# COMPAS<sub>s</sub>CO<sub>2</sub>



# COMPONENTS' AND MATERIALS' PERFORMANCE FOR ADVANCED SOLAR SUPERCRITICAL CO<sub>2</sub> POWERPLANTS (COMPASsCO<sub>2</sub>)

# Communication and Dissemination Plan

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#### **AUTHORS**

Name	Organization
Abdelghani El Gharras	OME
Emanuela Menichetti	OME

#### ABOUT THE PROJECT

COMPASsCO<sub>2</sub> is a 4-year HORIZON2020 project started on 1.11.2020. It is led by the German Aerospace Center (DLR), with eleven additional partners from seven European countries.

COMPASsCO<sub>2</sub> aims to integrate CSP particle systems into highly efficient sCO<sub>2</sub> Brayton power cycles for electricity production. In COMPASsCO<sub>2</sub>, the key component for such an integration, i.e. the particle-sCO<sub>2</sub> heat exchanger, will be validated in a relevant environment. To reach this goal, the consortium will produce tailored particle and alloy combinations that meet the extreme conditions in terms of temperature, pressure, abrasion operating and hot oxidation/carburization of the heat exchanger tubes and the particles moving around/across them. The proposed innovative CSP sCO<sub>2</sub> Brayton cycle plants will be flexible, highly efficient, economic and 100% carbon neutral large-scale electricity producers.

The research focus of COMPASsCO2 is on three main technological improvements: development of new particles, development of new metal alloys and development of the heat exchanger section.

#### DISCLAIMER

This project has received funding from the European Union's Horizon 2020 Research and Innovation Action (RIA) under grant agreement No. **958418.** 

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# LIST OF ABBREVIATIONS

CDP	Communication and Dissemination Plan
COMPASsCO <sub>2</sub>	Components and Materials
EC	European Commisssion
EPC	Engineering, Procurment and Construction
ESCOs	Energy Service Companies
EU	European Union
KPIs	Key Performance Indicators
РРТ	Power Point
SPIRE	Sustainable Process Industry through Resource and Energy Efficiency

## **1 INTRODUCTION**

An effective communication and dissemination strategy is key in the successful implementation and to increase impact of a particular project. The communication and dissemination plan provides guidance to the consortium in: 1) identifying the right communication and dissemination channels; 2) selecting the main stakeholder groups to be contacted at the various stages of the project duration; and 3) expressing the main messages to be delivered.

The Communication and Dissemination Plan includes the main activities, communication tools, stakeholders addressed by the project, and a schedule of the work plan of the COMPASsCO<sub>2</sub> project.

WP 7 (communication, dissemination and exploitation) is dedicated to dissemination activities (both scientific and broader dissemination methodologies), and is led by OME in close collaboration with the COMPASsCO<sub>2</sub> coordinator and all project participants. OME acts as the main contact point for communication and dissemination activities within the consortium and with external stakeholders. Dissemination activities will be ensured both during the project's duration and after the end of the project.

This deliverable outlines the communication and dissemination activities performed within the framework of the COMPASsCO<sub>2</sub> project. Different aspects are covered, targeting both internal (between the project partner and the European Commission (EC)) and external communication with all project stakeholders, including EC obligations regarding H2020 communication activities. The plan will be updated at each reporting period.

In particular, the communication and dissemination plan includes the main sections:

- Communication Plan
- Visual identity
- Communication and dissemination tools
- Internal communication
- Target groups
- Obligations for communication actions
- Annexes

# 2 COMMUNICATION PLAN

The main communication and dissemination plan is summarized in the figure below, including the visual identity, Communication levels, communication channels, and target groups:



#### **VISUAL IDENTITY**

A harmonized visual identity with unified colors and fonts is used for all the COMPASsCO<sub>2</sub> communications and templates.



#### **COMMUNICATION LEVELS**

Two main approaches are being adopted; both broader (e.g. newsletter, general and specialized online media, social media, etc.) and scientific communication (e.g. scientific papers, presentations in conferences, etc.) in order to increase the impact of the project.



#### TOOLS

A comprehensive list of communication and dissemination channels are in place; project website, scientific publications, conferences and workshops, repositories, media, etc.



## TIMELINE

Dissemination activities are being performed during the project's duration and will also be ensured after the project's end.



#### **TARGET GROUPS**

Several stakeholders are being identified and will be targeted at national, European and international levels in order to reach a wider audience.

Figure 1: Main Elements of COMPASsCO<sub>2</sub> Communication and Dissemination Plan

COMPASsCO<sub>2</sub> - Components' and Materials' Performance for Advanced Solar Supercritical CO<sub>2</sub> Power Plants

# 3 COMPAS<sub>s</sub>CO<sub>2</sub> VISUAL IDENTITY

The visual identity has been designed using customized logo, font and colors for COMPASsCO<sub>2</sub> materials and templates (i.e. deliverables, PPT presentations, newsletter, etc.).

