Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

SUNSON project has received funding from Horizon Europe Research and Innovation Action programme under Grant Agreement nº 101083827

SUNSON

Concentrated Solar energy storage at Ultra-high temperatures aNd Solid-state cONversion

WP7 – Dissemination, Exploitation and Communication

D7.1 – Project website, identity, and social media presence

Version 1

Document information

Contractual Due date: 28.02.2023	**Delivery Date**: 28.02.2023
Author(s): IDE	
Lead Beneficiary of Deliverable: IDE	
Dissemination level: PU (Public)	
Nature of the Deliverable: DEC —Websites, patent filings, videos, etc	
Internal Reviewers: UPM (coordinator), ALL (task participants)	

SUNSON Key Facts

Acronym	SUNSON
Project title	Concentrated solar energy storage at ultra-high temperatures and solid-state conversion
GA nº	101083827
Starting date	01/12/2022
Duration-months	42
Call (part) identifier	HORIZON-CL5-2021-D3-03 (Sustainable, secure and competitive energy supply)
Type of Action	HORIZON-RIA' Horizon Europe Research and Innovation Action Programme'
Topic identifier	HORIZON-CL5-2021-D3-03-02 (Next generation of renewable energy technologies)
Consortium	6 organisations, all EU Member States
Model GA type	HORIZON Action Grant Budget-Based

SUNSON Consortium Partners

N.	Partner	Acronym	Country
1	Universidad Politécnica Madrid - Instituto Energía Solar	UPM	ES
2	IDENER RESEARCH & DEVELOPMENT	IDE	ES
3	Norges Teknisk-Naturvitenskapelige Universitet	NTNU	NO
4	Plataforma Solar de Almería (PSA-CIEMAT)	PSA	ES
5	IonVac Process	IONV	IT
6	Holistic and ontological solutions for sustainability	HOLOSS	PT

Executive Summary

The SUNSON project proposes a breakthrough in the field of Solar to Heat to Power (S2H2P) generation. For that, an ultra-high temperature thermal energy storage (TES) system will be designed, developed, and validated as a modular, ultra-compact and decentralised solution for dispatchable solar power generation. This first prototype will have 10 times less volume than current concentrated solar power (CSP) technologies that efficiently store solar energy as heat for electricity conversion on demand. Furthermore, this novel storage system will be integrated within a unique solution, novel approaches for solar radiation conversion technology (flux splitting optics for beam-down concentrator), ultra-high temperature TES above 1200°C and solid-state conversion technology based on thermophotovoltaic (TPV) generators.

The purpose of this document, delivered in M3, is to take the first steps in relation to the communication activities. It is reported as DEC, with a Public dissemination level. Therefore this document will show what the resources used for the visual identity and brand, what are templates to be used as internal and external resources, how the website was launched and its content structure, and what are social media tools. As agreed in the Consortium Agreement and the Grant Agreement, the entire consortium will actively participate in the communication activities, aiming to reach the aforementioned goals.

This deliverable is structured into four main sections: Visual identity, Foundational assets, Website and Social media presence.

The first section shows the logo in different colours and styles as well as the colour and font code that will be used for all communication tools for the project. Likewise, the templates for internal and external communication will be shown.

The second section is related to the 'Key Messages' used during the SUNSON project execution for external communication. They are classified into two types: those to be used in the webpage and other relevant publications such as the press release, and those based on pertinent information of the project to be posted (through i.e., Twitter and LinkedIn), to reach a wider audience from both general and specialised public.

In the third section, the website will be displayed, as well as the location, hosting, type, and launch date data. The structure and content to be included in the different sections of the web is also reflected.

Finally, in the fourth section, the social networks that will be used for the project are presented (general email, LinkedIn, Twitter and YouTube), as well as what each one will contain and how often they should be updated.

Table of Contents

List of Figures

List of Tables

Abbreviations

CA	Consortium Agreement
CINEA	European Climate, Infrastructure and Environment Executive Agency
CSP	Concentrated solar power
D	Deliverable
DEC	Dissemination, Communication & Exploitation
DMP	Data Management Plan
DEC	Dissemination, exploitation and communication
EU	European Union
FAIR	Findable, accessible, interoperable and reusable
GA	Grant Agreement
GDPR	General Data Protection Regulation
IPR	Intellectual Property Rights
M	Month
PA	Project Advisor
PC	Project Coordinator
PCM	Phase Change Materials
PEDR	Plan for Exploitation and Dissemination of Results
PMP	Project Management Plan
SC	Steering Committee
SO	Specific Objective
S2H2P	Solar to Heat to Power
TES	Thermal Energy Storage
TL	Task Leader
TPV	Thermophotovoltaic
WP	Work package
WPL	Work package leader

1 Introduction

1.1 Purpose of the document

This deliverable is intended to develop the first results and DEC (Dissemination, Communication and Exploitation) content of the SUNSON project. Specifically, this deliverable has been created within the Task 7.1 framework ('Project identity, materials and channels').

A communications toolbox (fully described in the section 2.2.1 of the Part B in the Grant Agreement) has been made available to all the project partners.

1.2 Objectives

The present D7.1 and its results are strongly linked to the following Specific Objective (SO) of the SUNSON project:

SO6.4. To efficiently communicate and disseminate project results, promoting Open Science premises.

In addition, the consecution of one project Milestones is directly related to this deliverable:

MS2: Website launch in month 3 (WP7), responsible partner: IDENER

Means of verification: Website for SUNSON created and open to public 3

By the present month (M3), IDE has already established and created the following items:

- SUNSON visual identity and brand
- Foundational assets (mission, key facts, messages, targets, infographics) as a basis for digital and physical communications
- Public webpage open
- Social media presence
- A folder, display banner, digital and paper flyer, and poster template.

2 Visual identity

2.1 Logo

The brochure, as well as the rest of graphic materials, will be aligned with this philosophy to keep coherence with the meaning of the project name.

This final logo (depicted in Figure 1) will be used on all internal and external documentation of the Project, such as deliverables, reports, dissemination and communication actions, social media website, presentations and events. Project templates for deliverables, reports, presentations, etc., have been designed to follow the visual identity theme with the chosen logo. The design of the logo is based on the logo + icon (in colour, white, black) or icon (in colour, white, black).

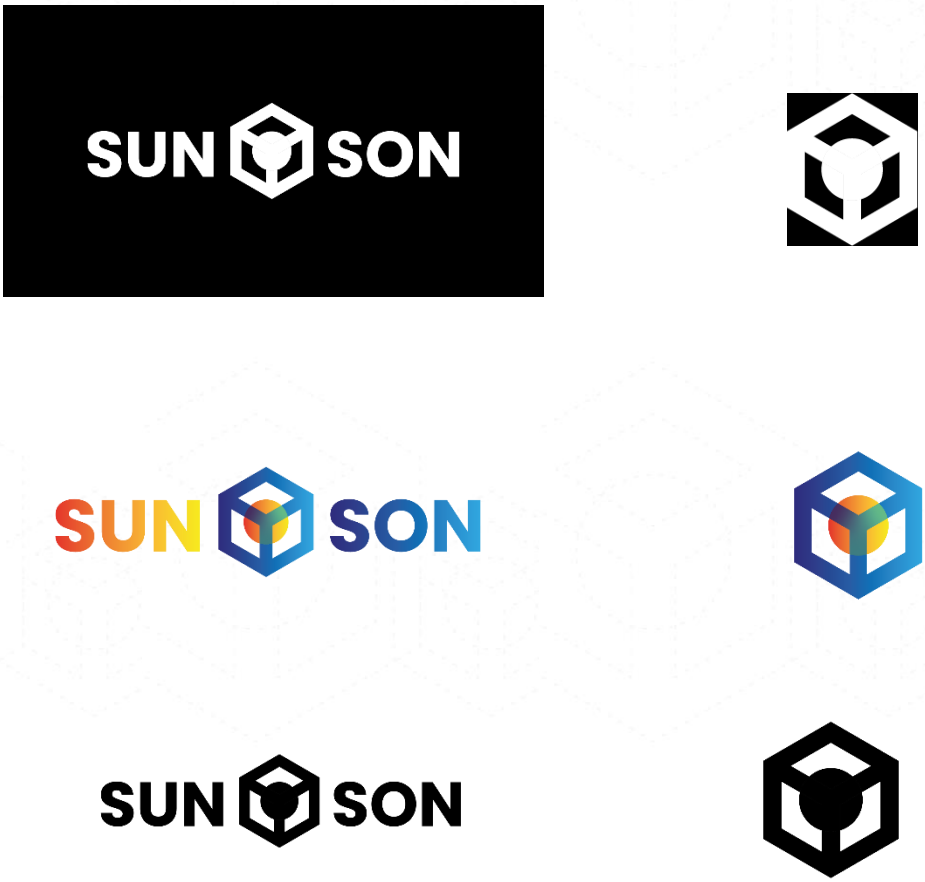


Figure 1. SUNSON logos

2.2 Colours, font and style

Table 1: Code colour for SUNSON

Code colour	
Orange to yellow gradient 	Orange: #e5352b Yellow: #fbea1c
Blue to light blue gradient 	Blue: 3302d7d Light blue: #39a8e0

Font style: Roboto

2.3 Templates for internal communication

During the first months of the project (M1-M3), IDENER as Dissemination, Exploitation and Communication (DEC) leader has also created the internal communication templates.: deliverables, minute of meeting, presentation template for consortium meeting, and semestrial Executive summary template for Project Reporting. All of them are included as Figures in Annex I.

2.4 Templates for external communication

In the same way as for the internal templates, during the first months of SUNSON, the project folder, lanyard, display banner, digital leaflet, poster, general presentation template and entity presentation tempalte were designed to be used in future workshop, congress, fairs, seminars, etc. Content and detailed designed of the different materials are included in Annex II.

3 Foundational assets

3.1. Key message

The messages must be effective: what the research results mean, why they are important, what may imply for the audience. The messages must be clear, simple and action-oriented. This means to tailor the messages to each audience, depending on what information may be interesting for the audience, thus focusing on the communication strategy and reaching the communication objectives identified.

The messages are grouped into four main ways to disseminate the information: Technical information about the Project, Results, Socioeconomic and environmental information, and General information.

- General information: In this level of communication, the messages must communicate the contribution, improvement, optimisation and participation in the SUNSON project.

- Socioeconomic and environmental information: All the information related to the social, economic, and environmental aspects may be transmitted from a human perspective. The messages must be emotional.

- Results: For these kinds of messages, the information includes the development, methodology, process and results arising from the Project.

- Technical information about the Project: The information will be about the outputs and results with an economic aspect as "selling" the Project.

The following key messages are proposed for the SUNSON project:

- *Making Europe climate neutral*
- *Making independent the solar energy sector*
- *Boosting the Solar to Heat to Power*
- *Boosting a site-independent energy*
- *SUNSON: opening the path towards the next generation of renewable energy technologies*
- *Storing the sunshine in a box and efficiently convert it into electricity on demand*
- *Ground-breaking Solar to Heat to Power (S2H2P) convertor for the energy of the future*

The key messages will be constantly updated along with the evolution of the project, to ensure that they are in line with the new findings and adapted to the scope and final targets of SUNSON.

3.2. Website

3.1 Hosting

A live public website is launched, hosting the key information, news updates and public documentation available from the project.

