



Grant agreement no. 884418

C⁴U

Advanced Carbon Capture for steel industries integrated in CCUS Clusters

Innovation Action

D7.5. Website and social media channels

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PU	Public	√
CO	Confidential, only for members of the consortium (including the Commission Services)	
CI	Classified, as referred to in Commission Decision 2001/844/EC	

Disclaimer

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Version log

Version	Date	Released by	Nature of Change
0.1	10/07/2020	O. Crowe (CS)	First draft by CS
1.0	14/07/2020	M. Stojanovska Rupcic (UCL), H. Mahgerefteh (UCL)	Implemented minor revisions and finalised the document.

Table of Contents

1	Introduction	5
1.1	The Website and Social Media Accounts	5
2	Design, Structure, Content and Management	6
2.1	Website Design	6
2.2	Website Structure and Content	7
2.2.1	Home Page	7
2.2.2	The Project	10
2.2.3	Ambition and Impact	11
2.2.4	Our Work	11
2.2.5	Findings	12
2.2.6	Newsletter	12
2.2.7	Privacy Policy	13
2.2.8	Contact	13
2.2.9	Remaining website pages	14
2.3	Website Development	14
2.4	Website Purpose and Use	15
2.5	Social Media Accounts	15
3	Conclusion	15

1 Introduction

1.1 *The Website and Social Media Accounts*

The **website** for the C⁴U project is an important channel for communicating project news and publications, as well as serving as the primary repository for all publications and presentations. By utilising this platform effectively, it can be an accessible source of information for all target audiences, including the following stakeholder groups:

- Policymakers
- Industrial actors and potential end-users, including engineering companies and system operator
- Academic and Research Community
- Local schools and universities
- Local communities and stakeholders
- Civil society including labour unions
- Funding agencies and investors

Social media accounts have also been created to communication and dissemination information on C⁴U activities. A project **Twitter** account has been created (**@C4Uproject**). Twitter lists will be developed to include consortium members, as well as members from other projects, and members of our target audiences. It will be important for sharing the project's results and updates with relevant scientific communities. A more formal format for sharing information and scientific results will be achieved by using the academic-focused platform **ResearchGate**. A **LinkedIn** page for the project has also been created to disseminate project updates and results to professional audiences, as well as to advertise activities like events and co-creation workshops.

The website and social media accounts will support all communication, dissemination and exploitations related activities in the C⁴U project, including (but not limited to): Sign-ups to the newsletter; press and media engagement; sharing of policy briefs and academic publications; advertising research seminars, site visits, workshops in local communities, technical co-creation workshops, the commercialisation event and any other event-based activities in C⁴U. Overall, the website and social media accounts will help to raise the visibility of the project, create a curate a network of stakeholders and end-users and showcase and promote the C⁴U results and cluster.

2 Design, Structure, Content and Management

2.1 Website Design

The communications objectives of the website include:

- Becoming a one-stop hub for all external information about the project.
- Display with clarity the project’s vision, objectives and approaches to all relevant stakeholders (see our audiences), emphasising a broad scope that goes beyond technology development, covering carbon capture implementation, incorporating stakeholders and end-users in society, policy, industry and business.
- Presenting basic project data (timespan, grant amount, coordination project partners and funder) in a transparent manner.
- The potential impact and benefits of the project are clearly communicated, whereby the project is addressing carbon emissions in heavy industry.

These following measures were implemented to guarantee a ‘dynamic’ feeling:

- A calendar with events and for future event announcements.
- Slide-share embedded for presentation viewing.
- Fully mobile responsive.
- User-friendly pages that communicate the different project aspects through both words and imagery.

Website “look and feel”

- The information displayed with an emphasis on solutions
- Approachable for all audiences mentioned
- Modern and easy-to-understand
- Imagery to convey messages
- Follow project identity

What success looks like:

- The traffic of 20,000 views across the website from the launch date of site to a final date of the project, tracked in google analytics.
- Attracts stakeholders to sign up to the newsletter.
- Attracts funders for activities that further develop C⁴U outputs.
- C⁴U is in the radar of the CCUS community and is instrumental in facilitating collaboration with other CCUS/industrial initiatives.
- The reach of project outputs is increased.