### 3.1 Fonts

Two main fonts are being used by COMPASsCO2 project' Arial and Righteous. The Arial font is used for the main publications, including the presentations, deliverables, and newstellerts, etc. The selected font for the website, logo and some communication materials is called Righteous and belongs to the Google Fonts group. These fonts are licensed under the <u>Open</u> Font License. So, the font is free for all applications.

The link to the font is: https://fonts.google.com/specimen/Righteous#standard-styles

The Glyphs of the Righteous font are:

ABCČĆDĐEFGHIJKLMNOPQRSŠTUVWXYZŽ

abcčćdđefghijklmnopqrsštuvwxyzž

1 2 3 4 5 6 7 8 9 0 ' ? ' " ! " ( % ) [ # ] { @ } / & \ < -+ ÷ × = > ® © \$  $\in$  £ ¥ ¢ : ; , . \*

## 3.2 Colors

In addition to the font, two main colors are being adopted for the COMPASsCO<sub>2</sub> products; orange and blue. The exact color codes are described below.

- The orange color is called FAUX-TANGERINE (#EC7D07) and has values 236/125/7 in the RGB color space. <u>https://www.2020colours.com/ec7d07</u>
- The blue color is called FAUX-SEA BLUE (#016986) and has values 1/105/134 in the RGB color space. <u>http://www.2020colours.com/016986</u>

Color	Name	HTML	RGB
	FAUX-TANGERINE	#EC7D07	236/125/7
	FAUX-SEA BLUE	#016986	1/105/134

Table 1: COMPASsCO<sub>2</sub> visual identity color codes

## 3.3 Logo

In order to easily distinguish the project, a dedicated and personalized **final draft logo** has been created for the COMPASsCO<sub>2</sub> project. Several versions of the logo have been designed.

A logo in different formats (i.e. JPEG, PNG, GIF) below has been considered and sent to all participants for their approval.



Figure 2: COMPASsCO<sub>2</sub> Final Final Draft Logo Version (not addopted)

After an internal market research and assessing the risk that "one or some of the Parties are lawfully held liable on a joint and several basis for any loss, damage or injury to third parties resulting from the classification of the consortium of the Parties as a partnership under civil law" **we decided to avoid using a logo.** 

Based on the above considerations, **the project will not have a logo**. In order to distinguish it from other projects, the name with two colors (below) will be used for all project communications.

# COMPAS<sub>S</sub>CO<sub>2</sub>

The complete list of different versions of the draft logos that have been designed, and from which the final draft version has been considered are in included in the annex.

## 4 MAIN COMMUNICATION AND DISSEMINATION TOOLS

Both scientific and broader dissemination activities are being performed. In order to reach a wider audience of stakeholders and disseminate the project's results, various communication and dissemination channels are being used (e.g. project website, deliverables, scientific publications in peer-reviewed journals, presentations at conferences, workshops, participants' websites, public repositories, newsletter, etc.). As coordinator of WP7, OME has produced several communication tools in order to disseminate the activities and results of COMPASsCO<sub>2</sub>.

#### 4.1 COMPASsCO<sub>2</sub> Website

The project's website is the main online tool/platform used in both external communication and dissemination (public area) as well as an internal sharing platform used by the COMPASsCO<sub>2</sub> project participants (private area restricted to the project participants only).

It is developed and has been operational since M3 (January 2021). The domain name of the website is: <u>https://www.compassco2.eu/</u>

The COMPASsCO<sub>2</sub> public area is designed in an intuitive and easy to use manner in order to facilitate navigation.



Figure 3: COMPASsCO<sub>2</sub> Website

The content of the website has been developed by OME with the input of all partners. The working language of the website is English.

All publications (public deliverables, scientific articles in peer-reviewed journals and newsletter, etc.) are available to third parties during the whole project's duration (4 years).

The map structure of the website is presented below:

- HOME
- ABOUT
  - Project Overview
  - Project Structure
  - Project Participants
  - Project Stakeholders
- ACTIVITIES

- Project Meetings
- Technical Committee Meetings
- Review Meetings
- o Workshops
- Final Conference
- PROJECT RESULTS
  - Press Releases
  - o Newsletters
  - o Deliverables
  - Scientific and Outreach Papers
  - Photo Gallery
- NEWSROOM
- PARTICIPANTS' AREA
- CONTACT

The participants' area is the private area with restricted access to project participants only. The private area is for exchanging among participants, including minutes, internal documents, research data, etc. It will be running/online during all the project's duration. All beneficiaries will have access to this area to upload and download all restricted items to consortium and the EC.

#### 4.2 European Commission Tools

#### 4.2.1 EC Participant's Portal

In addition to an overview of the project, including project objectives, scope and participants, as well as links to all publications in peer-reviewed journals, the final summary report will be available through the EC Cordis (<u>https://cordis.europa.eu/project/id/958418</u>) and is public.

