STORAGE RESEARCH INFRASTRUCTURE ECO-SYSTEM

WORK PLAN
WORKING GROUP 3

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 technological objectives are linked to the development of energy storage by providing access to world-class research infrastructures (RI) and services, with a focus on improving materials for devices and optimising hybrid energy systems to make energy technologies more competitive and reduce costs. In addition, StoRIES focuses on analysing socio-technical and environmental aspects of new developments and systems to promote education and training in these areas.

Within StoRIES, access to RI is organised in six transnational calls (TNA), each call having a specific subject and description. The selection and formulation of the specific call theme is the main task of WG2, which is the basis and starting point for each of the TNA calls. The experts gathered in WG3 analyse the results of the TNA, present the results to the other WGs, WP1, WP3 and WP4 (if requested) and make recommendations for the following topics of the TNA calls and for the procedures of the TNA. WG3 starts its work when the first results of the TNA projects are available i.e., in 2023.

4 OBJECTIVES AND EXPECTED RESULTS

The main objective of WG3 is to analyse and maximise the outcome of the StoRIES TNA projects. The expertise of the WG3 Members will enable a qualitative evaluation of the collected scientific data and will directly contribute to the Roadmap and SRIA being developed in WP3 and WG1, but also to the sustainability analysis being carried out in WP4. Furthermore, WG3 will make recommendations on the topics of the following TNA calls, taking into account the TNA scientific results and the feedback from TNA users and research infrastructure owners gathered in the Post Research Questionnaires (draft included in D2.2 "General rules for TA according to Access Policy" and in ANNEX III & IV). WG3 will furthermore support WG4 by defining the technical barriers identified in the TNA projects.

5   COURSE OF ACTION

The analysis of TNA results will start as soon as the first TNA data is available, which is expected to be in the second half of 2023. WG3 meetings to summarise the analysis will be organised online twice a year (or more often if needed). The physical meeting will only take place on request of WG3 Members and back-to-back with the StoRIES project meeting or another StoRIES event to maximise participation.

Within 1 month after the analysis of the TNA results is closed, the written feedback to the consortium (WG1, WG2 and WG4, WP1, WP3 and WP4) will be prepared by the WG3 members under the lead of the WG3 Chair. Communication and exchange with the above mentioned WGs and WPs will be mainly bilateral with the WG Chairs/WP Leaders and led by the WG3 Chair. However, larger meetings with the whole groups are not excluded.

5.1   Key Deliverables

WG3 will deliver an analysis from every TNA call and prepare written feedback for the WG1, WG2 and WG4.

5.2   Timeline

As the TNA results delivery depends on the access starting date and the TNA length, no defined timeline can be presented.

5.3   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 WG3 receive access to a StoRIES SharePoint folder dedicated to the work of WG3.

6 IDENTIFIED RISKS

Two main risks were identified in WG3:

Low participation of WG3 Members in the analysis of the scientific results of the TNA and Post Research Questionnaires.

The TNA documentation will be sent to the WG3 Members who have expertise in the field of the TNA project. The results will be discussed at the WG3 meetings by the WG3 Members who received the documentation. Participating in the analysis of the TNA results gives WG3 Members an insight into the experiments of groups from other organisations, which fosters exchange and networking. This will be communicated to the WG3 Members.

Delayed feedback from TNA users and RI owners, leading to outcome being submitted late to the other working groups.

The TNA participants will receive the Post Research Questionnaires directly after the approval of the TNA. Reimbursement of travel, accommodation and RI usage costs will be linked to the handover of the documentation to the WP2 leader and the WG3 Chair.