2.2 Website Structure and Content

The website will be structured according to the following site map:

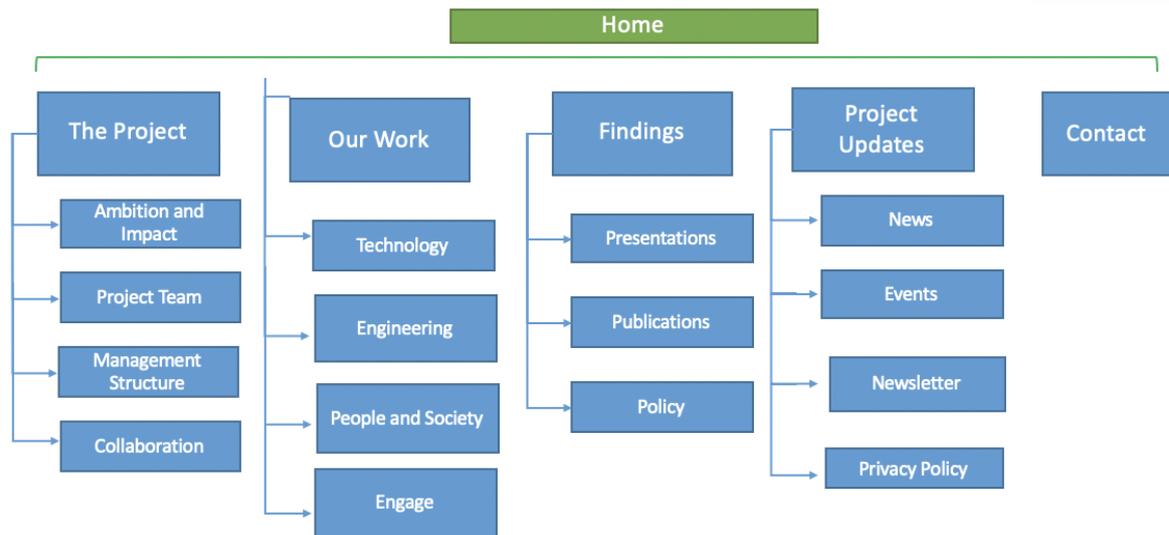


Figure 1. Site Map

The pages that have been developed so far are outlined in sections 2.1.1 – 2.1.8.