European Commission EU research results English	Searc
HOME RESULTS PACKS RESEARCHEU MAGAZINES NEWS & EVENTS PROJECTS & RESULTS ABOUT US	
COMPONENTS' AND MATERIALS' PERFORMAN SOLAR SUPERCITICAL CO2 POWERPLANTS	CE FOR ADVANCED
Fact Sheet	
Project description	Project Information
	COMPASsCO2 Grant agreement ID: 958418
Particle-alloy combinations to face extreme operating conditions	Status Ongoing project
In the envisaged solar-Brayton cycle, supercritical carbon dioxide (sCO2) is used as working media. Concentrated solar radiation is absorbed and stored in solid particles until the heat is transferred to the sCO2. Unique properties of	Start date         End date           1 November 2020         31 October 2024
sCO2 such as high density and low viscosity) allow reaching high efficiency of the energy conversion and very compact design of the components compared to conventional Rankine steam cycle. The EU-funded COMPAssCO2 project will integrate solar energy into SCO2 Brayton cycles for electricity production. The project will design, test	Funded under H2020-EU.2.1.5.3.
project will integrate solar energy into solo 2 brayour cycles to electricity production. The project will use grin, less and model tailored particle-alloy combinations able to face the extreme operating conditions regarding temperature, pressure, abrasion, oxidation and corrosion during the plant lifetime. Testing of the particle-sCO2 heat exchanger	Overall budget € 5 996 892,50
will validate the innovative materials developed.	EU contribution € 5 996 892.50
Show the project objective	Coordinated by DEUTSCHES ZENTRUM FUR LUFT - UND
	BEGROOMED LEMMONT ON EON POND
Field of science	RAUMFAHRT EV

Figure 4: CORDIS COMPASsCO<sub>2</sub> Page

#### 4.2.2 Other EC Tools

The main other communication and dissemination EC platforms that are considered for communication and dissemination of COMPASsCO<sub>2</sub> are:

- Research and Innovation success stories: A collection of the most recent success stories from EU-funded Research & Innovation. <u>https://ec.europa.eu/research-and-innovation/en/projects/success-stories</u>
- Horizon Magazine: The latest news and features about thought-provoking science and innovative research projects funded by the EU. <u>https://horizon-magazine.eu/</u>
- Horizon Results Platform: A public platform that hosts and promotes research results. It helps to bridge the gap between research results and generating value for economy and society. <u>https://ec.europa.eu/info/funding-</u> tenders/opportunities/portal/screen/opportunities/horizon-results-platform

#### 4.3 Zenodo Repository

co2/?page=1&size=20

In order to comply with H2020 Open Access and to increase the project's impact, all research open data and results will be put into a public repository like Zenodo.<sup>1</sup> The main items to be provided in the Zenodo *Horizon2020 COMPASsCO<sub>2</sub> Community* (*https://zenodo.org/communities/compassco2/?page=1&size=20*) are: public deliverables, all scientific publications in peer-reviewed journals, newsletters, and any open data. These materials will also be uploaded into the *European Commission Funded Research (OpenAIRE) Community* in Zenodo. OME has created the COMPASsCO<sub>2</sub> community and is responsible for uploading the files.

ZENCIÓO Search a	Upload Communities	€ Log in 🛛 🖓 Sign up
COMPASsCO2 Horizon2020		
Recent uploads		🛓 New upload
Search COMPASsCO2 Horizon2020		COMPASSCO2 Horizon2020 COMPASSCO2 (Components' and Materials' Performance for Advanced Solar Supercritical CO2 Powerplants) aims at integrating CSP particle systems into highly efficients -CO2 Brayton power cycles for electricity production. The key component for such an integration, i.e. the particle's -CO2 Brayton power cycles for electricity production. The key component for such an integration, i.e. the particle's -CO2 Brayton power cycles for electricity production. The key component environment. The consortium will produce tailored particle and alloy combinations that meet the extreme operating conditions in terms of temperature, pressure abarasion and hot oxidation/carbon neutral large-scale electricity produces. The research focus of COMPASSCO_5 is on three main technological improvements. Development of new particles: in order for particles to meet high efficient colleged and tested in several volume quantities. Development of new meetal alloys: The project will provide answers about how the project will provide answers about how the project will affectuation with substrate steels will affect the microstructure, phase composition and also chemical stability of the newly developed materials. The developed materials is merical at ingert the high efficient.

#### Figure 5: Zenodo's COMPASsCO<sub>2</sub> Community Homepage

<sup>&</sup>lt;sup>1</sup> <u>https://zenodo.org/</u>

As the open research datasets will be included in the Zenodo repository, no methods or software tools are needed to access them, no documentation about the Zenodo is needed to access the data; and there are no restrictions on use.

### 4.4 Scientific Publications

Considering the scientific research cutting of COMPASsCO<sub>2</sub>, particular attention will be reserved to the scientific dissemination through international channels, through mainly scientifically renowned peer-reviewed journals.

