



engage

Engage Society for
Risk Awareness and Resilience

Deliverable 7.3 – Innovation news and updates

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Abstract: ENGAGE aims at linking the informal resilience naturally inherent in citizens with the formal work of authorities to prevent, prepare for, respond to, and recover from disasters. It brings together 14 partners from 8 countries aiming to show how individuals and local practices can interrelate effectively with planned preparedness and response, practitioners, and technology.

The deliverable provides updates on the innovation management plan briefly described in the Project Management Manual. Indeed, it defines all guidelines and instruments to be used for the regular innovation management of the project. It describes the activities, the procedures and the roles related to innovation management. It also offers an overview on website of new initiatives, new research results, new practices and new users' needs that are relevance to societal resilience and citizens engagement. The overview will be continuously updated until the end of the project.

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- **revised:** Document authors produce new version in response to internal review comments.
- **approved:** Internal project reviewers accept the document.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	8
1 INTRODUCTION	9
1.1 PURPOSE OF THE DOCUMENT	9
1.2 INTENDED READERSHIP	9
1.3 STRUCTURE OF THIS DOCUMENT	9
1.4 RELATIONSHIP WITH OTHER DELIVERABLES	9
1.5 ACRONYMS AND ABBREVIATIONS	10
2 FOREWORD ON INNOVATION	11
3 INNOVATION MANAGEMENT GOVERNANCE	12
3.1 INNOVATION MANAGEMENT IN EUROPEAN PROJECTS	12
3.2 INNOVATION MANAGEMENT IN ENGAGE: THE KEY ACTIVITIES	12
3.3 SUPPORTING ENGAGE PROJECT BOARDS AND TASKS	13
4 INNOVATION MANAGEMENT ROLES, RESPONSIBILITIES, PROCESSES AND PROCEDURES	16
4.1 ROLES & RESPONSIBILITIES	17
4.2 PROCESSES	18
4.2.1 CAPTURING AND HANDLING IP/PROJECT RESULTS	18
4.2.2 EXPLOITATION MANAGEMENT	19
4.2.3 COMMUNICATION MANAGEMENT	19
4.3 PROCEDURES	20
4.3.1 CAPTURING PROJECT RESULTS	20
4.3.2 REVIEW OF PROJECT RESULTS AND AGGREGATE PROJECT RESULTS	21
5 NEWS AND LAST INITIATIVES REGARDING INNOVATION	22
5.1 INTERNAL INITIATIVES	22
5.1.1 SPRINT MEETINGS	22
5.1.2 INTERNAL END-USERS WORKSHOPS	22
5.2 EXTERNAL INITIATIVES	23
5.2.1 COLLABORATION ARENAS	23
5.2.2 TRANSDISCIPLINARY SEMINARS	25
5.2.3 SECURE SOCIETIES PROJECT TO POLICY KICK-OFF SEMINAR (P2PKOS)	26
6 CONCLUSION AND NEXT STEPS	27
7 REFERENCES	28
8 APPENDIX A: DEFINITIONS OF INNOVATION	29



List of Tables

Table 1. List of abbreviations and terms	10
Table 2: List of ENGAGE deliverables with high innovation potential	14
Table 3: Key roles in the innovation management	17

List of Figures

Figure 1: Innovation Management flow	12
Figure 2: Innovation Management plan	16
Figure 3: Internal end-users workshop - Miro dashboard	23
Figure 4: The word cloud from REA-NDM-FONCSI 2021	25



Executive summary

This deliverable provides evidence of innovation processes and practices supporting advances towards the achievement of ENGAGE project objectives. It details and provides updates on

- the innovation management procedures,
- the key activities, roles and responsibilities,
- the interdependencies with the communication and exploitation strategies and plans,
- how innovation creates conditions for participatory and inclusive transdisciplinary research through collaboration arenas and transdisciplinary seminars.

It defines processes to ensure that the innovation management is implemented efficiently and effectively.



1 INTRODUCTION

1.1 PURPOSE OF THE DOCUMENT

This deliverable describes all the innovation management aspects and provides updates on:

- the plan to be followed for an effective innovation management implementation
- the guidelines and instruments to be used for the regular innovation management of ENGAGE
- the activities, the procedures and the roles related to it
- the last initiatives, research results, practices and users' needs that are relevance to societal resilience and citizens engagement. The overview will be continuously updated until the end of the project.

1.2 INTENDED READERSHIP

This document has three groups of intended readers. The first two groups are part of the ENGAGE Consortium, composed of 14 partners from 8 countries.

1. The deliverable speaks to all partners of the consortium since it outlines the procedures and practices used for effective cooperation and innovation management in the ENGAGE project. This document is a snapshot of the innovation management at the current stage; however, it will evolve throughout the project as new procedures, tools etc. are added or changed.
2. This deliverable is also meant for the project's Knowledge Innovation Community of Practice (KI-CoP) partners who as practitioners can provide valuable insight for all the ENGAGE activities as well as its outcomes.
3. The last group of readers is associated with the European research council, the European Commission and addresses the project reviewers.

The dissemination level of the deliverable is therefore public, and it can be shared outside the consortium, the EC and the project reviewers.

1.3 STRUCTURE OF THIS DOCUMENT

This document is structured as follows:

- Section 2 provides a definition of innovation and innovation management.
- Section 3 outlines how innovation management is articulated in ENGAGE.
- Section 4 describes roles, processes, procedures, responsibilities and accountabilities to manage all innovation related activities such as dissemination and exploitation ones.
- Section 5 provides an overview of last news and initiatives related to innovation.
- Section 6 reports conclusions as well as next steps.