- Address: www.sunson.eu
- Hosting: one.com
- Word-Press: www.sunson.eu/wp-admin
- Launch date of the webpage to the public: 24/02/2023

3.2 Structure and Contents

3.2.1 HOME

3.2.1.1 INTRODUCTION

"SUNSON: opening the path towards the next generation of renewable energy technologies"

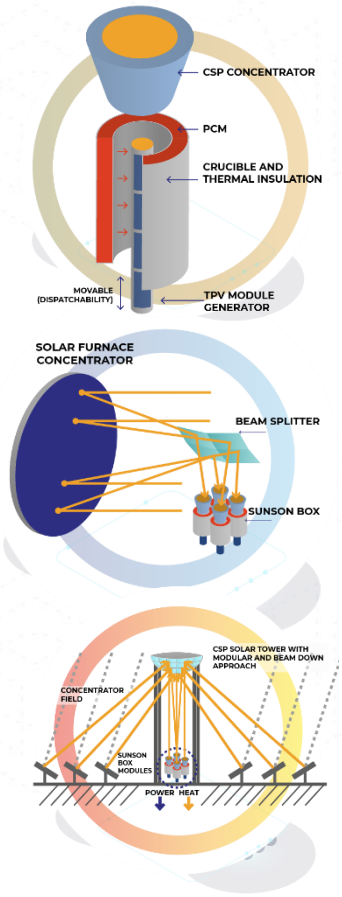
+ link to section "PROJECT"

"Ground-breaking Solar to Heat to Power (S2H2P) convertor for the energy of the future"

Dates: 3.5 years (1 December 2022 to 31 May 2026)

+ link to section "PARTNERS"

3.2.1.2 WHAT IS SUNSON?



SUNSON aims to demonstrate the feasibility and potential of a **modular** and **highly compact** solution for **Solar to Heat to Power** (S2H2P) conversion, called the **SUNSON-BOX.** It is a disruptive concept combining into a single system concentrated solar power **(CSP)** technologies for power generation by means of **thermophotovoltaic (TPV)** energy converters and **ultra-high-temperature thermal storage** based on **phase change materials (PCM)** at a temperature range over 1200°C. The solution provides electricity on demand from a thermal source, and as a secondary supply to be used in industrial heat processes, hot tap water or indoor heating. This allows the integration of renewable energy technologies (directly using solar energy) into a unique storage and energy generation system, providing a flexible solution for **power dispatchability** and ease of coupling with intermittent **renewable energy sources (RES)**. For this purpose, it will be supported by the SUNSON-TOOL, to optimise the design and increase the replicability of this innovative technology. SUNSON project will become the **flagship demonstration at laboratory scale (TRL4)**.

+ link to section "PROJECT"

3.2.1.3 PROJECT DATA

6 partners, 4 countries, 2,999,937.5 €

Dates: 3.5 years (1 December 2022 to 31 May 2026)

3.2.1.4 MAIN NEWS

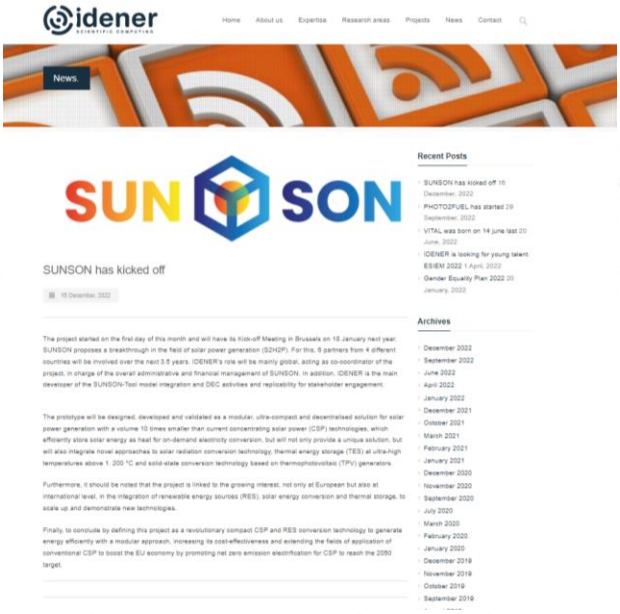


Figure 2. The first post of SUNSON is included in the IDENER webpage.

Content will be related to the most updated posts.

+ link to section "News&Events"

3.2.1.5 The SUNSON team

Link connected to the partners' website and an explanation of the roles will be displayed.

3.2.1.6 Final banner

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

SUNSON project has received funding from Horizon Europe Research and Innovation Action programme under Grant Agreement nº 101083827

3.2.1.7 Contacts, info email, social media symbols/links

Cookies policy

Contact: email project for info

Symbols and links to Twitter, LindekIn and YouTube

All rights reserved

Power by IDENER

3.2.2 PROJECT

"Storing the sunshine in a box and efficiently convert it into electricity on demand"

The SUNSON project will promote net-zero emission electrification through a smart combination of advanced concentration solar power with ultra-high temperature storage system for thermophotovoltaic generation. Increasing the European industrial leadership in key renewable energy integration enabling the transition to a net-zero emission economy by 2050.

3.2.2.1 OBJECTIVES

- Design and development of a **Solar to Heat to Power-*S2H2P*** prototype as feasibility and scientific proof of a novel power generation technology from solar radiation
- Design and development of a suitable thermal storage system based on Phase Change Materials (PCM) to be integrated into the SUNSON-BOX

- Flagship demonstration of a breakthrough and compact system (the SUNSON-BOX) integrating Renewable Energy Sources (RES) for power generation based on Concentration solar power, Phase-change material storage and thermophotovoltaic conversion

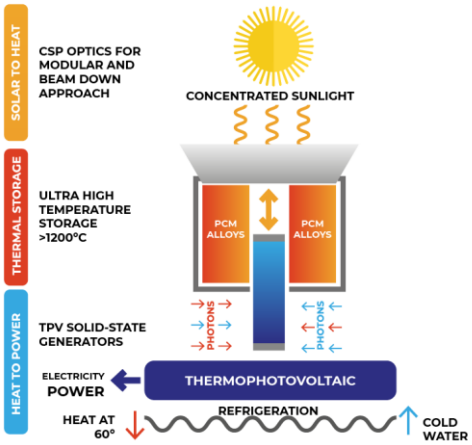
- Development of a digital intelligence support system (the SUNSON-TOOL) to optimise the RES integration within the energy system and assess the feasibility and replicability of the SUNSON solutions

- Proof of sustainability of the SUNSON solutions by a holistic assessment of environmental, technical, social and economic feasibility

- Exploitation, Dissemination and Communication of the knowledge and results generated in SUNSON –Innovations

3.2.3 TECHNOLOGY

SUNSON outcomes pursue a technological breakthrough in compact concentrated solar power and Renewable energy source conversion to generate electricity with a modular and scalable approach to increase its efficiency and cost-effectiveness. Operating at ultrahigh temperatures (>1200°C) provides higher efficiency ratios in converters and it is of particular interest for latent heat storage systems, as they offer up to 10 times the storage capacity of current molten salt-based storages at 600-800°C, resulting in a decrease of 10 times the overall system size and reducing the scale-size associated costs.



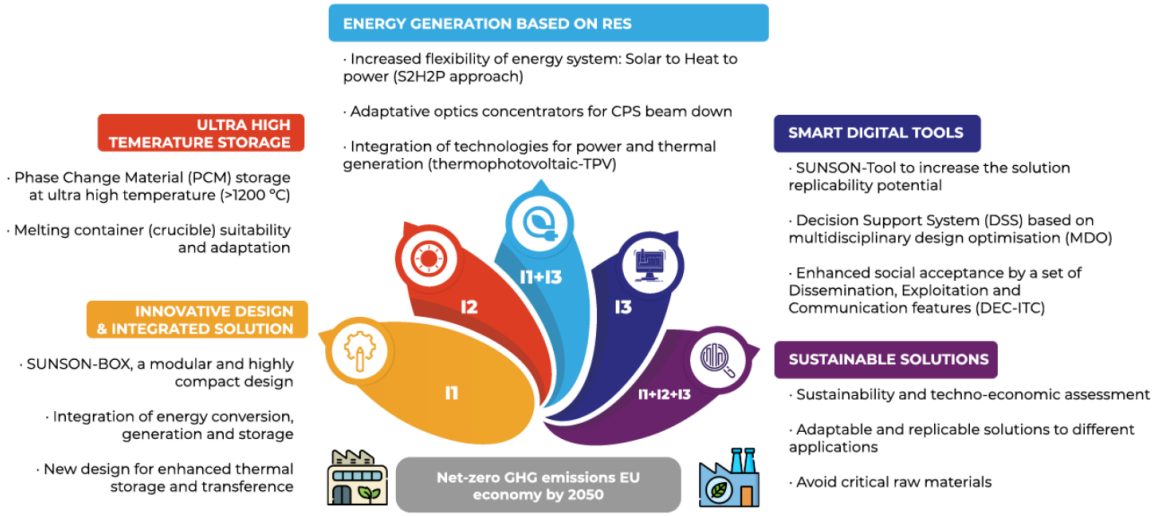
3.2.3.1 THE SUNSON-BOX

SUNSON-BOX will be the first prototype of its kind, combining novel developments into a single ultra-compact system (10 times less volume than current concentrated solar power systems), capable of working over 1200ºC. It consists of 3 main components:

(1) charging system by solar radiation with advanced concentrated solar power optics,

(2) ultra-high temperature Phase-change material storage system,

(3) discharging system by thermophotovoltaics generators to produce electricity on demand.

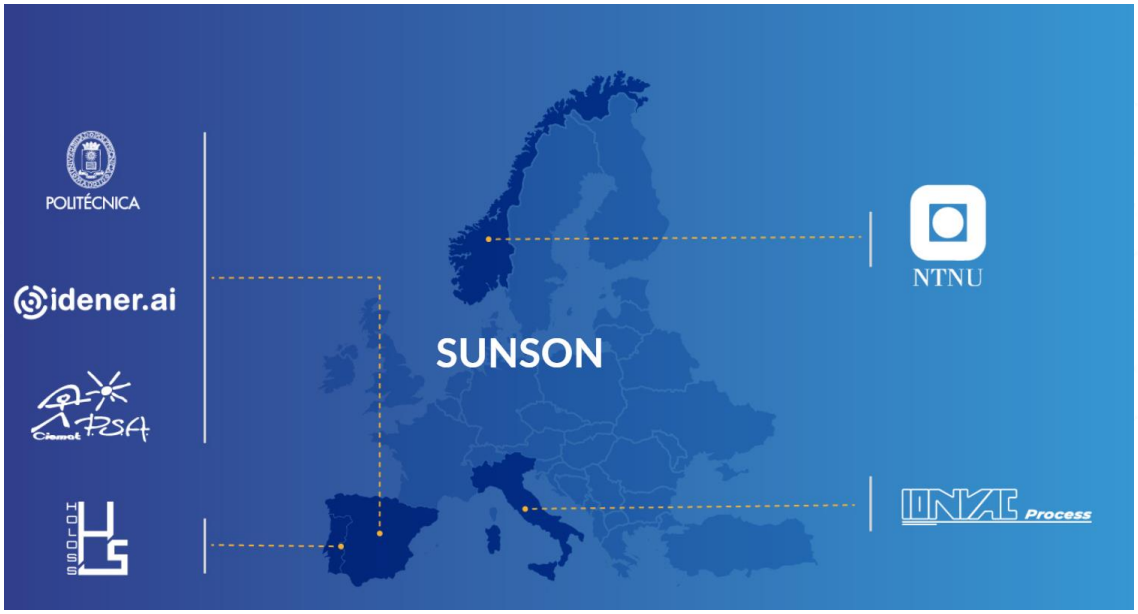


3.2.3.2 VALUE PROPOSITION

- ✓ Compactness
- ✓ Cost-effectiveness and efficiency
- ✓ Modular and scalable design
- ✓ Simplicity
- ✓ Flexibility
- ✓ Safety and sustainability

3.2.4 PARTNERS

3.2.4.1 THE SUNSON CONSORTIUM



Energy Solar Institute of the Polytechnic University of Madrid, IES-UPM

The Technical University of Madrid stands out as the top technical university in Spain. Within this university, researchers at the Solar Energy Institute have been pioneering the development of a latent heat thermophotovoltaic battery since the project's inception.

