof of Technological Feasibility of the “Humidity to Electricity” Concept

Wp4 Environmental & Social-Economic Feasibility Evaluation of the “Humidity to Electricity” Concept

Wp5 Dissemination, Exploitation, and Communication of the project’s results

Wp6 Project Management

Figure 5: Project Structure

Project Deliverables

A list of all of the project’s deliverables will be presented in this part. Public deliverables will also be available for download.

DELIVERABLES

D1.1 Protocol on YSZ-based humidity to electricity converter layers (Active Coating & Porous Block)
 D1.2 CATCHER Prototype fabrication Technical documentation & technological requirements
 D2.1 Recommendations for Converter Test Devices Improvement/Optimization
 D2.2. Protocol on Morphological and Electrical Properties of YSZ-based prototypes
 D3.1 Protocol on Technological Feasibility and effectiveness of “humidity to electricity” concept
 D3.2 Patent application (Conversion Technology)
 D4.1 Report on a conceptual engineering study of the technology and a Techno-Economic Assessment
 D4.2 Report on Environment and Social Assessment
 D4.3 Report on Integrated Multicriteria Analysis and Risk Assessment
 D4.4 Life Cycle Sustainability Assessment (LCSA)
 D5.1 Project website and logo
 D5.2 Dissemination and Communication Plan
 D5.3 Exploitation Strategic Plan initial with business models
 D5.4 Exploitation Strategic Plan final with business models
 D5.5. Report on the stakeholders & Market Analysis
 D6.1 Data Management Plan (DMP)
 D6.2 RPX update of the Data Management Plan
 D6.3 Update of the Data Management Plan
 D6.4 Technical/scientific review meeting documents RP1
 D6.5 Technical/scientific review meeting documents RP2
 D6.6 Technical/scientific review meeting documents RP3
 D6.7 Project Conference

Figure 6: List of Deliverables

2.2.2. Consortium

This section provides information on the partners of the project. It includes a description of the institutions and their role in the project. Additionally, a simple click on the specific link brings to the related institution.

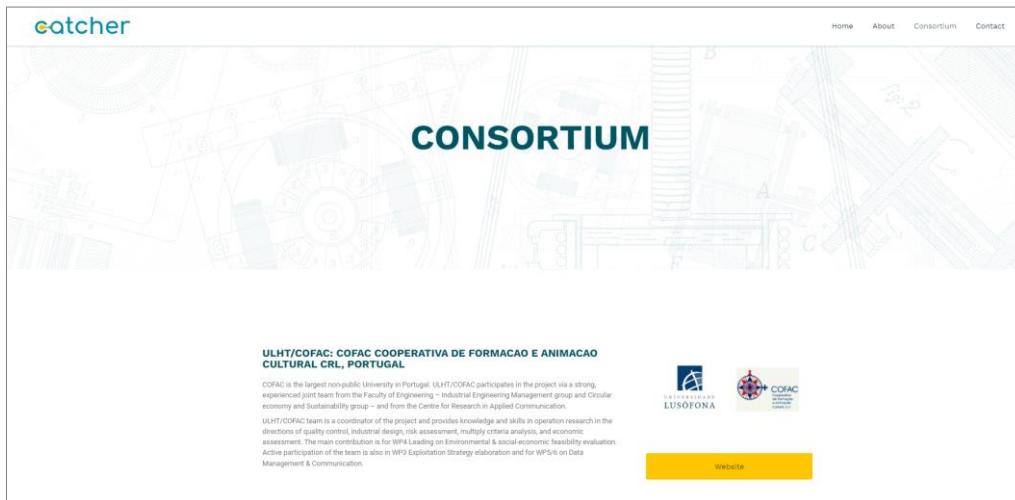


Figure 7: CATCHER Consortium

2.2.3. Contact

The section shows the contact details of the coordinator (ULHT/COFAC) of this project. It includes a web form for getting in touch with the project team.