1.4 RELATIONSHIP WITH OTHER DELIVERABLES

This document complements the following deliverables:



- D7.1 ENGAGE Project management manual that describes the processes, procedures and practices on collaboration, innovation management, control and monitoring, including quality and risk management of the project.
- D7.2 Initial data management plan and IPR registry that explains how open research data in the project will be generated and how it will be made accessible.
- D5.1 Dissemination and communication strategy and plan that describes the first version of the ENGAGE communication and dissemination strategy, including the dissemination activities as planned by month 6 of the project and the reporting and monitoring procedures that will be adopted. The deliverable will be revised in month 18 and month 36.
- D5.2 Exploitation Strategy and Plan that describes the initial plan and strategy of how ENGAGE results are going to be exploited.
- D5.5 ENGAGE knowledge platform & D5.6 Methods and tools to engage community of practice in transdisciplinary collaboration: The Knowledge and Innovation Community of Practice (KI-CoP) is strongly related to the activities of all WPs and it is the main resource for the Consortium Partners to be constantly in contact with external practitioners and other relevant stakeholders as well as benefit from their operational experience for redefining the project objectives and outcomes.
- D4.1 Validation plan that identifies the characteristics to be validated, the techniques to be used and plan the ENGAGE validation activities.
- D3.1 Initial catalogue of societal resilience solutions that provides selected solutions, the description of contextual issues and defines the guidelines for their implementation.

1.5 ACRONYMS AND ABBREVIATIONS

Table 1. List of abbreviations and terms

Term	Explanation
CA	Consortium Agreement
DG-ECHO	Directorate-General for European Civil Protection and Humanitarian Aid Operations
DG-HOME	Directorate-General for Migration and Home Affairs
EC	European Commission
GA	Grant Agreement
IP	Intellectual Property
IPR	Intellectual Property Right
KERs	Key Exploitable Results
KI-CoP	Knowledge Innovation Community of Practice. Community of Practice involving practitioners (e.g first responders, authorities, members of civil society organizations) and citizens supporting the project activity with the role of users and co-owners of its solutions
TRL	Technology Readiness Level (TRL)

2 FOREWORD ON INNOVATION

For the benefit of all partners, with varying backgrounds as well as different objectives within the ENGAGE project, and also for the benefit of a structured approach towards effective innovation management at project level, a clear definition for innovation is needed and provided hereafter.

Innovation

The definition of innovation adopted herein is based to a large extent upon the one provided by Melissa Shilling (New York University). The definition of innovation adopted in the present report is "*The act of introducing a new device, product or method for application to commercial or practical objectives. Invention may or may not be needed, since innovation may include the introduction and use of known ideas and solutions in a new context*" [1].

Furthermore, taking into account the preeminent role of communities in ENGAGE, the definition can be complemented by Bledow et al.'s one "*the development and intentional introduction of new and useful ideas by individuals, teams, and organizations*" [2].

Innovation Management

The definition of innovation management adopted herein is "The way that an organization and its members manage their innovation activities, including processes and structures for monitoring and controlling of innovation".

There is a wealth of various other definitions regarding innovation management. These are included in Appendix A of the present deliverable, for informative purposes.



3 INNOVATION MANAGEMENT GOVERNANCE

This Section describes briefly how innovation management is articulated in this European project and how the relevant ENGAGE boards, Ki-CoP and stakeholders interact with the innovation management task.

3.1 INNOVATION MANAGEMENT IN EUROPEAN PROJECTS

Innovation management includes two aspects: a) innovation processes management, and b) change management. Innovation refers to products and services, business process, and organizational innovation. Innovation management includes a set of tools that allow project consortium partners to cooperate with a common understanding of processes and goals.

Innovation management takes place before the project execution, allowing an organisation/project consortium to leverage external or internal opportunities, and use its creativity to introduce new ideas, as shown in the figure below.

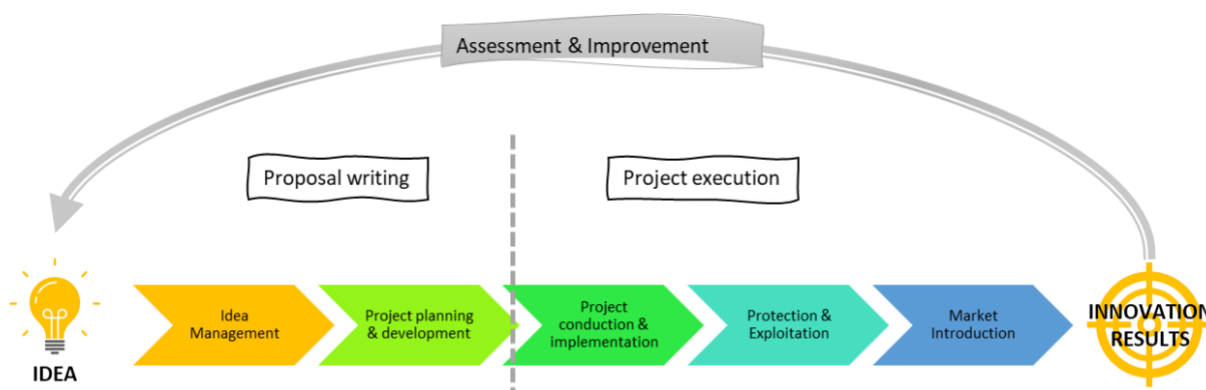


Figure 1: Innovation Management flow

By collecting in a proper framework all the ideas, the project consortium can trigger and deploy the creative capabilities of the consortium for the development of an impactful project proposal.