A variety of scientific articles in journals, conferences and specialized magazines will be produced. The publications will build on the activities carried out in line with the different tasks of the project. While topics would be identified during the project's implementation, the project participants anticipated during the proposal writing some potential topics to be submitted for publication, as presented in the preliminary list below:

- Development of new Cr based alloys and coatings
- Phase equilibria and microstructural optimisation in the Cr-NiAl system
- Phase equilibria and microstructural optimisation of Cr silicide alloys
- Mechanical properties and deformation mechanisms of chromium superalloys
- Evaluation of new Cr based alloys and coatings performance and mechanisms under high temperature particle erosion
- Evaluation of new Cr based alloys and coatings performance and mechanisms under high temperature CO<sub>2</sub>
- Heat transfer of a particle/s-CO2 particle heat exchanger
- Lifetime evaluation of tubes in particle/s-CO<sub>2</sub> particle heat exchanger
- Heat transfer in particle/sCO<sub>2</sub> heat exchanger
- Particle system design and operational experience
- Creep and wear monitoring and lifetime assessment of particle/fluid heat exchangers

Based on the focus of COMPASsCO<sub>2</sub> and the consortium's past experience, a number of potential journals have been identified to disseminate the project's work. At least 8 publications in high-impact journals are expected to be produced by the consortium. Only journals with impact factor will be considered for open access publications.

#### Table 2: Targeted Scientific Journals

Scientific	Journals
Solar Energy Journal	International Journal of Energy Research
Powder Technology	Energy
Renewable Energy	Food and Bioproducts Processing
Int. Jr. of Electrical Power & Energy Systems	Renewable & Sustainable Energy Reviews
Applied Thermal Engineering	Heat and Mass Transfer
Control Engineering Practice	Journal of Industrial Eng. Chemistry

Energy Conversion and Management	Energy Research and Social Science
Journal of Clean Production	International Journal of Thermal Science
Energy Policy	Energy Economics
Progress in Materials Science	Acta Materialia
Scripta Materialia	Applied Energy
Ceramics International	Intermetallics
Surface and coatings technology	Corrosion Science
International Journal of Refractory Metals	Coatings
and Hard Materials	
Solar Energy Materials and Solar Cells	Scientific Reports

Open access will be ensured to all peer-reviewed articles in scientific journals.

As also included in Deliverable (7.5) Data Management Plan, research data underlying scientific publication which are considered public will also be open and therefore shared through the different public platform and repositories related to COMPASsCO<sub>2</sub> project.

## 4.5 Events

Interaction with stakeholders through a bi-directional exchange of information and feedback is key in the successful implementation of COMPASsCO<sub>2</sub> activities. In addition to other channels, several events will be organized during the project's duration, including COMPASsCO<sub>2</sub> stakeholder workshops and a final event as well as other external events.

#### 4.5.1 COMPASsCO<sub>2</sub> Events

Two stakeholder (scientific) workshops will be organised to facilitate stakeholder integration, provide inputs to the project and widen project outreach and impact. The objective is to facilitate dissemination to a maximum number of stakeholders and researchers in the European Union (EU) and to ensure an interactive communication and information exchange between the consortium and community. These workshops will in particular offer cooperation opportunities and exploit potential synergies with the other projects. It could be possibly organised back-to-back with a large EU conference, to give more visibility to COMPASsCO<sub>2</sub> project. The organisation of the workshops will be overseen by OME in close coordination with DLR.

Topics of workshop are being defined. OME will oversee the overall organization of the workshop in close collaboration with the coordinator and all partners.

A preliminary list of topics to be presented during the first stakeholders' workshop to take place in parallel with the project meeting are included below:

- Project boundary conditions: selection of solar plant and Brayton cycle.
- Materials selection for COMPASsCO2: metals for the heat exchanger and particles.
- Metals' characterization and testing: current selection of tests and infrastructures to be used.

#### 4.5.2 External Events

It is expected that COMPASsCO<sub>2</sub> team will participate in third party events, through posters and oral presentations. Resources are allocated accordingly to partners to participate in such events, addressing potential COMPASsCO<sub>2</sub> stakeholders.

COMPASsCO<sub>2</sub> will deliver up to 10 presentations/publications at recognized international conferences including the ones listed below:

- ACHEMA World Forum and Leading Show for the Process Industries
- SWC Solar World Congress
- SCH International Conference on Solar Heating and Cooling for Buildings and Industry
- EFCE European Drying Conference
- ICEER International Conference on Energy and Environment Research
- ICRERA International Conference on Renewable Energy Research and Applications
- ECOS Int. Conf. on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems
- International Conference on Energy Sustainability
- SolarPACES Solar Power & Chemical Energy Systems
- CSGRES IFAC Workshop on Control of Smart Grid and Renewable Energy Systems
- TMS The Materials Society, USA annual conference
- Intermetallics
- EUROMAT European Congress and Exhibition on Advanced Materials and Processes
- Gordon Research Conference on High Temperature Corrosion
- The International Conference on Metallurgical Coatings and Thin Films (ICMCTF)
- EuroCorr
- Symposium on High Temperature Corrosion and Protection of Materials (HTCPM)
- Beyond Ni-base superalloys
- Materials Research Society (MRS), Boston, USA
- International Conference on Advanced Ceramics and Composites, Daytona Beach, USA
- Supercritical CO2 Power Cycles Symposium
- European Conference on Supercritical CO2

#### 4.6 COMPASsCO<sub>2</sub> newsletter

A regular newsletter will be disseminated by electronic channels (email, website, social networks, etc.) to all the project stakeholders.

In particular, the newsletter will include the main updates of the project, including deliverables and milestones, main messages and results, events, and other announcements. In addition to the distribution list of the stakeholders, the newsletter is made available under the project's website, under "Project Results"/Newsletters.

For example, the first issue of the project (April 2021) includes welcome by the project coordinator, an overview of the COMPASsCO2 project. the composition of the team, deliverables produced and milestones achieved, outreach communication activities and performed as well as events organized and how to get involved as a stakeholder.



		Contents
		Welcome About COMPASsCO <sub>2</sub>
		Team Deliverables
		Milestones
		Outreach
		Events
		Stakeholders
Issue 1	_	
20.00	This project has received funding from	
A.A.	Research and Innovation Action (RIA)	) under grant agreement No. 958418.

## 4.7 COMPASsCO<sub>2</sub> Social Networks

Giving the increasing importance of social networks as key communication tools, COMPASsCO<sub>2</sub> has also considered the integration of such tools in its communication and dissemination strategy in order to reach a broader target groups through the different channels. Therefore, two main social media means have been considered (Twitter and LinkedIn), and the accounts have been created.

OME acts as a moderator of both social media profiles, with input from all participants.

Tool	Account	Use
	@Co2Compa https://twitter.com/co2compa	The twitter page includes updates on COMPASsCO <sub>2</sub> news, events, contents, new deliverables, deliverables main messages to all the stakeholders.



COMPASsCO<sub>2</sub> Horizon2020 https://www.linkedin.com/co mpany/compassco2horizon2020/?viewAsMembe r=true Likewise, the LinkedIn page includes updates on COMPASsCO<sub>2</sub> news, events, contents, new deliverables, deliverables main messages to all the stakeholders.

	Home My Network Jobs Messaging	y		← COMP 6 Tweets	ASsCO2		
COMP	A5sCO <sub>2</sub>	ଡ	Home				
					COMPASSCO	02	
	erformance for Advanced Solar O <sub>2</sub> Powerplants	#	Explore	Compor	nents' and Materials' Perform Supercritical CO <sub>2</sub> Pou	ance for Advanc	ed Solar
		Q	Notifications				
OMPASsCO2 Horizon2020	and Salar Supervisited CO2 Recordents		Messages	COMPASSCO	2		
newables & Environment - 21 followers	nced solar supercritical CO2 Powerplants						Edit profi
+ Follow Visit website 🖉 More	)		Bookmarks	COMPASsCC @Co2Compa	02		
About Posts Jobs People		=	Lists	COMPASsCO2 aim	is at integrating CSP particle sy cles for electricity production.	stems into highly	/ efficient s-CO2
		•	Profile				
About			Profile	& https://t.co/ow	NFVNS6bC III Joined Februa	ry 2021	
OMPASsCO2 aims at integrating CSP particle systems into roduction. The key component for such an integration. I a	o highly efficient s-CO2 Brayton power cycles for electricity a the particle/s-CO2 heat exchanger, will be validated in a d particle and alloy combinations that meet the e see more		More	3 <sup>or</sup> https://Lco/ow 1 Following 4 Fo Tweets		ny 2021 Media	Likes
OMPASeCO2 aims at integrating CSP particle systems intri oduction. The key component for such an integration. Ia levant environment. The consortium will produce tailored	e. the particle/s-CO2 heat exchanger, will be validated in a			1 Following 4 Foll	Tweets & replies	Media	
OMPASSCO2 aims at integrating CSP particle systems into oduction. The key component for such an integration. I.e. levant environment. The consortium will produce tailores See al	b. the particle/s-CO2 heat exchanger, will be validated in a d particle and alloy combinations that meet the e see more		More	1 Following 4 Fo Tweets COMPAS Would ye order to interest 1	Tweets & replies	Media ASSCO2 stakehold e project? Please tting "stakeholde	ders network in express your
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Figure 6: COMPASsCO2 LinkedIn (left) and Twitter (right) Accounts

## 4.8 Articles in specialized Magazines

Specialized media, on press in particular, focusing on energy, renewables, materials science, etc. are also considered and will be used to disseminate the project's activities and results, in order to reach a wider audience.

#### 4.9 Other Communication and Dissemination Channels

#### 4.9.1 Project Participants' Websites

All the partners have websites, and most of them have also newsletter disseminated to their contacts. In order to disseminate widely, the COMPASsCO<sub>2</sub> project will use this option to also disseminate the main updates of the project. Also, some partners have added a general overview of the project in their portfolio of projects, thereby increasing wider access even after the project's duration. Annex 2 gives a synthesis of dissemination of the project through the participants' websites.