UPM is the scientific and technical coordinator of the SUNSON project, leading the quality assurance and risk management evaluation. In technological terms, UPM will also be in charge of the development of the TPV conversion generator for an advanced heat-to-power conversion, and its integration in the SUNSON-BOX.

Web site: https://www.ies.upm.es/IES_UPM

Idener, IDE

IDENER Research & Development is the IDENER division focused on the R&D activities of the group. Specifically, IDENER R&D investigates the multidisciplinary field of Computational Science and its application of systems and processes in key areas: Industrial Technologies, ICTs, Biotechnology, Energy, Resource and Raw Materials Efficiency.

IDENER R&D will be responsible for the ultra-high temperature multi-physical modelling, the creation of the SUNSON-TOOL, techno-economic analysis, and replicability evaluation for stakeholder engagement. IDENER is leading the Dissemination, Exploitation and Communication activities. Additionally, IDENER supports UPM in the project coordination developing a robust data and management strategy for the SUNSON project.

Web site: https://www.idener.es/

Almeria Solar Platform, PSA-CIEMAT

In the province of Almeria in southeast Spain, on the edge of Tabernas Desert, you will find the Plataforma Solar de Almeria (PSA). Owner and operator of the PSA is the Spanish research centre for energy, environmental studies and technology (Ciemat). On this over-250-acre site, the full force of the Andalusian sun has been exploited since 1980 for the testing and optimisation of a variety of high-temperature solar technologies under real-life conditions. More than 20,000 square metres of mirrors of various shapes in different test facilities concentrate the direct solar radiation to generate high and extremely high temperatures.

PSA is the largest test centre in Europe for concentrating solar technologies, leading the world in its field. The SUNSON prototype will be validated at PSA facilities. PSA will also oversee the RES integration with enhanced optics for micro-CSP beam-down approach.

Web site: https://www.psa.es/en/

HOLOSS

This Portuguese SME of recent creation is an end-to-end, customer-oriented environmental solutions company that is centred on circular economy, eco-design, and sustainability services in Europe and around the world. The company offers a broad portfolio of technologies, products, & solutions focused on different sectors such as manufacturing, energy efficiency, industry and waste valorisation, offering advanced environmental and sustainable solutions. HOLOSS is composed of a multidisciplinary team with backgrounds in environmental, chemical, and biological engineering but also in administration and international relations.

Within SUNSON, HOLOSS leverages its expertise in accelerating the progress of the LCA (environmental, economic and social), safe and sustainable by design (SSbD), energy and materials modelling ontologies and digital passport to provide support in integrating sustainability into design, innovation and evaluation of products, services and policies.

Web site: https://holoss.com/

IONVAC PROCESS SRL, IONV

Ionvac Process Srl is a high-tech SME, founded in 2001, dedicated to the design and production of tools, equipment and accessories for industrial and research applications. The company works in the fields of Energy, Aerospace, Engineering, Electronics, Optics and Biology, providing customised solutions for the development of research prototypes and industrial systems. The company's core business is focused on the production of high and ultra-high vacuum systems and plasma technologies such as: atmospheric pressure plasma torches; CVD (chemical vapour deposition); PECVD (Plasma Enhanced Chemical Vapor Deposition); HWCVD (hot wire chemical vapour deposition); ICP-PECVD (Inductively Coupled Plasma) for the deposition of thin films for various applications.

IONVAC is in charge of the demo engineering and commissioning of the SUNSON-BOX prototype at PSA's facilities.

Web site: https://www.ionvacprocess.com/

Norwegian University of Science and Technology, NTNU

The Norwegian University of Science and Technology (NTNU) is Norway's largest university, with eight faculties, the University Museum and more than 42,000 students and 7,400 full-time equivalent employees (2018). NTNU is the primary Norwegian university in engineering and technology, but it is also a full range university. More than 360 PhD degrees are awarded annually (2017) within the fields of technology, science, arts and humanities, social sciences and medicine, of which 43 per cent are international PhD students.

Within SUNSON, the Department of Materials Science and Engineering of NTNU will synthetise and characterise materials for ultra-high temperature storage, developing and testing the PCM-TES system, as the storage core of the SUNSON-BOX.

Web site: https://www.ntnu.edu/

3.2.4.2 SISTERHOOD PROJECTS

https://www.thermobat.eu/

3.2.5 NEWS & EVENTS

3.2.5.1 NEWS

The SUNSON project already had the Kick-off Meeting!

SUNSON→ The new Horizon Europe project aiming to store sunlight at the highest temperature ever recorded

"Sun's Son" is the acronym of this European Project which aims to store solar energy with temperatures in excess of 1200°C. This is more than twice the operating temperatures of current concentrated solar power (CSP) plants. The project aims to promote a new generation of highly compact and efficient CSP plants in order to create a more flexible renewable energy sector. To meet this challenge, the proposed solution combines solar concentrators with advanced optics, advanced phase change materials (PCMs) for thermal storage, and thermophotovoltaic converters for electricity generation in a single system.

The project is funded under the Horizon Europe scheme and by the European Agency for Climate Infrastructure and the Environment (CINEA). SUNSON comprises a multidisciplinary consortium led by the Polytechnic University of Madrid (UPM), which includes 6 European organisations ranging from SMEs (IONVAC Process and HOLOSS), technological centres (IDENER), public centres (CIEMAT) through to universities (UPM and NTNU). The areas of specialisation cover a wide range of disciplines and are all focused on the solar energy and sustainability sector.

SUNSON proposes a significant breakthrough for the renewable energy field (especially solar energy), where the major limitation is a lack of economic and efficient solutions when there is intermittent demand. Specifically, the objective of SUNSON is to demonstrate the feasibility and potential of a solution that integrates energy conversion and storage in a single highly modular and compact device (SUNSON-BOX).

The system is based on conversion technology which uses solar energy to first produce and store heat, and which later generates electricity on demand. This decoupling removes the dependency of variable renewable sources, thus increasing its flexibility for energy integration. This will allow electricity to be produced according to demand and, in turn, allow any excess heat to be used in industrial heat processes, domestic hot water or heating. For this reason, the application of this

system offers considerable benefits for the energy, industrial, and building sectors, and additionally for future hydrogen generation. In order to facilitate its design, feasibility and replicability, the project will also develop a powerful computing tool (SUNSON-TOOL) which integrates artificial intelligence algorithms.

During the next 4 years of the project, the SUNSON team intends to develop a prototype that is 10 times more compact than conventional CSP systems thanks to the incorporation of PCMs that store energy in the form of heat at temperatures above 1200°C. At these temperatures the heat becomes incandescent, and the system incorporates thermophotovoltaic converters that directly transform incandescence into electricity. The technology will be validated at the Plataforma Solar de Almería (PSA-CIEMAT), a leading centre for solar thermal technology research, and who will also facilitate the future development and commercialisation stages.

The kick-off meeting took place on 19 January 2023 in a hybrid event organised in Brussels and broadcast online, to facilitate participation amongst the entire project team. The objectives, impacts and work plan of the project were reviewed in detail. Professor Alejandro Datas, Project Coordinator, commented that: "The SUNSON project will aim to solve one of the biggest energy challenges that we are facing this century: the uninterrupted supply of renewable energy. If successful, the technology developed by SUNSON aims to enable a new generation of more compact and efficient solar thermal systems that can produce power whenever it is needed, regardless of whether the sun is shining or not."

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

SUNSON project has received funding from Horizon Europe Research and Innovation Action programme under Grant Agreement nº 101083827

Funded by the European Union

CINEA

3.2.5.2 EVENTS

The next semestrial consortium meeting will be held in Norway (7th-8th of June 2023)

3.2.6 RESOURCES

3.2.6.1 COMMUNICATION MATERIALS

Flyers, brochures, posters, etc. will be included in this section

3.2.6.2 RESULTS

The most important results, linked to future articles and conference materials.

3.2.6.3 OUR NEWSLETTER

Annual e-newsletters will be distributed featuring project news, progress reports and spotlight on recent project activities.

3.2.7 CONTACT

3.2.7.1 FAQs & GLOSSARY

Frequently asked questions:

What is a S2H2P technology?

S2H2P is the acronym for Solar to Heat to Power.

It describes the conversion route that takes advantage of solar radiation (by means of concentration solar systems) to generate thermal energy (S2H). First, this heat can be stored for later use (due to the characteristics of the latent heat storage systems). Then, this thermal energy can be converted into power on demand (H2P), through an efficient and novel solid-state technology. This technology is based on thermophotovoltaics for power generation.

+ link to section "TECHNOLOGY"

What is the SUNSON-BOX?

It is a flagship prototype of the proposed technology (S2H2P) integrating advanced optics for beam-down CSP technology, high-temperature latent heat storage and thermophotovoltaic conversion.

+ link to section "TECHNOLOGY"

What is the SUNSON-TOOL?

It is a smart digital tool to help the design, management and replicability purposes based on a multidisciplinary optimisation. It additionally provides a set of features usable for dissemination, exploitation, training and communication actions.

+ link to section "TECHNOLOGY"

What is a Multidisciplinary Design Optimisation?

MDO is a field of engineering focused on numerical optimisation for designing systems that involve multiple disciplines. The underlying idea is to solve a given optimisation problem within a defined domain. Advancing computer technology and the availability of new decomposition methods for solving the design problem have made MDO increasingly useful in engineering practice

What is Phase-change material?

Phase change materials (PCM) are compounds that absorb and release heat energy when they change phase (known as latent heat). For example, when a material melts, it changes from a solid to a liquid phase. During the phase transition, many materials are capable of absorbing a significant amount of heat energy.

+ link to section "TECHNOLOGY"

What is Thermophotovoltaic energy conversion?

A Solar Thermophotovoltaic (TPV) system is based on a principle of conversion of concentrated solar energy into radiation by heating an intermediate photon emitter with the subsequent photovoltaic conversion of this radiation in low-bandgap photo-converters.

TPV energy conversion stands out as the most efficient solid-state thermal-to-electric energy converter, with a record efficiency of nearly 30% at heat source temperatures higher than 1000°C. As a matter of fact, it is the most efficient small-sized heat engine.

+ link to section "TECHNOLOGY"

What are Technology Readiness Levels (TRL)?