During the project execution, the innovation management task defines relevant frameworks to ensure that:

1. The rights to access and use background and side ground IPs are identified;
2. The project results are captured, assessed and protected. Appropriate dissemination, exploitation and communication measures are agreed, and final dissemination and exploitation plans are defined

3.2 INNOVATION MANAGEMENT IN ENGAGE: THE KEY ACTIVITIES

In ENGAGE, the main responsible for the innovation management process is the Innovation Manager, which leads Task 7.2. The appointed person is:

- Name of the ENGAGE Innovation Manager: Martina Ragosta
- Organisation: SINTEF
- Contact details: martina.ragosta@sintef.no

The key activities of the innovation management task during the project execution are:



1. Defining (as first activity in the project) a lightweight innovation management plan to ensure that the related processes are properly organised and managed across project activities according to the technical specification CEN/TS 16555 on "Innovation Management" [3]. The processes are designed to ensure that:
 - a. The rights to access and use background and side ground IPs are identified (please refer to "D7.2 Data Management Plan and IPR registry" for further details);
 - b. The project results are captured, assessed and protected (please refer to "D7.2 Data Management Plan and IPR registry" for further details);
 - c. Appropriate dissemination, exploitation and communication measures are agreed, and dissemination and exploitation plans are defined (please refer to "D5.1 Dissemination and communication strategy and plan" and "D5.2 Exploitation Strategy and Plan" for further details). The design of the processes also considers appropriate connections with the continual improvement, management of all project outcomes as well as their quality (please refer to "D7.1 ENGAGE Project management" for further details).
2. Liaising and communicating innovation management related issues within Project Executive Board, the Ethics as well as the Security Advisory Board when required (for a detailed description of each board, please refer to "D7.1 ENGAGE Project management") during the project execution.
3. Ensuring that the project work and the results are innovative thanks to the established internal review system which, among other objectives, also contributes to guarantee and support the innovation (for a detailed description of each board, please refer to "D7.1 ENGAGE Project management") during the whole project lifespan.
4. Supervising the upkeep of the catalogue of project results and the validating the information provided by the partners;
5. Organizing "sprint" meetings (as defined in "D7.1 ENGAGE Project management") to:
 - a. Introduce the innovation management activity to the consortium;
 - b. Provide guidance on updating the project results and the related dissemination and exploitation plans;
6. Monitoring the exploitation and dissemination plans;
7. Supporting the consortium to select the best protection approaches such as Intellectual Property Rights (IPRs) for the project results;
8. Helping the consortium in defining the most relevant contributions of the project to achieve the expected impacts.

3.3 SUPPORTING ENGAGE PROJECT BOARDS AND TASKS

Innovation Management requires project-wide cooperation, below is a list of how different boards and tasks contribute to this activity:

- The Executive, Ethics and Security Advisory Boards are responsible to take appropriate actions according to the rules on innovation management and intellectual property creation as it is stated in the Grant Agreement [4], Collaboration Agreement [5], Project Management Manual which includes quality and risk plans. Boards' approval is required for all disclosure of confidential project results outside the consortium.
- WP5 provides input to the innovation management activities by defining a clear roadmap for engaging with Ki-CoP, key stakeholders and target groups.



- The Work Package Leaders (WPL) are responsible for:
 - collecting and reporting on project results, including information on Intellectual Property Rights (IPR), dissemination activities and exploitation plans;
 - identifying the person responsible (Lead Project Result Author) for developing the exploitation and dissemination plans and to provide input on related IPR.
- Consortium partners contribute with expertise on business, technologies, application domain, and research that enable innovation aligned to the business activities of the partners, and thus, provide input to the exploitation plans for the development of a product, a service, or future research.

Legal aspects of innovation, IP background and related intellectual property rights, joint ownership of project results (if applicable), and all related confidentiality issues are clarified in the Consortium Agreement; all those aspects constitute a primary input to the innovation management activities.

The table below offers a summary of deliverables directly related to support, enable, or drive innovation in ENGAGE. These have a high potential for innovation and will be monitored with particular attention at all stages of their development by the Innovation Manager, to ensure that the level of innovation is maintained at high level.

Table 2: List of ENGAGE deliverables with high innovation potential

Del. No	Deliverable title	Del. date
D1.3	Communication, social media and societal resilience	M7
D1.4	Revision of the model assessing and methods for improving societal resilience	M24
D2.5	Revision and update of solutions to improve societal resilience	M24
D3.2	Initial directions for innovative communication and social media solutions	M12
D3.3	Final catalogue of societal resilience solutions	M36
D3.4	Directions for innovative communication and social media solutions	M36
D4.1	Validation plan	M9
D4.3	Final validation report	M34
D5.1	Dissemination and communication strategy and plan	M6 (to be revised at M18 and M36)
D5.2	Exploitation strategy and plan	M12 (to be revised at M24 and M30)
D5.3	Contribution to SENDAI, policy and standardization	M36
D5.5	ENGAGE knowledge platform	M12
D5.6	Methods and tools to engage community of practice in transdisciplinary collaboration	M36
D6.3	Final Societal impact report	M36
D7.2	Data Management Plan and IPR registry	M6
D7.4	Final project report	M36

In addition to the above listed deliverables, the Innovation Manager will place particular attention on the level of innovation during all meetings, workshops and consultations that will take place during the project, as well as to the validation exercises that will be organized within the framework of the activities of WP4.



4 INNOVATION MANAGEMENT ROLES, RESPONSIBILITIES, PROCESSES AND PROCEDURES

The scope of the updated Innovation Management Plan is to describe roles, structures, procedures, responsibilities and accountabilities to manage all innovation related activity, including development of the Dissemination and Exploitation plans, the project Communication Plan, and the management of the IPs. The structure of the innovation management plan is depicted in the figure below.

