STORAGE RESEARCH INFRASTRUCTURE ECO-SYSTEM

WORK PLAN
WORKING GROUP 1

# 1  CONTENTS

## 2  ABBREVIATIONS AND ACRONYMS

| AB | Advisory Board |
|------|-----------------------------------------|
| AC | Associated Countries |
| ES | Energy Storage |
| GB | Governing Board |
| LoI | Letter of Intent |
| LTP | Linked Third Party |
| MS | Member States |
| R&I | Research and Innovation |
| RI | Research Infrastructure |
| RTO | Research and Technology Operator |
| SC | Steering Committee |
| SRIA | Strategic Research and Innovation Agenda |
| TNA | Transnational Access |
| ToR | Terms of Reference |
| WG | Working Group |
| WP | Work Package |

# 3  INTRODUCTION

StoRIES' main objectives are first, to create a large European eco-system of both industry and research together and second, to provide access to most advanced scientific infrastructures in the field. Four permanent Working Groups have been set up to ensure the involvement and contribution of all the stakeholders of StoRIES eco-system, providing vision, inputs, guidance, and continuous feedback for the development of different documents, publications, and activities.

# 4 OBJECTIVES AND EXPECTED RESULTS

Working Group 1 will provide input and recommendations to the SRIA and the roadmap for hybridisation of ES developed in Task 3.3 ('Development of a roadmap and SRIA for hybridization of ES') of WP3. The requested input will cover different areas and topics such as the identification of hybrid combinations as well as needs in terms of innovation, research infrastructure, technology development, cost reductions, integration for single technologies and combinations to be viable. The roadmap and SRIA will gather experience and knowledge from all stakeholders in the StoRIES ecosystem and use this to identify knowledge gaps and needs for research and innovation in order to make hybrid storage solutions viable.

# 5 COURSE OF ACTION

Within two months before the completion of one roadmap/SRIA version within T.3.3 (WP3), the WG1 Chair will summarise the documents and schedule a virtual meeting to discuss the results with WG1. The physical meeting will only take place on request of WG1 Members and back-to-back with the StoRIES project meeting or another StoRIES event to maximise participation.

The timeline of WG1 meetings is closely linked to the T3.3 work plan. For this reason, in case of delays in the implementation of the different versions of the roadmap/SRIA, there may be deviations from the WG1 timeline displayed in the following chapter.

According to T3.3 work plan, three versions of the roadmap/SRIA are expected within the project duration. WG1 meetings to give recommendations for implementation of the corresponding roadmap/SRIA versions will be organised two months before the corresponding delivery, i.e.:

- M8: First WG1 meeting to analyse the 'outline/scope of the roadmap/SRIA' expected in M6
- M18: Second WG1 meeting to analyse the 'first draft of the roadmap/SRIA' due in M20
- M28: Third WG1 meeting to analyse the 'second draft of the roadmap/SRIA' expected in M30
- M40: Four WG1 meeting to analyse the 'final version of the roadmap/SRIA' due in M42

# 6  KEY DELIVERABLES

WG1 will provide recommendations for implementing the different versions of the roadmap and SRIA along the project duration as an iterative process (see Annex III). At least three different draft version are expected.

After each WG1 meeting, the minutes should be prepared by the WG1 Chair and circulated within two weeks' time. If no objections to the minutes are received ten days after the distribution of the minutes, then they will be considered as approved by all WG1 participants.

- Report 1: Minutes of Meeting – WS#1 (M9)
- Report 2: Minutes of Meeting – WS#2 (M19)
- Report 3: Minutes of Meeting – WS#3 (M29)
- Report 4: Minutes of Meeting – WS#4 (M41)