Technology Readiness Levels (TRL) are a type of measurement system used to assess the maturity level of a particular technology. Each technology project is evaluated against the parameters for each technology level and is then assigned a TRL rating based on the project's progress. There are nine technology readiness levels classified as follows:

- TRL 1 – basic principles observed
- TRL 2 – technology concept formulated
- TRL 3 – experimental proof of concept
- TRL 4 – technology validated in lab
- TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7 – system prototype demonstration in operational environment
- TRL 8 – system complete and qualified
- TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

Do you have a question? Please send here your enquiries: info@sunson.eu

GLOSSARY

- S2H2P: Solar to heat to power
- TRL: Technology Readiness Level
- CSP: Concentration solar power
- TES: Thermal Energy Storage
- TPV: Thermophotovoltaic
- RES: Renewable Energy Sources
- PCM: Phase Change Materials
- DSS: Decision Support System
- MDO: Multidisciplinary Design Optimisation
- DEC: Dissemination, Exploitation and Communication activities
- KPIs: Key Performance Indicators
- KER: Key Exploitable Result

Sign up to stay on top of SUNSON news!

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

SUNSON project has received funding from Horizon Europe Research and Innovation Action programme under Grant Agreement nº 101083827

Funded by the European Union

CINEA

4 Social Media presence

4.1 Social media networks

The following Social networks have been already created by M3, to start communicating and disseminating the SUNSON project results:

- General email: info@sunson.eu
- Linkedin: linkedin.com/in/sunson-project
- Twitter: @SunsonProject (https://twitter.com/SunsonProject)
- Youtube videos: https://www.youtube.com/@sunsonproject

4.2 Updating and management strategy

Social networks will be managed through the following channels:

-LinkedIn

The LinkedIn page will be kept updated at least once a week, posting events or news from the SUNSON project or related to the subject. The search for followers will be a permanent task, and an attempt will be made to encourage the interaction of all partners for an active visualisation of the account and the project. In addition, the LinkedIn account will include a direct link to the SUNSON website.

-Twitter

The Twitter account will be updated at least twice per week, posting "Social Key Messages" (Annex III) with relevant information of the project, events or news of interest.

References to European Commission frequently appear in tweets and hashtags as #SolarEnergy, #EU, #SUNSON, #HorizonEurope, among others.

-YouTube

The YouTube account will be used to submit all public events related to the SUNSON project, including public workshops, conferences, training, etc. as well as the videos (2 within the project in total) related to the SUNSON implementation.

-The SUNSON website

The SUNSON website (www.sunson.eu) has been created as a central point for sharing information about the project and accessing project public material. The webpage will be updated at least once per month. It also includes access links to the sisterhood projects, i.e. THERMOBAT.

5 Conclusions and next actions

The purpose of this document, delivered in M3, is the first release of communication and dissemination materials of the SUNSON project, following the initial steps of the Plan for Dissemination, Exploitation and Communication (PEDRC, Deliverable 7.2) to be delivered in M6, by IDENER. The Deliverable 7.1 is a set of Communications and Dissemination materials. Additionally, the report content that was reflected is meant to explain and list all the communication material that has been provided so far in the project. It is reported as DEC, with a Public dissemination level.

This deliverable is structured into four main sections: Visual identity, Foundational assets, Website and Social media presence. Therefore, this document will show what resources are used for the visual identity and brand, what templates are to be used as internal and external resources, how the website was launched and its content structure, and what are social media tools to extend the project presence in these networks.

As agreed in the Consortium Agreement and the Grant Agreement, the entire consortium will actively participate in the communication activities, aiming to reach the aforementioned goals.

These source materials will help the entire consortium to keep standardisation in document management and reflects a consistent and real image of the SUNSON project. The visual identity and brand have tried to be designed in line with the complementary sisterhood project THERMOBAT (https://www.thermobat.eu/). This project has received funding from the European Union's Horizon 2020 research and innovation under grant agreement 101057954.

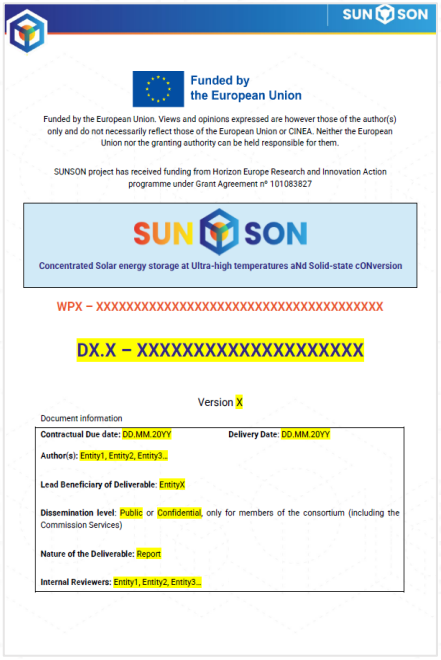
The next actions envisaged concerning the tasks and the communication materials and activities within the following months are:

1) To publish a Press Release (M6)
2) To keep updated all the Social Network with key messages, posts and relevant information related to future events
3) To keep updated the website by publishing news, posts, infographics and other relevant communications materials
4) To have a leaflet and roll-up (M6)
5) To start the design of the video (M18)
6) To start the initial content of the newsletter (M18)

6 ANNEXES

6.1 ANNEX I

6.1.1 Word template for deliverables:



Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

SUNSON project has received funding from Horizon Europe Research and Innovation Action programme under Grant Agreement n° 101083827

SUNSON
Concentrated Solar energy storage at Ultra-high temperatures aNd Solid-state cONversion

WPX – XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

DX.X – XXXXXXXXXXXXXXXXXXX

Version X

Document information

Contractual Due date: DD.MM.20YY Delivery Date: DD.MM.20YY

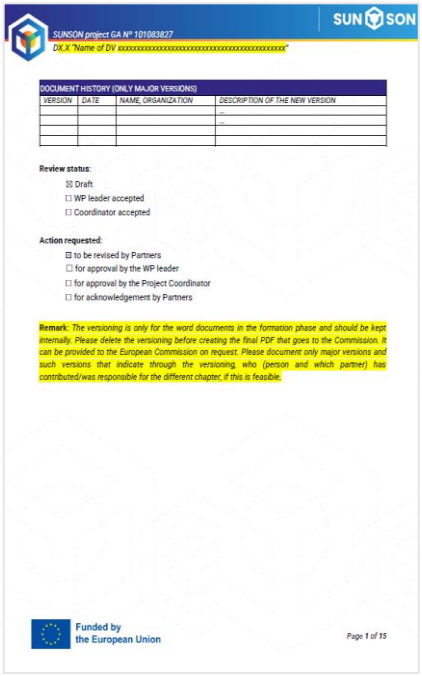
Author(s): Entity1, Entity2, Entity3...

Lead Beneficiary of Deliverable: EntityX

Dissemination level: Public or Confidential, only for members of the consortium (including the Commission Services)

Nature of the Deliverable: Report

Internal Reviewers: Entity1, Entity2, Entity3...



SUNSON project GA Nº 101083827
DX.X "Name of DV xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

DOCUMENT HISTORY (ONLY MAJOR VERSIONS)			
VERSION	DATE	NAME, ORGANIZATION	DESCRIPTION OF THE NEW VERSION
			...
			...

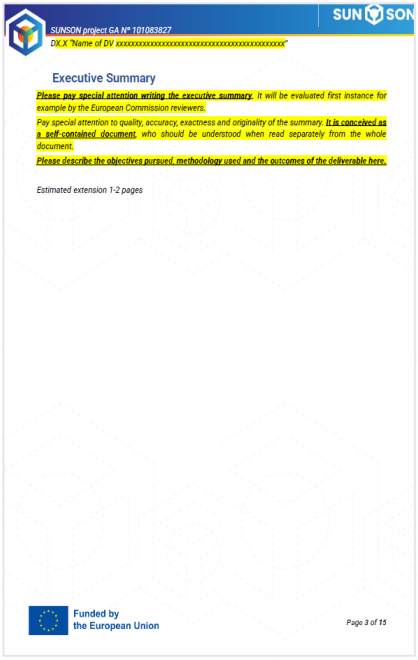
Review status:
☒ Draft
☐ WP leader accepted
☐ Coordinator accepted

Action requested:
☒ to be revised by Partners
☐ for approval by the WP leader
☐ for approval by the Project Coordinator
☐ for acknowledgement by Partners

Remark: The versioning is only for the word documents in the formation phase and should be kept internally. Please delete the versioning before creating the final PDF that goes to the Commission. It can be provided to the European Commission on request. Please document only major versions and such versions that indicate through the versioning, who (person and which partner) has contributed/was responsible for the different chapter, if this is feasible.

Funded by the European Union

Page 1 of 15



SUNSON project GA Nº 101083827
DX.X "Name of DV xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

Executive Summary

Please pay special attention writing the executive summary. It will be evaluated first instance for example by the European Commission reviewers.

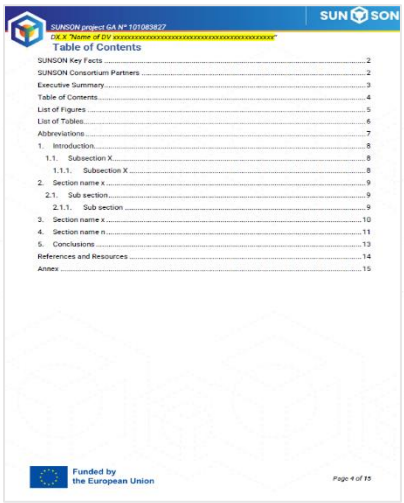
Pay special attention to quality, accuracy, exactness and originality of the summary. It is conceived as a self-contained document, who should be understood when read separately from the whole document.

Please describe the objectives pursued, methodology used and the outcomes of the deliverable here.

Estimated extension 1-2 pages

Funded by the European Union

Page 3 of 15



SUNSON project GA Nº 101083827
DX.X "Name of DV xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

Table of Contents

Funded by the European Union

Page 4 of 15

SUNSON project GA Nº 101083827
DX.X "Name of DV xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

List of Tables

Funded by the European Union

Page 6 of 15

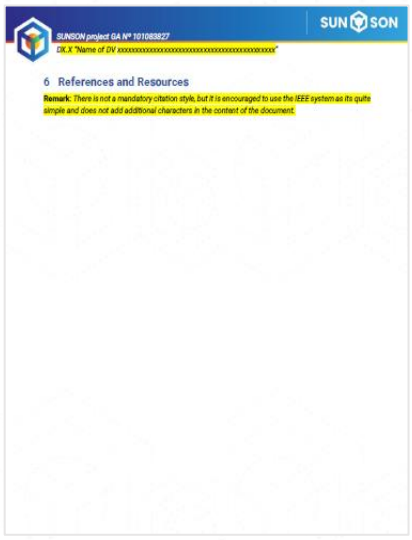
SUNSON project GA Nº 101083827
DX.X "Name of DV xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

Abbreviations

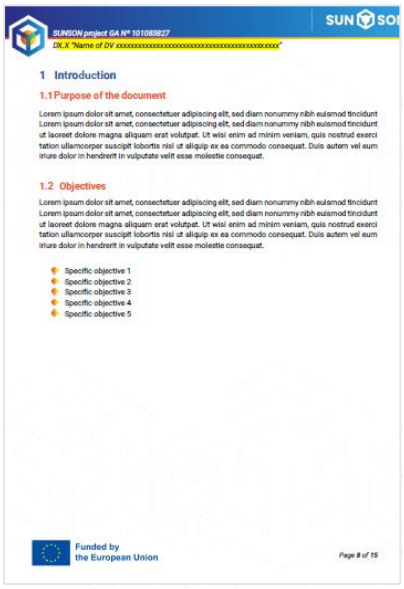
Funded by the European Union

Page 7 of 15

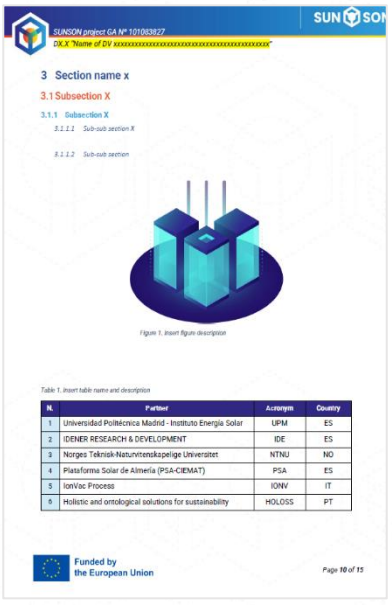

5 Conclusions
Funded by the European Union


6 References and Resources
Remark: There is not a mandatory citation style, but it is encouraged to use the IEEE system as its quite simple and does not add additional characters in the content of the document.