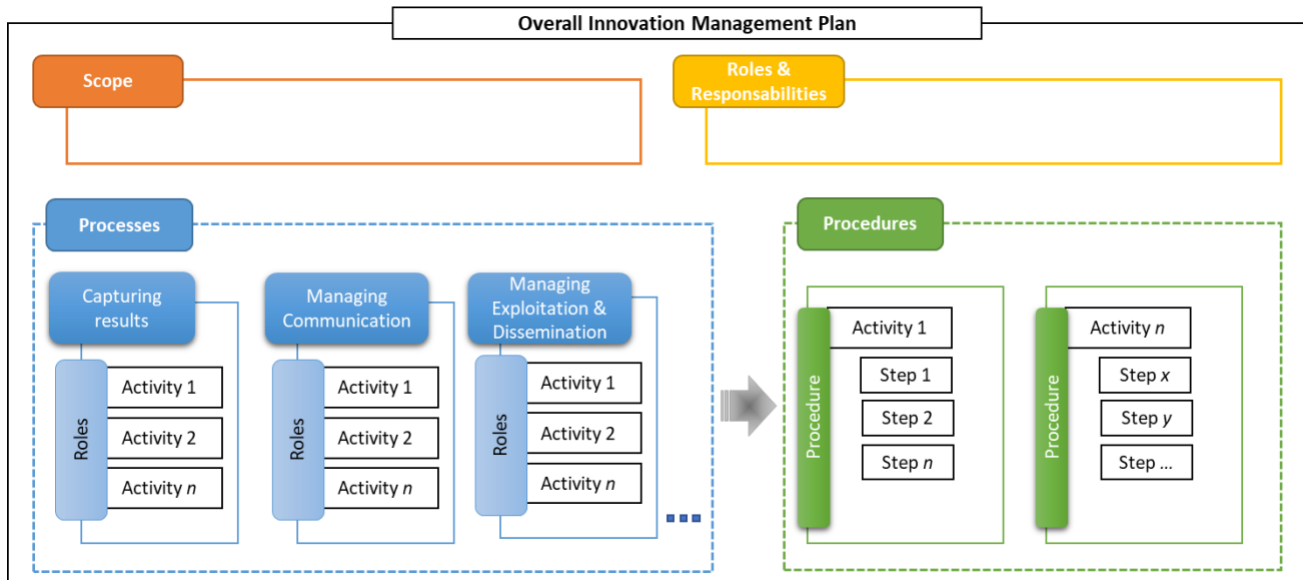


Figure 2: Innovation Management plan

Each process is a structured set of activities, with clearly defined responsibilities. Those activities aim at a specific objective starting from a set of defined inputs.

For each process, it is defined:

- Objective: scope of the activity
- Activity Manager: person/board responsible for managing the activity
- Accountability: person/board who oversees the activity
- Inputs: inputs to the activity, and the persons/boards who provide them
- Activities: description of the activities, and where it is done, work packages and tasks as appropriate
- Outputs: description of outputs of this activity, e.g. table of IP, deliverables, as appropriate

The Innovation Management plan foresees the following processes:

- Capturing and handling information related to IP/Project results
 - Identifying and capturing background IPs, sideground and 3rd party IPs used during the project
 - Identifying and capturing background, sideground and 3rd party IP needed for exploitation
 - Capturing and managing foreground IPs (Project results)
- Managing dissemination and exploitation
- Managing communication

A procedure is a specific set of steps or instructions necessary to accomplish one or more activities in a process. The innovation management plan incorporates two key procedures created for:

- Updating information on project results and related exploitation and dissemination plans in close collaboration with WP5. This is carried out by adopting *agile practices* which have been putting in place since the beginning of the project (please refer to "D7.1 ENGAGE Project management" for further details)
- Reviewing project results and aggregate project results. Please refer to "D5.2 Exploitation Strategy and Plan" for further details and the initial list of Key Exploitable Results (KERs).

4.1 ROLES & RESPONSIBILITIES

The table below outlines the key roles in the innovation management of the ENGAGE project.

Table 3: Key roles in the innovation management

Role	Responsibilities
Innovation Manager	<ul style="list-style-type: none"> • Advise on the best approach to protect Intellectual Properties (IPs) produced during the project • Provide support to the validation of the list of key results • Provide support to the validation of dissemination and exploitation plan • Ensure that the KERs list is updated • Closely collaborate with WP3, WP5 and WP7
Project Coordinator	Interface with Innovation Manager, plan review meetings and closely collaborate for ensuring the successful achievement of all innovation management activities
Project Security Officer	Review exploitation risks by focusing on security issues and update the project's risk table
Data, Ethics and Societal Impact Manager	Review exploitation risks by focusing on ethics issues and update the project's risk table
Executive Advisory Board (EAB)	<ul style="list-style-type: none"> • Review periodically and validate the list of KERs • Review the dissemination and exploitation plan execution
WP leaders	<ul style="list-style-type: none"> • Register project results in the KERs list • Ensure that the information is complete and updated • Ensure that dissemination and exploitation plans are defined (by result main responsible)
WP5 team	Contributes to validate dissemination and exploitation plans for results
Authors of deliverables or milestones	Define a dissemination and exploitation plan for every project result in scope

4.2 PROCESSES

4.2.1 CAPTURING AND HANDLING IP/PROJECT RESULTS

The information gathered about background, sideground, third-party IPs and project results, have been used as key input into the "D5.1 Dissemination and communication strategy and plan" and "D5.2 Exploitation strategy and plan", particularly the strategy for knowledge management and protection.