#### 4.9.2 Spire website

The SPIRE (Sustainable Process Industry through Resource and Energy Efficiency) website (<u>https://www.spire2030.eu/</u>) will also be used a communication and dissemination channel. Currently, an overview of the COMPASsCO<sub>2</sub> project (e.g. objectives of the project and concept, etc.) has been submitted for publication in a SPIRE brochure.

#### 4.9.3 Printed materials

In addition to the online communication and dissemination tools, printed materials (brochures, posters, flyers, etc.) will also be used, especially at the different events organized either within the framework of the COMPASsCO<sub>2</sub> activities or at other events where team members are participating at. They will be developed using the project visual identity codes but customized in terms of content and language style according to the specific event targeted.

Moreover, specific printed materials will be developed for the COMPASsCO<sub>2</sub> final event.

#### 4.9.4 University lectures

Given that lecturers/professors are involved in the COMPASsCO2 project, lectures on material science and ceramics will be updated accordingly to highlight the demands of CSP, and the innovation made on materials science.

## **4.10 Internal Communication**

In addition to communication and dissemination to COMPASsCO<sub>2</sub> stakeholders, internal communication among the project participants, including communication with the EC, is key in meeting the project's objectives, and therefore assuring a high quality management of the project.

The scheme below shows the governance structure and the communication flow within the COMPASsCO<sub>2</sub> project. Whereas the Project coordinator (DLR) assures efficient communication between the European Commission and the Team, the operative coordinator (OME) acts also as WP7 leader assuring communication internal and external communication with stakeholders.



Figure 7: Coordination and Communication flow in COMPASsCO2

Coordination and communication among participants is ensured through different tools:

- Regular emailing among all participants for regular updates, providing input, organizational and administrative issues, etc.
- Regular tele-conferencing (technical committee meetings, dedicated WP meetings, tasks and sub-tasks meetings, etc.).
- Online platforms for documents and data sharing: DLR teamsite has been used during the first stage of the project, while the project's website was under development. After being operation, the private area of the project website is the main online platform for documents sharing among the COMPASsCO2 team members.
  - DLR Teamsite: It has been used as a sharing platform among the project participants, while the project's website was under development. All beneficiaries have access to this area to upload and download all restricted items to consortium. The access to the Teamsite has to be granted by the project Coordinator and a unique username and password is given to each project partner. Each partner is responsible for changing his password and not sharing it or losing it to any third parties.
  - Project's website private area: It is the main documents and data sharing platform, where all confidential information is shared among the project participants, including minutes, confidential data, restricted deliverables, etc. The participants' dedicated area is managed by OME and all partners have access to upload and download documents and other materials.

# **5 TARGET GROUPS**

Since the beginning of the project, a stakeholder and community network is being developed. Deliverable 7.3 (Stakeholders database, dissemination level confidential) has a detailed list of stakeholders being engaged. The consortium will not only disseminate and convey the results and messages of the project, but will also establish a bi-directional flow of information and exchange to get the stakeholders' feedback about the project's methodologies and results. Several stakeholders will be interested in the Concentrating Solar Power Technologies, including policy makers, end users, Energy Service Companies (ESCos), renewable energy technology developers and investors, research organizations, industrial associations, standards groups, financing community, etc.). Given the different stakeholders of the COMPASsCO<sub>2</sub> project, tailored communication is developed for the particular audience. Below are details about the different stakeholders COMPASsCO<sub>2</sub> project is targeting.



Figure 8: COMPASsCO<sub>2</sub> Stakeholders Groups

Policy Makers and Public Authorities					
Communication Approach	Target Group Profiles				
<ul> <li>Provide insights about technology specific sector applications and recommendations to policy makers at the local, regional, national, European and international level.</li> <li>Disseminate the general results and findings in the different broader dissemination channels; website, newsletter, social networks, etc.</li> </ul>	<ul> <li>European Commission (EC)</li> <li>European authorities in charge of energy and environment strategies</li> <li>National public authorities (i.e. ministries, national agencies, etc.) in charge of defining national strategies and plans</li> <li>Regional and intergovernmental institutions</li> </ul>				

Scientific & Academic Groups				
Communication Approach	Target Group Profiles			
- Provide detailed information, including	- Universities			
technology-specific requirements and	- Research centers			
applications, testing materials and particle results, including results from the pilot	- R&D departments in companies			
project to research centers and universities.	- Scientific platforms			
<ul> <li>Disseminate mainly through public deliverables, publications in scientific journals and presentation at scientific conferences and workshops.</li> </ul>	<ul> <li>Scientific conferences boards and technical committees</li> </ul>			