2.2.1 Home Page

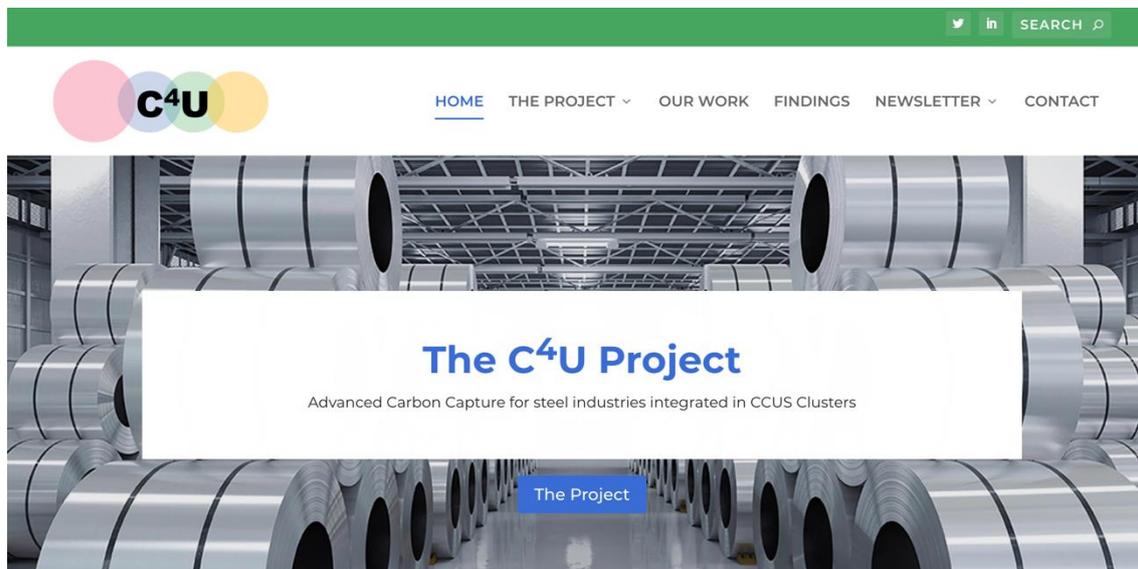


Figure 2. Banner and Navigation

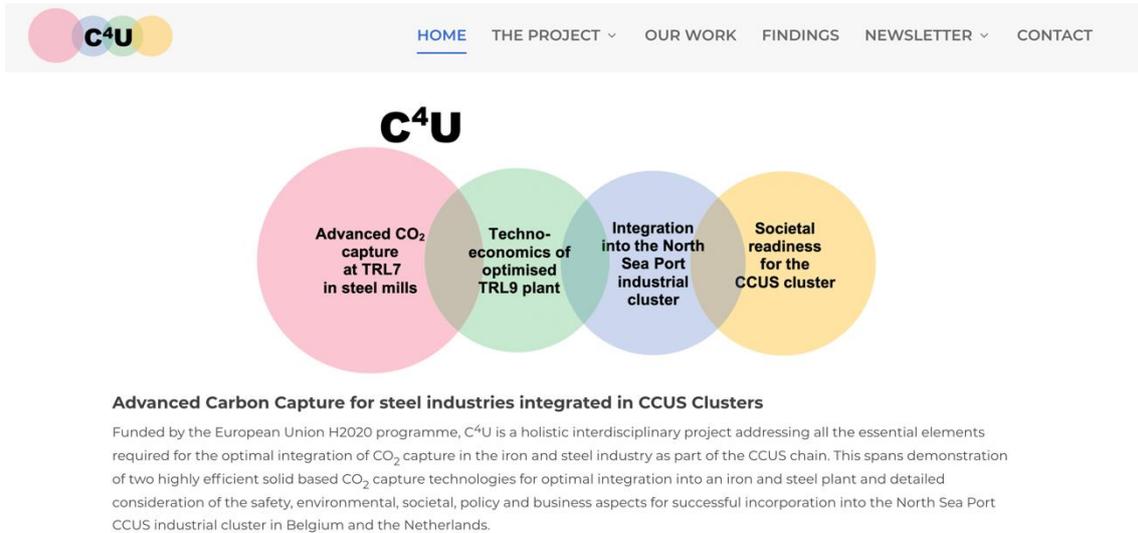


Figure 3. partial screenshot of the project description

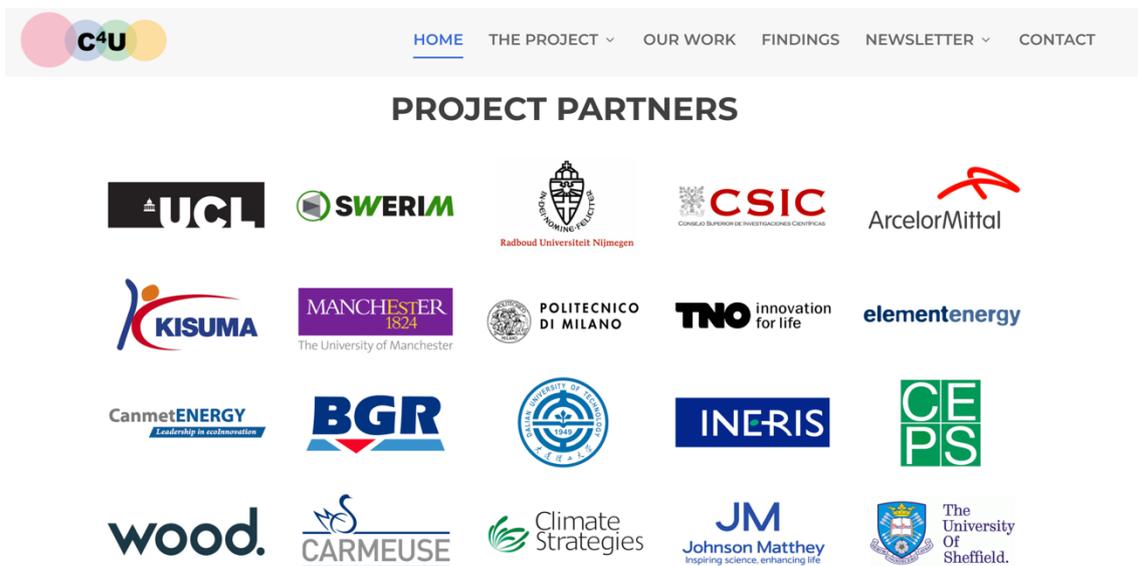


Figure 4. Representation of partners

The footer is divided into several sections:

- Funding:** A blue box with the European Union flag and text: "This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 884418." Below it is a disclaimer: "Disclaimer: The content of this website reflects only the author's view and the Commission is not responsible for any use that may be made of the information it contains."
- COORDINATED BY:** "Prof Haroun Mahgereteh" and "UCL Department of Chemical Engineering" with the UCL logo.
- NEWSLETTER:** Three input fields for "FIRST NAME", "LAST NAME", and "EMAIL ADDRESS". A checkbox for consent to data collection and a "SIGN UP" button.
- PROJECT CONTACT:** "Department of Chemical Engineering", "University College London", "Torrington Place", "London WC1E 7JE", "United Kingdom", and email "chemeng.C4U@ucl.ac.uk".
- FOLLOW US:** Social media icons for Twitter, LinkedIn, and ResearchGate.

At the bottom, a green bar contains: "Copyright ©2020 C4U Project | Designed by St Albans Web Design" on the left and "Privacy Policy" on the right.

Figure 5. Website footer (features on all pages)

2.2.2 The Project



[HOME](#)
[THE PROJECT](#)
[OUR WORK](#)
[FINDINGS](#)
[NEWSLETTER](#)
[CONTACT](#)

The Project

Why C⁴U?

The iron and steel industry represents the largest energy-consuming manufacturing sector in the world, with average specific emissions being 1.83 tonnes of CO₂ per tonne of steel and global crude steel production reaching 1.8 Gt for the year 2018, up by 4.6% compared to 2017. **This enormous CO₂ footprint of steel mills, which accounts for up to 8% of anthropogenic CO₂ emissions must be substantially reduced.**

Given the urgency of emission reductions, the very different characteristics of the CO₂ containing streams emanating from steel plants and the huge quantities of CO₂ involved, a **portfolio of promising CO₂ capture technologies must be developed and practically tested to high TRL to identify the optimal integration solutions that deliver the minimum cost and energy consumption**

How?

C⁴U CO₂ Capture Technology

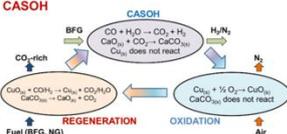
C⁴U aims to advance 2 emerging carbon capture technologies, known as DISPLACE and CASOH, which have the potential to tackle up to 94% of the CO₂ sources in a steel mill.

DISPLACE



DISPLACE – high-temperature sorption-displacement process for CO₂ recovery

CASOH



CASOH – Calcium Assisted Steel mill Off-gas Hydrogen production

Both DISPLACE and CASOH technologies involve high temperatures gas-solid separation processes that reduce the exergy penalty associated with CO₂ capture. This is due to their ability to:

1. recover heat at very high temperatures that can be used for energy-demanding processes in the steel plant (i.e. reheating furnaces and CO₂-free power generation), and

Integration into CCUS Clusters

Regarding the connection of the CO₂ streams to the pipeline transport networks for ultimate geological storage and/or utilisation, many relevant issues need to be considered to identify techno-economic optimums. Work based on CO₂QUEST and CO₂PipeHaz projects has shown that many of the impurities in the CO₂ stream even if present in small proportions have unique and likely significant impact on the CO₂ compression work, cost of capture and ultimately the economic and safe operation of both the transportation pipeline and the storage site. These issues can be dealt with by further purification of the steelworks off-gases and/or captured CO₂ but the inevitable increase in cost may become prohibitive. As such, a whole-system approach is required balancing the different requirements of capture, pipeline transportation and storage, as well as society.



The planned North Sea Port industrial CCUS cluster.
Figure courtesy of North Sea Port, Gent, Belgium.

NEWSLETTER

Subscribe to our contact list and receive news from the project periodically.

I consent to the collection, use, storage and disclosure of my personal data as described in the C⁴U [Privacy Policy](#).

Figure 6. Descriptions of why C4U, how the technology works and how it will be integrated into clusters.

2.2.3 Ambition and Impact

C4U AMBITION

Our ambition is to substantially reduce the enormous CO₂ footprint of steel mills, which account for up to 8% of anthropogenic CO₂ emissions. Indeed, the combined use of the C⁴U technologies can tackle up to 94% of the sources of CO₂ in a steel mill, resulting in an overall CO₂ emission reduction of 89%.

Source	Percentage
Blast furnace	65%
Hot rolled steel	3%
Electric arc furnace	3%
Processed steel	2%
Foundry products	1%

Category	Percentage
Directly Addressed in C ⁴ U	94%

Figure 7. Descriptions of the ambition and impact of the project

2.2.4 Our Work

Work Packages

C⁴U will be carried out in 8 interacting and coupled Work Packages (WPs). WPs 1-6 deal with technical development, scientific, business, societal readiness and public policy activities, whilst WP7-8 are concerned with project dissemination, exploitation and management.

- WP1: DISPLACE process for reheating ovens**
- WP2: CASOH process for blast furnace gas**
- WP3: Integration of CO₂ capture technologies in a steel plant**

Objectives

The aim of this WP is the design of the C⁴U capture technologies at industrial scale