4.2.1.1 *Identifying and capturing background IPs, sideground and 3rd party IPs used during the project*

This process has the objective to secure to the consortium the necessary usage rights for the IPs required to operate during the project.

Activity Manager	Project Coordinator, Executive Advisory Board
Accountable to	General Assembly
Inputs	Background IP defined by partners in Consortium Agreement.
Activities	Access and usage rights during project agreed in Consortium Agreement.
Outputs	Consortium Agreement IPR registry

4.2.1.2 *Identifying and capturing background, sideground and 3rd party IP needed for exploitation*

This process has the objective to clarify which are the IPs and usage rights required for the exploitation of the project results after the end of the project.

Activity Manager	WP Leaders, Result Authors
Accountable to	Innovation Manager
Inputs	Information of relevant IPs from WP leaders and Result Authors
Activities	WP leaders register sideground IPs needed for the exploitation of project results in the catalogues and ensure that the information in the catalogue is complete and up to date and that dissemination and exploitation plans are defined according to the established procedure
Outputs	IPR registry KERs list

4.2.1.3 *Capturing and managing foreground IPs (Project results)*

This process has the objective to capture and manage the foreground IPs (project results), including: clarification of ownership, relative contributions, and physical management of IPs.

Activity Manager	Innovation Manager, WP Leaders
Accountable to	Innovation Manager
Inputs	Description of foreground IPs from Result Author and Work Package leader
Activities	<ul style="list-style-type: none"> Results are captured and updated in the KERs list according to the established procedure (please refer to Section 4.3.1)

	<ul style="list-style-type: none"> Results will be discussed and aggregated to identify the key contributions to the project’s expected impacts with regular review meetings.
Outputs	IPR registry KERs list D5.2 Exploitation strategy and plan D5.3 Contribution to SENDAI, policy and standardization D5.6 Methods and tools to engage community of practice in transdisciplinary collaboration

4.2.2 EXPLOITATION MANAGEMENT

The exploitation management process has the objective to:

- Assess exploitation opportunities for foreground IP, and developing an appropriate strategy for its exploitation and protection if the opportunities have commercial potential.
- Maintain and elaborate the dissemination and exploitation strategy plan, to promote the project results and their use to maximise the expected impacts of the call topic.
- Develop and update a business plan(s) as appropriate

Activity Manager	WP5 Teams, WP Leaders
Accountable to	Innovation Manager
Inputs	Exploitation Plans from Result Authors and WP leaders
Activities	<ul style="list-style-type: none"> WP leaders appoint Result lead Authors from Consortium to define exploitation and dissemination plans for each result Exploitation of project results will be a topic on the agenda of the Consortium meetings in order to support exploitation of results on consortium level (please refer to Section 4.3.2 for the procedure)
Outputs	IPR registry KERs list D5.2 Exploitation strategy and plan D5.3 Contribution to SENDAI, policy and standardization D5.6 Methods and tools to engage community of practice in transdisciplinary collaboration

4.2.3 COMMUNICATION MANAGEMENT

The communications management has the objective to:

- Coordinate and monitor the communication activities to promote both the project and the results during the period of the project.
- Implement the dissemination aspects of the Dissemination and Exploitation Plan, as well as promoting the project

Activity Manager	Communication Manager
Accountable to	WP5 team
Inputs	Exploitation Plans from Result Authors and WP leaders



Activities	The "D5.1 Dissemination and communication strategy and plan" and "D5.2 Exploitation strategy and plan" clearly identify: <ul style="list-style-type: none"> • the targets audience of the project results • Key messages to each target • Channels used to deliver the key messages
Outputs	Dissemination Materials ENGAGE knowledge platform

4.3 PROCEDURES

This paragraph describes the key procedures defined in the innovation management plan. Each procedure is defined as follows:

- Entities involved in the procedures and roles
- Steps: list of actions to follow in the procedure and main responsible
- Triggers that initiate the procedure

4.3.1 CAPTURING PROJECT RESULTS

This procedure describes how information about project results is gathered

Trigger: preparation of a deliverable

Steps

Step#	Responsible	Action	Prerequisites, if any
1	Author of deliverables or milestones	Creates/Updates entries in the IPR registry and/or KERs list defining the dissemination and exploitation plans for each project result in scope in the deliverable/milestone. If support or clarification are needed, she/he can contact the Innovation Manager through email	
2	Author of deliverables or milestones	Contact the Innovation Manager through email that entries have been filled in and can be reviewed	
3	Innovation Manager and WP5 Team	Review the information provided in the IPR registry and/or KERs list and approve the entries, notifying this in the related Deliverable (or Milestone)	Authors of deliverables and milestones have completed the entries in the related Deliverable (or Milestone)
4	Innovation Manager and	In case the information provided in the entries is not sufficient, the Innovation Manager will request further updates to the authors of the	Incomplete/Insufficient information provided

	Author of deliverables	<p>of deliverables (or milestones) before approval. Author of deliverables (or milestones) will be notified also through email by Innovation Manager.</p>	in IPR registry and/or KERs list
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4.3.2 REVIEW OF PROJECT RESULTS AND AGGREGATE PROJECT RESULTS

Trigger: Executive Advisory Board results review meeting

Steps

Step#	Responsible	Action	Prerequisites, if any
1	WP leader	<p>Prior the EAB results review meeting, WP leaders review project results and aggregate project results.</p> <p>If support or clarification are needed, the WP leader can contact the Innovation Manager through email:</p>	
2	EAB and Innovation Manager	<p>Discuss the new entries</p> <ul style="list-style-type: none"> • Discuss on relevant issues on IPRs, exploitation and dissemination plans • New aggregate results are reviewed • Aggregate results are prioritized, defining Key and Supporting results • Input for the discussion is also provided by members of : <ul style="list-style-type: none"> ○ Ethics Advisory Board ○ Security Advisory Board 	Entries in the Catalogues pages have been updated/created