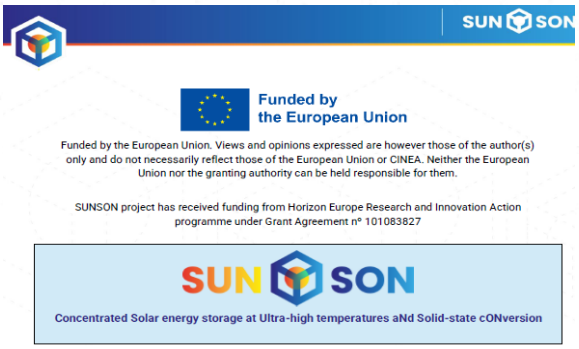

7 Annexe
Funded by the European Union


1 Introduction
1.1 Purpose of the document
1.2 Objectives
Specific objective 1
Specific objective 2
Specific objective 3
Specific objective 4
Specific objective 5
Funded by the European Union


2 Section name x
2.1 Sub section
2.1.1 Sub section
Lorem ipsum
Lorem ipsum
Lorem ipsum
Funded by the European Union


3 Section name x
3.1 Subsection X
3.1.1 Subsection X
Funded by the European Union

6.1.2 Minutes of meeting (MOM) template:



Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

SUNSON project has received funding from Horizon Europe Research and Innovation Action programme under Grant Agreement nº 101083827

SUNSON

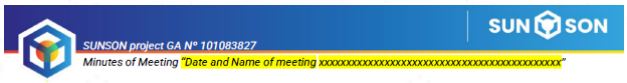
Concentrated Solar energy storage at Ultra-high temperatures aNd Solid-state cONversion

Minutes of Meeting (MoM) document

Meeting MOM –
XXXXXXXXXXXXXXXXXXXX

Document information

Meeting date: DD.MM.20YY	**Minutes approved date:** DD.MM.20YY
Location: Venue	
Assistants:	**Meeting organiser and minutes creator:** EntityX
Entity1: person, person	
Entity2: person, person	
Entity3: person, person	
Entity4: person, person	
Entity5: person, person	
Entity6: person, person	
Internal Reviewers: Entity1, Entity2, Entity3…	
Dissemination level: Public or Confidential	



SUNSON project GA Nº 101083827
Minutes of Meeting "Date and Name of meeting xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

DOCUMENT HISTORY (ONLY MAJOR VERSIONS)			
VERSION	*DATE*	*NAME, ORGANIZATION*	*DESCRIPTION OF THE NEW VERSION*
			…
			…

Review status:

☒ Draft
☐ Coordinator accepted
☐ Consortium accepted

Action requested:

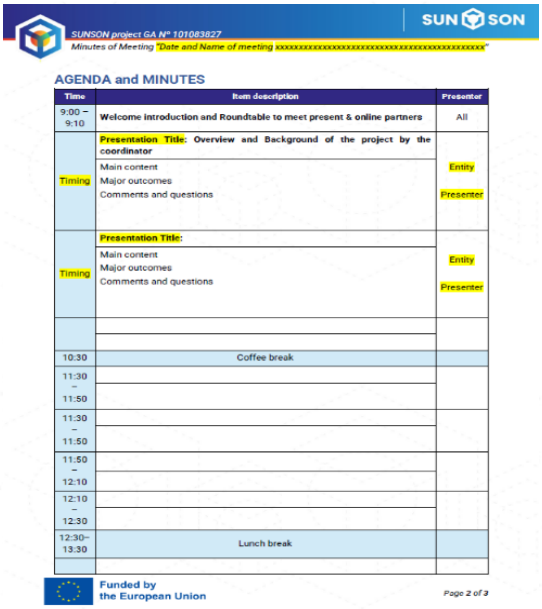
☒ to be revised by Partners
☐ for approval by the Project Coordinator

Disclaimer of SUNSON project:

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

© **Copyright** in this document remains vested with the SUNSON Partners, 2022-2026

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both. Reproduction is authorised provided the source is acknowledged.



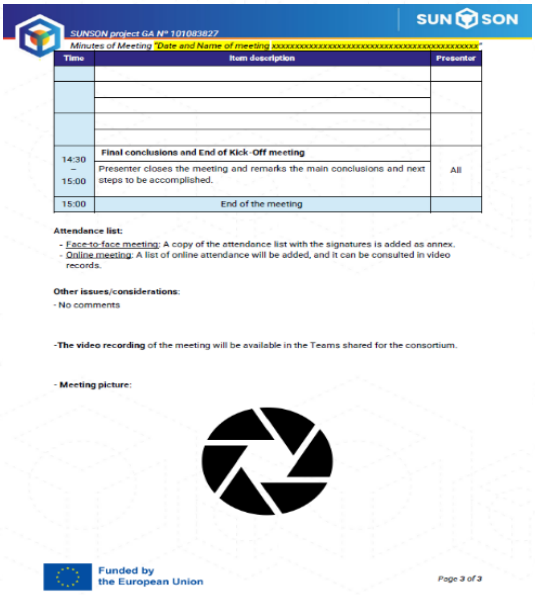
SUNSON project GA Nº 101083827
Minutes of Meeting "Date and Name of meeting xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

AGENDA and MINUTES

Time	Item description	Presenter
9:00 – 9:10	**Welcome introduction and Roundtable to meet present & online partners**	All
Timing	**Presentation Title: Overview and Background of the project by the coordinator** Main content Major outcomes Comments and questions	Entity Presenter
Timing	**Presentation Title:** Main content Major outcomes Comments and questions	Entity Presenter
10:30	Coffee break	
11:30 – 11:50		
11:30 – 11:50		
11:50 – 12:10		
12:10 – 12:30		
12:30– 13:30	Lunch break	

Funded by the European Union

Page 2 of 3



SUNSON project GA Nº 101083827
Minutes of Meeting "Date and Name of meeting xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

Time	Item description	Presenter
14:30 – 15:00	**Final conclusions and End of Kick-Off meeting** Presenter closes the meeting and remarks the main conclusions and next steps to be accomplished.	All
15:00	End of the meeting	

Attendance list:

- Face-to-face meeting: A copy of the attendance list with the signatures is added as annex.
- Online meeting: A list of online attendance will be added, and it can be consulted in video records.

Other issues/considerations:

- No comments

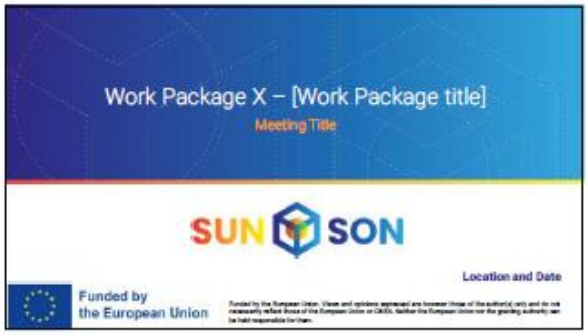
-**The video recording** of the meeting will be available in the Teams shared for the consortium.

- **Meeting picture:**

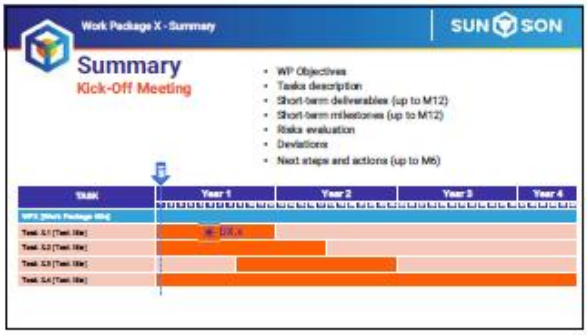
Funded by the European Union

Page 3 of 3

6.1.3 Presentation template for consortium meetings:

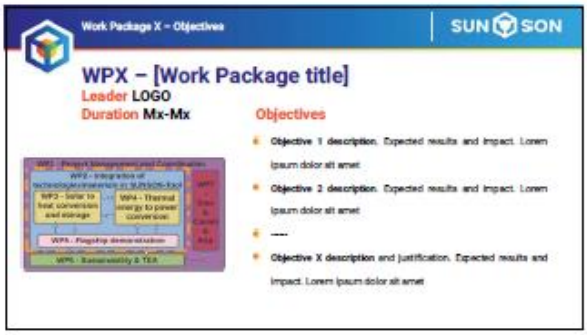


1



2

3



4

5

6


Work Package X – Task X.X
SUNSON
Task X.X Title description
Subtask X.X Title description
Methodology
Inputs needed
Outputs and results
Main partners role
Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod
Subtask X.X Title description
Methodology
Inputs needed
Outputs and results
Main partners role
Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh
MS
M20
Leader: LOGO
Participants: LOGOS

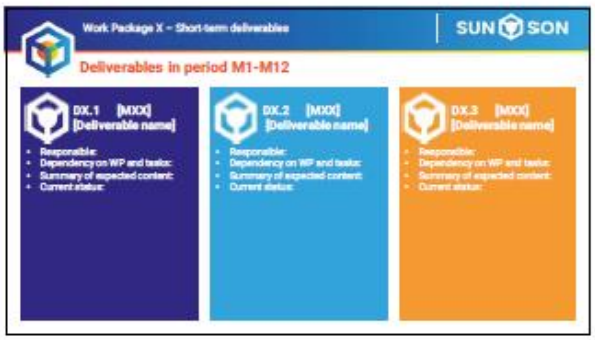
7


Work Package X – Task X.X
SUNSON
Task X.X Title description
Subtask X.X Title description
Methodology
Inputs needed
Outputs and results
Main partners role
Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod
Subtask X.X Title description
Methodology
Inputs needed
Outputs and results
Main partners role
Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh
MS
M20
Leader: LOGO
Participants: LOGOS

8


Short-term
Deliverables

9


Work Package X – Short-term deliverables
SUNSON
Deliverables in period M1-M12
DX.1 [MXX]
[Deliverable name]
Responsible:
Dependency on WP and tasks:
Summary of expected content:
Current status:
DX.2 [MXX]
[Deliverable name]
Responsible:
Dependency on WP and tasks:
Summary of expected content:
Current status:
DX.3 [MXX]
[Deliverable name]
Responsible:
Dependency on WP and tasks:
Summary of expected content:
Current status:

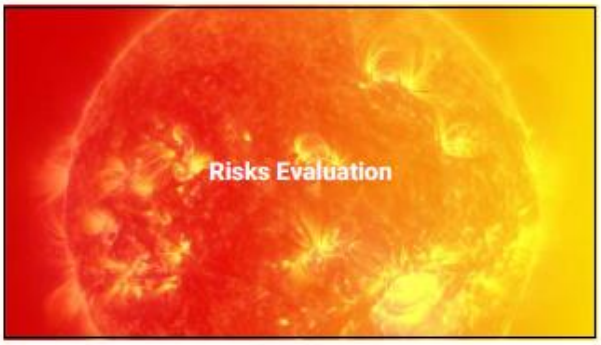
10


Short-term
Milestones

11

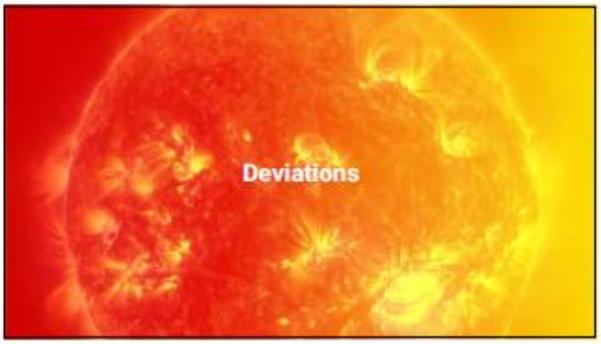

Work Package X – Short-term milestones
SUNSON
Milestones in period M1-M12
MS X [Month]
[Milestone name]
Related WP:
Responsible partner
Due date:
Means of verification:
MS Y [Month]
[Milestone name]
Related WP:
Responsible partner
Due date:
Means of verification:
MS Z [Month]
[Milestone name]
Related WP:
Responsible partner
Due date:
Means of verification:

12

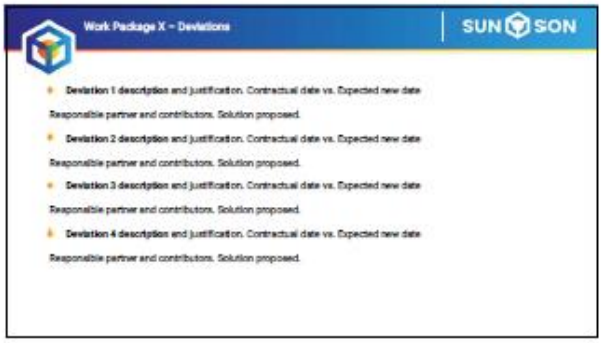


13

14



15



16

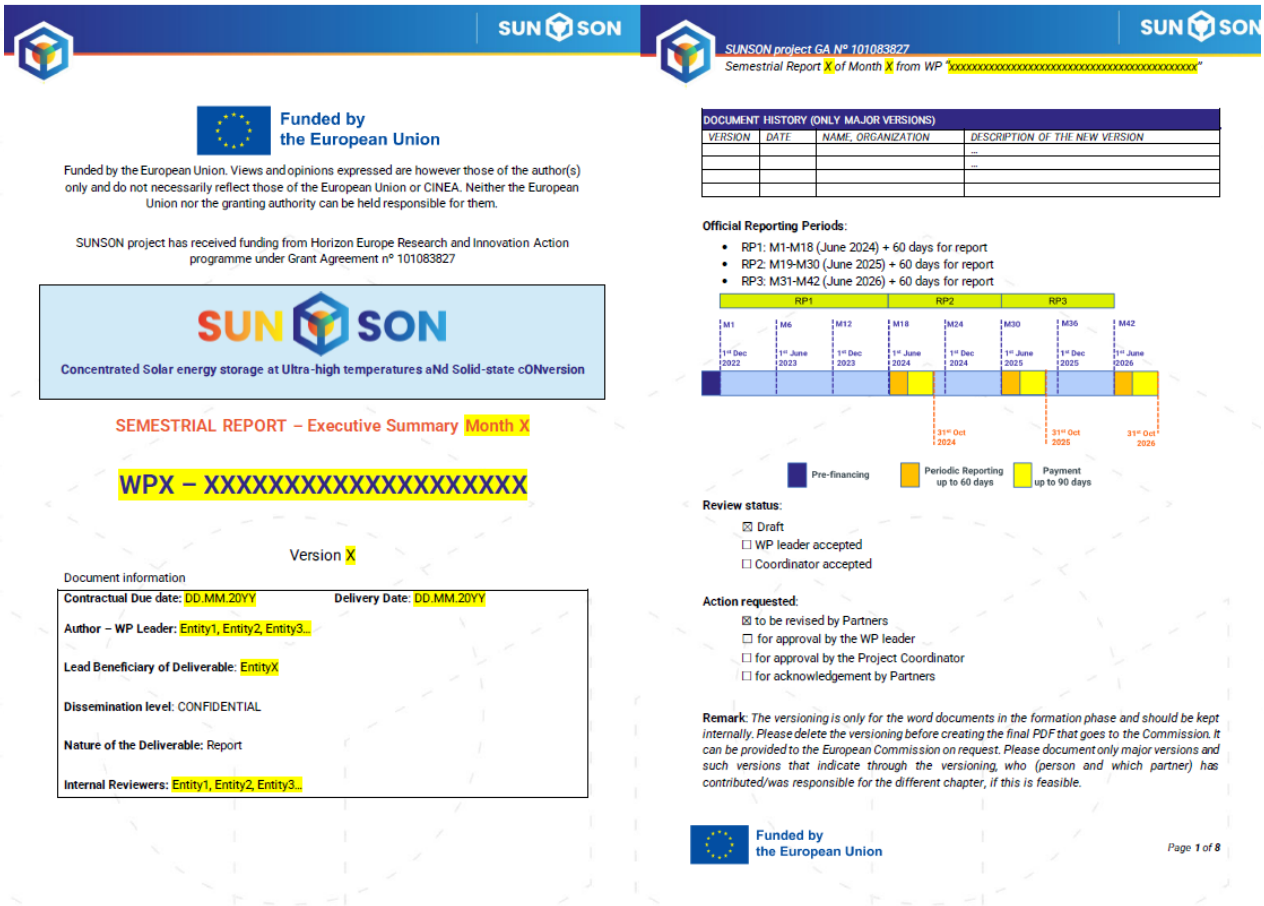
17

18

19

20

6.1.4 Semestrial Executive summary template for Project Reporting:



SUNSON

Funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

SUNSON project has received funding from Horizon Europe Research and Innovation Action programme under Grant Agreement nº 101083827

SUNSON

Concentrated Solar energy storage at Ultra-high temperatures aNd Solid-state cONversion

SEMESTRIAL REPORT – Executive Summary Month X

WPX – XXXXXXXXXXXXXXXXXXX

Version X

Document information

Contractual Due date: DD.MM.20YY	**Delivery Date:** DD.MM.20YY
Author – WP Leader: Entity1, Entity2, Entity3…	
Lead Beneficiary of Deliverable: EntityX	
Dissemination level: CONFIDENTIAL	
Nature of the Deliverable: Report	
Internal Reviewers: Entity1, Entity2, Entity3…	

SUNSON project GA Nº 101083827
Semestrial Report X of Month X from WP "xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

DOCUMENT HISTORY (ONLY MAJOR VERSIONS)			
VERSION	DATE	NAME, ORGANIZATION	DESCRIPTION OF THE NEW VERSION
			…
			…

Official Reporting Periods:

- RP1: M1-M18 (June 2024) + 60 days for report
- RP2: M19-M30 (June 2025) + 60 days for report
- RP3: M31-M42 (June 2026) + 60 days for report

Review status:

☒ Draft
☐ WP leader accepted
☐ Coordinator accepted

Action requested:

☒ to be revised by Partners
☐ for approval by the WP leader
☐ for approval by the Project Coordinator
☐ for acknowledgement by Partners

Remark: *The versioning is only for the word documents in the formation phase and should be kept internally. Please delete the versioning before creating the final PDF that goes to the Commission. It can be provided to the European Commission on request. Please document only major versions and such versions that indicate through the versioning, who (person and which partner) has contributed/was responsible for the different chapter, if this is feasible.*

Funded by the European Union

Page 1 of 8

1 Summary of the work done during the current reporting period

WP general description

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat.

1.1 Task X.1

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat.

- Objective
- Methodology used
- Development status of the task
- Outputs and results
- Next actions proposed for the next reporting period (1 year)

1.2 Task X.2

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat.

- Objective
- Methodology used
- Development status of the task
- Outputs and results
- Next actions proposed for the next reporting period (1 year)

1.3 Task X.3

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat.

- Objective
- Methodology used
- Development status of the task
- Outputs and results
- Next actions proposed for the next reporting period (1 year)

1.4 Task X.4

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat.

- Objective
- Methodology used
- Development status of the task
- Outputs and results
- Next actions proposed for the next reporting period (1 year)

2 Progress through the achievement of the WP milestones (list all milestones in the WP)

2.1.1 Milestone MX

Related WP: WPX
Responsible: ACRONYM
Due date: month X
Means of verification: xxxxxxxxx
Status:

2.1.2 Milestone MX

Related WP: WPX
Responsible: ACRONYM
Due date: month X
Means of verification: xxxxxxxxx
Status:

2.1.3 Milestone MX

Related WP: WPX
Responsible: ACRONYM
Due date: month X
Means of verification: xxxxxxxxx
Status:

3 Progress through the achievement of the WP deliverables (list all deliverables in the WP)

Table 1. Summary of DV status

D.	Title	Month	Type	Responsible	Status
X.1					
X.2					
X.3					
..					
...					
..					

3.1 Deliverable DX.1: title

Description of status, content and results

3.2 Deliverable DX.1: title

Description of status, content and results

3.3 Deliverable DX.1: title

Description of status, content and results

4 Assessment of the Critical Risks

See the critical risks listed in the Participant Portal o the GA document
Please add new risks if they have been identified

Likelihood	Severity	Risk description	Risk-mitigation measures
1	1		
2	2		
3	3		
1	1		
2	2		
3	3		
1	1		

5 Assessment of Deviations

Deviations in terms of timing, scope, or resources per task

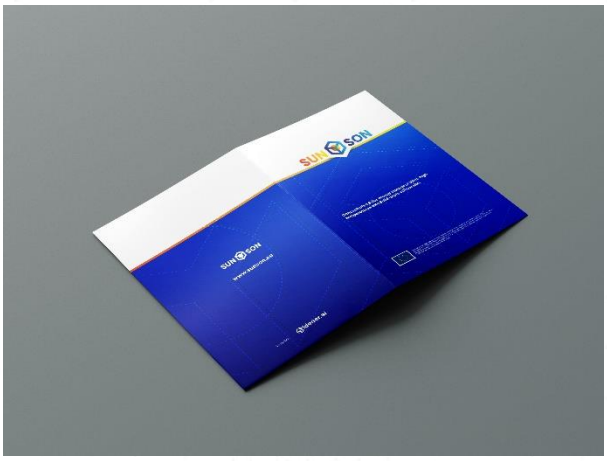
- **Deviation 1 description** and justification.
  Contractual date vs. Expected new date
  Responsible partner and contributors.
  Solution proposed.
- **Deviation 2 description** and justification.
  Contractual date vs. Expected new date
  Responsible partner and contributors.
  Solution proposed.
- **Deviation 3 description** and justification.
  Contractual date vs. Expected new date
  Responsible partner and contributors.
  Solution proposed.
- **Deviation 4 description** and justification.
  Contractual date vs. Expected new date
  Responsible partner and contributors.
  Solution proposed.