7 ANNEX I – WG MEMBERS

Family Name	First Name	Organization	Country	Specific Field
Barelli	Linda	UNIPG	IT	chemical ES
Baumann	Stefan	FZJ	DE	chemical ES
Besmehn	Astrid	FZJ	DE	cross-cutting
Blanco	Marcos	CIEMAT	ES	cross-cutting
Cavazzini	Giovanna	UNIPD	IT	mechanical ES
Di Noto	Vito	UNIPD	IT	electrochemical ES
Ding	Yulong	UNIBirmingham	UK	thermal & mechanical ES
Gallino	Isabella	UniSaarland	DE	Electrochemical ES
Garcia	Pierre	CEA	FR	thermal ES
Granados	Xavier	CSIC	ES	SMES
Heussen	Kai	DTU	DK	power and energy systems control and integration
Holtappels	Peter	DTU	DK	chemical ES
Krohn Aasgård	Ellen	SINTEF EN	NO	mechanical ES
Lager	Daniel	AIT	AT	thermal ES
Malek	Kourosh	FZJ	DE	AI
Navarro	Helena	UNIBirmingham	UK	thermal ES
Paillard	Elie	PLIMI	IT	electrochemical ES
Rodriguez	Margarita	CIEMAT	ES	thermal ES
Schnürch	Michael	TU Wien	AT	thermal ES
Scipioni	Roberto	SINTEF AS	NO	electrochemical ES
Stevens	Philippe	EDF	FR	electrochem, chem, thermal
Wimmer	Yannick	AIT	AT	WG2 Chair
Remco	Groenenberg	TNO	NL	Medium to long duration ES

Joris	Koornneef	TNO	NL	Medium to long duration ES evaluation of the research infrastructure
Rafael	Dr. Mayo-García	CIEMAT	ES	

WG3 Chair: Olga Sumińska-Ebersoldt, KIT

As of September 2022

8 ANNEX II – CALLS

As of September 2022, one call has been published.

The calls will be published on the StoRIES webpage in the form presented below and disseminated via social media like LinkedIN.

FIRST StoRIES TRANS-NATIONAL ACCESS CALL

TNA Call No.: 1
Date of opening: 27.04.2022.
Date of closing: 31.08.2022.
Call topic: Application oriented hybrid and sustainable energy storage solutions

The call topic foresees three different sources of innovation: material research, development and testing of a component, device or device cluster and the integration of the innovation in the energy system.

Proposals concentrating on the same innovation source and investigating it from different scientific directions (proposal cluster) with the aim of fast and successful implementation of the innovation to the market, will receive additional points by the proposal evaluation. This approach will support solutions with a clear and predefined path for an uptake to the market.

The proposals should include sustainability-oriented assessments regarding e.g. the use of critical raw materials, possible environmental and economic impacts over the entire lifecycle of the storage solution, as well as indications about the potential recyclability of used materials. Beyond that, social implications related to relevant upstream value chains, the use and end of life phase should be considered.

To apply for the call please use the **application form** available here.

Only proposals submitted by the **31st of August 2022** will be evaluated.

1: Download your application form:

2: Fill it in, save it and upload it:
+ CHOOSE FILE

3: Sumbit your filled form:
SUBMIT

Read the Procedures & Rules

Storage Research Infrastructure Eco-System

1st TNA Call Documentation - User

StoRIES TNA Post Research Questionnaire (with satisfaction survey): User (s)

After the StoRIES Transnational Access stay or Virtual Access, users are required to submit a post research questionnaire. This should be done within 4 weeks after the Access is completed unless otherwise agreed. The Post Research Questionnaire form will be given to the User(s) by the Project Management. The report contains sections related to the work performed, the main results and observations that were achieved.

This document should be completed, signed, and sent to the following person, along with the Travel Cost Claim Form and all eligible receipts either by e-mail to info@storiesproject.eu and olga.suminska-ebersoldt@kit.edu or/and by postal mail to:

Karlsruhe Institute of Technology

Olga Sumińska-Ebersoldt

Geb 421

Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen

Germany

Summary questionnaire for users who have been granted Transnational Access (TNA) under the StoRIES project Horizon 2020 TNA scheme. More information on StoRIES TNA can be found in General Rules and in Access Policy of StoRIES TNA.

General information about the project	
Project title (as used in application)	
Project acronym (max 15 characters)	
StoRIES TNA RI(s) accessed	
Keywords (up to ten, free text)	
Arrival date (in town where RI located)	
Departure date (from town where RI located)	
Starting date of access (first day at RI)	
Finishing date of access (last day at RI)	
Number of days not using the RI (during the above period)	
Reason for not using RI those days (describe)	
Number of days using the RI	
Number of users granted access (group size)	
Comments	
User	
User group leader or sole applicant (user group member 1)	

First name	
Last name	
Affiliation / Employer	
Country of Employer	
E-mail	
Comments	
User group member 2	
First name	
Last name	
Affiliation / Employer	
Country of Employer	
E-mail	
Comments	
User group member 3	
First name	
Last name	
Affiliation / Employer	
Country of Employer	
E-mail	
Comments	
User group member 4	
First name	
Last name	

Affiliation / Employer	
Country of Employer	
E-mail	
Comments	

Please insert more fields if your groups had more than four members.