5 NEWS AND LAST INITIATIVES REGARDING INNOVATION

According to the ENGAGE Description of Action (DoA) [6] "Innovation management activities ensure that the project is aligned with the development of the state of the art related to societal resilience and uptake possibilities. It considers *open innovation principles* where both **external and internal conditions** influencing knowledge and solutions and ideas to be adopted. [...] ENGAGE will support create conditions for *participatory and inclusive transdisciplinary research* through collaboration arenas where practitioners and scientists are willing to collaborate, experiment, integrate and co-create solutions and transform knowledge. Transdisciplinary seminars will be established *as practice in all work packages* to *share and create transferable knowledge* across disciplines and contexts that facilitates implementation of ENGAGE results in practice. [...] In this way, innovation management supports *processes of growing ideas and solutions into their practical use.*"

While the chapters above offer an overview of what has been planned and achieved within the project Consortium (e.g. IPR registry and KERs list), this chapter summaries the participatory and inclusive transdisciplinary research activities carried out so far within and outside the Consortium.

5.1 INTERNAL INITIATIVES

Since the beginning of the ENGAGE project, all the partners have been encouraged to share innovative ideas. This has been done in periodic meetings, namely "sprint meetings" as well as in dedicated workshops with the internal end users in order to ensure that we take into account the most updated and recent ideas, means, solutions, procedures concretely and daily adopted from the operatives. By using the highest expertise of all participants of those meetings, we have been able to promote innovative thinking and share solutions.

5.1.1 SPRINT MEETINGS

As defined in "D7.1 ENGAGE Project management" [7], every second Tuesday all the WP leaders:

- Provide evidence for WPs progress reporting (main achievements, issues, risk, opportunities, actions)
- Discuss specific WP issues and suitable mitigation actions
- Suggest a plan for the next weeks

This offers the opportunity to constantly build a clear and common understanding of the project and the progress made so far. Furthermore, it helps in identifying synergies and potential collaborations across the different WPs.

With the aim of keeping all the other partners aligned on the project status, periodic meetings have been also scheduled with them. Indeed, every fourth Tuesday the whole Consortium is invited to take part in a discussion regarding the project progress, issues and next activities. The main goal is to foster cooperation and interaction among all members participating in the meeting and remove unnecessary obstacles hindering progress.

5.1.2 INTERNAL END-USERS WORKSHOPS

Before each formal workshop with the KI-CoP, namely Societal Resilience Hub (for further details please refer to subsection 5.2.2.1), an internal workshop with the Consortium end-users has been organized with the aim of take advantage of their operational expertise and redefine together the objectives as well as the content of the other one.



Always by keeping in mind an interactive and innovative approach for actively engaging the participants, during the workshops we adopted some tools (i.e. Miro) to collect their feedback. One of the results is the dashboard below that shows their comments to the suggested COVID-19 scenario and offers some additional inputs to revise and improve it before the Societal Resilience Hub event.

End-user Workshop 1			
Scenario 1 - Overwhelmed Hospital Occupation			
QUESTION	Besides restraint, what else could have been done BEFORE THE CHAOS that involves citizens' participation?	How to interact with the citizens to explain the extreme measures and to demonstrate that all possible actions have been done?	How to deal with protests, rebellions and chaos created by people trying to get access to care?
SOLUTION	<ul style="list-style-type: none"> AWARENESS CAMPAIGN Communicate CITIZEN PATROL Education information Emphatic 	<ul style="list-style-type: none"> Daily briefings Information Principle of Social Media participatory 	<ul style="list-style-type: none"> Proportional use of Filing of Reports Provide PoC (Point of Open interaction with opposing Monitor social reactions Whole-community
BARRIER	<ul style="list-style-type: none"> Lack of Elderly people 	<ul style="list-style-type: none"> Not all measures might be Valid information Coordination across Different 	<ul style="list-style-type: none"> Conspiracy Economics DENIERS Different POPULAR EXHAUSTION STATE OF

Figure 3: Internal end-users workshop - Miro dashboard

5.2 EXTERNAL INITIATIVES

5.2.1 COLLABORATION ARENAS

5.2.1.1 The Horizon 2020 DRS01 Cluster

The Horizon 2020 Framework programme¹ enabled through its Work programme "Secure societies" and specifically the DRS01 call focused on "Human factors and social, societal and organizational aspects for disaster-resilient societies" research teams to address the disaster management cycle as a whole.

Indeed, the related research and innovation issues and work towards a consolidated common European understanding of disaster resilience and empower disaster-resilient societies that cope with natural or man-made disasters and build back better. This call focused on the diversity in risk perception, in vulnerabilities and in understanding responses to crises to propose new approaches and strategies for communities' awareness, leadership, and involving first responders as well as authorities that can propose strategies, processes and methods.

The Horizon 2020 DRS01 Cluster was established in September 2020 with the endorsement of the Research Executive Agency REA² to enable the DRS01 projects RESILOCC³, BUILDERS⁴, LINKS⁵, and our project funded under the action to cooperate, collaborate and coordinate, in order to support and enhance synergies across their strategic objectives and jointly contribute to the build up to the

¹ <https://ec.europa.eu/programmes/horizon2020/>

² https://ec.europa.eu/info/departments/european-research-executive-agency_en

³ <https://www.resilocproject.eu/>

⁴ <https://buildersproject.eu/>

⁵ <http://links-project.eu/>



ultimate goals of the Framework programme. The project teams started supporting each other in challenges related to visibility and dissemination, research ethics, terminology, gradually expanding cooperation to other areas of their projects' actions boosting their capacity to address the complexities of societal resilience.