6 Dissemination, Communication, Exploitation and Training

Publications in Scientific Journals (title, authors, date, journal, etc.)
1. Publication 1 2. Publication 2 3. …
Publications in Conference Proceedings (title, authors, date, conference name, etc.)
1. Publication 1 2. Publication 2 3. …
Presentations in Conferences, Seminars, Trade fairs, and/or Workshops without proceedings (title, authors, date, event name, etc.)
1. Presentation 1 2. Presentation 2 3. Poster 1 4. Poster 2 5. …
Patents (title, authors, date, etc.)
1. Patent 1 2. Industrial secret 2 3. Copyrights 4. ….
Data (kind of data, data identifier, …)
Generated databases in line with the Data Management Plan (D1.2) 1. Data 1 2. Data 2 3. …
Exploitation activities (commercialization agreements, licensing, investments, etc.)
1. Activity 1 2. Activity 2 3. …
Communication activities (press, broadcast media, etc.) – please include the links
1. Press releases 2. Newspapers articles 3. Electronic journals 4. Radio presentation 5. TV presentations
Internal or External Training activities (webinars, workshops, lectures, seminars, etc.)
1. Activity 1 2. Activity 2 3.

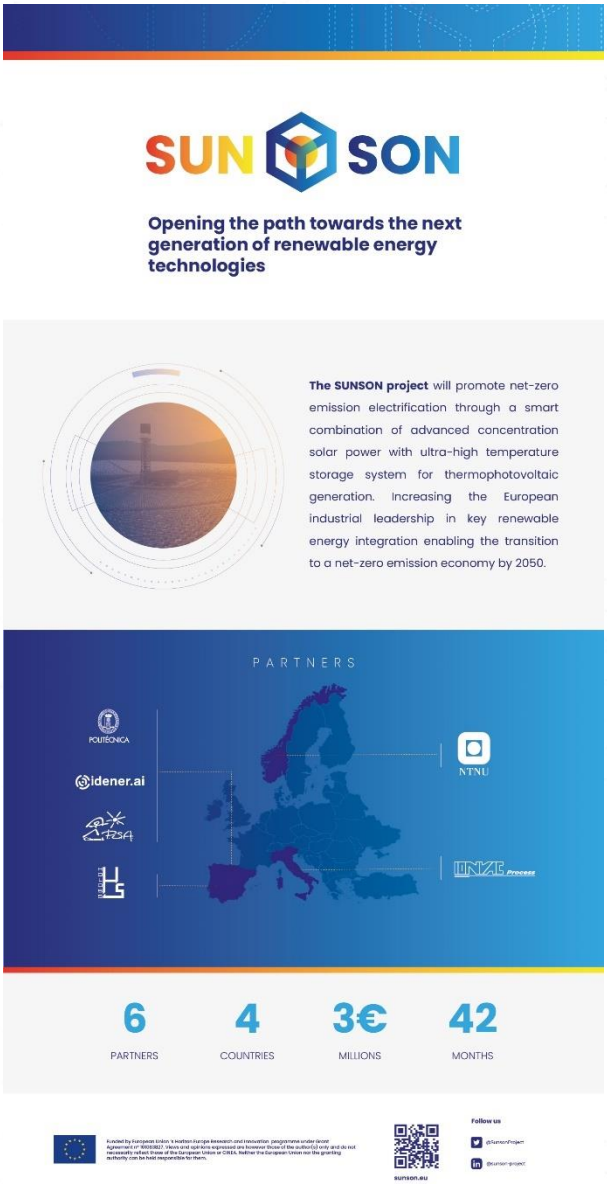
6.2 ANNEX II

6.2.1 Project folder



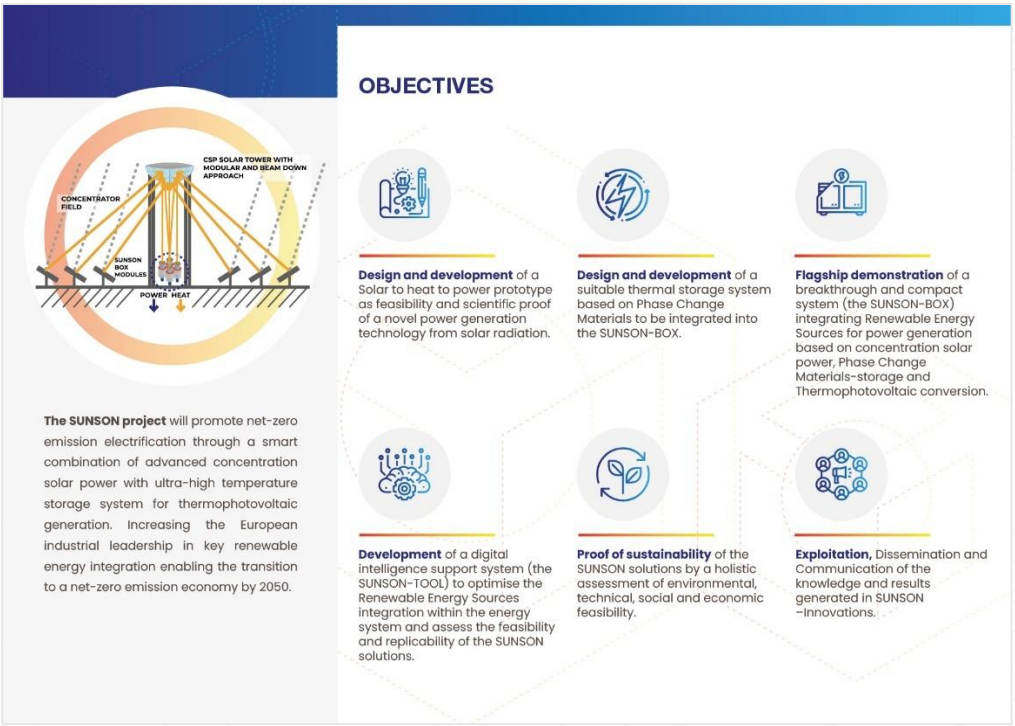
6.2.2 Lanyard for identification cards

6.2.3 Display banner



6.2.4 Digital and paper flyer templates

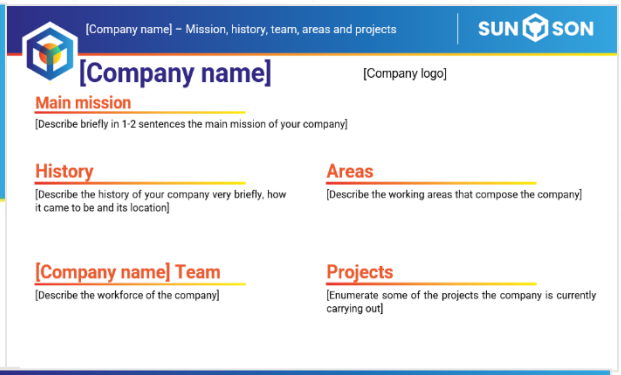

6
PARTNERS
4
COUNTRIES
3€
MILLIONS
42
MONTHS
PARTNERS
idener.ai
NTNU
SUNSON
Opening the path towards the next generation of renewable energy technologies
SUNSON outcomes pursue a technological breakthrough in compact Concentration solar power and Renewable Energy Sources conversion to generate electricity with a modular and scalable approach to increase its efficiency and cost-effectiveness. Operating at ultrahigh temperatures (>1200ºC) provides higher efficiency ratios in converters and it is of particular interest for latent heat storage systems, as they offer up to 10 times the storage capacity of current molten salt-based storages at 600-800ºC, resulting in a decrease of 10 times the overall system size and reducing the scale-size associated costs.
Project Coordinator
Universidad Politécnica de Madrid.
Instituto de Energía solar.
Ramiro de Maeztu 7 Edif.
Rectorado, Madrid.
28040, Spain.
Dissemintaion
IDENER
Early Ovington 24-8
41300 La Rinconada
(Seville), Spain
www.idener.es
Follow us
@SunsonProject
@sunson-project
sunson.eu

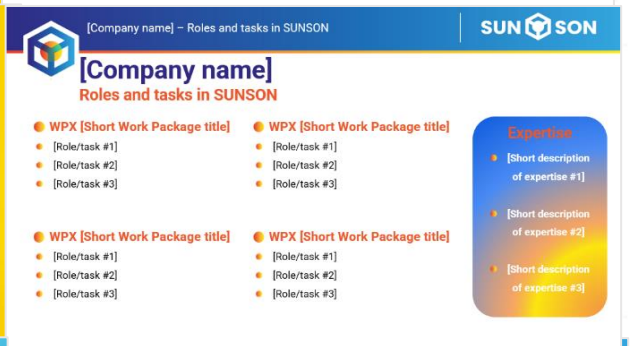

OBJECTIVES
CSP SOLAR TOWER WITH MODULAR AND BEAM DOWN APPROACH
CONCENTRATOR FIELD
SUNSON BOX MODULES
POWER
HEAT
The SUNSON project will promote net-zero emission electrification through a smart combination of advanced concentration solar power with ultra-high temperature storage system for thermophotovoltaic generation. Increasing the European industrial leadership in key renewable energy integration enabling the transition to a net-zero emission economy by 2050.
Design and development of a Solar to heat to power prototype as feasibility and scientific proof of a novel power generation technology from solar radiation.
Design and development of a suitable thermal storage system based on Phase Change Materials to be integrated into the SUNSON-BOX.
Flagship demonstration of a breakthrough and compact system (the SUNSON-BOX) integrating Renewable Energy Sources for power generation based on concentration solar power, Phase Change Materials-storage and Thermophotovoltaic conversion.
Development of a digital intelligence support system (the SUNSON-TOOL) to optimise the Renewable Energy Sources integration within the energy system and assess the feasibility and replicability of the SUNSON solutions.
Proof of sustainability of the SUNSON solutions by a holistic assessment of environmental, technical, social and economic feasibility.
Exploitation, Dissemination and Communication of the knowledge and results generated in SUNSON -Innovations.