Figure 8. Descriptions of the project work packages

2.2.5 Findings

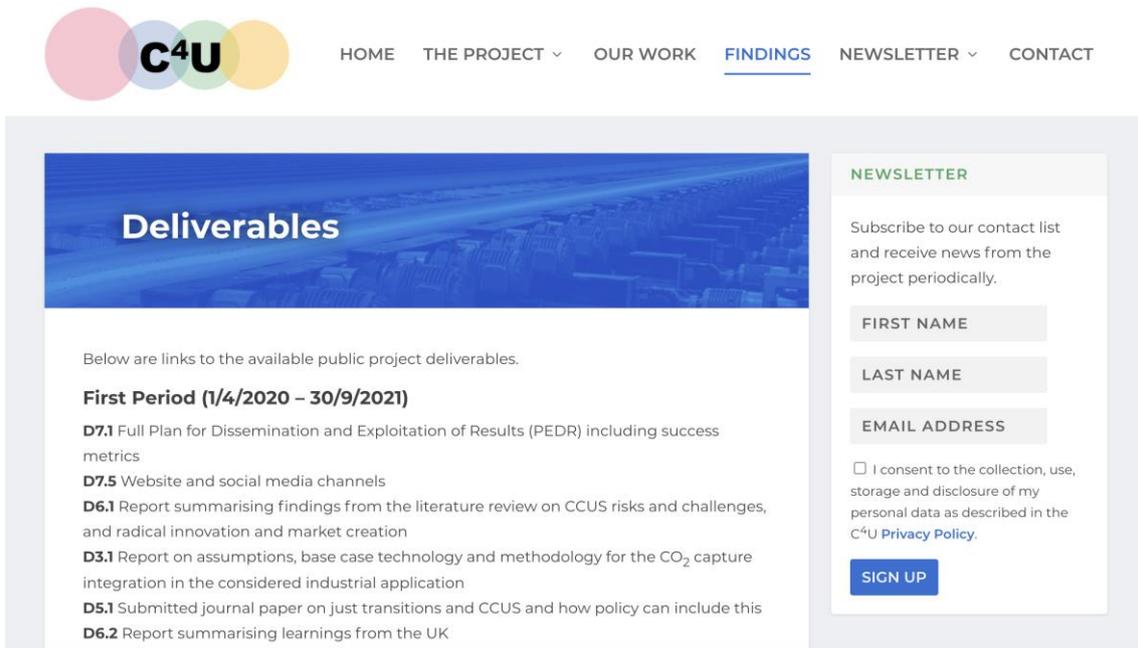


Figure 9. Descriptions of public deliverables

2.2.6 Newsletter

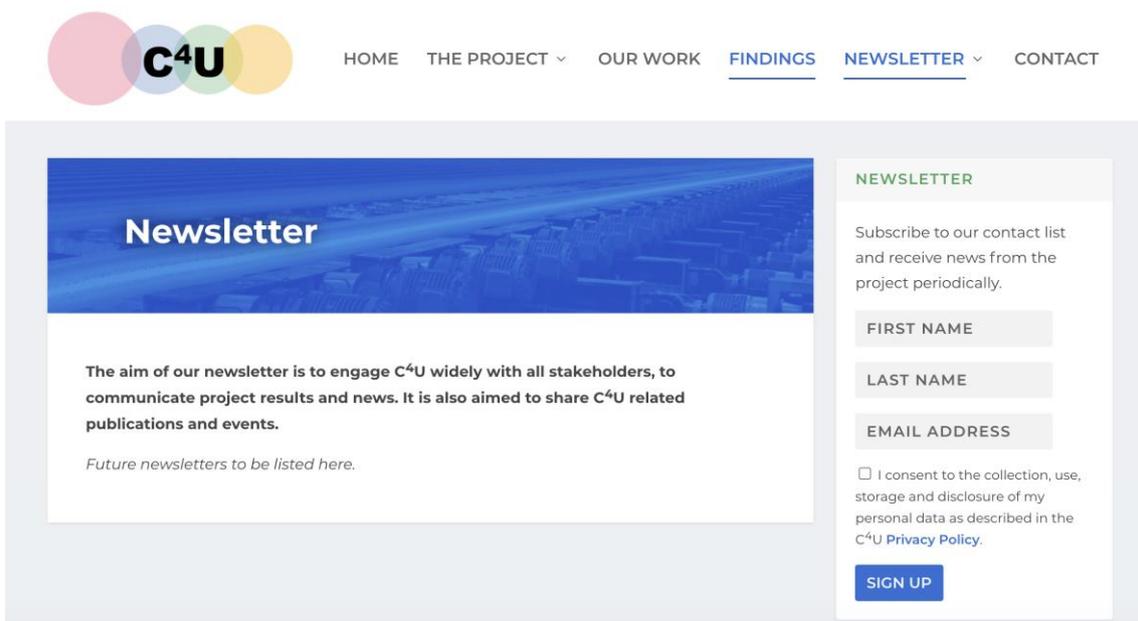


Figure 9. Temporary Newsletter pages

2.2.7 Privacy Policy

C4U HOME THE PROJECT ▾ OUR WORK FINDINGS NEWSLETTER ▾ CONTACT

Privacy Policy

[Download Privacy Policy PDF](#)

Introduction

Climate Strategies (“we” “us”, or “our”) respects your privacy and is committed to protecting your personal data. This policy document tells you how we collect, store, use and disclose your personal data when you interact with us. Please read the following carefully to understand how we process your personal data.

About us

NEWSLETTER

Subscribe to our contact list and receive news from the project periodically.

FIRST NAME

LAST NAME

EMAIL ADDRESS

I consent to the collection, use, storage and disclosure of my personal data as described in the C⁴U [Privacy Policy](#).