In order to facilitate interaction, a dedicated DRS01 Cluster group was established on the Crisis Management Innovation Network Europe CMINE enabling the projects to share information, experiences, best practice and lessons learned but also convene and conference at any point of need in a secure but dynamic online environment of the platform www.cmine.eu. The DRS01 Cluster is pioneering cooperation schemes paving the way for added value interactions of the projects to deliver upon the diverse strategic objectives with the support of the recently launched Horizon Europe programme. The first, remote meeting, was organized at the beginning of February 2021 and the Project Coordinator of ENGAGE presented the main objectives, the methodology as well as the preliminary results. Since then, through the platform, ENGAGE has been in contact with the other projects and suggest further opportunities to jointly present all the projects' progress (e.g. joint workshops in different conferences, ideas for a white paper/articles on the common topics and so on).

5.2.1.2 Bouncing forward from global crises and challenges - REA-NDM-FONCSI 2021

At the end of June 2021, a joint initiative of the Resilience Engineering Association (REA)⁶ and Naturalistic Decision Making (NDM)⁷ offered a great opportunity to ENGAGE to share its vision with a world-wide audience. Indeed, both the ENGAGE Project Coordinator and the Innovation Manager are active members of REA and chaired some of the sessions, were invited speakers in others and presented the progress of the project (please refer to the Full 4 days programme⁸ for all the details).

The theme of the event was " Bouncing forward from global crises and challenges. Rethinking and guiding adaptations based on Resilience Engineering and Naturalistic Decision Making". Indeed, the pandemic and other events around the world are shocks that stress human systems at scale. These events produce disruptions that spread over time and space inhibiting usual responses. Critically, there is uncertainty about when and how the event may be resolved, and, especially, uncertainty about what a resolution may look like. The event made an attempt to answer the following questions: "Whether we are scientists, engineers, or managers, how does our work help stakeholders look ahead to reconfigure systems and relationships? How do we guide adaptations, changes, and opportunities for renewal, while reducing natural tendencies for retreat and retrenchment?"

Always by keeping in mind an interactive and innovative approach for actively engaging the participants, during our sessions we adopted some tools (i.e. Mentimeter) to collect their feedback. One of the results is the word cloud below that shows their reply to this question "*What concepts can resilience engineering and natural decision making provide for understanding societal resilience?*" and offers some additional inputs for our project.

⁶ <https://www.resilience-engineering-association.org/>

⁷ <https://naturalisticdecisionmaking.org/>

⁸ <https://easychair.org/smart-program/REA-NDM-FONCSI2021/>



challenged not only to select the most suitable solution amongst the ones proposed but also to suggest others and analyze their applicability. Another key topic of this workshop was the involvement of citizens as well as volunteers in all the phases of a disaster management. Indeed, this offered the opportunity to start validating some of the identified solutions to link formal and informal interventions in emergencies. For engaging them, different interactive and innovation tools/platform were used (i.e. Miro dashboard, break-out rooms and so on).

This second workshop allowed us to revise the initial structure of the catalogue of solutions by focusing on end-users needs and requirements. Furthermore, we better understood the need to empower citizens and ensure a gracefully handover between them and the first responders.

5.2.2.1.3 Next Societal Resilience Hub

According to "D5.1 Dissemination and communication strategy", the next two scheduled Societal Resilience Hub events are planned to be held as physical events in October 2022 in Spain or Romania and in May 2023 in Belgium. It should be noted that these workshops might be rescheduled due to Covid-19 restrictions. In addition, based on the activities of the first year described above, other events will be organized either remotely or physically, depending on goals and constraints, to support the development, validation and C&D activities of the project.

5.2.3 SECURE SOCIETIES PROJECT TO POLICY KICK-OFF SEMINAR (P2PKOS)

At the end of March 2021, ENGAGE joined the second Secure Societies Project to Policy Kick-off Seminar (P2PKOS)¹⁰, organized by the Research Executive Agency (REA). The event provided an opportunity for Horizon 2020 projects to meet virtually with European Commission (EC) policy officers and discuss the EU policy landscape.

The ENGAGE project aims to provide important contributions to policymaking in fostering resilience; our findings can be used to inform decision-making to improve societal resilience on national and international levels. Engaging with governance actors is therefore key to ensuring that our results have a significant, long-term impact. Various departments of the EC were represented at the P2PKOS event, including the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG-ECHO)¹¹ and the Directorate-General for Migration and Home Affairs (DG-HOME)¹².

The Project Coordinator and WP5 Leader represented ENGAGE at the event, using the opportunity to present and get feedback from policy officers on our plans for policy impact. A particularly important outcome of the meeting was gaining insight into the importance of exploring synergies between different Secure Societies projects. We investigated crossovers between projects and how collaborations can make results more impactful. In addition, we explored how the EU Civil Protection Knowledge Network will help to make the impacts of Secure Societies projects more sustainable.

The discussions from the Secure Societies Project P2PKOS event will feed back into developing ENGAGE's policy impact outputs. Ultimately, our aim is to produce actionable advice that can have a positive impact on people's safety. All the exchanges from the P2PKOS event therefore helped us to understand the best way to communicate our findings and exchange ideas, as well as the areas of EU policy which are most relevant to our work.

¹⁰ <https://digital-strategy.ec.europa.eu/en/library/project-policy-kick-seminar-security-research>

¹¹ https://ec.europa.eu/echo/index_en

¹² https://ec.europa.eu/home-affairs/index_en



6 CONCLUSION AND NEXT STEPS

This deliverable presented and elaborated the innovation management plan of the ENGAGE project. The presented processes and procedures are already in place and are being implemented by the project consortium.