# 7 TIMELINE

Table 1: Timeline of planned activities of WG1

| Name | Title | Activity | Time | Date | Status |
|---|---|---|---|---|---|
| WG1 – Workshop#1 | Feedback to scope of the roadmap/SRIA | meeting | M8 | 3 June 22 | done |
| WG1 – Workshop#1 | Minutes of Meeting -WS#1 | report | M9 | Jul 22 | done |
| WG1 – Workshop#2 | Feedback to 1$^{st}$ draft of the roadmap/SRIA | meeting | M18 | 5 May 23 | ongoing |
| WG1 – Workshop#2 | Minutes of Meeting -WS#2 | report | M19 | May 23 | - |
| WG1 – Workshop#3 | Feedback to 2$^{nd}$ draft of the roadmap/SRIA | meeting | M28 | Feb 24 | - |
| WG1 – Workshop#3 | Minutes of Meeting -WS#3 | report | M29 | March 24 | - |
| WG1 – Workshop#4 | Feedback to final draft of roadmap/SRIA | meeting | M40 | Feb 25 | - |
| WG1 – Workshop#4 | Minutes of Meeting -WS#4 | report | M41 | March 25 | - |

# 8 MEANS AND TOOLS

The meetings will usually be held online, but a collaborative toolset will be provided to ensure that each expert can contribute. Tools to be used include Conceptboard (an interactive collaborative workshop tool) and tools for simultaneous editing of text documents. All members of WG1 receive access to a StoRIES SharePoint folder dedicated to the work of WG1.

# 9 IDENTIFIED RISKS

Two main risks were identified in WG1:

1. Delays in T3.3. The schedule of WG1 meetings is closely linked to the T3.3 work plan. For this reason, in case of delays in the implementation of the different versions of the roadmap/SRIA, there may be deviations from the WG1 work plan.

    - T.3.3 leader has been invited to join the WG1 in order to immediately inform the WG1 chair about any change of the expected schedule for delivering the different versions of roadmap and SRIA.

    - The status and progress of all StoRIES tasks (including T3.3) are continuously monitoring by the SC JF (Steering Committee Jour Fixe) meetings every two weeks in order to take actions in case of possible deviations.

2. Low participation of WG1 Members to provide recommendations for implementing the different versions of the roadmap and SRIA.

    - The WG1 meetings will be announced on the webpage as well as on social media. Save-the-date invitations will be sent to all WG1 members at least four weeks in advance. The agenda of each meeting will be prepared by the WG1 Chair assisted by the Secretariat as needed two weeks before the meeting and will be send to all WG1 members in advance.

    - The physical meeting will only take place on request of WG1 Members and back-to-back with the StoRIES project meeting or another StoRIES event to maximise participation.

# 10 ANNEX I – WG1 MEMBERS

| Family Name | First Name | Organization | Country | Specific Field |
|---|---|---|---|---|
| Balducci | Andrea | UNIJENA | DE | Electrochemical Energy Storage |
| Bouchotrouch | Faisal | CENER | ES | Management System Development |
| Cavazzini | Giovanna | UNIPD | IT | Mechanical Energy Storage |
| Dr. Mayo-García | Rafael | CIEMAT | ES | Roadmap for Hybridisation, Strategic |
| Graczyk-Zajac | Magdalena | EnBW | DE | Electrochemical Energy Storage |
| Granados | Xavier | CSIC-ICMAB | ES | SMES |
| Groenenberg | Remco | TNO | NL | Medium to long duration es |
| Iturbe | Rafa | ANTECSA | ES | SMES |
| Jacas Biendicho | Jordi | IREC | ES | Electrochemical Energy Storage |
| Karagiannakis | George | CERTH | GR | Thermal/Thermochemical es |
| Koornneef | Joris | TNO | NL | Medium to long duration es |
| Luque Aleman | Enrique | VOITH | DE | Management Energy Storage |
| Mahmood | Nasir | RMIT | AU | Electrochemical Energy Storage |
| Millingen | Magnus | TEXEL | UK | Thermal Energy Storage |
| Navarro | Helena | UNIBIRG | UK | Thermal Energy Storage |
| Ollacarizqueta | Aitor | CENER | ES | Management System Development |
| Paillard | Elie-Elisee | POLIMI | IT | Electrochemical Energy Storage |
| Persoglia | Sergio | OGS | IT | Hydrogen Underground Storage |
| Stevens | Philippe | EDF | FR | Electrochemical, Chemical, Thermal |
| Scipioni | Roberto | SINTEF | NO | Electrichemical |
| Trilla | Lluis | IREC | ES | Battery Management System |
| Zadeh | Mehdi | NTNU | NO | Marine Hybrid Power System |
| Zubizarrtea | Leire | ITE | ES | Materials for Energy Storage |