SIGN UP

Figure 10. Details of the privacy policy with a downloadable version

2.2.8 Contact

Map Satellite

Address
Department of Chemical Engineering
University College London
Torrington Place
London WC1E 7JE
United Kingdom

Email
chemeng.C4U@ucl.ac.uk

Get In Touch

FIRST NAME

LAST NAME

EMAIL ADDRESS

I consent to the collection, use, storage and disclosure of my personal data as described in the C⁴U [Privacy Policy](#).

SIGN UP

Figure 10. Details of how to get in touch with the project coordinators

2.2.9 Remaining website pages

The pages left to be developed are highlighted in yellow below:

HOME

- The Project
 - ⇒ Ambition and Impact
 - ⇒ Project Team
 - ⇒ Management Structure
 - ⇒ Collaboration
- Our Work
 - ⇒ Technology
 - ⇒ Engineering
 - ⇒ People and Society
 - ⇒ Engage
- Findings
 - ⇒ Presentations
 - ⇒ Publications
 - ⇒ Policy
- Project Updates
 - ⇒ News
 - ⇒ Events
 - ⇒ Newsletter
 - ⇒ Privacy Policy
- Contact

2.3 Website Development

The website domain was decided on by the project coordinator, exploitation managers and Climate Strategies, the WP7 lead. The domain (www.c4u-project.eu), which went live in July 8th 2020, was chosen as it is clear, it emphasises that the website is for a project, it avoids the use of any loaded words or jargon (like CCUS and h2020), and it will not go out of date. Other options considered for the domain were: c4u-h2020; c4u-ccus; c4u-steel; c4u-horizons

A website brief was developed by Climate Strategies, which was used as information for web designers in the tender process, through which a contractor for the website was selected. The contractor was selected on the basis of budget, flexibility and previous successful work for other H2020 projects.

To develop the website, Climate Strategies updated the site map and created the content for the first 3 website pages ('home', 'about' and 'vision & impact'), and a suggested layout. The content was targeted at the general public, combining a mix of easy-to-understand project descriptions, and the opportunity to learn more information through buttons that go into more detail on technical aspects of the project. WordPress was chosen to host the website as

this will enable Climate Strategies to make updates and edits in the future where necessary, without consulting the web designer.

The rest of the web pages as outlined in the site map are to be developed in coordination with the web designer and UCL throughout July.

2.4 Website Purpose and Use

C⁴U's website will be a core tool for research dissemination, news and events for all target audiences. All outputs will be made available during and up to at least four years after the project ends. All the content available on the website will be public, with the purpose of external communication. The project website will be regularly updated with all upcoming events, recent publications and findings from the project. The design of the website is in keeping with the identity of the project.

The management of the website and social media accounts is the responsibility of Climate Strategies and the website and social media accounts will be operational for the full length of the project. The Consortium aims at keeping it live for four years following completion of the project to ensure maximum impact of our results. The data collected in the website via the 'Newsletter' (see section 3.6) will be in-keeping with the requirements set out in the Data Management Plan, whereby users will be required to confirm their acceptance of a privacy policy before signing up.

2.5 Social Media Accounts

Twitter: The project twitter account has been created (@C4UProject). the project's results and updates will be shared with relevant scientific communities. Twitter lists will be developed to include consortium members.

ResearchGate: The scientific lead (Prof. Mahgerefteh) has created a dedicated C⁴U project page to disseminate project updates and results over time. All scientific consortium members in C⁴U will be added to the project, and information will be on different aspects of the research as it progresses. The updates will be shared biannually.

LinkedIn: A dedicated C⁴U project page (C4U Project) has been created on LinkedIn to disseminate project updates and results over time, as well as to advertise activities like events and co-creation workshops.

3 Conclusion

The website will be completed by early August, before the start of communication and dissemination activities with stakeholders. It will prove to be an important tool throughout and after the C⁴U project, providing a one-stop hub for all external information about the project.