Access Summary Report - work performed and initial results

Brief description of the objectives of your project (up to 200 words)

[Please describe short the main objectives of your project]

Activities performed (up to 600 words)

[Please summarise the work carried you (steps taken, instrumentation used, techniques employed, data sources consulted etc.)]

Scientific results (up to 800 words)

[Summarise the (initial) outcomes of your study at the RI(s).]

Interpretation of the results (up to 400 words)

[Discuss the data obtained and describe the major scientific conclusions drawn.]

Main achievements during the TNA related work (up to 250 words)

[Describe the main achievements during your stay at the site(s)]

Difficulties during the TNA related work (up to 250 words)

[List problems and issues you had, completing out your research project: Did you get access to all the necessary equipment, facilities, databases, etc.?

If not, please specify the problems that occurred and list equipment the was not working or accessible.]

Intended publications

[Explain where and how you expect to publish the outcomes of your project work. Include also anything already published (What and where?)]

Data management

[Describe the further usage and storage of project data]

Conclusions / additional comments

[Provide any other comments you might have on your work]

Did you complete the EC user questionnaire available at
https://ec.europa.eu/eusurvey/runner/RIsurveyUSERS ? (necessary)

☐ *Yes*   ☐ *No*

Feedback – HSE, Ethics and Satisfaction

Please rate on a scale from 1 (excellent) to 5 (poor). Feel free to provide additional comments

Practical information on how to apply for Transnational Access and the overall application process	1 (excellent)	2	3 (neutral)	4	5 (poor)
	☐	☐	☐	☐	☐

[Comment]

Information provided, once your project was accepted, on how to proceed	1 (excellent)	2	3 (neutral)	4	5 (poor)
	☐	☐	☐	☐	☐

[Comment]

Support received at the site(s) regarding technical/scientific matters and logistics	Have you got sufficient support from the RI staff during the project? If not, please, specify the problems. ☐ *Yes* ☐ *No*

[Please specify any problems]

RI extension / upgrades required	In your opinion, is the RI needed to be upgraded? If yes, please give an explanation. ☐ *Yes* ☐ *No*

[Please specify]

Problems with local regulations	Have you had any problems with regulations of the visited RI owner (HSE, lab working hours, etc.)? If yes, please, specify ☐ *Yes* ☐ *No*
[Please specify]	
Health and safety issues	Did you encounter any health or safety issue during your research? Please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics	Did your research involve the use of elements that may cause harm to the environment, to animals or plants? Please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics	Did your research deal with endangered fauna and/or flora and/or protected areas? Please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics	Did your research involve the use of elements that may cause harm to humans, including research staff? Please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics – Dual use	Does your research have the potential for military applications? Please provide details.

	☐ *Yes* ☐ *No*
[Please provide details]	

Environment & Ethics – Misuse	Does your research have the potential for malevolent /criminal/terrorist abuse? Please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	

Environmental issues	Were any potentially dangerous substances (materials / gases etc.) released into the environment (atmosphere, water, or land)? Please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	

Ethics issues	Are there any other ethics issues that should be taken into consideration? Please specify ☐ *Yes* ☐ *No*
[Please provide details]	

Overall impression of communication and interaction after finishing your TNA related work	1 (excellent)	2	3 (neutral)	4	5 (poor)
	☐	☐	☐	☐	☐

[Comment]

Suggestions for facilities not included in StoRIES which you would use for your research
[Please provide suggestions for specific type of facilities missing (RI gaps) or measurement / experiments you would like to perform which cannot be done on current StoRIES facilities]

Suggestions how StoRIES can improve future TNA programme, how to make the TNA more impactful on the energy storage technologies and how to enable the achievement of high TRL levels.	
[Your suggestions]	

Feedback – Pro-active Innovation Support				

Awareness	Did you know about the pro-active innovation support of StoRIES. ☐ Yes ☐ No				
[Please specify how you learned about the pro-active innovation support]					
Personal experience	Have you taken advantage of or benefited from the pro-active innovation support? ☐ Yes ☐ No				
[Please provide details]					
Information/service provided by the pro-active innovation support?	1 (excellent)	2	3 (neutral)	4	5 (poor)
	☐	☐	☐	☐	☐
[Please provide details]					

I declare that the above provided information and especially that information on the number of days visited the RI is correct.

