LINKS

Strengthening links between technologies and society
for European disaster resilience

D6.6 FINAL REPORT ON THE LINKS FRAMEWORK APPLICATION IN A BROADER CONTEXT

Research Report

ROBERT LARRUINA – VRIJE UNIVERSITEIT AMSTERDAM (VU)

NATHAN CLARK – VRIJE UNIVERSITEIT AMSTERDAM (VU)

FRANCESCO GRAZIANI – SAVE THE CHILDREN ITALY (SCIT)

CAMILA FROIO – UNIVERSITA DEGLI STUDI DI FIRENZE (UNIFI)

EMMELINE ROELOFFS – VRZL VRIJE UNIVERSITEIT AMSTERDAM (VU)

RICHARD LÜKE – SAFETY INNOVATION CENTER gGmbH (SIC)

NINA BLOM ANDERSEN – UNIVERSITY COLLEGE COPENHAGEN (UCC)

LENE STOLPE MEYER – FREDERIKSBERG KOMMUNE (FK)

NELE HINGMANN – DEUTSCHE HOCHSCHULE DER POLIZEI (DHPOL)

ANNIKA HAMACHERS – DEUTSCHE HOCHSCHULE DER POLIZEI (DHPOL)

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AUTHORS & CONTRIBUTORS

Author	Institution	Authored Sections
Robert Larruina	VU	Entire Document
Nathan Clark	VU	Entire Document
Francesco Graziani	SCIT	Section 3.1.1
Camilla Froio	UNIFI	Section 3.1.1
Emmeline Roeloffs	VRZL & VU	Section 3.1.2
Richard Lüke	SIC	Section 3.1.3
Therese Habig	SIC	Section 3.1.3
Nina Blom Andersen	UCC	Section 3.1.4
Lene Stolpe Meyer	FK	Section 3.1.4
Annika Hamachers	DHPol	Section 3.1.5
Nele Hingmann	DHPol	Section 3.1.5

REVIEWS

Reviewer	Institution	Reviewed Sections
Camilla Froio	UNIFI	Entire Document
Richard Lüke, Therese Habig	SIC	Entire Document

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EXECUTIVE SUMMARY

About the project

LINKS "Strengthening links between technologies and society for European disaster resilience" is a comprehensive study on disaster governance in Europe. In recent years, social media and crowdsourcing (SMCS) have been integrated into crisis management for improved information gathering and collaboration across European communities. The effectiveness of SMCS on European disaster resilience, however, remains unclear owing to the use of SMCS in disasters in different ways and under diverse conditions. In this context, the overall objective of LINKS is to strengthen links between technologies and society for improved European disaster resilience by producing sustainable advanced learning on the use of SMCS in disasters. This is done across three complementary knowledge domains:

- Disaster Risk Perception and Vulnerability (DRPV)
- Disaster Management Processes (DMP)
- Disaster Community Technologies (DCT)

The project will develop a framework through an iterative process and bring together 15 partners and two associated partners across Europe (Belgium, Denmark, Germany, Italy, Luxembourg, the Netherlands) and beyond (Bosnia & Herzegovina, Japan) to understand, measure and govern SMCS for disasters. The LINKS Framework consolidates knowledge and experiences on the uses of SMCS into useful products for relevant stakeholders. It has been developed and evaluated through five practitioner-driven European cases, representing different disaster scenarios (earthquakes, flooding, industrial hazards, terrorism, drought), cutting across disaster management phases and diverse socioeconomic and cultural settings in four countries (Denmark, Germany, Italy, and the Netherlands). Furthermore, LINKS sets out to create the LINKS Community, which brings together a wide variety of stakeholders, including first-responders, public authorities, civil society organisations, business communities, citizens, and researchers across Europe, dedicated to improving European disaster resilience through the use of SMCS.

About this deliverable

This deliverable (6.6) is the final report on the LINKS Framework application in the broader context. By application, we refer to the final validation and use of the Framework products and parts by relevant stakeholders. The application was carried out at two levels: 1) the activities of the five LINKS cases (Earthquakes in Italy, industrial hazards in the Netherlands, drought in Germany, flooding in Denmark and terrorism in Germany) and activities outside those organized by the cases (i.e., the LINKS Advisory Committee meetings, individual and joined projects meetings, expert conferences or local event).

This deliverable provides a detailed overview and timeline of the activities carried out between April and November 2023. The document highlights the products and parts in the Framework on which the activities focused, the stakeholders involved, and the overall outcomes of those activities. Below is an overview of the activities per Framework part and highlights of their outcomes.

- **User Guidance**

The User Guidance is a set of simplified questions matched with the LINKS products. It was validated through a survey done using a Google form. This methodology created a situation close to reality for the user in order to test the guidance: sitting at their desk at home or work and without assistance other than the information on the website. The validation was done by respondents from the four case countries in LINKS (the Netherlands, Italy, Germany and Denmark) plus two more: Spain and Norway. The users' roles ranged from experts with press offices and social media in disaster management organisations (DMOs) to researchers in disaster management. All of the respondents found the overall experience user-friendly, clear, informative and engaging. They found the overall design appealing and easy to navigate. All of the respondents recognised that the guidance offered practical help for focusing their search when navigating the LCC and exploring LINKS products.

- **SMCS Technologies**, **Guidelines**, **Use Cases Libraries.**

The SMCS libraries have transformed the way the cases see and work with SMCS because they offer a comprehensive classification of the SMCS technologies currently available (Technologies Lib.), expert guidelines (Guidelines Lib.) and practical examples (Use Cases Lib). During the lifetime of LINKS, the different libraries have been widely used and organisations supported in their social media utilisation through workshops. There have been several opportunities for feedback with stakeholders in the different cases, including the Municipality of Frederiksberg (DK), DMOs near Chemelot (NL), the German Policy Academy (GE) and the annual Conference of the Association for the Promotion of German Fire Protection (GE). The case on drought achieved an up-to-date overview of the SMCS technologies in use, and how and why these technologies are used and by whom. All in all, the cases and their stakeholders now have easier access to the sizable world of SMCS and know where to search for reliable resources and examples.

- **Including Citizens Handbook**

The Including Citizens Handbook has been explored and is being used by DMOs, first responders, decision-makers, businesses and schools. In the Italian case, the handbook provides resources for practitioners to use throughout the course of the disaster cycle (before, during and after) to validate the advantages of using technologies with an emphasis on making information accessible and mobilising citizens. For the Danish case, the sections of the handbook on mobilising volunteers and communicating risk are of particular relevance. They

serve as relevant stepping stones for internal discussions on risk communication, volunteering and the possibility of involving the citizen. Similarly, in the Dutch case, the handbook has proven a valuable tool to explore possibilities to enhance the strategies to communicate risk in industrial accidents. These strategies are vital in a setting where the chemical factory is so physically close to the neighbouring municipalities, as in their case.

- **Feel Safe**

Feel Safe is a product that helps to explore vulnerability to earthquakes and provides training tools and other educational materials for practitioners and educators. It is a fully developed and functioning website with activities ranging from roundtables with practitioners and policymakers (Italy) to teaching exercises and sections for children to use (IT & NL). Feel Safe is advertised and disseminated nationally in Italy through a social media campaign. Moreover, in the Dutch context and in collaboration with Save the Children Italy, a lesson plan was developed for teachers to communicate with children about chemical risks and disaster preparation.

- **Resilience Wheel**

The Resilience Wheel was promoted and explored in many activities within the cases, particularly the Danish and German (terrorism) cases. These activities facilitated discussions and assessments on how SMCS can support disaster management processes within and across organisations. The activities went further into the specificities of each context and each organisation. They generated exchanges with potential users that led to helpful feedback that contributed to adjusting the instructions for DMOs to apply the wheel. More concretely, the participants from Hovedstadens Beredskab (HBR), HOFOR[1] (DK) and the German Police Academy (GE) expressed interest in bringing the Resilience Wheel back to their organisations and applying it as a working method to understand their challenges and needs.

The above list provides the high-level outline of the activities and outcomes from April to November 2023. More specific information on products, activities and outcomes are found in Sections 3 and 4 of this deliverable.

This document is a public document and of relevance to researchers and practitioners who are engaged in activities similar to those carried out in LINKS and are looking for direction on subjects like SMCS planning and/or for practical information that can support their work. This is particularly relevant for understanding how SMCS communication and collaboration can impact the outcomes of different activities in the disaster management sphere.

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[1] HOFOR is a large organisation that covers many municipalities in the greater Copenhagen region and is a significant stakeholder of the Danish capital area, when it comes to disaster resilience. They operate in close cooperation with other authorities.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

Abbreviation/Acronym	Description
CATs	Case Assessment Teams
DMO	Disaster Management Organisation(s)
LCC	LINKS Community Center
LCW	LINKS Community Workshop
PO	Product Owner
SMCS	Social Media and Crowdsourcing
WP	Work Package

DEFINITION OF KEY[2]

Terms	Definition
Case	Context-based study, realised through fieldwork, to assess the LINKS Framework. A case implies an empirical inquiry that investigates a real-life hazard scenario (LINKS Glossary).
Case Assessments	The assessment of the LINKS Framework in local cases (LINKS Glossary).
LINKS Framework	The LINKS Framework consolidates knowledge and experiences on the uses of social media and crowdsourcing in disasters, into products for relevant stakeholders. The Framework is accessible online through the LCC, and can be used by stakeholders to openly explore knowledge, or as a strategic planning tool for guiding disaster management organisations in their planning for using social media and crowdsourcing in disasters.
LINKS Knowledge Base	The outputs and knowledge obtained from the assessment of three knowledge domains. This knowledge is used to develop the LINKS Framework (LINKS Glossary).
Scenarios	In LINKS, the scenarios are the hazards, contextualised in each case (case 1, earthquake, Italy; case 2, industrial, the Netherlands; case 3, drought, Germany; case 4, flooding, Denmark; case 5, terrorism, Germany). They are informed by methodological choices and are instrumental for the case-based assessments of the Framework as they are the real-life scenarios through which the LINKS Framework is assessed (LINKS Glossary)
Social Media	A group of internet-based applications that build on the ideological and technological foundations of the Web 2.0 and that allow for the creation and exchange of user-generated content (UGC). Forms of media that allow people to communicate and share information using the internet or mobile phones (definition builds on Kaplan & Haenlein, 2010; see also LINKS Glossary).

LINKS Glossary - Links Project (links-project.eu)

1. INTRODUCTION

The overall objective of LINKS is to strengthen links between technologies and society for improved European disaster resilience, by producing sustainable advanced learning on the use of social media and crowdsourcing (SMCS) in disasters. To achieve this objective, LINKS has created a **Framework** that can be accessed online via the **LINKS Community Center** (LCC). The LINKS Framework includes the following products:

- Four libraries on a) **Technologies (**List of Disaster Community Technologies - LINKS Community Center**),** b) **Guidelines (**List of Guidelines - LINKS Community Center**),** c) **Use Cases (**List of Use Cases - LINKS Community Center**)** and d) **Crisis Communication Messages[3]** (List of Crisis Communication - LINKS Community Center) related to SMCS in disasters;
- An **Including Citizens Handbook** focusing on involving citizens and promoting more inclusive approaches in disaster risk management (DRM) (Including Citizens Handbook - LINKS Community Center);
- The **Feel Safe** platform provides educational material to engage children in disaster preparedness. It also promotes knowledge and good practices regarding children's rights during emergencies and participation in DRM (Feel Safe - LINKS Community Center);
- The **Resilience Wheel** facilitates initial discussions and assessments on how SMCS may support disaster management processes within and across organisations (Resilience Wheel - LINKS Community Center).

The final version of Framework also includes a fully validated **user guidance** system that assists stakeholders in navigating the products and supports strategic planning by organizations working with SMCS in DRM. The design of the **user guidance** is based on knowledge derived from the products concerning two main themes and six sub-themes (D5.5 Fonio & Larruina, 2023).

1. **Engaging with citizens:** collecting and analysing information, mobilising citizens, mobilising volunteers and
2. **Improving communication:** targeting communication, ensuring the quality of information, making information accessible.

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[3] Based on discussions with LINKS Community members, a fourth library, titled the **Crisis Communication library** was created in August 2023. An internal finalization and validation of this library was ongoing as of November 2023 and is not covered by this report. More details on the library will be available in D7.6

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During the LINKS project, the Framework was developed, validated and applied through iterations in activities in case assessments in Denmark, Germany, Italy, and the Netherlands, focused on different hazard scenarios:

- Case 1: Earthquakes in Italy
- Case 2: Industrial hazards in the Netherlands
- Case 3: Drought in Germany
- Case 4: Flooding in Denmark
- Case 5: Terrorism in Germany

Figure 1. The LINKS Cases

Deliverable 6.6 is the last deliverable reporting on the activities that led to applying the final version of the LINKS Framework in a broader context. It builds on the previous work of the cross-case and deep dive assessments (D6.4 Clark et al., 2022 & D6.5 Larruina et al., 2023), which included the collaboration between case assessment teams (CATs) and relevant stakeholders (e.g., schools, police, fire brigades, municipalities, civil protection authorities) in the different case activities. Whereas deliverables 2.6 (Report on the monitoring of DRPV–

related broader context application), 3.5 (Report on the monitoring of DMP–related broader context application) and 4.5 (Report on the monitoring of DCT- related broader context application) report on the I state of the Knowledge Bases and provide a comprehensive account of the status of their respective LINKS products.

During this period (April - November 2023) the application of the Framework was done in the "broader context" meaning that the final validation and use of the Framework products and parts, was primarily done with relevant stakeholders outside the LINKS consortium. This happened at two levels: the activities of the five cases and activities outside the cases through the extended networks[4] of LINKS (i.e., the LINKS Advisory Committee meetings, individual and joined projects meetings as well as the final evaluation of the user guidance). This document provides the final outcomes from those activities. It is written together with the CATs, as this cooperation was vital to understanding the contexts of the different cases, the organisation and execution of the activities across and within the different cases during the project's lifetime.

1.1   How to Read the Document

This document is structured as follows:

Section 2 provides an outline of the final version of the LINKS Framework. It also summarises what happened between the second case assessment (D6.5) and the present application of the Framework in the broader context (D6.6).

Section 3 presents a detailed description of the application of the Framework in the five cases. In this section, each case elaborates on the focus of their activities during LINKS, to address the needs and challenges of each scenario and how they have achieved their aims.

Section 4 presents the broader application of the Framework through diverse activities and stakeholders such as the LINKS Advisory Committee (LAC), LINKS individual and joint meetings and the final evaluation of the user guidance.

Section 5 provides conclusive remarks and a final conclusion regarding the overall work of the case assessment teams during the lifetime of LINKS.

In addition to these sections, annex I present the google form used to validate the User Guidance.

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[4] An extended network refers to a group of individuals who share a common connection or interest, such as disaster management-related issues. This connection can be through a particular activity, organization, place of work, or community.

2. The Final Version of the Links Framework and Its Application in a Broader Context

2.1 The Final Version of the LINKS Framework

The final version of the LINKS Framework is the materialisation of the knowledge from three different bases (D2.5, Froio et al., 2023; D3.4, Nielsen et al., 2023; D4.4, Luke and Habig, 2023 and D5.5, Fonio & Larruina, 2023) into useful products. The Framework functions as a knowledge resource for disaster management organizations (DMOs) and other relevant stakeholders, to guide them in the application of Social Media and Crowdsourcing (SMCS) in disaster risk management (DRM). Guidance through the Framework is organized under two thematic areas (engaging with citizens and improving communication) and sub-themes (D5.5). (Fig. 2).

Figure 2: The LINKS Framework – Main themes and sub-themes
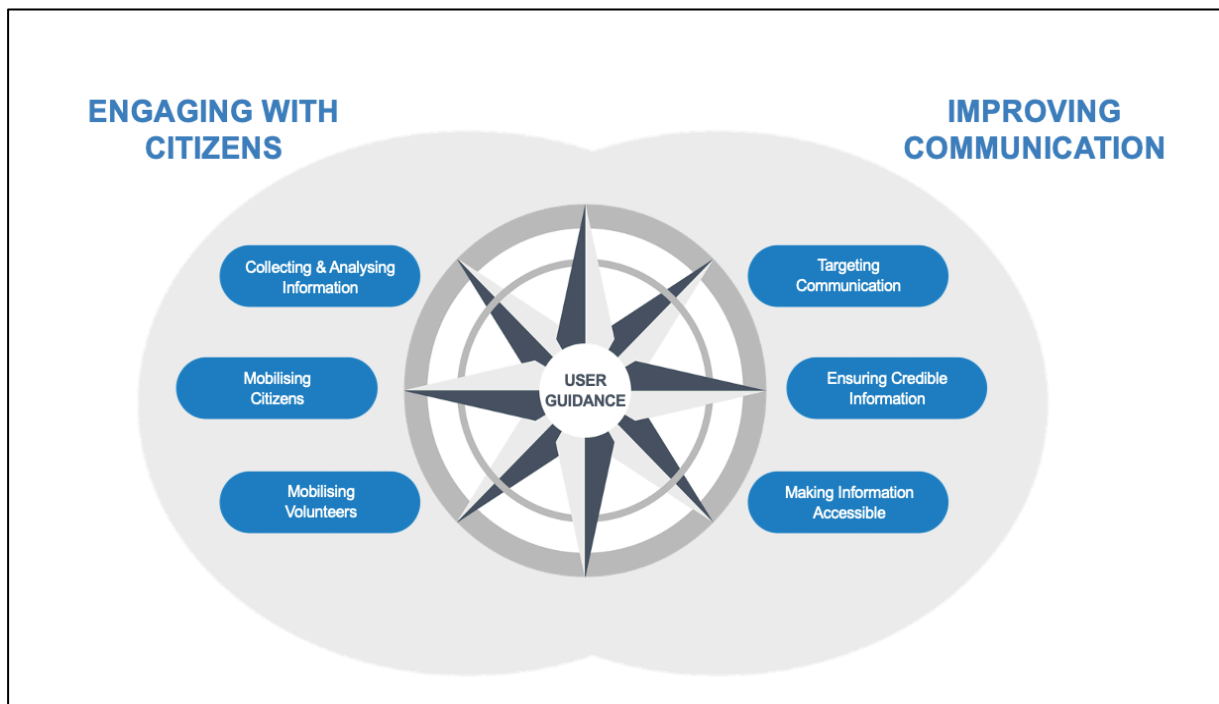
Source: WP5-WP9

The overall purpose of the **User Guidance** is to provide easy access to the products in the Framework through the **LINKS Community Center** (LCC) (Fig. 3). The user guidance has thematic questions which are linked via the thematic areas to the LINKS products (Fig.2).

Figure 3: The LINKS Framework
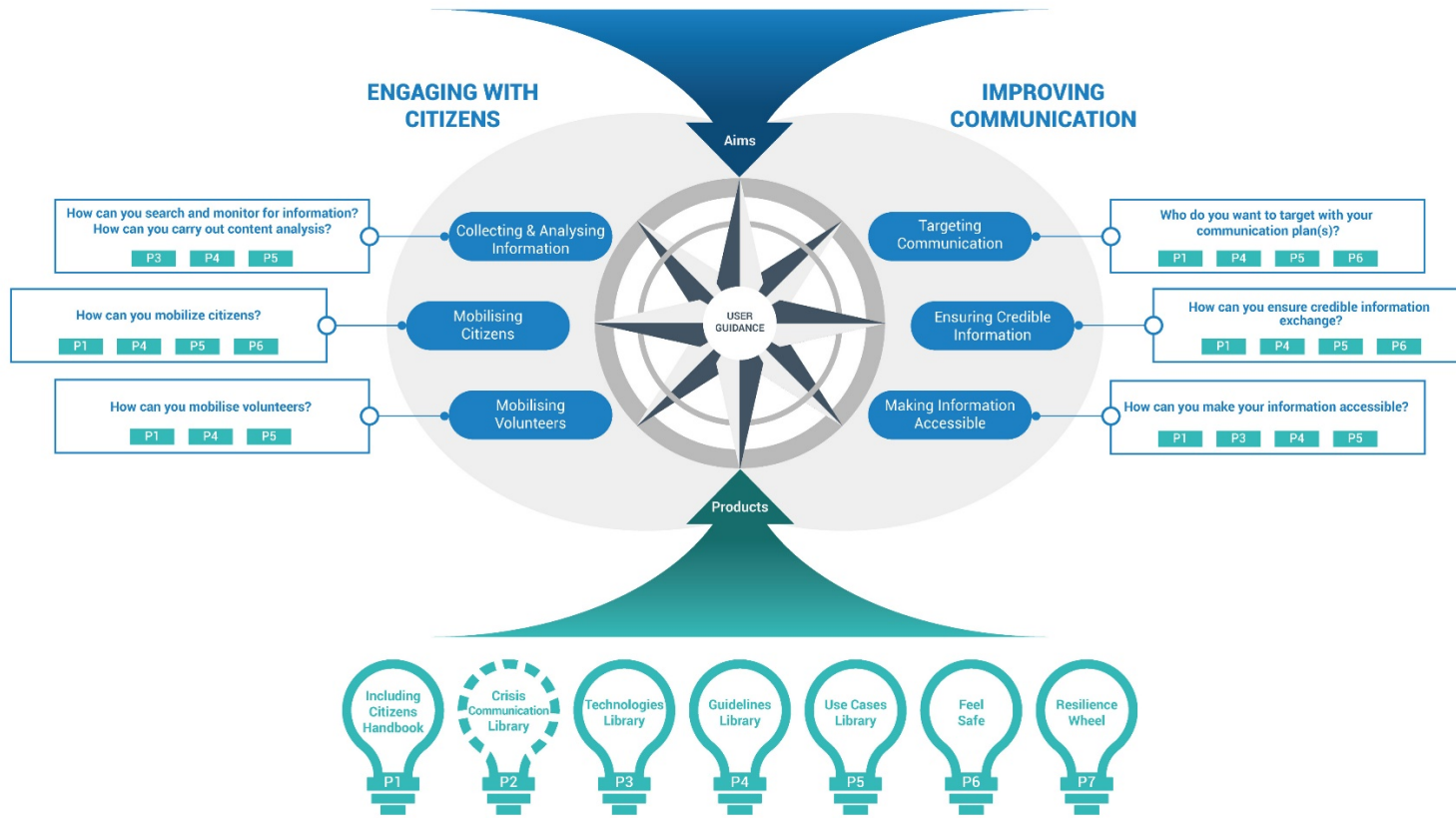
Source: WP5-WP9

From a user's perspective, and as a starting point. The users can click on the navigation compass and then choose between the themes "Improving Communication" and "Engaging with Citizens". As shown in the following figure.

Figure 4: Entry point to the LINKS Framework in the LCC

Figure 5: LINKS themes

User Guidance

The LINKS User Guidance, like a compass, aims to support navigation and orientation within and across two main themes – Engaging with Citizens and Improving Communication – so that disaster management organizations and relevant stakeholders can take more informed decisions on the uses of Social Media and Crowdsourcing through the LINKS products. Orientation is supported by pre-defined questions that guide users towards the LINKS products.

Please select the themes you are interested in below.

Improving Communication

Engaging With Citizens

Under each theme and then subtheme, there are guiding questions, as shown in figure 6.

Figure 6: The User Guidance theme, subtheme and question

Please select the themes you are interested in below.

Improving Communication

Targeting Communication
Who do you want to target with your communication plan(s)?

Ensuring Credible Information

Making Information Accessible

Consider as well:
What do you have to consider to facilitate strategic and inclusive use of social media and crowdsourcing in your organisation in disaster situations?
Check the Resilience Wheel!

The question leads to a set of info cards containing a brief description of the product (s) that will assist the user to address the question he wants to address. In the following example the user would click on the info card of Feel Safe[5] (Figure 7)

Figure 7: Product info card and brief description

— Improving Communication

— Targeting Communication

— Who do you want to target with your communication plan(s)?

Citizens
How can you target citizens?

Guidelines	Use Cases	Feel Safe
Guidelines on crisis communication targeting practitioners and policy makers.	Use cases involving the topics of social media and targeting communication.	Explore projects from around the globe for a more child-targeted communication.

Including Citizens Handbook	Including Citizens Handbook	
Learning module on how to be prepared in case of evacuation or in-sheltering.	Learning module on how to communicate risk using different media.	

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[5] If you want experiment with the User Guidance, please visit LINKS Community Center and follow the instructions on annex I in this report if needed.

When the user clicks on an info card, they are directed to a landing page (Figure 8) with general information about the product. The landing page also provides the link to go to the actual website product if they decide to continue (Figure 9).
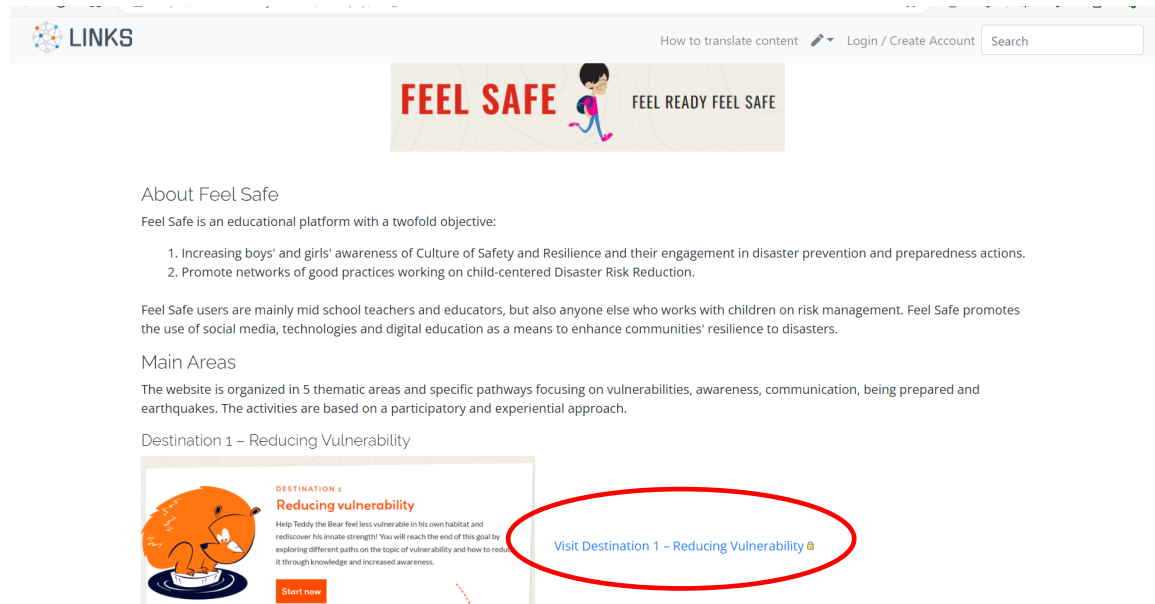
Figure 8: Landing page from the Feel Safe product

Figure 9: Webpage of Feel Safe
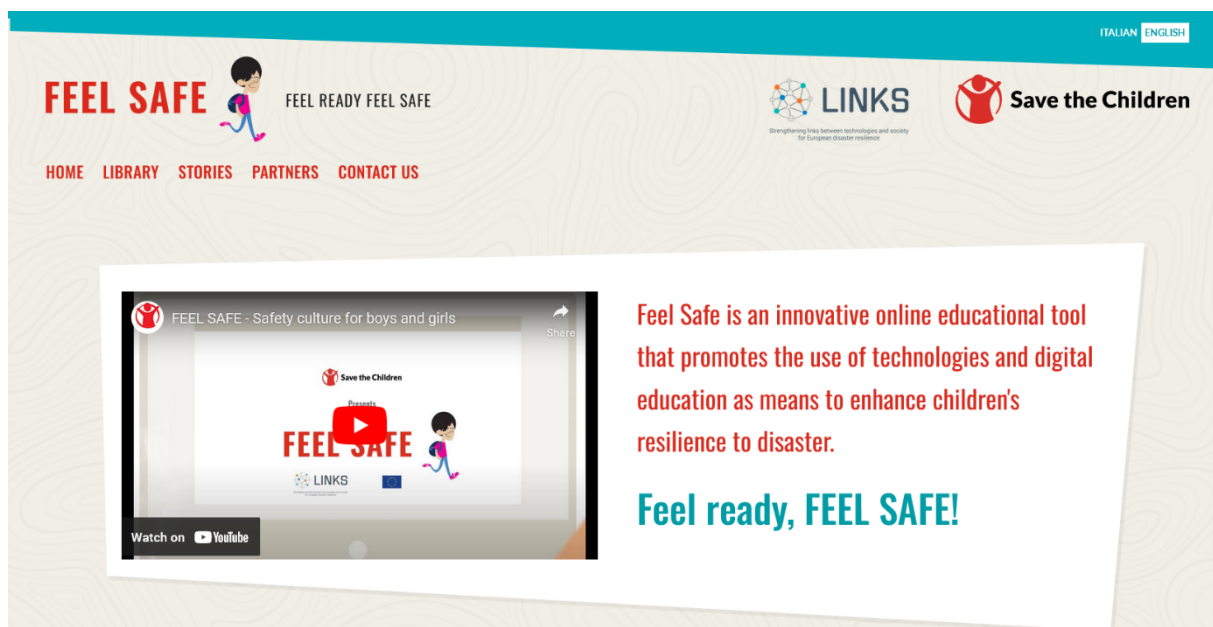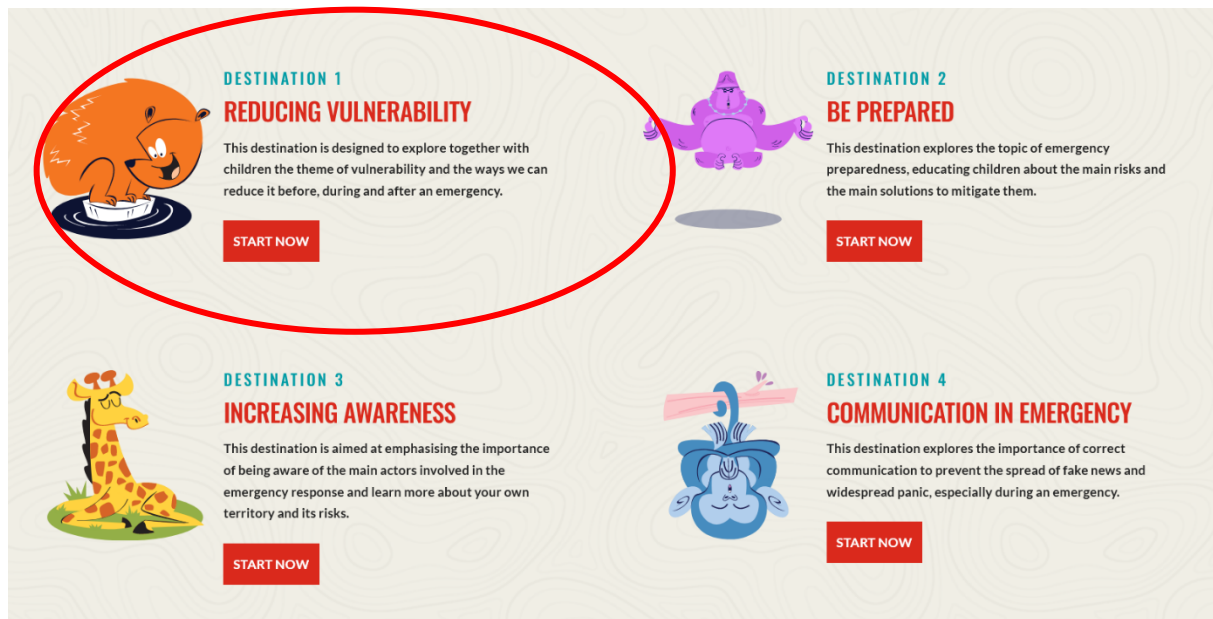
To go from the inputs of the knowledge bases to the user guidance approach implemented in the last version of the Framework, internal and external rounds of evaluations took place (D5.5). These activities were crucial to ensure that the Framework could guide relevant stakeholders wanting to apply SMCS in DRM, particularly when they need support for improving communication and engagement with citizens in all phases of disasters (D5.5). The final application of the updated user guidance system and products will be described in the subsequent sections.

2.2   From the Second Round of Case Assessments to the Final Application of the Framework.

As previously mentioned, the Framework was developed and assessed in iterations in LINKS. During the second round of case assessments that took place between November 2022 and March 2023 (D6.5), the cases identified the themes and sub-themes that allowed them to connect their needs and challenges (D6.4) through the user guidance to the products in the Framework. Each case assessment team (CAT) planned and executed activities with different stakeholders in their respective scenarios. Additionally, CATs and product owners discussed preliminary results concerning the products and their applicability at the case level (in particular) and practitioner level (in general). The activities organised by the cases generated inputs for the products (D5.5) and hazard scenarios (D6.5). The results from the second round of case assessments contributed to further developing the three knowledge bases and their products. Furthermore, the user guidance and products in the Framework were also applied, improved, and consolidated in the third and final version of the Framework. Figure 9 shows

![LINKS logo](Strengthening links between technologies and society for European disaster resilience)

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the workflow between the knowledge bases (WP 2-4), the LINKS Framework (WP5) and the LINKS cases (WP6) in the third and final iteration leading to this deliverable, D6.6.

Figure 9: LINKS workflow
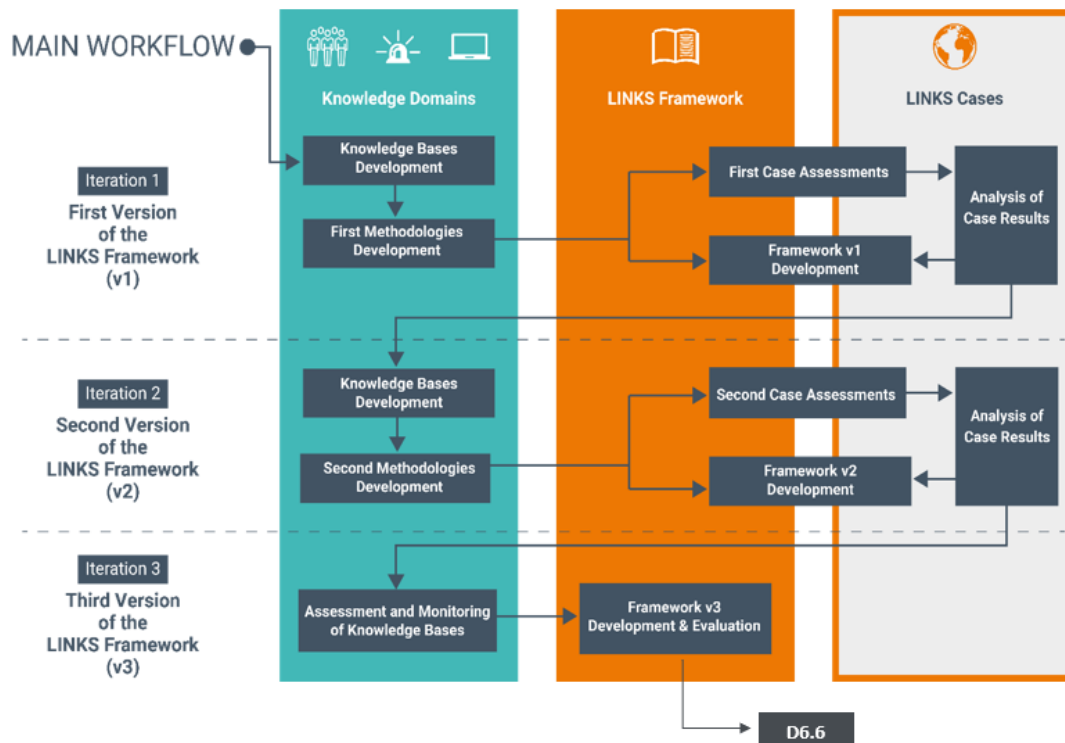
The second round of case assessments (D6.5) was conducted through the guidance of the second methodology (D2.7, Lüke et al., 2022), which was built from the results of the first case assessments (D6.4) and the experiences and organisational settings of the practitioners in the LINKS consortium. Combining research with practice in the second methodology allowed the generation of new knowledge and further testing and co-producing results from the first phase of the project directly with practice (D2.7, D6.5).

In the second round of assessments, the collaboration between CATs and relevant stakeholders in the cases had a crucial role in developing activities, contributing to the products, and using actionable results from the project. This fed into the final application of the Framework in the current period between April – November 2023, within and outside the cases.

2.3   The Application of the LINKS Framework in this Period

In this period, the CATS validated, promoted and applied the Framework in activities within the cases and also within their extended networks, leading to some improvements in specific parts of the Framework (Section 3). To achieve this, they organised activities with relevant stakeholders in their scenarios. These stakeholders belong to disaster management

organisations and organisations supporting disaster risk management activities at different levels. This is a vital step for the Framework because it closes a circle that started during the deep dive and cross-case assessments (D6.4), where the needs and challenges of practitioners were identified.

Additionally, to validate the user guidance of the Framework, a short evaluation was created with questions aimed at assessing the guidance navigability and user-friendliness (via a Google Form) (for the results please go to section 4 in this document). This was done by formulating questions about the different elements that the user would find on the journey though the themes, subthemes, questions, sub-questions and when arriving to the products. An online evaluation was used to carry the validation because that would allow the respondents to answer in a situation as close to the real world as possible. In other words, the respondents would be sitting in front of their computers, at home or work, and navigating independently looking for useful information and tools, without assistance.

The respondents were invited to fill the form based on their expertise and experiences working at operational and strategic levels within disaster management organisations, or within organisations that can eventually support disaster risk management activities at different level. They were contact from different partners within the consoritum who represented governmental organisations, non-governmental organisations, associations and federations, policy/decision-makers and scientific communities (e.g., universities, other research projects). The respondents were emailed a link to the form and a link to the LCC (appendix I).

2.3.1 General overview of the activities developed per case

The following table presents an overall overview of the activities which took place for around each product in the Framework between April and November 2023. It is organized by product, activity (organized by the CATs or in a broader network), and the overall outcome of each activity. Case countries are indicated by NL (Netherlands), IT (Italy), GE1 (Germany case on drought), GE2 (German case on terrorism) and DK (Denmark).

Table 1: Overview of activities and outcomes per product

Product	Activity	Outcome
User Guidance[6]	• Validation and evaluation of User Guidance through Google form survey (IT, NL, GE1, DK, GE2)	Validation and dissemination and collection of feedback from individuals working at operational and strategic levels in DMO and support organizations.
SMCS Technologies Library	• Conference Association for the Promotion of German Fire Protection (GE1) • European Emergency Number Association Conference (GE1) • Workshop within the 4TH LAC meeting (G1) • Disaster Prevention Day 2023 State of North Rhine-Westphalia (G1) • Qualitative Questionnaire (G1) • 1 LCW (NL) • LCW (DK)	Engagement with stakeholders, which facilitated valuable exchanges with experienced practitioners based in Germany. User feedback shed light on the practicality and potential use of products in various contexts. New inputs to expand the library. Exchange of ideas on product use after the project's end (Sustainability). Identification of needs and challenges of stakeholders about the use of existing social media and crowdsourcing initiatives; better understanding of the use of the social media channels currently in use by businesses. Dissemination.

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[6] The User Guidance is not a product but an integral part of the Framework.

Product	Activity	Outcome
SMCS Guidelines Library	• Annual Conference 2023 Association for the Promotion of German Fire Protection (G1) • European Emergency Number Association Conference (GE1) • Workshop in the 4th LAC (G1) • Disaster Prevention Day 2023 State of North Rhine-Westphalia (G1) • Qualitative Questionnaire (G1) • LCW (DK)	Engagement with stakeholders which facilitated valuable exchanges with experienced practitioners based in Germany. User feedback shed light on the practicality and potential use of products in various contexts. New inputs to expand the library. Exchange of ideas on product use after the project's end (Sustainability). Identification of needs and challenges of the stakeholders about the use of existing social media and crowdsourcing initiatives. Dissemination.
SMCS Use Cases Library	• Week of Safety event (NL) • Annual Conference 2023 Association for the Promotion of German Fire Protection (GE1) • European Emergency Number Association Conference (GE1) • Workshop with the 4th LAC (G1) • Disaster Prevention Day 2023 State of North Rhine-Westphalia (G1) • Feedback Workshop (on terrorism related cases) (GE2) • LCW (DK)	User feedback shed light on the practicality and potential use of products in various contexts. New inputs to expand the library. Exchange of ideas on product use after the project's end (Sustainability). Identification of needs and challenges of the stakeholders about the use of existing social media and crowdsourcing platforms. Cooperation with retail park management. Dissemination in the local community; addressed questions about risks, safety, and awareness. Dissemination to and collection of feedback from law enforcement practitioners (police operations and communication) from Spain, Austria, Sweden, Belgium and Germany.

Product	Activity	Outcome
Including Citizens Handbook	• 2 Workshop (IT) • 1 Round Table (IT) • User story exercise (IT) • 1 LCW (NL) • 1 LCW (IT) • Week of Safety event (NL) • 2 Meetings (NL) • 1 Roundtable (NL) • 1 LCW (DK) • 1 LCW (G2)	Disseminate the main functions of the Handbook in the broader context and show how it is integrated into the LCC. Outreach to potential users. Feedback and suggestions on implementing the product in different contexts. Detailed understanding of the local needs regarding safety information. Evaluation of practices that can be incorporated into the product. Presence in the local community to answer questions about risks, safety, and awareness. Dissemination of the product and collection of specific feedback among law enforcement practitioners (police and academics) and health professionals (hospital management). Dissemination.
Feel Safe	• European Emergency Number Association Conference (IT) • Panel (IT) • Roundtable (IT) • Webinar (IT) • Teaching exercise (NL) • Facebook Sponsorship (IT) • 1 LCW (IT)	Launch and dissemination of the product to users. Presentation to schools and school children. Training for educators on how to use the resources found on the website. Dissemination and debate on how to strengthen investment in disaster preparedness education among policy makers from Italian civil protection and Ministry of Education (IT)
Resilience Wheel	• 4 LCW (DK) • 1 LCW (GE2) • 1 Workshop (GE2)	Dissemination to and further testing of the wheel with the public and DMO users. Adjustment of the instructions for the wheel resulting from testing.

Product	Activity	Outcome
		All participants expressed great interest in bringing the Resilience Wheel back to their organisation in order to apply the method.
		Interest expressed in developing and organising more workshops.
		Two departments at HOFOR[7] joined the activities and expressed intention to develop better exchanges across departments.
		Built awareness regarding coordination and reaching as many citizens as possible.
		Dissemination and collection of feedback to and from law enforcement practitioners and academics.
		General dissemination.

The following section presents a detailed report on the case activities to promote and apply the Framework. This section focuses on the activities carried out and the outcome of these activities for the product and the stakeholders.

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[7] HOFOR is a large organisation that covers many municipalities and a significant part of the Danish capital area, and they operate in close cooperation with other authorities. For more information, please visit About HOFOR - HOFOR

3. Report on the Activities to Apply the Framework in the Cases

This section presents the results from the application of the Framework and products in the five cases. Each case and the product owners created specific mechanisms to discuss the progress, potential issues and the results of the activities. These processes depended on the product and what the product owners needed to adjust or improve based on maturity level of the product in question (D5.4 and D5.5).

3.1 Activities Per Case

This section presents a detailed description of the application of the Framework per case between April to November 2023[8].

Each case refers to the focus of their activities during the project (synthesized in the accompanying visual at the beginning of each of the cases report) and their impact on the scenario in which they operate. Moreover, reflection is shared on how those activities contribute to addressing the challenges and activities from the deep dives (D6.4[9]). The texts are followed by tables detailing the activities that were organised. The tables present the Framework part, the type of activity, the organiser, the stakeholders who took part and the outcome of these activities.

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[8] A few case activities concluded after the time of writing this report. In those situations, the cases write about their expected outcomes.

[9] For more detailed information please go directly to D6.4.

3.2 Case 1: Earthquakes in Italy
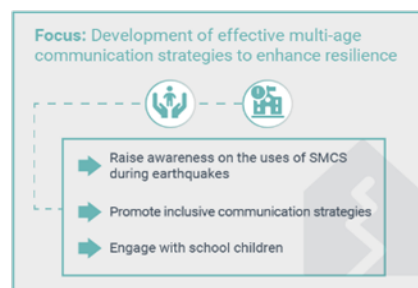
3.2.1 Overall focus of activities and impact on the scenario

a- Outline of the case original focus

Examining the cases of earthquakes that occurred in Italy, including the 2009 L'Aquila earthquake in the Abruzzo region and later ones, such as the one in Val Nerina in 2016, constituted the context from which to start to understand how the use of digital tools could offer support in making communities more resilient to earthquake risks. In the initial phase of the project, what emerged from the dialogue with the Italian partners was the lack of engagement with SMCS in the disaster management process, as well as the absence of knowledge on how to better engage with citizens and how to communicate about risk with children through the use of digital technologies activities and research carried out since the

beginning of the LINKS project highlighted that Italian practitioners' lack of interest in social media and crowdsourcing in particular resulted from the lack of clear guidelines on using these tools effectively. For this reason, one of the aims of the **Handbook** and **Feel Safe** was to provide resources specifically designed for practitioners to use during the course of the whole disaster cycle (before, during and after a disaster occurs) to demonstrate the potential and advantages of using technologies in hazardous contexts.

The **Handbook** (two out of four sections of the product developed by UNIFI: Accessibility and Mobility) and **Feel Safe** are two online educational platforms that aim to provide resources, guidelines, and exercises on how to engage first with citizens and second with children, in the context of disaster management operations. These are addressed to practitioners, stakeholders, policymakers, and educators. Both were developed and validated within the Italian case scenario. The collaboration with the Province of Terni (PDT) was key to strengthening the link between the products and the territory and developing products that actively reflect the experiences and needs of the practitioners.

Feel Safe was developed over two years with several Italian stakeholders, such as UNIFI, PDT, Fanciulli School, and the Italian Teachers Association, all of which participated in activities, consultation processes, workshops and tests. Two thematic areas were identified within Feel Safe. These explore the vulnerability to earthquakes and provide training tools and other educational materials for practitioners and educators.

User story exercises were carried out with individual practitioners to evaluate the **Handbook**'s functionalities and features with potential users. In this context, the exercise aimed to evaluate how a potential user would consider the product and navigate through the sections and subsections according to their needs. Engagement with potential users outside the LINKS project was vital to obtaining a broader perspective on the product and promoting it.

b- **How the case achieves its aims and the impact of its activities**

In the final phase of the project, the case activities carried out by the Italian case had the following impact on the earthquake scenario:

Active engagement of stakeholders and organisations in workshops and events. During the LINKS Final in Rome two sections of the Handbook were presented to 27 participants from different backgrounds in a workshop. The workshop played a pivotal role in assessing the product's potentialities and main functions with a broad group of people. The navigation experience was tested to evaluate if the platform is easy to access and navigate. In addition, new features, such as videos, were shown for the first time to an audience. The users welcomed the integration of different media in the platform. The workshop also demonstrated how the **Handbook** and **Feel Safe** are integrated into the **LCC.** These activities

aimed to change Italian practitioners' attitudes towards the use of digital technologies, especially social media, in disaster management operations. Having guidelines and examples on two easy-to-use online platforms was a practical solution to the lack of knowledge on engaging with people through the digital space. In addition, a final LCW is planned for late November 2023 in the Province of Terni. This activity will allow the active participation of PDT, SCIT and UNIFI. It will include a workshop to present the Handbook in Italian to practitioners who only speak Italian, including technicians from local municipalities at the regional level.

Additionally, the LINKS Final was important when it comes to dissemination and promoting the outcomes and findings of the Italian case. Several of the participants showed interest in the LINKS products and in developing further collaborations with the Italian case (for interviews, workshops, events, and papers). As for **Feel Safe**, currently the platform is a fully developed and active tool that can be used to strengthen children's risk awareness and disaster preparedness education. Feel Safe will be advertised and disseminated at the national level through a social media campaign.

Activities to apply the LINKS Framework

Period: April-November 2023
Table 2: Activities per product and their outcome

Product	Activity & Date	Organizer	Stakeholders	Outcome
Feel Safe	EENA conference - 19 to 21 April	EENA	Members of the European Emergency Number Association and practitioners from their networks	Presentation to the public in a thematic session dedicated to the engagement and participation of citizens in disaster risk management. Dissemination to and feedback from experts.
Including Citizens Handbook	Round Table – 22 May 2023	UNIFI, PDT	Technicians and administrators from Province of Terni	Collection of experiences and suggestions from different Italian stakeholders involved in managing disasters mostly in the context of earthquakes.

Product	Activity & Date	Organizer	Stakeholders	Outcome
		& SCIT	(PDT); General managers from private agencies for disaster management; Scholars and PhD candidates.	Feedback and information on updated policies on how to manage disaster situations: providing the basis for the implementation of sections of the Handbook providing the basis for the development of the Knowledge Base on Disaster Risk Perception and Vulnerability, as presented in D2.5. Dissemination to the Italian audience.
Including Citizens Handbook	Workshop - LINKS annual meeting – 4 & 5 July	UCC, UCPH & UNIFI	LINKS partners	Internal test of two out of four sections of the product to validate structure in and content. Results integrated into the Handbook. Significant inputs about the production of videos.
Including Citizens Handbook	Workshop – 16t October	UNIFI	27 participants in total. PDT; LINKS partners; SINTEF; ENGAGE; Fraunhofer-Gesellschaft; Greater Copenhagen Fire Department; The Open University	Evaluation and discussion of two of four sections of the Including Citizens Handbook (i.e., Accessibility and Mobility). Overall discussion about the product. Evaluation by practitioners, stakeholders, civil protection administrations, academics, and LINKS partners. Dissemination and its embeddedness in the LCC itself. Presentation of two videos (English-Italian) featured in the Handbook shown for the first time: well received by participants. Collection of feedback regarding how to implement the platform. In particular, how to make it more user-friendly with clear and precise language. Other items related to implementing more visuals and suggestions on new content in the mobility section of the handbook.

Product	Activity & Date	Organizer	Stakeholders	Outcome
Including Citizens Handbook	Individual user story exercise – 29 September & 11 October	UNIFI	DHPol; VRZL; FRB; Action AID Italy; University of Eastern Piedmont Region	Monitoring Accessibility and Mobility sections of the Handbook and evaluation of the navigation experience of partners and potential users. Collection of insights on potential applications of the product in a broader context: for example, intern training and background knowledge for citizens. Insights into the benefits of the product outside the Italian case by showing how the resources could be used in different contexts and by different practitioners. Show the integration of the product in the LCC and in connection with other products. Evaluation of and feedback on the user navigation experience.
Feel Safe	Panel – 16 October	SCIT	LINKS partners, Engage, RiskPack, Technicians from Italian Civil Protection	Presentation of the product to an international audience. Launching of the website. Social media campaign to advertise and disseminate the product in the broader context.
Feel Safe	Exercise and roundtable with policy makers - 17 October	SCIT	School Fanciulli (Terni) LINK partners, Engage, RiskPack, Italian Civil Protection, volunteers, emergency	Exploration and validation with students who, divided into groups, experienced some of the activities from the website. Exchanges between experts about how to strengthen investment in disaster preparedness education (IT). Raising awareness of the importance of including disaster preparedness education and Feel Safe as a consistent part of school curricula.

Product	Activity & Date	Organizer	Stakeholders	Outcome
			responders, and civil society organizations	
Feel Safe	Facebook sponsorship	SCIT	Persons with an interest in DRR and emergency	Dissemination of the production online via a social media campaign, targeting people with a particular interest and engagement in DRM.
Feel Safe	Webinar – 17 October	SCIT	Schools	Presentation to Italian schools. Approximately 1,000 partner schools invited to follow the webinar. Assistance for teachers and educators on how to use the resources found on the website.
Including Citizens Handbook **Feel Safe**	LCW – 28 November	PDT	All Target Groups	Upcoming (as of this report) workshop will entail the active participation of PDT, SCIT and UNIFI: presentation of the Handbook to Italian-to-Italian practitioners (I.e., technicians from local municipalities at regional level) in the form of a workshop to test the product within the Italian case scenario.

3.3 Case 2: Industrial hazards in the Netherlands

3.3.1 Overall focus of activities and impact on the scenario

a- Outline of the case original focus

The data management system currently in use by the safety region of South Limburg (VRZL) compiles publicly accessible social media data during various disaster phases. This system verifies public sentiment, ascertains whether safety protocols are being followed, or locates possible misinformation online, among other benefits. However, it does not provide two-way communication between the VRZL and the public. Collecting

direct feedback or input from citizens through this system is impossible. As a result of the activities organized by the Dutch case there is more contact with the local community through workshops, information booths and visits to different organizations. As a result, the VRZL can now collect input directly from the citizens.

Communication between citizens frequently takes place in online spaces (i.e., neighbourhood watch, family and associations chat groups). These online spaces are currently underutilized by most DMOs. A safety-related message posted into one of these chats would reach dozens, if not hundreds, of individuals. However, these chats are not accessible to those outside. As a result of the LINKS ambassador program, more of these previously inaccessible chats are now receiving safety information.

Fundamental to the maintenance of a disaster-resilient society is to work closely with those at risk. However, this kind of communication must occur before an incident happens. Explaining what civilians need to do during an incident would waste valuable time (**Including Citizens Handbook** and **Feel Safe)**. Informing the community before an incident takes place is, therefore, extremely important. The Dutch case team works closely with those living in the surroundings of Chemelot to directly inform civilians of what to do in the event of a chemical incident. For the various LCWs, the Dutch case invited key figures from the community (directors, leaders, recognizable figures). The Dutch case has been asking the attendees of the workshops if they would like to assist them in their risk communication strategy, those who agreed were added to the list of ambassadors. The ambassadors share the (social media) messages provided by the Dutch case with their social circles. The Dutch case team provides them with social media messages and helpful tips to prepare for a chemical incident. These stakeholders possess an extensive understanding of the social structures of their groups and are the most capable of translating external safety information into comprehensible/appropriate information for their networks.

Furthermore, the Dutch case created learning tools such as the Kids Emergency Card and the Kids lesson plan, tested in a local school and posted on the Feel Safe website, both English and Dutch. These tools have been well received.

b- **How the case achieves its aims and the impact of its activities**
The activities carried by the Dutch case highlight the current shortcomings in the risk communication practices of some of the organizations that form the case. The results from the research conducted by LINKS and studies conducted by the RIVM and IFV on the feelings of safety for those living in the surroundings of a chemical site revealed that residents, particularly those who live close to Chemelot, would like to be more informed

on what to do in the possible event of a chemical incident. Citizens would also like to be alerted on time, yet, they are not likely to search for this themselves. Those who do, however, do not always immediately understand what they need to do or what they should even be looking for. This knowledge about civilians living in the surroundings of Chemelot helped spark project groups such as "Samen Veilig Rondom Chemelot" (Together Safe Near Chemelot) and the Dutch case team to improve risk communication.

LCWs and other activities **(Including Citizens Handbook, Feel Safe, SMCS Use Cases Library** and **SMCS Technologies Library)** allowed the dissemination of information and the appropriate safety protocols. They also allowed citizens to voice their experiences, criticisms, and feedback. These workshops fill gaps in the previous communication practices of the VRZL (as mentioned above). What is more, the information gathered changed how the practitioners from VRZL and ST communicate risk. The workshops provide valuable insights into the sensitivities of various groups, how individuals view our organizations and how individuals from different neighbourhoods can have different experiences and opinions on safety.

Since starting LINKS, the VRZL and ST have been more active in the surroundings, communicating risk. LCW's have created much attention for chemical incidents in the surroundings. Currently the organizations that form the case are receiving requests from municipalities to organize workshops due to the rise in demand for them by citizen. We have also become more active in the community in other ways. We now frequently run information booths and, at times, conduct personal visits in especially risk-prone areas.

The LINKS Community workshops resulted in better offline relations between the VRZL, Chemelot, and the surrounding community. The activities contributed to businesses, shopkeepers, hospitals, and schools updating (or often creating) their emergency action plans in preparation for a chemical incident. Many of them are interested in developing further activities. The organizations in the Dutch case have strong ties with the community through the ambassador's network and public and private partners. The case has monthly talks with the steering committee of "Samen Veilig", an advisory body consisting of partners from the surrounding municipalities (Beek, Stein & Sittard-Geleen), members of the VRZL and Chemelot. This committee works on improving the safety of those living in the surroundings of Chemelot and are currently evaluating if the activities started within LINKS would be continued after the project ends.

Activities to apply the Framework

Period: April- November 2023

Table 3: Activities per product and their outcome

Product	Activity & Date	Organizer	Stakeholders	Outcome
SMCS Technologies Library **LINKS Community Center[10]**	Meeting Zuyderland Hospital – 26 April	The Dutch case (VRZL, VU, & ST)	Zuyderland Hospital	Dissemination of LINKS project. Discussions with hospital representatives on how to improve preparation and protocols. Presentation of the LCC and how to access some of the SMCS technologies. Exploration of sustainable technologies that can help communication between VRZL and ST and the hospital. Further discussions to coordinate a training exercise.
Including Citizens Handbook	Combined meeting (PO & Zuyderland hospital) – 17 May	Dutch case & PO	The Red Cross, PO, VRZL & VU.	Exchange of inputs with the different parties about the use of the product. Collection of information to improve the product applicability.
Including Citizens Handbook	Discussion with Dutch case – 8 June	Dutch case & PO	Dutch case & PO	In-depth feedback, primarily for the 'communicating risk' section, which is relevant to the Dutch case.

[10] While the LINKS Community Center is not a product it provides access to general discussions about LINKS and its products on a general manner.

Product	Activity & Date	Organizer	Stakeholders	Outcome
LINKS Community Center	LCW Businesses (Beek, Stein, & Sittard- Geleen) -12 June	Dutch case	Businesses from the municipalities of Beek, Stein & Sittard-Geleen.	Dissemination of LCC and information about safety protocols. Gain a better understanding of the communication needs of surrounding businesses.
LINKS Community Center	June 25th "the day of safety" in the Netherlands.	Members from the VRZL, ST and communications at Chemelot.	Citizens but also personnel from other organizations present in other booths	Promote LINKS and the LCC. Exchange information about safety protocols with citizens.
SMCS Technologies Library	Outdoor LCW Shopkeepers- 26 July	VRZL (fire brigade)	Shopkeepers (Lindenheuvel, South Limburg, the Netherlands)	Dissemination of emergency cards and discussions about safety protocols in the event of a chemical incident. Collection of detailed information on the communication needs of shopkeepers. Discussions about how technologies/ communication methods and the LCC could assist.
LINKS Community Center				
Feel Safe	Teaching Exercise Dutch Case - 12 September	ST instructed the teaching staff ST, VRZL and Save the Children Italy contributed to create the Kids	Teaching staff of the primary school De Lemborgh, in Limbricht in South Limburg.	In collaboration with Save the Children Italy, developed a lesson plan to help teach children about chemical risks: available on the Feel Safe website. Several meetings between our team, local school administration, emergency personnel

Product	Activity & Date	Organizer	Stakeholders	Outcome
		Emergency Card[11] & lesson plan.	The target group for the lesson plan is children aged 4 to 12	and teachers. Training of teachers on how to conduct the safety lesson for children aged 8 to 12. Lesson included in the Kids Emergency Card for ages 8 to 12. This lesson plan can be used for educational purposes at school or home. This activity provided valuable learnings for the Feel Safe website.
Including Citizen Handbook	LCW Urmond – 23 October	VRZL & ST	Representatives of different organizations and associations (e.g., Steinerbos Experiencepark, Jeu de Boules Club Urmond, Hunting Club Sint Leendert, Music club St. Martinus , among others and citizens (The workshop took place in a local café)	Expanding understanding of local needs on safety information. Exploration of which social media channels the different groups use and how organizations can work together to utilize these existing platforms. Collection of information for the Handbook (preferences and existing practices) and also for providing general information for the LCC, in the form of feedback on social media tendencies and desired uses.

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[11] The Kids Emergency Card depicts what children should do to get to safety during a chemical incident

Product	Activity & Date	Organizer	Stakeholders	Outcome
SMCS Use Cases Library **Including Citizens Handbook**	Week of Safety Event – 5 to 22 October	VRZL, ST & the communication team Chemelot.	Local residents visiting the shopping mall Makado.	Operated a booth in the local community and invited citizens to respond to questions about risks, safety, and awareness. Local residents provided feedback and shared experiences of living near and working on the Chemelot site. Locals shared safety concerns.
LINKS Community Center	Dutch case evaluation of the activities of LINKS in the context of the case – 15 November	VRZL & ST	Representatives from Chemelot's board, VRZL and Sitech, and mayors from the three surrounding municipalities (Beek, Stein & Sittard-Geleen).	Evaluation of activities that have taken place in the Dutch case and how they could be continued after LINKS ends (Samen Veilig Rondom Chemelot and workshops)

3.4 Case 3: Drought in Germany
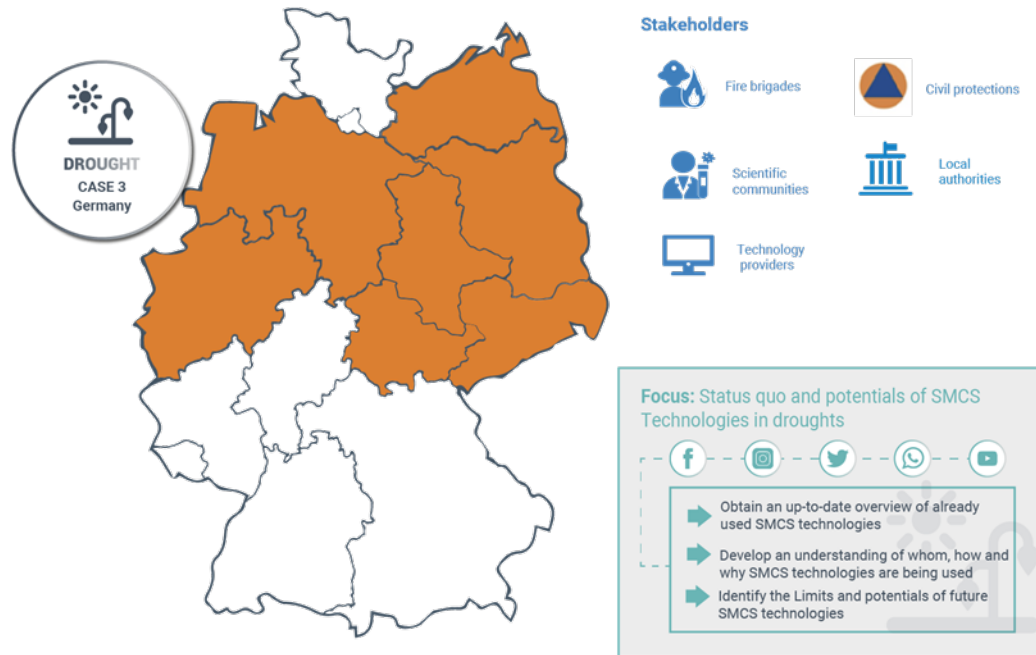
3.4.1 Overall focus of activities and impact on the scenario

a- Outline of the case original focus

The increasing droughts, which are a relatively new phenomenon for Germany, represent a fascinating field of research in terms of modern communication methods and technologies to extend beyond the duration of the project. Central to this exploration is a comprehensive evaluation of the current and future capabilities of SMCS technologies within the context of drought conditions. As an application-oriented research organisation, the Safety

Innovation Center (SIC) strives to bring concepts, methods and platforms developed in research projects into practice. For this reason, a permanent cooperation with the city and district of Paderborn (which includes the fire brigade, police, authorities) has been established in the organisational structure. In the context of LINKS and the case, this means that the case activities were subject to the following objectives:

- Compiling a current snapshot of the **SMCS technologies** in use; gaining a deeper understanding into the why, by and to whom and how these technologies are applied; investigating the boundaries and potentials for the advancement of SMCS technologies in the future.
- Dissemination of the **LINKS Community Center (LCC)** as a central project platform with the aim of building and maintaining the LINKS community. This includes dissemination of the **SMCS Libraries** (Technologies, Guidelines, Use Cases and, additionally, Crisis Communication) and the User Guidance as a user-friendly navigation aid between the different products.
- Strengthening the collaboration with local stakeholder and practitioner partners to continuously develop and improve technological innovations in public safety.

b- **How the case achieves its aims and the impact of its activities**

By presenting the LCC and the products at numerous conferences and events (e.g., EENA conference 2023 and vfdb conference 2023), different stakeholders (especially practitioner organizations) were reached, and the community was built. In concrete terms, the different **SMCS Libraries** were utilized and organizations supported in using social media through dedicated workshops and feedback loops with interested stakeholders, including the Municipality of Frederiksberg, SITECH and the Federation of European Fire Officers. Specifically, participation in the Disaster Prevention Day 2023 of the State of North Rhine-Westphalia provided an opportunity to deepen collaboration with a range of local and regional stakeholders and to promote the project outcomes (cf. Table 4).

In particular, the dissemination and utilization of the **Use Cases Library** provides a low-threshold approach to SMCS. Moreover, numerous practitioner organisations compiled their experiences in use cases and added them to the **LCC**. This led to other organisations being exposed to innovative and proven uses of SMCS and being inspired to use SMCS.

Over the course of the project, cooperation was deepened with Ubermetrics Technologies and Public Sonar. These collaborations with technology providers to intensively research and strengthen the technological use of social media monitoring and analysis tools and to improve efficient

usability in crisis management. The needs of the practice were matched with the potentials of the technology providers and thus positively influenced the further development of technologies for disaster management. In addition, relevant stakeholders in Germany (Federal Office for Civil Protection and Disaster Assistance (BBK), Federal Environment Agency (UBA), German Weather Service (DWD), Helmholtz Institute for Environmental Research (UFZ)) were surveyed about their social media activities in drought situations and heat waves and at the same time informed about the project results and the LCC. Three of the four organizations responded and expressed their insights on the use of SMCS in droughts and heat waves:

- These organizations recognize the power of social media as a swift and efficient channel to deliver important information to citizens, especially for communicating long recommendations during lasting droughts (e.g., a water-saving use of resources as a cultural adaptation in society).

- Organisations do not work in silos when it comes to their communication strategies. Moreover, they are acutely aware of one another's activities and are strategically interlinking their content depending on the profile, to strengthen to enhance their reach and effectiveness. For example, the DWD shares weather data with forecasts using various media (text, symbolic images and explanatory videos) in real time and forwards to dedicated self-help brochures from the BBK for the respective weather event (either related social media posts or direct links to the webpage). Further health-related information and impacts from the Ministry of Health are also referenced. This collaborative approach ensures that the organisations complement each other's critical information to make it widely accessible, enhancing the public's capacity to respond adequately to the situation.

- While all organizations use social media to distribute information, only one organization indicated that they engage in actively gathering data from user generated content in social media during droughts. The manual collection of hashtags and topic trends in discussion posts and comments enables subsequent more targeted communication identified as a result and by posting information using the collected hashtags. In this way, the organization can tailor its communication strategies to better meet the public's needs and maximize the impact of its informational campaigns. However, no technology for collecting and monitoring automatically on social media was mentioned, making the SMCS Libraries provided in the LCC a valuable resource for participating organisations. The needs expressed by the organisations in the survey were used as an opportunity to highlight the LCC.

Overall, the activities within the drought case promote the benefits for a thoughtful use of SMCS supported by innovative technologies in practice, and the necessary information is provided in the LCC. Gaps and further challenges that were not known at the beginning of the project were also identified and can be considered for future research.

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Activities to apply the Framework

Period: April - November 2023

Table 4: Activities per product and their outcomes

| Product	Activity & Date	Organizer	Participants/ Stakeholders	Outcome
SMCS Technologies Library **SMCS Guidelines Library** **SMCS Use Cases Library** **LINKS Community Center**	EENA conference -19 to 21 April	EENA	Members of the European Emergency Number Association and practitioners from their networks	The different SMCS Libraries and the LCC were presented at the LINKS booth together with FEU, SCIT and EOS. Feedback for improvement of both a strategic and practical nature from the experts present, which led to further improvements in the libraries. Further entries received for the libraries.
SMCS Technologies Library **SMCS Use Cases Library** **SMCS Guidelines Library**	Annual Conference 2023 of the Association for the Promotion of German Fire Protection	SIC & FEU	Event reaching a broad group of experts, mainly consisting of: Fire protection experts (practitioners) Represent of fire protection companies	Presentation and discussion of the products with FEU moderating. FEU unveiled a comprehensive approach tailored for the establishment of a social media team within a municipal fire brigade. This introduction set the stage for the subsequent presentation of the SMCS Libraries, all integrated within the Framework of the LCC.

Product	Activity & Date	Organizer	Participants/ Stakeholders	Outcome
LINKS Community Center	(vfdb[12] e.V.) – 15 to 17 May		Policy and decision makers Scientists and researchers	Involvement of the audience via a live voting and comment tool (Mentimeter) facilitated a rich exchange of views and insights from seasoned practitioners. Feedback from industry experts and professionals to shed light on the practicality of the products and potential improvements. Valuable additions to the Use Cases Library, underlining the importance of user participation. Expansion of the LINKS community, with a noticeable uptick in activity and deeper engagement with the SMCS Libraries housed within the LCC. To further amplify its reach, vfdb is set to feature an article spotlighting the LCC and the associated libraries in their forthcoming journal.
SMCS Technologies Library **SMCS Use Cases Library** **SMCS Guidelines Library** **LINKS Community Center**	Workshop within the 4th LINKS Advisory Committee – 20 to 22 June	SIC and FEU	LINKS Advisory Committee and Community of Practice of ENGAGE	Detailed discussion of the products by numerous experts from the two advisory boards – most of whom were aware of the projects, the LCC and the libraries from previous meetings – led to improvements. Presentation of LCC and the libraries in two booths. Collection of inputs and feedback about numerous aspects of the products in a breakout session. The groups were interactively involved in an ongoing survey and had the opportunity to ask questions live. As a result, new use cases and technologies could be added to the LCC. Discussion regarding future use of the product after the end of the project.

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[12] vfdb: Expert network for protection, rescue and safety. https://www.vfdb.de/en/

Product	Activity & Date	Organizer	Participants/ Stakeholders	Outcome
SMCS Technologies Library **SMCS Use Cases Library** **SMCS Guidelines Library** **LINKS Community Center**	Public Event: Disaster Prevention Day 2023 of the State of North Rhine-Westphalia – 26 August	SIC	A whole range of local aid organizations, including: • Fire Department Paderborn • Municipality of Paderborn • Federal Office for Civil Protection and Disaster Assistance (BBK) • German Weather Services (DWD) • State government of North Rhine-Westphalia • Federal Agency for Technical Relief (THW) • German Red Cross (DRK) • Johanniter accident assistance (JUH) • Maltese relief service (MHD) • German Life Saving Society (DLRG) • Workers' Samaritan Association (ASB)	The potential of the LCC and the libraries shown to the different target groups and feedback obtained. Use cases of the 2022 tornado in Paderborn and the possible applications of social media and supporting technologies were discussed in detail. This enabled new requirements to be derived for the use cases library. The Disaster Prevention Day 2023 emphasized the importance of conveying scientific information to the public, bolstering collaborations with local practitioners and stakeholders, and fostering connections with policymakers.

Product	Activity & Date	Organizer	Participants/ Stakeholders	Outcome
SMCS Technologies Library	Qualitative Questionnaire – 1 to 30 September	SIC	• German Weather Services (DWD) • Federal Office for Civil Protection and Disaster Assistance (BBK) • Federal Environment Agency (UBA) • Helmholtz Center for Environmental Research (UFZ)	Questionnaire sent to key stakeholders in drought situations and heat periods in Germany, asking about existing social media and crowdsourcing initiatives, along with potential strategies and suggestions. The feedback directly influences the case: By examining good practices, the organizations' actions and insights is assimilated into the LINKS products, thereby enriching the LINKS Framework supporting comprehensive disaster management.
SMCS Use Cases Library	Qualitative Questionnaire - 1 to 30 September	SIC		

3.5 Case 4: Flooding in Denmark
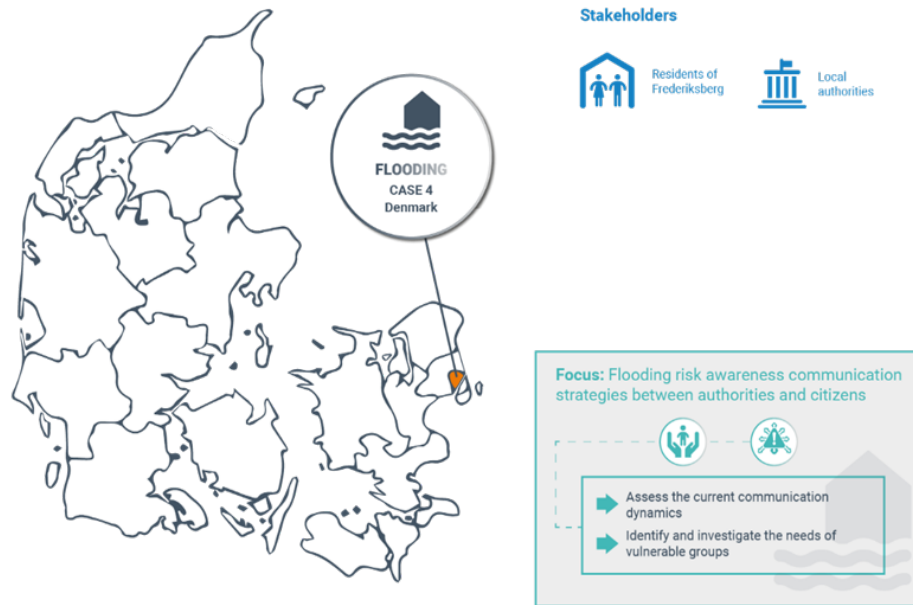
3.5.1 Overall focus of activities and impact on the scenario

a- Outline of the case original focus

In the early stages of LINKS, the Danish case identified needs and challenges that have guided its work since then (D6.4). The initial part of the deep dive analysis showed that the dominant focus concerning the decision-making processes among disaster management organisations

(DMOs) was on how to communicate in the response phases (e.g., when a cloud burst strikes Frederiksberg), with only scarce reflections on communication regarding how citizens can engage in preparedness activities (e.g., how citizens can take care of their own property, local community preparedness and personal safety). Moreover, communication concerning both response and preparedness can be strengthened in the Danish case. Communication between citizens and DMOs is important online and offline. This can happen online by including SMCS technologies and offline, by focusing on the needs and relevance of understanding offline environments. It is also important to create comprehensive communication mechanisms between citizens. Regarding credible information, many stakeholders believe that citizens' perspectives and insights were not credible or resourceful enough to deploy during a response phase. The DMOs doubt if citizens can hold insights into the needs for preparedness regarding cloud burst adaptation. They also doubt if citizens can hold insights in that would provide a better overview of the situation regarding cloud burst. Stakeholders did not see citizens as a source of credible information and insights. They did not see the benefit of citizens sharing information and knowledge during a crisis, where large parts of Frederiksberg might be flooded, and where the flooding can have a severe impact on both households and critical infrastructure

b- **How the case achieves its aims and the impact of its activities**

Concerning the impact of our activities on our case scenario, we can see a new focus on the potential of applying SMCS to a more significant degree – and having a more designated focus on the needs of the citizens. The use of a social listening technology has been tested for several months, and the combination of an automated survey of social media (applying Retriever) with a manual survey (done by staff) was implemented with very effective outcomes.

Our activities have contributed to understanding something new in terms of practices: to apply tools and methods (e.g., social listening) more actively and inclusively to get an insight into the needs of the citizens. In conversations with the participants, they refer to the results and express that they have reflected on the findings and the methods to engage the needs of the citizens in a better way. In addition, they have also definitively expressed interest in applying the **Resilience Wheel**. Presentations of the results of carrying out social listening in Facebook groups and an introduction to the use of the Resilience Wheel to engage the different organisations into the tasks of strengthening the links between DMOs and citizens have shown very successful results.

A consultation of the **Technologies Library** led the municipality to implement a social listening tool. Besides being able to follow what is going on, it brought the project managers closer to the communication department, and they now have meetings about the use of social media. Currently, social listening is also used for areas other than the one in which the Danish case implemented it. The results from the Danish survey brought valuable knowledge to plan communication with citizens. The end product of these activities resulted in a report and a flyer that can be used to easily communicate the facts to policy makers .

The products developed within the **LINKS Framework** provide a foundation for facilitating discussions and understanding how practitioners can communicate risk concerning external actors and citizens within our organisation. The Resilience Wheel and two of the sections of the **Including Citizens Handbook** (Mobilising Volunteers and Communicating Risk) are especially relevant in the HBR context, as they serve as relevant stepping stones for internal discussions on the topics of risk communication, volunteering and the possibility of involving citizens. However, the products must be introduced within a facilitation frame to optimise the outcome of their use. In the last month of the project, HBR will introduce the handbook to two different groups of internal actors to start an overall conversation about how we, as practitioners, can use and adopt the tools in the future. As the Danish case activities draw to an end, there is definitely a change in the way the need to address citizens, the use of communication technologies, non-digital communication and resilience are spoken about within HBR and FRB. This is also the case among the external stakeholders and Danish practitioners who are not part of the LINKS project on the subject.

Activities to apply the Framework

Period: May - November 2023

Table 5: Activities per product and their outcome

| Product	Activity & Date	Organizer	Stakeholders	Outcome
Resilience wheel	LCW – 20 September	UCC	Stakeholders, external lectures, internship organisations affiliated with the crisis and risk management programme at UCC. The 40 participants came from 18 different organisations at the local, regional and national level. Authorities, NGOs and private companies participated.	Promotion of the LINKS project and with a focus on the Danish deep dive, the cross-case findings and testing the wheel. Interest to learn about 1) findings from the Danish deep dive study 2) presentation of method and results of studies applying the social listening method 3) introduction and test of Resilience Wheel. Interest in bringing the Resilience Wheel back home to the participant's organisation in order to apply it as a method. Feedback concerning the product and its dissemination to other organizations and contexts. Interest in learning more about the 'Social listening' method, and in conversations with participants following from the workshops, they refer to the interesting findings from the small cases of social listening at Frederiksberg, presented at the workshop. Short interviews with the participants following the workshop led to an adjustment of the instructions for applying the wheel. Positive feedback and general interest in focusing on 'improving communication'.

Product	Activity & Date	Organizer	Stakeholders	Outcome
Resilience Wheel	LCW – 9 November	UCC	HOFOR[13] – Copenhagen utility company	Dissemination of LINKS and test the wheel, with adjustments resulting from the September workshop and results from the Danish deep dive study informed the choice of scenario and the planning of the workshop, including the instructions for how to apply the wheel. Two departments at HOFOR joined the workshop. HOFOR wants to coordinate with others, reach as many citizens as possible by using the right communication channels and media. Workshop allowed them to focus on 'improving communication' and engage in conversations with the aim of testing their own internal procedures and to find out how to change practices in the future. Positive feedback on the usefulness and application of the product to cover issues that DMOs need to consider.
Including Citizens Handbook **SMCS Use Cases Library**	LCW – 21 November	FRB, HBR, UCPH, UCC	Municipalities, utility companies and first responders	Dissemination and presentation of the LINKS project and products to Danish Municipalities, utility companies and first responders.

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[13] HOFOR is a large organisation that covers many municipalities in the greater Copenhagen region and is a significant stakeholder of the Danish capital area, when it comes to disaster resilience. They operate in close cooperation with other authorities.

Product	Activity & Date	Organizer	Stakeholders	Outcome
SMCS Guidelines Library				Collection of insights and possible entries that might lead to further improvement of the libraries based on specific needs and challenges.
SMCS Technologies Library				
Resilience Wheel				
Resilience wheel	LCW - 28 November	FRB	FRB & Frederiksberg utility company	Promotion of the LINKS project and testing of wheel. Project managers and communication staff will attend. The main points from the talks will be used when we communicate about the launch a new strategy for handling stormwater in 2024

3.6   Case 5: Terrorism in Germany
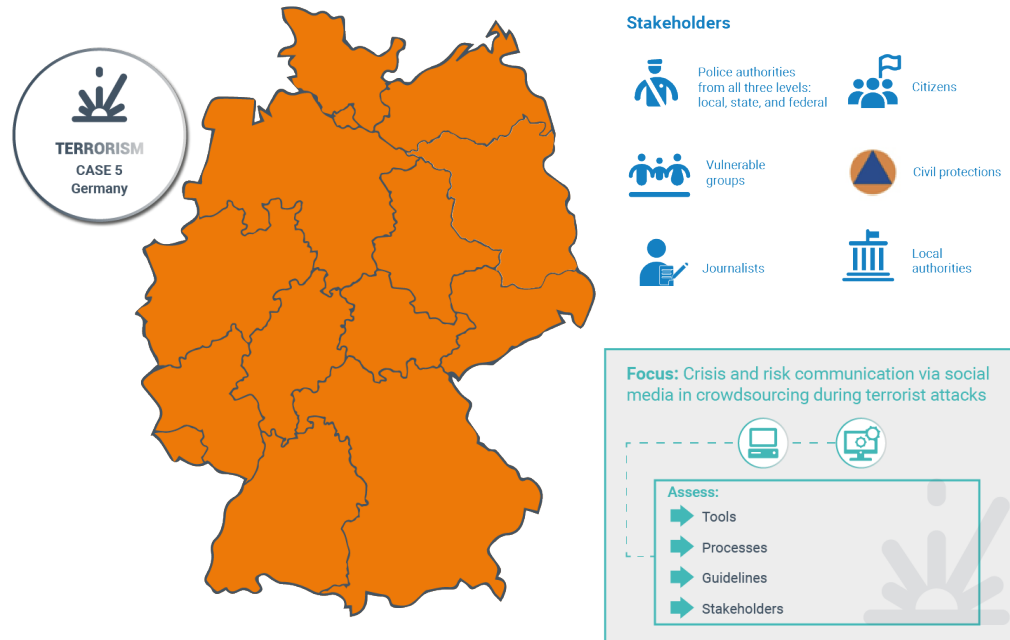
3.6.1   Overall focus of activities and impact on the scenario

a- Outline of the case original focus

Over the course of the LINKS project, DHPol engaged more than 60 research participants from various German police authorities and several colleagues from other EU countries (e.g., Netherlands, Austria or Sweden) in various research activities. The initial case activities carried out during the first phase of the case-based assessment (a pilot survey across all federal states in Germany and exploratory interviews) indicated that

LINKS

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social media had become a reliable tool to manage police operations and are regarded as fundamental by LEA (Law Enforcement Agencies) to secure public safety during severe events such as terrorist attacks. Additionally, social media has become part of the standard repertoire in police crisis communication. Most law enforcement social media teams have established similar and highly professional workarounds for their use them in the event of an actual threat[14].

However, the exchange with practitioners revealed that crowdsourcing is interpreted quite differently and applied far from homogeneously across the different states. This has become even more apparent in the use case contributions on past terrorist events for the LCC that DHPol developed together with practitioners during the second phase of the case assessment. Crowdsourcing is – if at all – only applied in terms of a more active engagement of *citizens* during such events (e.g., by asking for tips during public manhunts or motivating social media users to become multipliers for safety instructions). The potential of crowdsourcing in terms of active engagement of skilled *volunteers* during terrorist attacks has not yet been implemented by law enforcement authorities.

b- **How the case achieved its aims and what is the impact of its activities**

The case activities, particularly the second set of interviews and the joint use case write-ups, helped DHPol to explore the reasons: While some LAE are not even aware of those possibilities, others have already established contacts with volunteer pools (e.g., VOST) and would see significant advantages in sourcing out tasks to them or working jointly on them (particularly for the efficient and fast verification of information/identification of 'fake news' which practitioners unanimously identified as the greatest social media related challenge during terrorist attacks) but are reluctant because of general insecurities about legal aspects (such as data protection or the alignment with police regulations) or the fear that the inclusion of relatively anonymous crowds into police operations might pose new security threats or promote digital vigilantism. Yet, the deep dive activities with DHPol also made the practitioners reconsider those hurdles and come up with possible solutions. One interesting suggestion was to look into certification programs so that LEAs have a pool of trusted volunteers available when severe events strike.

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[14] Recent fruitful developments that were pointed out were the implementation of 'Intel' officers who perform open-source intelligence tasks like real-time social media research upon incoming emergency calls and the establishment of joint monitoring and communication centers in regional mission support centers.

The findings from the deep dive activities were reflected in the LCC products themselves and also particularly guided the dissemination, evaluation and sustainability activities DHPol carried out in the final phase of the project:

- The two **LINKS Community Workshops** were conducted with the aim of assessing the products of the LINKS project. Both workshops successfully gathered valuable feedback from practitioners on how they can utilize the products, as well as insights into potential adjustments needed to enhance their utility for both practitioners and academics. Additionally, the LCWs were an opportunity to disseminate LINKS.

- Two scenario-based interviews were carried out to evaluate the **LCC**, particularly the usefulness of the **SMCS Technologies Library** and the **SMCS Guidelines Library** in the contexts of police education and police operations management. This activity did not only validate the overall usability of the products from the LEA perspective and reveal some minor improvement needs regarding the filters (e.g., facilitate the wording for addressees with no background in crisis communication) but also pointed towards future application contexts and even institutionalization contexts within the German police: all officers at management level (particularly those involved in crisis communication and operations management) should be informed of the existence of the LCC and should be regularly offered the possibility to sign up for webinars (or even better: in-house trainings) that introduce the single Framework products (similar to the interview itself) based on real-world scenarios.

- Dissemination articles for journals that specifically target police practitioner audiences in Germany (e.g., 'Behördenmagazin') and across the EU ('The European Law Enforcement Bulletin') were created. These articles systematically address the various problems and concerns regarding the application of SMCS by LEA that were raised during the previous case activities and point practitioners directly to the LCC products and features that help to resolve them and will thus enable a more efficient management of future police operation (e.g., pointing to software from the Technologies Library that particularly assist with the management of large amounts of posts, stressing the possibility to specifically search for tools that are in line with the GDPR, referencing items from the **Guidelines Library** that provide workarounds to counter fake news like *The Verification Handbook: For Disinformation And Media Manipulation* or the Awesome OSINT repository for intelligence officers; and particularly promoting the Mobilizing Volunteers section of the Including Citizens Handbook which addresses the most prevalent insecurities and knowledge gaps identified for LEAs during the LINKS casework).

The findings from LINKS, as well as the most valuable contents from the **LCC** were incorporated into materials for lectures at the German Police University and shall thus help future police leadership and communication staff make more informed strategic decisions about social media and

crowdsourcing applications, mainly the **Resilience Wheel** will be introduced for this purpose and was thus adjusted for the law enforcement context and turned into a large educational map by an external graphic designer.

Activities to apply the Framework

Period: May- November 2023

Table 6: Activities per product and their outcome

Product	Activity & Date	Organizer	Stakeholders	Outcome
Resilience Wheel	LCW - 13 June 2023	DHPol	Practitioners and academics (specialisation in e.g., law and police law, leadership for law enforcement)	Dissemination of information about LINKS, as well evaluation and presentation of the Resilience Wheel. Valuable takeaways regarding the need to tailor the Resilience Wheel to meet the specific needs of practitioners who intend to utilize it. Positive feedback regarding the product as a valuable tool for organizational development. Collection of feedback and comments regarding how to optimize some functions in the product. Recommendation to translate the product into German. Interdisciplinary exchanges among participants and awareness of the usability of the product.
Including Citizens Handbook	LCW - 4th of July	DHPol, UCPH, UCC	Practitioners (police and academics)	Dissemination of information about LINKS, as well as evaluation and presentation of handbook. High interest for external participants, particularly the segment focusing on volunteer engagement. Positive feedback on the layout and functionalities of the product (user friendly, clear and engaging).

Product	Activity & Date	Organizer	Stakeholders	Outcome
				Feedback concerning the engagement of volunteers in law enforcement.
				Valuable insights in understanding the product applicability in the specific context of LEA.
SMCS Use Case Library	Feedback workshops on terrorism-related use cases – 10 to 31 October	DHPol	LEA from Germany (the social media team of the Berlin and the Munich police, operations management of the Herne police, the OSINT team of the Osnabrück police), Austria (Section II/Unit II of the Ministry of the Interior), Spain (mossos d'esquadra) & Sweden (communication department of the Swedish police), and a crisis communication expert involved with the Belgium Team D5	Refinement and extra inputs of use cases in the library. Insights into the strategy for the sustainability of the LINKS products within law enforcement contexts. Fact checking and corrections by the practitioners whose departments were in charge of the actual management of the operations depicted (the cases added to the library). The discussion of those cases was also used to explore in detail why SMCS was or was not employed to facilitate the management of those operations. The information gathered can a) help to showcase in-depth best-practices to other practitioners b) explore future developments (i.e., integration of volunteers into police work, national and international exchange on SMCS beneficial for LEA).

Product	Activity & Date	Organizer	Stakeholders	Outcome
LINKS Community Center **SMCS Technologies Library** **SMCS Guidelines Library**	Scenario-based evaluation/usability test of the LCC – 13 November	DHPol	LEA from Germany (director of the unit for threat prevention of a police department in Northrhine-Westphalia former head of special forces and former police educator for operations management)	Presentation of the LCC with emphasis on the Technologies and Guidelines libraries. Evaluation of the libraries and their usability from the perspective of police education and police operations management. Assessment possibilities of the sustainability of the LINKS products. Exploration of the product based on a fictitious scenario of a recent terrorist attack in a neighbouring city.
LINKS Community Center **SMCS Technologies Library** **SMCS Guidelines Library**	Scenario-based evaluation/usability test of the LCC – 18 October		LEA from Germany (police instructor, training police leadership, special interest in technologies in police work)	Validation the overall design of the LCC and its usefulness in the context of police work. Collection of feedback and comments regarding how to optimize the products (i.e., navigation, filters, instructions). Positive feedback from educators in the area of operations management and police crisis staff members. Collection of suggestions and feedback to further promote the product among LEA.

Product	Activity & Date	Organizer	Stakeholders	Outcome
LINKS Community Center	LEA Dissemination/Sustainability Strategy Workshop - 27 October	DHPol	DHPol & SIC	Final discussion of the dissemination texts drafted for 'Deutsche Polizei[15], European Law Enforcement Research Bulletin[16] and the mailing list of the 17 German police universities / police academies at state level[17]. Promotion of the LCC particularly for LEA in the German and the broader European context, presenting the project results. Showcasing the benefits of engaging with the LCC products for different user groups within police authorities.
Resilience Wheel	Internal design workshop– 31 October	DHPol	LEA (members of the Department of the of Communication Science at DHPol) and a graphic designer	Dissemination of the product and discussions to make it visually appealing and to find appropriate translations for the terms that fit into the LEA context. Identification of lines with the curriculum at DHPol, incorporating the Wheel into the official learning scripts/study books provided to students at DHPol (Studienbücher).

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[15] German Police, the journal of the biggest German police labour union; target group: German police officers.

[16] Journal of CEPOL; target group: European police practitioners in further education.

[17] Target group: lecturers in special field communication and operations management.

4. THE BROADER APPLICATION OF THE FRAMEWORK

The broader application of the Framework contains the use, validation, and dissemination of the products through diverse activities and stakeholders such as the LINKS Advisory Committee (LAC), LINKS individual and joint meetings and the final evaluation of the user guidance (user guidance evaluation results here). The following table provides an overview of those activities. Note that some activities overlap with those in the cases.

Table 7: Activities with the broader application of the framework

Activity	Date	Stakeholder	Outcome
EENA conference[18]	19 to 21 April	Members of the European Emergency Number Association and practitioners from their networks	Presence and dissemination of LINKS in the conference. Booth with consortium members (SIC, FEU, STC, EOS) with printed materials (Feel Safe, Tech. Library, Guidelines Library, LCC). Booth visitors received general information about the project and had access to the LCC through a set of laptops ready to be used. Short flyer on the LINKS Framework and a poster with the QR code so visitors could respond to the evaluation survey.
Annual Conference of the Association for the Promotion	15 to 17 May	Members of the Association for the Dissemination of German Fire Protection	Presence and dissemination of LINKS in the conference (SIC). Engagement with specific audience Expansion of LINKS community.

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[18] Home - EENA Conference

Activity	Date	Stakeholder	Outcome
of German Fire Protection (vfdb e.V.)[19]			Recognition of the significance of the topic that LINKS addresses and its valuable contribution to the field of civil safety by vfdb members. The vfdb aims to feature an article spotlighting the LCC and associated libraries in their forthcoming journal.
LINKS & ENGAGE[20] joined meeting workshops	20 to 22 June	LINKS & ENGAGE consortium partners, guests and advisory boards.	LINKS presented the Framework, the LCC and some of its products to practitioners and experts from both consortia. Both projects brought together their consortium partners, as well as guests from (extended) networks.
LINKS Advisory Committee meeting (during LINKS & ENGAGE joint meeting)	20 to 22 June	LINKS & ENGAGE consortium partners, guests and advisory boards.	Valuable opportunity for LINKS product owners to gain feedback from an external expert audience that offered new insights into the applicability and development of LINKS products. Enlarge the LINKS community through engaging in synergies with the ENGAGE project and comments on the results of both projects from LINKS and ENGAGE Advisory Board members.

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[19] Some activities had two layers of relevance for LINKS, the case in question uses it to promote and validate its products (Tables in section 3) and also to apply the Framework in the broader context by presenting the project in a broader context.

[20] Home Page - Engage Project - Risk management for society resilience (project-engage.eu)

Activity	Date	Stakeholder	Outcome
The day of safety in the Netherlands	25 June	Citizens and members of other DMO presents in the event.	Presentation and dissemination of LINKS and its products. Exchange of ideas with citizens and other practitioners.
Pantheon EU Project[21]	28 June	Scholars, volunteers, Disaster Management Organizations, technicians	Dissemination of the Handbook and latest outcomes of the research and activities conducted by the Italian Team.
LINKS Annual meeting	4 & 5 July	Workshops on Dissemination, Communication, Exploitation & Community Building and the Including Citizens Handbook with invited practitioners.	Deeper understanding of the actions taken at the local level by our partners and invited practitioners. Promote and communicate the contribution of the Framework and its different products in the SMCS.
Disaster Prevention Day 2023 of the State of North Rhine-Westphalia	26 August	A whole range of local aid organizations, e.g.: • Fire Department Paderborn • Municipality of Paderborn • Federal Office for Civil Protection and Disaster Assistance (BBK) • German Weather Services (DWD)	The relevance of LCC and the libraries was shown to the participants. Important feedback was obtained. This event emphasized the importance of conveying scientific information to the public, strengthening collaborations with local practitioners and stakeholders. This event also allowed fostering connections with policymakers.
LINKS Final meeting co-organized with Save the Children Italy	17 & 18 October	School Fanciulli (Terni) LINK partners, Engage, RiskPack, Italian Civil Protection, volunteers,	Presentation and dissemination of LINKS, with emphasis on Feel Safe (on the second day). Evaluate and promote the Including Citizens Handbook.

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[21] PANTHEON (pantheon-project.eu)

Activity	Date	Stakeholder	Outcome
		emergency responders, and civil society organizations.	Exchanges between experts on how to strengthen disaster preparation and invest in disaster preparedness education.
Validation and evaluation of User Guidance through Google form survey	13 to 27 October	15 respondents (3 Italian, 4 Dutch, 3 German, 3 Danish, 1 Norwegian and 1 Spanish) ranging from press officers and social media related positions to researchers in disaster management.	All the respondents found the overall experience through the user guidance user-friendly, clear, educative (informative) and engaging. They found the overall design appealing and easy to navigate in all its steps. Some minor feedback was provided regarding the amount of text used in the landing pages and info cards. Some suggestions were made about drop-down menus, and reducing the number of questions. All the respondents recognized that the guidance was helpful when needing assistance to focus on the content of the Framework and its products while navigating the LCC.

Additional information about the results from the outcomes of the broader application of the Framework can be found in specific reporting deliverables on the LACs (8.6, the final LINKS community workshop and LINKS Advisory Committee report) and deliverables that provide updates on the products and the LCC (7.6, The final report about the online community management and quality assurance). In addition, 9.5 (Opromolla & Sposato, 2023) and 9.6 (The final report on the development and distribution of dissemination material and on the execution of the LINKS Framework sustainability strategy) provide and a complete outline regarding dissemination and exploitation activities in the last months of the project. Many of these activities have contributed to the broader application of the Framework differently. The LINKS Framework sustainability strategy is thoroughly elaborated on in D 9.6.

The following section provides on the overall conclusion for this report as well as a final reflection on the work of the case assessment teams during LINKS life course.

5. CONCLUDING REMARKS

5.1   Conclusion

This deliverable provides a detailed overview of the final activities carried out by the project to apply and disseminate the LINKS Framework in the cases with local stakeholders and activities carried within the extended network of LINKS.

First, this document presents the overall results and then elaborates on the activities executed by each case of the five Case Assessment Teams (CATS). To achieve this, they organised activities with relevant stakeholders in their scenarios (Section 3). These stakeholders belong to disaster management organisations and organisations supporting disaster risk management activities at different levels. Secondly, this deliverable shows results from the broader application of the Framework through activities outside the cases (Section 4).

All activities led to the dissemination and improvements in specific parts of the Framework, especially those products that needed extra validation (D5.5). All in all, the activities during this period led to valuable exchanges between LINKS and the relevant stakeholders.

Deliverable 6.6 is the final deliverable for WP6, which encapsulates the work of the CATs to understand the challenges and needs of DMO in their context as well as their contributions to developing or improving the LINKS Framework and its parts.

In the early stages of the project, and despite the restrictions of the COVID-19 pandemic, the work of the cases provided the building blocks for the LINKS Community, which eventually brought together a wide variety of stakeholders, including first responders, public authorities, civil society organisations, business communities, citizens, and researchers across Europe, dedicated to improving European disaster resilience through the use of SMCS (D6.2, Fonio & Clark, 2021).

The cases started with specific goals, and despite some early challenges, have achieved what they set out to achieve. The Italian CAT better understands how to raise awareness of using SMCS during earthquakes, promote inclusive communication strategies and engage with school children. The Dutch case identified specific needs, improved the risk communication plans and built cooperation among private and public organisations and citizens. The German CAT on drought obtained an up-to-date overview of the SMCS technologies in use. They also developed a deep understanding of how and why these technologies are used and by whom. The Danish cases evaluated risk awareness communication between authorities and citizens, assessing communication practices and improving activities regarding targeted vulnerable groups. Similarly, the German case on terrorism assessed tools, processes, guidelines and stakeholders relevant to law enforcement for effective risk and crisis communication via SMCS during major terrorist attacks.

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7. ANNEX I: USER GUIDANCE EVALUATION FORM

INSTRUCTIONS

Please visit the LINKS Community [Center](link) (LCC) We recommend getting familiar with it and filling in this form by following the instructions below. We need the form no later than **October 27th**you can answer the questions in English or another preferred language**.** We are looking forward to receiving your feedback! Thank you, the LINKS Team.

Part One: USER DETAILS

A. Email;
B. What role do you have in relation to disaster management organizations (DMO) Do you work or are you interested in knowing more about one of the following scenarios (please mark which);
   - Earthquakes
   - Flooding (cloud burst)
   - Drought
   - Terrorism
   - Industrial hazards/disasters

INSTRUCTIONS for the USER GUIDANCE

1. Click on the **User Guidance** icon on the LCC page. You will land on the overview page, where the two main themes of the User Guidance are present (Improving Communication and Engaging with Citizens).
2. Please click on the theme that is more interesting for you.
3. Once you have clicked on the theme (e.g., Improving communication), you will see a subtheme (e.g., targeting communication, Ensuring Credible Information, Making Information Accessible)
4. When you click on the subtheme, in some cases, a sub-question will appear (e.g., Who do you want to target with your communication plan(s)?).
5. You will end up with a set of info cards with the name of the LINKS products (e.g., Technologies, Guidelines, Use Cases Libraries, Including Citizens Handbook, Feel Safe and Resilience Wheel). The cards are displayed with a short description indicating how that product assists you to answer issues related to the question/theme path (Improving communication).
6. When you click on the info card you will be led to a bridge/landing page with links to the relevant section or predefined filters within the SMCS Libraries where you can find the information applicable to the theme and sub-themes you have selected.
7. In the case of the Feel Safe product, due to an update and development, you might need to use the following login details;
   https://feelsafe.savethechildren.it/ user: **XXXX**, password: **XXXXXX**

QUESTIONS PART 1: INFOCARD and LANDING PAGE

1. Does the info card provide a clear indication in terms of the content of the product that you are being led to? What works well? What does not (if that is the case)?

2. Regarding the landing page, for the products where there is one, did it provide you with a good overview of the product to which it directs you? What works well? What does not (if that is the case)?

3. Once in the product, did you find relevant information (to the chosen theme) in thin answering? In other words, did the section in the product assist you to answer the question related to the main theme? What works well? What does not (if that is the case)?

QUESTIONS PART 2: OVERALL EXPERIENCE

4. Was the navigation from the User Guidance icon to the section in the product user-friendly? What works well? What does not (if that is the case)?

5. Do you see any room for improvement in the navigation from the theme to the product's section? What works well? What does not (if that is the case)?

6. How do you find the overall experience?

QUESTIONS PART 3: LCC

7. Do you think that the overall design of the LINKS Community Center is user-friendly, especially for new users? Please explain why.

8. Please share your thoughts on the information and content provided on our Knowledge Management Platform e.g., relevance, quality, helpfulness etc.

9. Do you have general comments and suggestions for improving the LINKS Community Center?

10. Do you have ideas for promoting the LINKS Community Center and potential collaboration with other communities or platforms?