WG1 Chair: Myriam E. Gil Bardají, KIT

As of February 2023

# 11 ANNEX II – LETTER OF INTENT (TEMPLATE)

**Letter of support for H2020 STORIES project**

**Subject: Interest of becoming a member of the *Working Groups 2-3* in the STORIES project**

**H2020: LC-GD-9-1-2020**: European Research Infrastructures capacities and services to address European Green Deal challenges // Topic: Support Europe leadership in clean energy storage technologies

Dear STORIES consortium,

Mr.XXXXXXX hereby expresses her/his active support to the project *'STORIES-Storage Research Infrastructure Ecosystem'* led by Karlsruhe Institute of Technology (*KIT)* under the H2020 Green Deal Call.

In December 2019, the European Commission has presented the "European Green Deal", a set of policy initiatives aiming at ensuring the EU becomes climate neutral by 2050. These policy initiatives have strong implications for the energy sector, and for the energy storage sector in particular. To address these challenges, STORIES brings together a consortium of more than 30 beneficiaries from at least 15 countries: ESFRI facilities, technology institutes, universities and industrial partners to jointly improve the economic performance of storage technologies.

The main technological objectives of STORIES are linked to the energy storage development by providing access to world-class research infrastructures and services, with a focus on improving materials for devices and optimizing hybrid energy systems with a view to make energy technologies more competitive and reducing costs. In addition, STORIES focus on the analysis of socio-technical and environmental aspects of new developments and systems and provides training and education.

The project will bring a significant contribution towards Europe's independence on fossil fuels, while opening industrial opportunities for disruptive technologies. The foreseen acceleration of materials developments and enhancing of hybrid storage technologies will lead to cost reduction of energy storage devices. Users will perform research to foster innovation in the long lasting structures of the European Energy Research Alliance (EERA) and the industry lead European Association for Storage of Energy (EASE). This supports strongly the entire energy value chain and is a necessasity to solidify the European leadership in renewable energy technologies.

With reference to this project, Mr. xxxxxxx as energy storage expert in the field ----energy storage, will participate as a member of the project's **Working Group 1** and contribute to the Roadmap for hybridisation of energy storage as well as the Strategic Research and Innovation Agenda (SRIA) within the STORIES project.

Yours sincerely,

**Signature**

**Name, position and organisation**

# 12 ANNEX III – IMPLEMENTATION PROCESS FOR ROADMAP/SRIA

Figure 1: Graph depicting the iterative process of contributing to draft of scope for the roadmap and SRIA.
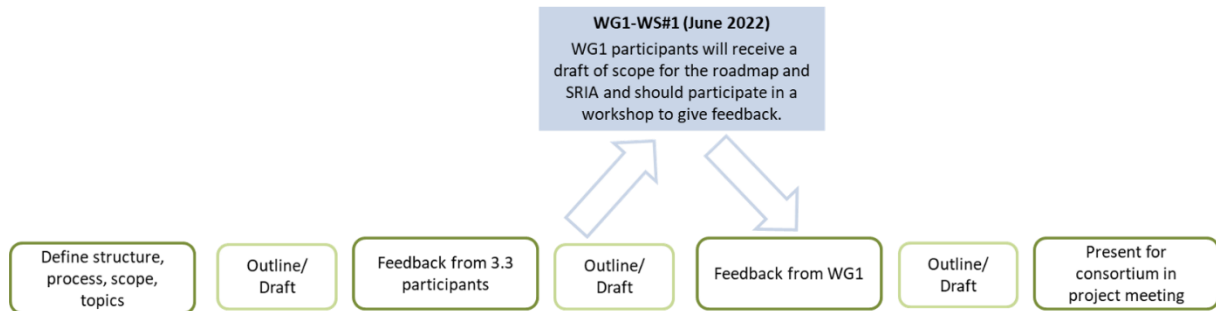


Figure 2: Graph depicting the iterative process for implementing the different versions of the roadmap and SRIA along the project duration.