Industry Stakeholders				
Communication Approach	Target Group Profiles			
- Share results on testing of materials and	- Companies			
their combination as well as the results of	- Industry associations			
the pilot project.	- Equipment manufacturers			
<ul> <li>Involve stakeholders in the workshops to have a bi-directional flow of information and</li> </ul>	- Raw materials providers			
feedback to both present result and get	- Particles providers			
industry stakeholders' feedback.	- Developers			
<ul> <li>In addition to sharing deliverables and scientific publications, explore cooperation opportunities for an eventual adoption and</li> </ul>	- Engineering, Procurement and Construction (EPC) companies			
deployment of the technology.	- Utilities			
- Share results of the testing and	- Components retailers			
demonstration activities and eventually cooperation of the development of new	- ESCos			
products and services.	- Other value chain stakeholders			

Other Projects and Initiatives Active in s-CO2					
Communication Approach	Target Group Profiles				
- Build synergies and partnerships with similar projects at the national, European	<ul> <li>Projects and initiatives working on solar s-CO2 power plants.</li> </ul>				
and International level.	- H2020 call projects				
- Explore collaboration opportunities for joint actions.	- European and non-European projects working on the same				
- Sharing best practices with related projects for policy recommendations	technology field.				

COMPASsCO<sub>2</sub> - Components' and Materials' Performance for Advanced Solar Supercritical CO<sub>2</sub> Power Plants

Financing actors					
Communication Approach	Target Group Profiles				
<ul> <li>Explore opportunities to finance solar s- CO2 projects in the future.</li> </ul>	<ul> <li>National, European and International Financial institutions</li> </ul>				
<ul> <li>Involve financing stakeholders in workshops and share results, especially business models to attract their interest in the technology.</li> </ul>	<ul> <li>Donor and aid agencies</li> <li>Commercial banks</li> <li>Investment companies</li> </ul>				

# 6 MONITORING OF DISSEMINATION ACTIVITIES

Several indicators are being used to monitor communication and dissemination activities, in order to assess the effectiveness of communication activities. This exercise will help evaluate the communication and dissemination strategy and how to refine the approaches, in case of barriers. In order to monitor the activities, a number of Key Performance Indicators (KPIs) have been developed as shown in the table below.

KPI	Measurement Unit	Target
Visual identity	-	1
Project website	-	1
Project roll-ups	Nr. of roll-ups produced	1
Communication strategy	Nr. of versions developed	3
Project newsletter	Nr. of newsletter issues produced	8 (bi-annual)
Workshops	Nr. of workshops organized	2
Presentations at external events	Nr. of presentations (both oral and poster)	10
Scientific publications in peer-reviewed journals	Nr. of publications	8
Scientific publications as Open Access	Proportion of publication as Open Access	100%
Specialized online press articles	Nr. of articles published	4
Dissemination in COMPASsCO <sub>2</sub> LinkedIn	Nr. of posts in LinkedIn	1/week (average)
Dissemination in COMPASsCO <sub>2</sub> Twitter	Nr. of posts in Twitter	1/week (average)

#### Table 4: Key Performance Indicators and Targets

In order to the key performance indicators included in the table above, the project will also monitor and report performance on other indicators, including participation at external events, number of entries/publication on the COMPASsCO<sub>2</sub> website, external audience of COMPASsCO<sub>2</sub> website based on Google Analytics, and number of contacts and followers on LinkedIn and Twitter, accordingly.

In order to monitor dissemination activities performed by COMPASsCO<sub>2</sub> participants, a dissemination log form designed as an excel sheet has been developed and is shared with all participants to track their activities, and is put in the private area of the project's website.

#### Table 5: COMPASsCO<sub>2</sub> Dissemination Log Example

COMPASsCO2 Dissemination Log						
Participant	Specific Action	Event/Media	Place	Date	Description of the action (general info about the project, event announcement, etc.)	Link/URL
OME	Website Post	OME website	n/a	3/11/2020	General information of the COMPASsCO2 project	https://www.ome.org/compassco2- components-and-materials-performance-for advanced-solar-supercritical-co2-powerplant
OME	Website Post	OME website	n/a	3/11/2020	Announcement of the kick-Off meeting	https://www.ome.org/november-3-2020/
				1		

Each participant enters some basic information (event, date, description, etc.) in the form, which will be synthesized and used to evaluate whether the objectives and impact of the project are met.

Based on the dissemination log excel sheet, specific KPI's as described in the previous table will be monitored and evaluated by OME to check whether the progress being made is sufficient in meeting the project's objectives or further efforts are needed on certain activities. Regular email reminders will also be sent to all participants to keep track of the dissemination activities and to update the excel sheet accordingly.

# 7 COMPASsCO<sub>2</sub> TEMPLATES

Within the framework of visual identity and in order to have a homogenous communication and dissemination formats, several templates have been designed, including the PPT presentation and deliverables, agendas, and minutes, etc. templates. As WP7 leader, OME has developed and produced such templates and made them available to participants.

Templates of the following products are available at Annex 3. COMPASsCO<sub>2</sub> templates:

- Power Point Template
- Deliverables Template
- Agenda/Event Template
- Minutes Template

## 8 EC REQUIREMENTS FOR COMMUNICATIONS

The consortium is well aware of the EC requirements and obligations, and will ensure that all such clauses are respected accordingly.