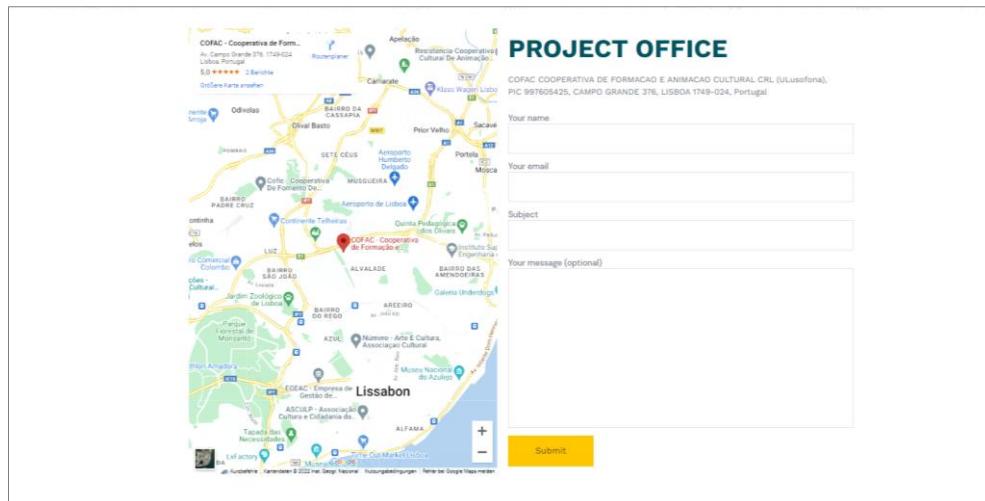


Figure 8: CATCHER Contact Form

2.3. Search Engine Optimiser

The website has installed a SEO plugin which will increase the visibility of the site. In addition, the website is connected with Google Webmaster Tools to increase the project index in search engines.

2.4. Google Analytics

The project website is connected also with Google analytics which will help to survey the usage of the site from end users in different dimensions like location, language, device, technology, demographic and more.

3 Project identity: Logo

Graphic materials were developed to promote the project at selected events providing general information and preliminary results, addressing both the technical and non-technical public. The materials will be continuously released during the execution of the project, firstly with a general presentation of the project and at the end of the project gathering the results: Leaflet (project factsheet), Stickers, business cards and other dissemination materials. The printable versions will be uploaded on the project website and in the intranet of the project, as it will serve also as support document for fairs, congresses, forums and workshops.

The visual identity of the CATCHER project is an important first step in establishing not only the identity and very basis for the project, but also in branding the various products which are used to 'spread the word' about the project before and after project results are delivered. Visual identity includes the name, logo and of course the rules of graphic layout and use of the logo for those who will deploy it – in this case the project partners.

The CATCHER project identity reflects the topic of renewable energy in the logo. The logo of CATCHER project was selected by the consortium from a number of designs proposed, considering that it should be easily used in the products, printouts, projected slides and on the web.

LOGO VARIATIONS

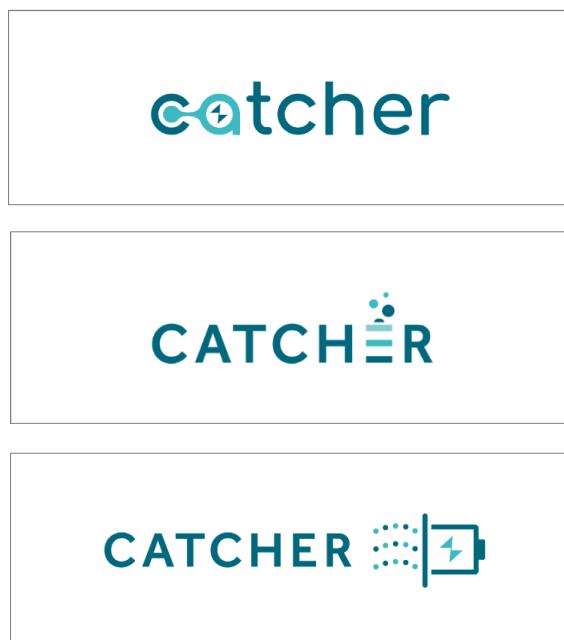


Figure 9: CATCHER logo drafts



Figure 10: Final CATCHER logo

4 Social media channels and communication activities

The project website will serve as an important resource and dissemination tool, where researchers, experts, stakeholders, the interested public and potential participants can find the relevant information about the project. The website is object to change as new information will be published or changed.

In addition to the project website, further dissemination channels and activities are planned to be enrolled including Dissemination materials. This entails a Twitter channel, as well as a ResearchGate channel, which aims to disseminate project outcomes towards the scientific stakeholders.

5 Conclusion

The project website will serve as an important resource and dissemination tool, where researchers, experts, stakeholders, the interested public and potential participants can find the relevant information about the project. The website is object to change as new information will be published or changed.

In addition to the project website, further dissemination channels and activities are planned to be enrolled including Twitter, ResearchGate and printed Dissemination materials.