Periodic review meetings will take place to help the consortium in refining the key results and assessing the best exploitation and dissemination strategies. In addition, the information gathered during the project execution will be systematically collected and assessed for the development of new ideas/proposals about societal resilience and citizens engagement.

The Innovation Manager and also the ENGAGE consortium pursue to be actively involved in different arenas as well as seminars to ensure that the innovation management support processes of growing ideas and solutions into their practical use. With this aim, ENGAGE will organise a series of webinars to raise awareness and get endorsement on the project solutions.



7 REFERENCES

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4. ENGAGE Grant Agreement (GA) Number 882850
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7. D7.1 ENGAGE Project management manual, version 00.01.00, released on 10/09/2020



8 APPENDIX A: DEFINITIONS OF INNOVATION

Most probably due to the diverse background of all those (persons and sectors) where the development of innovative solutions, products or technologies is an important target, no clear and commonly acceptable definition of innovation exists. The nature of this deliverable is not to provide a commonly agreed definition. However, it is important to have some definitions that provide a setting and a starting point. The following list contains a variety of definitions for innovation (retrieved by Eric Shaver, *The many definitions of innovation*).

"...the successful conversion of new concepts and knowledge into new products, services, or processes that deliver new customer value in the marketplace."

"Something different that has impact."

"Innovation is the multi-stage process whereby organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace."

"Innovation is significant positive change."

"Innovation represents the core renewal process in any organization. Unless it changes what it offers the world (product/service innovation) and the ways in which it creates and delivers those offerings (process innovation) it risks its survival and growth prospects."

"...the creation of a new product-market-technology-organization-combination."

"...is the creation and capture of new value in new ways."

"...innovation is the process that turns an idea into value for the customer and results in sustainable profit for the enterprise."

"A change in a product offering, service, business model or operations which meaningfully improves the experience of a large number of stakeholders"

"...the art of applying creative ingenuity to either solving business problems or creating material value through a product, service or experience."

"...production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome."

"...adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization."

"...the search for, and the discovery, experimentation, development, imitation, and adoption of new products, new production processes and new organisational set-ups."

"Innovation is change that creates a new dimension of performance."

"Innovation is creativity with a job to do."

"...new ideas that are implemented to create business value."

"...a product, process or service new to the firm, not only new to the world or marketplace."

"The design, invention, development and/or implementation of new or altered products, services, processes, systems, organizational structures, or business models for the purpose of creating new value for customers and financial returns for the firm."

"People implementing ideas that create new value."



"Innovation is the creation of a new product, service, or process that provides value for customers and/or other stakeholders."

"Innovation is an invention that has demonstrated its' ability to create value."

"A new idea, method, or device. The act of creating a new product or process, which includes invention and the work required to bring an idea or concept to final form."

"Innovation is the set of capabilities (individual, company, societal) that allows the continuous realization of a desired future by transforming what is possible into what is valuable for many."

"Innovation is executing new ideas to create value."

"Innovation transforms the useful seeds of invention into solutions valued above every existing alternative – and widely adopted."

"...a viable offering that is new to a specific context and time, creating user and provider value"

"...innovation is the conversion of a new idea into revenues and profits."

"Discontinuous improvement."

"...the synchronized intersection of a meaningful insight or market need, the new product, service or business model that meets that need, and the communication and commercialization strategy."

"The introduction of transformational change into inherently stable systems from which a user derives meaningful value."

"...the introduction of new products or services that add value to your business."

"...any novel product, service, or production process that departs significantly from prior product, service, or production process architectures."

"The act or process of introducing new ideas, devices, or methods"

"...the function of an interaction among the motivation to innovate, the strength of obstacles against innovation, and the availability of resources for overcoming such obstacles."

"...any policy, structure, method or process, product or market opportunity that the manager of the innovating unit perceived to be new."

"Making connections to bring something new to the world."

"Innovation is the process of making changes, large and small, radical and incremental, to products, processes, and services that results in the introduction of something new for the organization that adds value to customers and contributes to the knowledge store of the organization."

"Innovation = Creativity + Exploitation"

"...is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations."

"...the transformation of knowledge into new products, processes, and services..."

"...directed creativity implemented."

"...a change that breaks trade-offs."

"Innovation = Invention + Exploitation"

"...an idea, practice, or object that is perceived as new by an individual or another unit of adoption."

"The commercialization of any new product, process, or idea, or the modification and recombination of existing ones."

"Newness that proves its worth."



- "...a process of finding novel solutions to important problems."
- "...the practical implementation of an idea into a new device or process."
- "...the act of generating more value for the customer and the business by fulfilling a job to be done better than anyone else."
- "...innovation is a process of turning opportunity into new ideas and of putting these into widely used practice."
- "...is the process through which value is created and delivered to a community of users in the form of a new solution."
- "...catalyzes positive change in the way we do things and fundamentally alters our views."
- "Innovation = theoretical conception + technical invention + commercial exploitation"
- "Innovation is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of a new (or improved) product or manufacturing process or equipment."
- "Innovation is the successful exploitation of new ideas."
- "...an invention which has reached market introduction in the case of a new product, or first used in a production process, in the case of a process innovation."
- "...the process of developing and implementing a new idea."
- "...is anything new that is actually used ('enters the marketplace') – whether major or minor."
- "...the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, the organization or wider society."
- "Change that creates value."
- "...any idea, practice, or material artifact perceived to be new by the relevant unit of adoption."