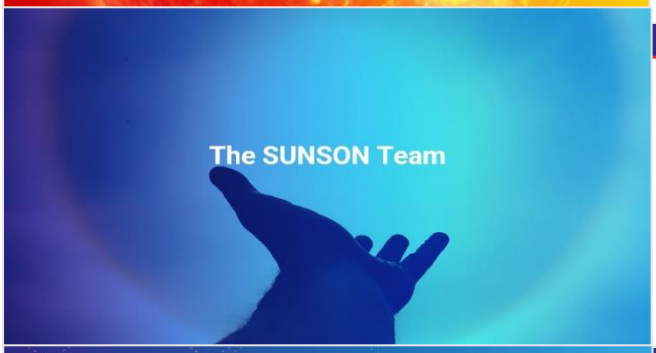
6.2.5 Poster template

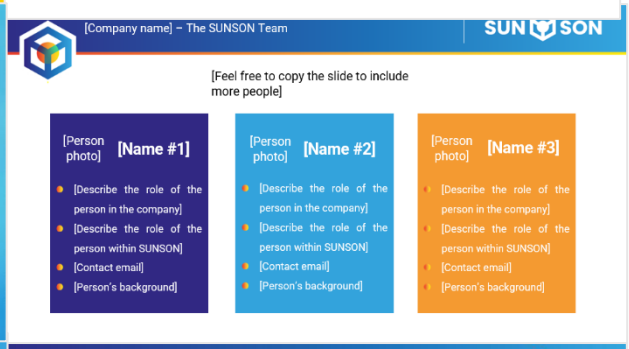
6.2.6 General presentation template

6.2.7 Entity presentation template









6.3 ANNEX III

6.3.1 Social key messages

The following key messages will be used in Twitter to reach the audience and keep the followers informed and interested:

Post 1
SUNSON proposes a breakthrough in the field of Solar to Heat to Power (S2H2P) generation with 10 times less storage volume than the current concentrated solar power systems.
Post 2
SUNSON comprises a smart combination of advanced concentrated solar power + ultra-high temperature storage system + thermophotovoltaic generation.
Post 3
SUNSON is well aligned to the growing European and international interest in integrating renewable energy sources (RES), solar energy conversion and thermal storage, to scale up and demonstrate novel technologies from research level, advancing within the market uptake roadmap.
Post 4
SUNSON will radically boost the EU economy by promoting net-zero emission electrification to put CSP back on track to meet the 2050 target.
Post 5
The European renewables market represents 25% of the worldwide renewables market, being the second-largest market after China, which means that EU companies have significant opportunities in emerging markets.
Post 6
SUNSON copes with strategic areas such as renewable energy generation, storage and conversion, efficiency, electrification, sustainability, or digitalisation to boost European autonomy, growth a decarbonised energy generation and foster economic and social awareness.
Post 7
The search for distributed and site-independent energy solutions is an urgent field of research. In this sense, CSP enables the direct storage of solar energy as heat and converts it into electricity on demand.
Post 8
SUNSON outcomes pursue a technological breakthrough in compact CSP and RES conversion to generate electricity with a modular and scalable approach to increase its efficiency and cost-effectiveness.
Post 9
SUNSON aims to demonstrate the feasibility and potential of a modular and highly compact solution for Solar to Heat to Power (S2H2P), called the SUNSON-Box.
Post 10
SUNSON innovations: the SUNSON BOX + ultra-high temperature PCM storage + the SUNSON-Tool
Post 11
SUNSON methodology approaches TRL evolution from a conceptual idea (TRL2), with intermediate testing at the laboratory for the individual components up to the experimental TRL4 validation of the integrated technology
Post 12
SUNSON proposes the integration of ground-breaking technologies to overcome the challenges in energy conversion from CSP power generation that enables better cost efficiency by combining high-efficiency technologies and increasing the equipment simplicity by removing complex parts.

Post 13
SUNSON-BOX will be the first prototype which combines a single ultra-compact system (10 times less volume than current CSP systems), capable of working at over 1200°C.
Post 14
SUNSON concept consists of 3 main components: (1) a charging system by solar radiation with advanced CSP optics, (2) an ultra-high temperature PCM storage system, and (3) discharging system by TPV generators to produce electricity on demand.
Post 15
SUNSON proposes a new S2H2P concept by integrating innovative technologies within the SUNSON-Box prototype, starting from conceptual level to the validation of an integrated prototype in the solar furnace at @psaciemat's R&D facilities.
Post 16
The targeted breakthrough of SUNSON is to develop a novel ultra-high temperature latent heat storage system capable of working above 1200°C.
Post 17
SUNSON will provide a tool for design replicability and up-scaling based on Multidisciplinary Design Optimisation for a proper energy management and RES variability.
Post 18
SUNSON-Box represents the next generation of ultra-compact S2H2P system to increase the RES integration share, with proven performance for further up-scaling and commercialisation.
Post 19
SUNSON partners actively coordinated and participated in previous EU-funded projects such as AMADEUS, HYDROSOL, PROME3THE2US2, SISAL, ISLANDER, GRECO or NATHALIE. All this knowledge is used for the correct execution of SUNSON.
Post 20
SUNSON is shaped with an integrated approach to ensure a smooth transition from TRL2 to TRL4. Design, modelling, development, and integration activities are within the SUNSON scope.
Post 21
SUNSON is an ambitious project integrating radically diverse disciplines of knowledge: materials science, metallurgy, engineering, physical chemistry, thermo- and fluid-dynamics, photovoltaics and thermal storage, energy conversion and sustainability.
Post 22
SUNSON methodology with a holistic approach will be leveraged to create workshops, seminars, events, training, and replicable results and obtain feedback from representative sectors and stakeholders, the ones directly involved in the project.
Post 23
SUNSON will incorporate social innovation concepts supported by real end-users' needs aimed at improving our assessment of and response to complex societal cross-cutting issues.
Post 24
The social and socioeconomic benefits of the innovative value chains developed in SUNSON will be addressed by applying the social LCA methodology, as well as assessing the social impact and the key stakeholder's approval along the value chain.
Post 25
The proposal follows a human-centric approach to addressing social acceptance or resistance to new energy technologies, related socioeconomic and livelihood issues in considering society's expectations and position towards SUNSON developments.

Funded by the European Union

Post 26
As an integral part of the work plan, the results of SUNSON will be disseminated following the EU's Open Science policy and FAIR principles, e.g., OpenAIRE Dashboard and EU-Citizen.Science.
Post 27
SUNSON consortium is committed to promoting the participation, representativeness, and leadership of women at all levels. SUNSON follows the Directive 2002/73/EC on implementing equal treatment for men and women.
Post 28
Nearly 40% of the people involved in the SUNSON project are female researchers, which is remarkable given its low percentage belonging to the project fields (such as engineering and information technologies).
Post 29
SUNSON will develop an innovative MTW-TPV cell producing >1 W/cm2 and >25% conversion efficiency and will manufacture a novel TPV module with high efficiency (< 2% cell-to-module interconnection losses).
Post 30
SUNSON seeks to increase the growth of CSP in Europe by breaking the current temperature limits, improving its storage capacity and promoting materials with the greatest potential to reduce costs in the short term.
Post 31
SUNSON has the potential to provide one of the best energy densities at a cost ratio (~10 €/kWh) among the lowest offered by commercial storage systems.
Post 32
SUNSON-Box prototype will generate new knowledge on compact, modular, and efficient energy generation based on novel optics for CSP combined with a compact TPV with PCM storage.
Post 33
CSP entities could benefit from the SUNSON-Box prototype technology by elaborating a strategic vision for the medium to long terms based on reliable data on the feasibility and efficacy of SUNSON solutions.
Post 34
SUNSON supports that more attention should be paid to current policies, which are insufficient to achieve ambitious long-term goals for developing a sustainable, innovative society.
Post 35
The CSP market size surpasses 3.6B€, and the annual production will exceed 1.3GW, reaching 6.3B€ in market value with a 16.2% CARG by 2028.
Post 36
SUNSON-Tool is based on AI and ML algorithms to predict performance and replicability in Europe and beyond (a strong market growth in China, Israel, South Africa, Morocco, Saudi Arabia, Kuwait).
Post 37
SUNSON contributes to the green and digital transformation of Europe with advanced solutions for power generation from local renewable solar resources following sustainable and affordability premises and the adoption of key digital and enabling technologies.
Post 38

SUNSON pilot demonstrates a compact, modular and efficient energy generation based on novel optics for CSP combined with a compact TVP with PCM storage to increase RES integration. It allows to store and to generate both electricity and thermal energy.
Post 39
SUNSON will take advantage of local and renewable resources (solar radiation) and unexploited storage technologies (ultra-high temperature) to foster a solid European global leadership in affordable, secure, reliable and sustainable renewable energy technologies.
Post 40
Proof technical, economic and environmental feasibility with SUNSON replicability features to enhance the market uptake of a disruptive CSP+TPV technology and replace fossil-based ones by 2050.
Post 41
SUNSON pilot shows efficient management based on the results of a MDO approach analysis providing flexible energy storage, generation and demand response to optimise costs and sustainability indicators.
Post 42
SUNSON tool will exploit synergies between power and thermal energy by improving the digital and data infrastructure (supported by ML techniques), facilitating the control, monitoring and integration of varying RES.
Post 43
Deployment and testing of SUNSON open interface tool with a high degree of interoperability, model modularity, data availability and exchange for supporting stakeholders' engagement and social participation.
Post 44
SUNSON will support several EU policy priorities. The main identified policies are initiatives under the Green Deal such as Clean Energy, Sustainable Industry, and Eliminating Pollution, among others.
Post 45
SUNSON creates more and better jobs (25 jobs per million invested in Renewable energy actions) and presents a high turnover/job ratio compared to other sectors (800k€/job).
Post 46
SUNSON will work and produce innovative, and profitable solutions are planned to be commercialised, given the relevant market potential characterised by a global market value growing from 37B€ in 2021 to 108B€ in 2028 at a CAGR of 16.2% in the forecast period.
Post 47
SUNSON project proposes a promising solution to meet uncovered CSP targets and real industrial needs (cost-effectiveness, compactness, modularity and high operation temperatures).
Post 48
SUNSON results will have direct commercialisation prospects in the future since 3 partners in the consortium UPM, NTNU, PSA are closely involved with technology manufacturers and material providers actively investing in improving their products with the SUNSON value proposition.
Post 49
The SUNSON-TOOL offers an integrated energy ecosystem through an energy data space platform and energy management, supporting future replicability actions, performing feasibility analysis and acting as DSS.
Post 50
SUNSON will provide new solutions to cover potential improvements and provoke a cost reduction (80% decrease in CAPEX per energy capacity, compared to Li-ion batteries), achievable with increased deployment and demonstration.
Post 51

This project encourages the driving role of new high-potential actors in R&I by incorporating high tech SME (IONV), SMEs of recent creation (HOLOSS), high qualified women (leaders of NTNU and IDE teams) and young research and studies (UPM, NTNU, IDE).
Post 52
To achieve SUNSON's objectives, a multi-disciplinary consortium has been arranged with a well-balanced distribution and an experienced group integrating 2 SMEs (IONV; HOLOSS), 1 research organisation (IDENER), 1 public organisation (PSA-CIEMAT) and 2 universities (UPM and NTNU).
Post 53
6 partners from 4 different countries (Spain, Italy, Norway and Portugal) guarantee a diverse European countries coverage within SUNSON.
Post 54
The SUNSON consortium is multidisciplinary, covering different expertise such as RES integration with enhanced optics for micro-CSP, TPV conversion, storage materials, ultra-high temperature, modelling, digitalisation, environmental, socioeconomic science and ethics issues.
Post 55
Within SUNSON project, UPM will act as scientific and technical project coordinator, PSA, NTNU and UPM as R&D technology developers and technology validators, IONVAC as engineering, IDE as co-coordinator, digitalisation and optimisation and DEC leader.
Post 56
Within SUNSON, IDENER with the support of ALL the consortium will define a robust business model and credible key exploitation routes to reach cooperation agreements or commercialisation relationships with power generation sector, platforms, associations or stakeholders.