### 8.1 EU Funding and Use of the EU emblem

All dissemination activities related to COMPASsCO<sub>2</sub> project should indicate that the project has received funding from the European Union's H2020 Programme.

The European Union flag should appear in all communication and dissemination activities.



Figure 9: EU Emblem

With acknowledgement of funding:

- Communication activities

*"This project has received funding from the European Union's Horizon 2020 Research and Innovation Action (RIA) under grant agreement No.* **958418.**"

- Major infrastructure and equipment

"This [infrastructure][equipment] [insert type of result] is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. **958418.**"

#### 8.2 Disclaimer excluding the Commission responsibility

Any communication activity related to the COMPASsCO<sub>2</sub> project should indicate that the content reflects only the author's view and that the Commission is not responsible for any use of the information included.

"The content of this publication reflects only the author's view and not necessary those of the European Commission. The Commission is not responsible for any use that may be made of the information this publication contains."

## 8.3 Other requirements and obligations

- Exploitation and dissemination of the project results up to four years after the end of the project, as stipulated in articles 28 and 29 of the Model grant agreement.

In order to ensure reporting on dissemination and exploitations after the project's end, the EC made available a continuous reporting module under the Funding and Tenders Portal.

- Open Access to Scientific Publication and public research data are to be ensured, and made available online, at no extra cost and accessible to Europen researchers, innovative industries and the public, and as stipulated in : ARTICLE 29 — DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING
  - Article 29.1 Obligation to disseminate results: "<u>Unless it goes against their</u> <u>legitimate interests</u>, each beneficiary <u>must</u> — 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).
    - [...]

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply.

<u>A beneficiary that intends to disseminate its results must give advance notice</u> to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.

Any other beneficiary may object within — unless agreed otherwise — 30 days of receiving notification, if it can show that its legitimate interests in relation to the results or background would be significantly harmed. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.

[...]

 Article 29.2 Open access to scientific publications: "Each beneficiary <u>must ensure open access (free of charge, online access for any user)</u> to <u>all peer-reviewed scientific publications</u> relating to its results.

In particular, it must:

(a) as soon as possible and at the latest on publication, **deposit a** machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

(b) ensure open access to the deposited publication – via the repository – at the latest:

(i) on publication, if an electronic version is available for free via the publisher, or

- (ii) within 6 months of publication.
- (c) ensure open access via the repository to the bibliographic metadata that identify the deposited publication.

[...]"

# 9 **REFERENCES**

European Commission. *Horizon 2020 Programme. Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020.* Version 3.2, 21 March 2017.

European Commission. Horizon 2020. Communicating EU research and innovation guidance for project participants. Version 1.0, 25 September 2014. http://ec.europa.eu/research/participants/data/ref/h2020/other/gm/h2020-guide-comm\_en.pdf

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European Commission. *Quick Guide on Communication, Dissemination and Exploitation.* <u>https://ec.europa.eu/research/participants/docs/h2020-funding-guide/imgs/quick-guide\_diss-expl\_en.pdf</u>

# **ANNEXES**

Annex 1. Draft Versions of the COMPASsCO<sub>2</sub> Logo



# Annex 2. Communication and Dissemination of $COMPASsCO_2$ at the Partners' Websites









HOME ABOUT US PROJECTS & PUBLICATIONS CONFERENCES & EVENTS TRAINING DATABASE CONTACT Q

#### COMPASSCO2 - Components' and Materials' Performance for Advanced Solar Supercritical CO2 Powerplants

COMPASSCO2 is a Horizon 2020 project under the SPIRE (Sustainable Process Industries) Research and Innovation Action (RIA). The project aims to integrate solar energy into highly efficient supercritical CO2 Brayton power cycles for electricity production. Concentrated solar radiation is absorbed and stored in solid particles and then transferred to the s-CO2. In COMPASSCO2, the key component for such an endeavor shall be validated in a relevant environment: the particle s-CO2 heat exchanger. To reach this goal, the consortium will produce, test, model and validate tailored particle-alog combinations that meet the extreme operating conditions in terms of temperature, pressure, abrasion and hot axidation/carburization of the heat exchanger tubes and the particles moving around/across them.

Additional information about the COMPASsCO2 could be found through: https://cordis.europa.eu/project/id/958418

Duration: 48 months (November 2020 - October 2024)

iontact: emanuela.menichetti@ome.org

Partners: The consortium is led by the German Aerospace Center DRL and comprises additional 11 institutions from 7 European countries.

Annex 3. COMPASsCO<sub>2</sub> Templates

## Components' and Materials' Performance for Advanced Solar Supercritical CO2 Powerplants

**COMPASsCO**<sub>2</sub>

**TITLE OF PRESENTATION** 

event, venue and date







Figure 12: COMPASsCO<sub>2</sub> Agenda (left) and Minutes (right) Templates