☐ *I have read the [StoRIES privacy policy](#) for participation in the StoRIES TNA and consent to participation and the associated data processing.*

Date of submission to StoRIES TNA team:

Your full name:

Your signature:

Storage Research Infrastructure Eco-System

1st TNA Call Documentation – RI Provider

Post Research Questionnaire Form: RI Provider

After the StoRIES Transnational Access stay or Virtual Access, RI providers are required to submit a post research questionnaire. This should be done within 4 weeks after the Access is completed unless otherwise agreed. The Post Research Questionnaire form will be given to the RI Provider(s) by the Project Management.

This document should be completed, signed, and sent to the following person by e-mail to info@storiesproject.eu and olga.suminska-ebersoldt@kit.edu or/and by postal mail to:

Karlsruhe Institute of Technology

Olga Sumińska-Ebersoldt

Geb 421

Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen

Germany

Summary report form (exit questionnaire) for facilities that had a Transnational Access (TA) visit under the StoRIES H2020 TA Scheme

> **General information about the TA project**

Project title	(project name)
StoRIES TNA RI(s) accessed	(RI name)
Name of lead (main) visiting researcher	
Your name	
Your position	
Start date of access (first day at RI)	
Completion date of access (last day at RI)	
Days to commission / prepare RI before the visit	(State number of days before first access day)
Days to decommission RI after the visit	(State number of days after last access day)
Please give a short description of commissioning / decommissioning	
Number of days RI used during the above period	
Number of days RI not used during the above period	
Reason for not using RI those days – describe	(For example: weekend, RI not working, health and safety training, etc.)
User(s)	
Other group member (apart from the group leader above)	
Name Group member 1	
Name Group member 2	
Name Group member 3	
Name Group member 4	

Name Group member 5	
…..	
Work performed	
Did the researcher (/group) comply with your facilities / organisation's regulations?	Yes / No. If not, please, explain the problem. ☐ *Yes* ☐ *No*
[Please provide details]	
Did the research project cause any damage to the RI? If yes, what was the estimated damage?	Yes / No. If yes, describe and estimate the damage? ☐ *Yes* ☐ *No*
[Please escribe and estimate]	
Did you need to contact directly the researcher's (/group's) institution?	Yes / No. If yes, why? ☐ *Yes* ☐ *No*
[Please provide details]	
Where there any complaints from the researcher (/group)?	Yes / No. If yes, please, list them. ☐ *Yes* ☐ *No*
[Please list]	
Are you satisfied with how the research was performed and with the results achieved?	Yes / No. If not, please, explain why. ☐ *Yes* ☐ *No*
[Please explain]	
Difficulties during the researchers TA visit or any problems with the RI during the research project?	

[List problems or inconveniences during the project: (access available to all the necessary equipment, facilities, databases, etc.?) If not, please specify the problems that occurred and list equipment not working or accessible.]

What would you suggest could improve the StoRIES Transnational Access program, how to make the TNA more impactful on the energy storage technologies and how to enable the achievement of high TRL levels.?
[Please describe]

Feedback about the research project

Could the research be performed as planned?	Any RI upgrades required? If yes, please give an explanation. ☐ *Yes* ☐ *No*
[Please provide details]	
Problems with local regulations	Were there any issues regarding your facilities regulations (lab working hours, etc.)? If yes, please, specify ☐ *Yes* ☐ *No*
[Please provide details]	
Health and safety issues	Did you or the researcher encounter any health or safety issue during your research? If yes, please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics	Did the research involve the use of elements that may cause harm to the environment, to animals or plants? If yes, please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	

Environment & Ethics	Did the research deal with endangered fauna and/or flora and/or protected areas? If yes, please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics	Did the research involve the use of elements that may cause harm to humans, including research staff? If yes, please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics – Dual use	Does the research have the potential for military applications? If yes, please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environment & Ethics – Misuse	Does the research have the potential for malevolent/criminal/terrorist abuse? If yes, please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Environmental issues	Were any potentially dangerous substances (materials / gases etc.) released into the environment (atmosphere, water, or land)? If yes, please provide details. ☐ *Yes* ☐ *No*
[Please provide details]	
Ethics issues	Were there any other ethics issues that should be taken into consideration? If yes, please specify ☐ *Yes* ☐ *No*
[Please provide details]	

☐ *I have read the StoRIES privacy policy for participation in the StoRIES TNA and consent to participation and the associated data processing.*

Date of submission to StoRIES TNA team:

Your full name:

Your signature: