



# LINKS

Strengthening links between technologies and society  
for European disaster resilience

## D8.6 FINAL LINKS COMMUNITY WORKSHOP AND LINKS ADVISORY COMMITTEE REPORT

### Report

KRISTIAN REESON – EUROPEAN ORGANISATION FOR SECURITY

DIETER NUSSLER – FEDERATION OF EUROPEAN UNION FIRE OFFICE ASSOCIATIONS

RICHARD LUEKE – SAFETY INNOVATION CENTER

EMMELINE ROELLOFFS - VEILIGHEIDSREGIO ZUID-LIMBURG

FRANCESCO GRAZIANI – SAVE THE CHILDREN ITALY

CAMILLA FROIO - UNIVERSITÀ DEGLI STUDI DI FIRENZE

NINA BLOM ANDERSEN - KØBENHAVNS PROFESSIONSHØJSKOLE

ANNIKA HAMACHERS - DEUTSCHE HOCHSCHULE DER POLIZEI

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### AUTHORS& CONTRIBUTORS

Author	Institution	Authored Sections
Kristian Reeson	EOS	Entire Document
Dieter Nuessler	FEU	Section 4
Richard Lueke	SIC	Section 4
Emmeline Roelloffs	VRZL	Section 3.3 - 3.11
Francesco Graziani	SCIT	Section 3.1
Camilla Froio	UNIFI	Section 3.2
Nina Blom Andersen	UCC	Section 3.12 -3.14
Annika Hamachers	DHPol	Section 3.15 -3.16
Contributor	Institution	Contributed Sections
Lieke Rijk	VU	Section 3.3 - 3.11
Lene Stolpe Meyer	FRB	Section 3.12 -3.14

### REVIEWS

Reviewer	Institution	Reviewed Sections
Therese Habig	SIC	Entire Document
Nina Blom Andersen	UCC	Entire Document
Nathan Clark	VU	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, due 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 will be 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, 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

The purpose of Deliverable 8.6 is to provide a final comprehensive report of the outcomes arising from the LINKS Community Workshops (LCW) and LINKS Advisory Committee (LAC) meetings. This report encompasses the LCWs and LAC Meetings spanning from Month 30 to Month 42, marking the end of the LINKS project. Furthermore, the report will outline how the project achieved the goals linked to the community.

LCWs and LACs constitute integral components of the wider LINKS Community. The primary objective of this project was to empower local communities through the LCWs, which are locally organized by LINKS project partners and intricately linked to the five predefined case studies

encompassing earthquakes in Italy, industrial hazards in the Netherlands, droughts in Germany, flooding in Denmark, and terrorism in Germany.

The LCWs and LAC meetings played a pivotal role in fostering the exchange of best practices related to the utilization of SMCS (Social Media and Crowdsourcing) in disaster risk management and resilience. These gatherings served as critical forums for local practitioners and stakeholders to share insights, while also serving as platforms for disseminating information concerning the project's objectives and outcomes.

The LAC is composed of esteemed professionals and experts hailing from relevant organizations, representing a diverse spectrum of practitioners, researchers, and citizens. Their role is to provide guidance, information, and validation for the project's developments and results, thus ensuring its success and effectiveness.

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## LIST OF ACRONYMS

Acronym / Abbreviation	Description
DCT	Disaster Community Technologies
DMP	Disaster Management Processes
DRPV	Disaster Risk Perception and Vulnerability
DMO	Disaster Management Organization
(DRR)	Disaster Risk Reduction
LAC	LINKS Advisory Committee
LCC	LINKS Community Center
LCW	LINKS Community Workshop
SMCS	Social Media and Crowdsourcing
WP	Work Package

## DEFINITION OF KEY TERMS<sup>1</sup>

Term	Definition
Disaster Community Technologies	A DCT is a software(-function) for interaction with, within or among groups of people who have similar interests or have common attributes (communities) in case of a disaster as well as performing analysis of these interactions.
Disaster Management Processes	A collective term encompassing a systematic series of actions or steps taken to reduce and manage disaster risk. Disaster management processes are often associated directly with the phases of the Disaster Management Cycle. In the context of LINKS, we specifically refer to DMP as the policy frameworks, tools and guidelines developed to govern disasters across all phases of the Disaster Management Cycle.
LINKS Framework	A set of best-practices consisting of methods, tools and guidelines for enhancing the governance of diversity among the understandings and applications of SMCS in disasters for relevant stakeholders.

<sup>1</sup> Definitions are retrieved from the LINKS Glossary (<https://links-project.eu/glossary/>).



		<p>Methods in LINKS refer to approaches that will enable researchers and practitioners to assess the effects of SMCS for disaster resilience under diverse conditions.</p> <p>Tools are practical instruments supporting first-responders, public authorities and citizens with the implementation of SMCS in disaster and security contexts.</p> <p>Guidelines are recommendations for improving national and regional governance strategies on SMCS as well as introductions and explanations of how to apply the methods and tools under diverse conditions.</p>
LINKS Center	Community	<p>The LCC brings together different stakeholders (LINKS Community) in one user-friendly and flexible web-based platform and enables them to exchange knowledge and experiences and to access, discuss and assess learning materials on the usage of SMCS in disasters.</p>
LINKS Domains	Knowledge	<p>The three crucial domains of analysis for studying European disaster resilience and SMCS. These include:</p> <p>Disaster Risk Perception and Vulnerability (DRPV), for assessing changes in the citizens' perception of disaster risks induced by SMCS, as well as assessing the changes in the vulnerability of practitioners and citizens.</p> <p>Disaster Management Processes (DMP) for analysis of how SMCS changes the procedures and processes within the crisis and disaster management.</p> <p>Disaster Community Technologies (DCT), for assessing SMCS related technologies used by practitioners (and citizens) in disasters.</p>
LINKS Workshop	Community	<p>Workshops for capacity-building at the local level, organised locally by the LINKS project partners and linked to the five pre-defined case studies (earthquake in Italy, industrial disasters in the Netherlands, drought in Germany, flooding in Denmark and terrorism in Germany). They are crucial for gathering and communicating information regarding the project's objectives and requirements, and for exchanging best practices among local stakeholders on the use of SMCS in disasters.</p>

LINKS Committee	Advisory	Invited professionals and experts from relevant organizations (representing practitioners, researchers, and citizens) that advise, inform and validate developments and results in the project.
(Disaster) perception	Risk	Risk perception is the way individuals and groups appropriate, subjectivize and perceive risks that might or might not be calculated in an objective manner during risk assessments. The importance of studying risk perception more seriously is obvious: risk perception directly influences people's ability and level of preparedness. Risk perception covers what is also referred to as "risk awareness".

## 1. INTRODUCTION

One of the primary objectives of the LINKS project is to establish a sustainable stakeholder community known as the LINKS Community. The D8.1 deliverable, titled "LINKS Community Strategy" (Philpot, J., & Reuge, E., 2020), outlined that the LINKS Community comprises a diverse array of stakeholders from various countries, professions, and fields of expertise. These individuals collaborated with the LINKS Consortium to both learn from and contribute to the project's development and outcomes. Their input enriched the overall LINKS research.

The LINKS Community employed three key approaches for knowledge sharing and interaction throughout the project:

- **LINKS Cases:** These cases encompassed a range of hazard scenarios, geolocations, sociocultural contexts, and demographic settings. They leveraged local stakeholders' contextualized knowledge to address disasters such as earthquakes in Italy, industrial incidents in the Netherlands, droughts in Germany, flooding in Denmark, and terrorism in Germany.
- **LINKS Community Workshops (LCWs):** LCWs served as a vital tool for building capacity among local stakeholders. They were designed and coordinated by LINKS project partners to address specific topics relevant to the research and its outcomes.
- **LINKS Advisory Committee (LAC):** The LAC consisted of selected professionals and experts who provided advice, information, and validation for the project's work.

The LCC served as an online platform facilitating the sharing of best practices, information, and ongoing experiences related to SMCS within the LINKS Community. As the online platform hosting the LINKS Framework, the LCC providing access to structured information about how social media and crowdsourcing can support disaster management processes. Through the LCC, LINKS Community members engaged with LINKS results via the LINKS Framework, which includes the results and in particular the products such as SMCS Libraries.

LCWs played a pivotal role in the LINKS Community by fostering knowledge exchange. This exchange was crucial for the success of the project and ensured that valuable feedback was provided to project partners for the improvement of the LINKS products.

In summary, the main objectives of the LCWs were to:

- Enhance information and knowledge exchange among local stakeholders, LINKS Community members, and experts.
- Collect data and feedback from participants to inform the development of LINKS products.
- Disseminate project developments and results.

Throughout this document, "LINKS Products" refers to the various tools, platforms, and guidelines developed by the three knowledge bases (WP2-4), consolidated within the LINKS Framework and

accessible through the LINKS Community Center (LCC) web platform. The following LINKS Products were influenced by LCWs and LACs held between M30 and M42:

- **Including Citizens Handbook:** A resource containing instructions, guidelines, examples, checklists, and exercises for using existing SMCS and developing new crowdsourcing initiatives in disaster risk management. It focuses on increasing awareness, mobilizing people, making information accessible, and engaging volunteers.
- **Resilience Wheel:** A visual model that holistically frames considerations and priorities for applying SMCS in disaster risk management, simplifying the complexities involved.
- **Feel Safe:** An online platform with two objectives: to provide educational material for engaging children in disaster preparedness activities and to promote knowledge and best practices regarding children's rights during emergencies and participation in emergency management.
- **Technologies Library:** gathers and structures information about existing social media and crowdsourcing technologies to grasp the overwhelming market and to guide the selection and application of these technologies. For practitioners, it provides a highly needed overview about the market, gathers and structures the relevant information about these technologies and thus guides the selection and the application of a suitable technology for disaster management organizations.
- **Guidelines Library:** gathers and structures existing guiding documents (guidelines, legal documents, SOP) that support the implementation and use of social media and crowdsourcing in LINKS' target audiences. While the library target disaster management organizations it also contains documents intended for use by researchers, businesses, citizens or others with interest in using SMCS in their crisis communication.
- **The Use Cases Library:** serves as a repository for documenting instances of how SMCS has been applied or can be employed in real-world scenarios. It enables stakeholders to access insights addressing specific inquiries, such as identifying the technologies employed by organizations for collecting and analyzing social media data during disasters and how do other DMOs organise their processing of data from Social Media? This resource is designed to facilitate the sharing of practical experiences and solutions across different contexts.

This document specifically addresses the developments of LCWs and LAC meetings held between M30 and M42, providing updates on their main results and outlining future workshop planning and LINKS product development within the Framework.

The report's structure is as follows:

- Section 2: Discusses the LCW roadmap, differences in workshop focus compared to the previous LCW report D8.4 First LINKS Community Workshops and LINKS Advisory

Committee report and D8.5 Second LINKS Community Workshops and LINKS Advisory Committee report and outlines future LCWs and their relationship to LINKS products.

- Section 3: Covers the nine LCWs organized between Month 30 and Month 42, detailing their objectives, format, outcomes, next steps, and lessons learned.
- Section 4: Provides information on the LAC Meeting held between Month 30 and Month 42.
- Section 5: Examines the objectives of the Community and how successful the project was in achieving them.

## 2. LINKS COMMUNITY WORKSHOP ROADMAP

The LINKS project's objective was to plan and organize a total of 20 LINKS Community Workshops (LCWs), of which 10 were organised in the first 30 months of the project despite the COVID19 Pandemic greatly hindering free movement and the organization of workshops. Nonetheless, the local partners were able to organize hybrid and virtual LCWs and LACs. As travel restrictions were lifted and large gatherings were permitted, throughout the second half of the project, the local partners were able to plan and organize more LCWs. In total 26 LCWs were planned, surpassing the KPI of 20. The first LCW is documented in deliverables D8.4 *First LINKS Community Workshops and LINKS Advisory Committee report*, whilst D8.5 *Second LINKS Community Workshops and LINKS Advisory Committee report* covered the other 9 held before M30. This deliverable (D8.6) will cover the 16 LCWs organised between M30 and the end of the project (M42). These workshops are an integral part of the project's framework and revolve around the five local cases located in Italy, the Netherlands, Germany, and Denmark. Depending on the specific objectives of each LCW, they may either explore multiple cases or concentrate on a single one. To streamline the planning and execution of these LCWs, a dedicated LCW roadmap was developed.

The LCW roadmap served as a strategic tool, aiding in the meticulous planning and coordination of LCWs scheduled throughout the 42-month project duration. Its purpose was to enhance the preparation process, promote synergy among organizers, and mitigate the risk of duplicated efforts. Additionally, it allowed for the consideration of potential challenges, notably the impact of the COVID-19 pandemic.

The LCW roadmap from start to the end of the project is depicted below in Table 1 (M18 -M23), Table 2 (M24 – M25), Table 3 (M30 -M34), Table 4 (M36 -M38), and Table 5 (M40 – M42):

**Table 1: LCW Roadmap M18 -M23**

	November (M18)	February (M21)	March (M22)	April (M23)	April (M23)
<b>DATE</b>	<b>(09.11.2021)</b>	<b>(07.02.2022)</b>	<b>(11.03.2022)</b>	<b>(08.04.2022)</b>	<b>(08.04.2022)</b>
<b>LCWS #</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Location</b>	<b>Italy</b>	<b>Germany</b>	<b>Denmark</b>	<b>Germany</b>	<b>Germany</b>
<b>WPs</b>	<b>WP2</b>	<b>WP6</b>	<b>WP3</b>	<b>WP4</b>	<b>WP4</b>
<b>Cases</b>	<b>Earthquake in Italy</b>	<b>Terrorism Germany</b>	<b>Flooding</b>	<b>Drought Germany</b>	<b>Drought Germany</b>
<b>Description</b>	1st introductory workshop used to create a network of local stakeholders and to collect information regarding their needs and expectations on the use of SMCS in disasters.	Focus on differences in social media usage among German police agencies and provided valuable feedback on the SMCS Guidelines.	Initial workshop for practitioners in FBR and HBR. Aimed at improving information and knowledge exchanges between practitioners, in particular the workshop focussed on the use of and barriers to social media and crowd sourcing.	The use of SM during a heat wave in the city of Paderborn. Discussion with local and national stakeholders from first responder and SMCS expertise. Developed and discussed key elements of a SM strategy in order to prepare for an upcoming heat wave.	The use of SM during a heat wave in the city of Paderborn. Focused on the technologies that could be implemented in combatting drought.
<b>Organiser</b>	<b>UNIFI; SCIT; PDT</b>	<b>DHPol</b>	<b>FRB; HBR, UCC, UCPH</b>	<b>SIC</b>	<b>SIC</b>
<b>LCWs Report Template</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>

**Table 2: LCW Roadmap M24 – M25**

	May (M24)	May (M24)	May (M24)	May (M24)	June (M25)
<b>DATE</b>	<b>(04.05.2022)</b>	<b>(04.05.2022)</b>	<b>(10.05.2022)</b>	<b>(27-28.05.2022)</b>	<b>(14.06.2022)</b>
<b>LCWS #</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Location</b>	<b>Germany</b>	<b>Germany</b>	<b>Netherlands</b>	<b>Italy</b>	<b>Denmark</b>
<b>WPs</b>	<b>WP6</b>	<b>WP4</b>	<b>WP5-7</b>	<b>WP2</b>	<b>WP3</b>
<b>Cases</b>	<b>Terrorism</b>	<b>Drought</b>	<b>Industrial</b>	<b>Earthquake</b>	<b>Flooding</b>
<b>Description</b>	The aim of the workshop was to evaluate the current state of art of the use of SMCS within the German special forces as well as how the LINKS project could contribute to the project's outcomes.	The focus was on the needs of police forces when it comes to SMCS and in particular on the development of the LINKS product: Technologies Library	Focused on the needs of healthcare professionals and those with a vested interest in the LINKS industrial case. The aim of the LCW was to enhance the disaster resilience of local communities through the implementation of new technologies, such as SMCS, to improve communication	An interactive event focussed on the design of the Feel Safe online platform and aimed to spread awareness on safety and risk management, through an activity with relevant practitioners and children.	The main focus was on the use of SMCS for prevention and during a crisis situation. the preliminary results from the Danish case were presented.
<b>Organiser</b>	<b>DHPol</b>	<b>SIC</b>	<b>Sitech, VRZL, GGD-ZL</b>	<b>UNIFI, SCIT, PDT</b>	<b>FRB; HBR, UCC, UCPH</b>
<b>LCWs Report Template</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>



**Table 3: LCW Roadmap M30 – M34**

	<b>November (M30)</b>	<b>February (M33)</b>	<b>March (M34)</b>	<b>March (M34)</b>	<b>March (M34)</b>
<b>DATE</b>	<b>(1.11.2022)</b>	<b>(3.02.2023)</b>	<b>(20.03.2023)</b>	<b>(21.03.2023)</b>	<b>(30.03.2023)</b>
<b>LCWS #</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
<b>Location</b>	<b>Netherlands</b>	<b>Denmark</b>	<b>Netherlands</b>	<b>Netherlands</b>	<b>Netherlands</b>
<b>WPs</b>	<b>WP5-6-7</b>	<b>WP3</b>	<b>WP5-7</b>	<b>WP5-7</b>	<b>WP5-7</b>
<b>Cases</b>	<b>Cross cases</b>	<b>Flooding</b>	<b>Industrial</b>	<b>Industrial</b>	<b>Industrial</b>
<b>Description</b>	The focus was on Investigating the information needs of school directors and students in case of an emergency. Citizen handbook + Feel Safe	The workshop focused on the LINKS product: the resilience wheel. The aim was to investigate whether operations managers, could use the Resilience wheel as a strategic tool.	The main focus of the LCW was community building and networking. In particular it dealt with ambassadorship and finding key stakeholders to help improve the project and work on its sustainability.	The LCW focussed on clarifying responsibilities during an industrial disaster; on the current technologies in use, as well as the technologies sought after, and how LINKS could effectively address knowledge gaps. Furthermore, it helped contribute to the community building.	The focus was community building and enhancing risk awareness, elucidating the roles played by the community and governmental entities, assessing current technological tools in use, identifying desired technologies, and exploring the potential of LINKS to bridge existing knowledge gaps.
<b>Organiser</b>	<b>ST, VU, VRZL</b>	<b>FRB; HBR, UCC, UCPH</b>	<b>Sitech, VRZL, GGD-ZL</b>	<b>Sitech, VRZL, GGD-ZL</b>	<b>Sitech, VRZL, GGD-ZL</b>
<b>LCWs Report Template</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>

**Table 4: LCW Roadmap M36 – M38**

	May (M36)	June (M37)	June (M37)	July (M38)	July (M38)
DATE	(30.05.2023)	(12.06.2023)	(13.06.2023)	(4.07.2023)	(25.07.2023)
LCWS #	16	17	18	19	20
Location	Netherlands	Netherlands	Germany	Germany	Netherlands
WPs	WP5-7	WP5-7	WP6	WP6	WP5-7
Cases	Industrial	Industrial	Terrorism	Terrorism	Industrial
Description	The LCW's focus was on community building as well as to glean insights from direct experiences and engage in face-to-face dialogues with the participants.	The main focus of the LCW was on engaging with shopkeepers and businesses to identify any previously overlooked issues that could be incorporated into the Including Citizens Handbook.	Focused on the validation and development of the Including Citizens handbook. Stakeholders from various police and civil protection forces from Denmark and Sweden were present and validated the product, as well as suggested minor changes for its improvement.	Focused on the validation and development of the Including Citizens handbook. Stakeholders from various police and civil protection forces from Denmark and Sweden were present and validated the product, as well as suggested minor changes for its improvement.	The focus was to enhance risk awareness and clarifying responsibilities among shop owners and managers, empowering them to disseminate this knowledge to their teams.
Organiser	Sitech, VRZL, GGD-ZL	Sitech, VRZL, GGD-ZL	DHPol	DHPol	Sitech, VRZL, GGD-ZL
LCWs Report Template	Received	Received	Received	Received	Received

**Table 5: LCW Roadmap M40 – M42**

	September (M40)	October (M41)	October (M41)	October (M41)	November (M42)	November (M42)
<b>DATE</b>	(20.09.2023)	(5 - 22.10.2023)	(17.10.2023)	(23.10.2023)	(9.11.2023)	(28.11.2023)
<b>LCWS #</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>
<b>Location</b>	<b>Denmark</b>	<b>Netherlands</b>	<b>Italy</b>	<b>Netherlands</b>	<b>Denmark</b>	<b>Italy</b>
<b>WPs</b>	<b>WP3</b>	<b>WP5-6-7</b>	<b>WP2</b>	<b>WP5-6-7</b>	<b>WP3</b>	<b>WP2</b>
<b>Cases</b>	<b>Flooding</b>	<b>Cross cases</b>	<b>Earthquake</b>	<b>Cross cases</b>	<b>Flooding</b>	<b>Earthquake</b>
<b>Description</b>	Focused on the Resilience Wheel with practitioners within crisis management	The workshop focused on an incident drill at an elementary school	The focus was on Feel Safe	workshop for associations, social institutions, sports clubs, etc. in the Chemelot area.	Focused on the Resilience wheel - Hofor utility company	The focus was on Feel Safe and the LCC.
<b>Organiser</b>	<b>FRB; HBR, UCC, UCPH</b>	<b>ST, VU, VRZL</b>	<b>SCIT</b>	<b>ST, VU, VRZL</b>	<b>FRB; HBR, UCC, UCPH</b>	<b>UNIFI</b>
<b>LCWs Report Template</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>	<b>Received</b>

### 3. LINKS COMMUNITY WORKSHOP REPORTS

In the following section, 16 LCWs organised between M30-M42 of the LINKS project will be addressed. These LCWs are organized following the order of the LINKS Cases: Case 1 - Italy (Earthquake), Case 2 - Netherlands (Industrial Disaster), Case 3 - Germany (Drought), Case 4 - Denmark (Floods), and Case 5 - Germany (Terrorism).

Overall, the LCWs played an important role in fortifying the LINKS research by fostering knowledge exchange and synergy among stakeholders, ultimately contributing to the project's success in disaster management and resilience-building. In the final months of the project, the remaining LCWs planned, such as the FEEL SAFE LCW within the Italian terrorism case, which took place in October 2023, aimed to improve the sustainability of the project by working with stakeholders who were interested in utilizing the LINKS products.

#### 3.1 3<sup>rd</sup> Italian LCW (Earthquake)

The 3<sup>rd</sup> Italian LCW was held on the 17<sup>th</sup> of October 2023 at the headquarters of Save the Children in Rome (SCIT), Italy. The workshop was organized by SCIT to raise awareness on child focused Disaster Risk Reduction (DRR) notably just after the DRR International Day. The LCW was conceived as an opportunity to bring together DRR experts and decision makers to discuss the state of the art and future actions and commitments with special focus on disaster education and the use of SMCS in Disaster Risk Management (DRM).

#### Objectives

The workshop aimed to achieve several key objectives, including fostering a sense of security by promoting the concept of "Feel Safe." It sought to bring children closer to the realm of civil protection through intergenerational activities, promoting awareness about safety and risk management. Another goal was to encourage investment in disaster preparedness with a specific focus on children. The workshop also aimed to promote global cooperation and facilitate the exchange of best practices. Additionally, a crucial objective was to raise awareness about the significance of involving citizens and children in activities related to disaster risk reduction (DRR).

#### Format

The workshop was divided into 4 main sessions.

Session 1: the panel involved experts in the field of civil protection, disaster management and education who are particularly outstanding for their commitment to promote children's rights in

emergencies. The panellists presented their views on how to move towards more effective risk and crisis communication solutions adapted to children. They gave an account of the state of the art in this sector and provided inspiring ideas to make children safer and readier but also more actively engaged in the overall goal of promoting a culture of civil protection.

Session 2: the panel involved regional, local institutions and experts who have collaborated with Save the Children on all phases of the disaster cycle management promoting the participation and protection of minors. The speakers presented experiences and their vision for the dissemination of more inclusive practices across the country to promote risks' awareness and better protection of the needs and rights of children in emergency.

Session 3: Promoting a culture of disaster preparedness is a global priority. It is paramount to promote disaster preparedness education in all educational contexts to reduce children's and young people's vulnerability to disasters. In this panel, experts provided the audience with global perspectives from Japan, USA, Italy, Czech Republic, and Ireland on how to approach disaster education and they shared innovative practices in this field, mixing new technologies and more traditional approaches.

Session 4 – Feel Safe Challenge: Children from the school IC G. Fanciulli were divided into 4 teams and experienced Feel Safe by engaging in educational and playful activities which focused on Vulnerability, Preparedness, Awareness, Communication and Earthquake hazard throughout the premises of SCIT offices.

## Participants

The workshop was attended by 130 people (80 adults and 50 children), split evenly between genders.

The participants represented the following associations and organizations:

- Italian National Civil Protection
- Regional and local civil protection
- Ministry for Civil Protection and Sea Policy
- Emergency organizations
- Other third sector organizations engaged in emergency response.
- School Fanciulli from the Province of Terni
- Save the Children

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers

- Expertise: administration, communication, education, social media technologies, emergency response, civil protection.
- Relevance: The participants work in civil protection, emergency response, and education. As such they were the idea target group for the validation of Feel Safe and improving its sustainability by ensuring it would be adopted and implemented.

**Figure 1: Participants to the 3<sup>rd</sup> Italian LCW**



## Outcomes

The workshop successfully achieved its objectives as the panellists delivered highly impactful remarks and speeches on various crucial topics. Notably, the event included the launch of Feel Safe and the presentation of its website, showcasing a commitment from the Italian national civil protection to promote investment and collaboration with the Ministry of Education for disaster preparedness education. The discussions covered sharing best practices in working with children throughout all phases of the disaster cycle, leveraging new communication tools and virtual reality for disaster preparedness education, developing more accessible local emergency plans that prioritize the needs of children, advocating for increased engagement of children from a young age in DRR activities, and enhancing the capacity of communication staff to consider the emotional and psychosocial components of those affected. The workshop also featured insightful case studies, such as the floods in the city of Faenza and examples from the United States, the Czech Republic, Japan, and Ireland, all centered around disaster preparedness education.

The workshop was a valuable occasion to disseminate the Feel Safe product and engage with stakeholders, such as the school *Fanciulli* who would be interesting in utilizing it. In ensuring the sustainability of Feel Safe, SCIT will continue to organize events where it will be disseminated.

### 3.2 4<sup>th</sup> Italian LCW (Earthquake)

The 4<sup>th</sup> Italian LCW took place on the 28<sup>th</sup> of November 2023 in the Provincia di Terni. The workshop was organised by the Provincia di Terni (PDT) as their final event showcasing three years of LINKS activities. The LCW focused in particular on the LCC, Feel Safe, and the Including Citizens Handbook.

#### Objectives

The main objective of the workshop was to disseminate the LINKS products, in particular the LCC, Feel Safe and the Including Citizens Handbook, ensuring their sustainability as interested stakeholders involved in civil protection will utilize them. Furthermore, this final LCW for the Italian Earthquake case was to share final ideas, comments, and point of view about the project and outcomes.

#### Format

The LCW began with presentations of all the activities and outcomes of the LINKS project. Then the workshop presented in detail the LCC, Feel Safe, the Including Citizens Handbook and other dissemination material produced by PDT. Throughout the day, all the participants had the possibility to directly experience LINKS, share ideas and think about how to in turn share these products and knowledge with local municipalities.

#### Participants

The workshop was attended by 15 participants, 10 male and 5 female.

The participants represented the following associations and organizations:

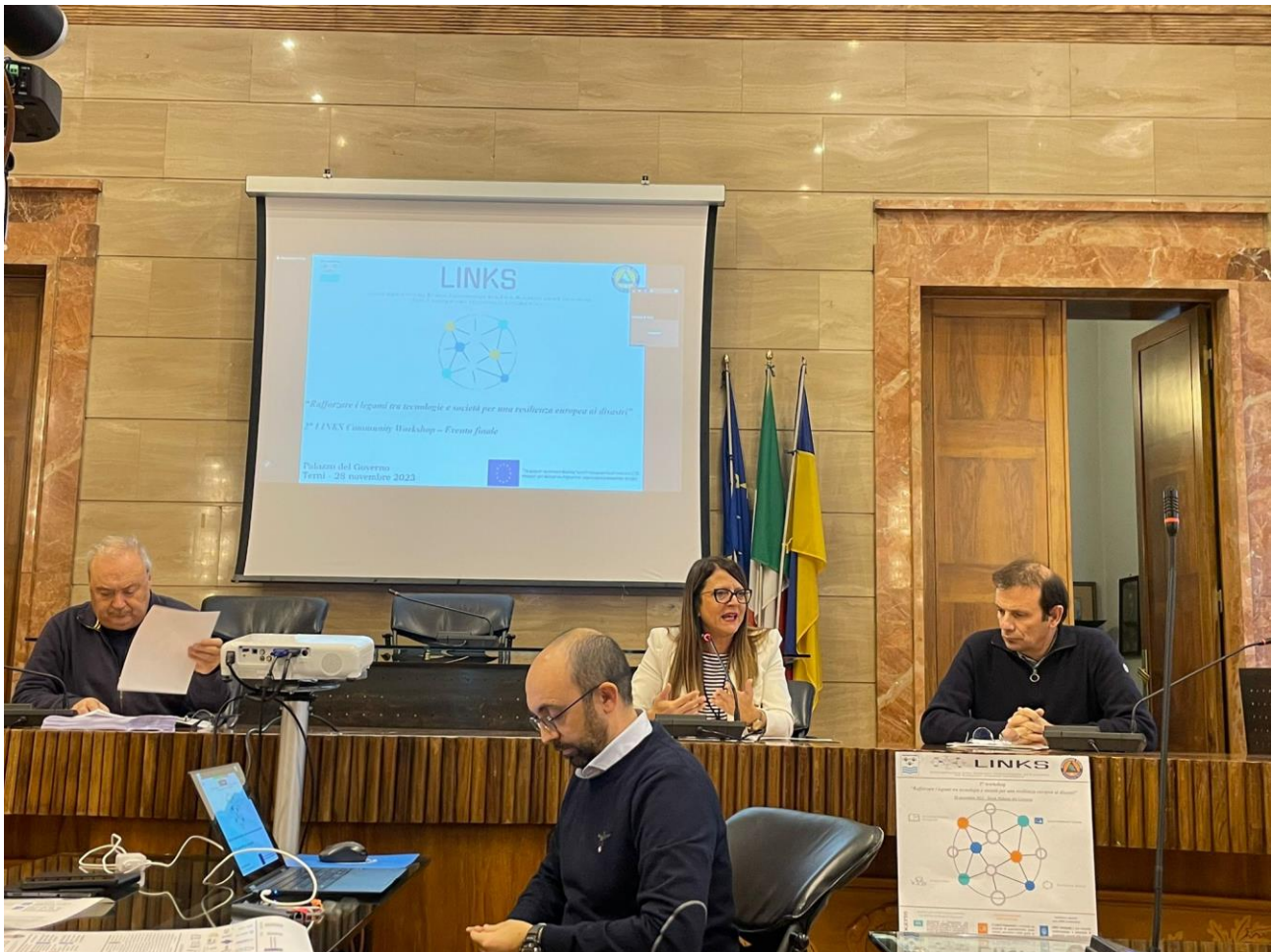
- Provincia di Terni - PDT
- University of Firenze - UNIFI
- Save the Children - SCIT
- Guardia di Finanza (Police)
- Prociv Arci (civil protection association)
- Municipality of Orvieto - Civil protection
- Municipality of Parrano - civil protection

- Civil protection office of "Unione dei Comuni dell'Orvietano"

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers
- Expertise: social media technologies, emergency response, civil protection.
- Relevance: The participants work in civil protection, emergency response, and policy making. As such they were the ideal stakeholders to hold the last Italian LCW with, showcasing the results of the project that they may now use to develop civil protection activities and strategies.

**Figure 2: Participants to the 4<sup>th</sup> Italian LCW**





## Outcomes

The workshop was successful in achieving its objectives. The LINKS project and its products, in particular Feel Safe and the LCC, were disseminated to the relevant stakeholders who will increase their use of the products. The LCW was a valuable occasion to strengthen relations with stakeholders in order to further collaboration beyond the project's lifetime. To ensure the sustainability of the LINKS results, especially the LCC and Feel Safe will continued to be disseminated among local schools and civil protection organizations.

### 3.3 2<sup>nd</sup> Dutch LCW (Industrial Hazards)

The 2<sup>nd</sup> Dutch LCW was held on the 1<sup>st</sup> of November 2022, and investigated the information needs of school directors and students in the case of an emergency. The workshop focused on the LINKS products including Citizen Handbook and Feel Safe.

The Dutch Case Team organised a workshop with a specific focus on educational institutions within the three municipalities bordering Chemelot, namely Beek, Stein, and Sittard-Geleen. This workshop was tailored for the upper management of schools, safety personnel, school directors, and prominent members of the overarching school boards operating in these neighbouring municipalities.

## Objectives

The primary objective of this workshop was to inform the school administrators of their responsibilities in the advents of an industrial disaster as well as the best practices to implement. Another objective was the building of the LINKS Community by engaging with practitioners and other experts who would be interested in the LINKS project and its Framework and results. Furthermore, the workshop presented an opportunity to disseminate the results of the product, particularly Feel Safe and the Including Citizen Handbook.

The workshop delved into a comprehensive exploration of the potential challenges in risk and crisis communication that might arise in the event of an incident. These discussions were initiated by posing open-ended questions and providing an open forum for in-depth deliberations. The experts invited to the workshop played an instrumental role in addressing any knowledge gaps that emerged throughout the course of our collective discussion. In turn, the feedback collected was used to improve the LINKS products, in this case Feel Safe.

## Format

The LCW featured two distinct sections: a learning component and a discussion segment. In the preliminary phase of the workshop, the primary aim was to establish a foundational understanding. To achieve this, visual aids were employed in the form of videos and images depicting previous

chemical incidents, thereby illustrating the responses of schools in the vicinity of Chemelot during those events. Additionally, visual content pertaining to the roles of Chemelot, VRZL, and the Government, was presented with the intention of elucidating both the current responsibilities and limitations. The Dutch team revisited the concepts of risk communication and crisis communication, then introduced the LINKS project and "Samen Veilig" (Together Safe). The workshop concluded with a forward-looking perspective on collaboration among schools, an introduction to "Feel Safe" and the DRR Education Toolkit, highlighting various projects such as the Risk Factory Venlo, and gathering feedback. In pursuit of this objective, schools were engaged in small group activities where they were tasked with formulating written responses on how their institutions would address specific challenges. Following these group exercises, we reconvened in the main session room to collectively dissect and discuss each question.

### **Participants**

The workshop was attended by 30 participants (14 female and 16 male), drawn from the municipalities of Sittard-Geleen, Stein, and Beek, all of which are contiguous to the Chemelot region. Within this cohort, 22 individuals held positions as directors and upper-management representatives, duly representing the educational institutions and boards within these municipalities. The remaining attendees comprised 5 organizers hailing from the Dutch Case Team, encompassing VRZL, SiTech, and VU, along with 3 distinguished experts in risk and crisis communication, sourced from the Fire Brigade, Chemelot, and government agencies.

The participants represented the following associations and organizations:

- MIK&PIW Groep
- Bs De Lemborgh Limbricht
- Acaleph
- Graaf Huyn College
- Brede school de Bron
- Kindante
- Groenewald
- OBS de Maaskei
- Kindcentrum Aelse
- Stichting Triade/ Basisschool De Leeuwerik
- Stichting DaCapo
- Groenewald
- De Kluis
- Triade

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers
- Expertise: administration, communication, social media technologies, emergency response, civil protection.
- Relevance: The participants have either important responsibilities in administration as decision makers or work in communication and emergency response and encounter SMCS in their daily work. Furthermore, they have to consider SMCS when making life saving strategic decisions and are experts in their fields.

**Figure 3: Participants to the 2<sup>nd</sup> Dutch LCW**



## Outcomes

The workshop was successful in achieving its objectives. The best practices to implement in the event of an industrial disaster were successfully communicated to the participants, such as staying indoors, sealing off potential points of entry, and staying informed by listening to L1 radio for updates and instructions.

In particular, educational institutions learned of the importance of proactively defining roles and responsibilities before a chemical incident, such as clarifying expectations from parents and the school, establishing a plan for rapid response, and training staff as company first responders (BHV).

The LCW improved the community building of the project by creating a network of interested and involved practitioners and decision makers, who would be willing to implement Feel Safe as an educational tool to prepare their students for an industrial disaster. The schools present at the

workshop expressed interest in delving deeper into Feel Safe and integrating its exercises into their existing curricula.

### 3.4 3<sup>rd</sup> Dutch LCW (Industrial Hazards)

The 3<sup>rd</sup> Dutch LCW was held at Het Volkshoes, a central hub and event centre in the Lindenheuvel, on the 20<sup>th</sup> of March 2023. It was organized by VRZL and SiTech and focused on the LCC and SMCS Libraries.

#### Objectives

The workshop aimed to increase risk awareness by addressing the potential hazards associated with the Chemelot site and by reiterating essential safety guidelines. Secondly, the workshop sought to clarify responsibilities and improve community building by shedding light on the roles and duties of various stakeholders, including the government, VRZL, SiTech, and the individuals who function as 'ambassadors - stakeholders/representatives from local organizations, groups, clubs, and institutions. Additionally, the workshop served as a platform for disseminating information about LINKS and affiliated projects. Participants were provided with insights into the nature of LINKS and how it might contribute to the local community.

#### Format

The workshop began by delving into the concept of ambassadorship and its implications for the community. The discussion then turned to risk awareness and the roles played by both the community and governmental entities. A significant part of the workshop centered on the current technologies in use and the technologies desired, as well as how LINKS could bridge any knowledge gaps that may exist. The feedback gained was used to develop the SMCS Libraries.

The agenda for the workshop was structured with the following key points: An introductory segment that welcomed participants and outlined the evening's program and objectives. Presentations on the background and missions of the organizing entities, including Sitech, Chemelot, LINKS, and Samen Veilig. An exploration of the roles of SiTech and Chemelot, both in preparation for and during a chemical incident. The definition and distinction between risk communication and crisis communication, as well as a review of general safety instructions to follow during a chemical incident. An overview of the target groups involved in the project. Detailed discussions on how to respond when sirens sound, covering internal and external communication, roles and responsibilities, and the messaging process. A reflection on the mutual support between participants and the path forward in the collaboration. Lastly, an invitation for those interested in becoming ambassadors was extended.

## Participants

The LINKS Community Workshop was attended by 23 people (15 male to 8 female), 8 of whom were from the organizers side.

The participants represented the following associations and organizations:

- R.K.F.C. Lindenheuvel/ Heidebloem/Bovitec (hetzelfde bestuur als RKFC)
- KBO Oud-Geleen
- Hengelsportvereniging Maurits
- ZOwonen Woningvereniging
- Retailpark Sittard-Geleen
- Veiligheidskundige/crisiscoördinator Zorgcentra Zuyderland - V&V
- t Volkshoes
- E.H.B.O Vereniging Geleen
- GGMD voor doven en slechthorenden
- OBS De Duizendpoot
- Basisschool 't Heuvelke
- Buurtpreventieteam Lindenheuvel
- Parochie Lindenheuvel
- Onze-Lieve-Vrouw van Altijddurende Bijstandkerk
- Markaz Al-Houda Geleen
- Welzijn/ WCL de Linde
- Proeftuin Zeeheldenbuurt
- Braining the Future
- Design Thinker (werkt samen met de Zeeheldenbuurt)
- Speeltuin Miranaburg
- Beleidsuitvoerders Openbare Orde en Veiligheid
- Lindenheuvel Journaal
- Ontmoetingswinkel Sittard-Geleen
- Wijk agent Lindenheuvel
- EHBO Geleen
- Basisschool 't Heuvelke

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers, developers, Media.
- Expertise: communication, social media technologies, emergency response, civil protection.

- **Relevance:** The workshop participants all play a central role, have a vast (social) network and are often familiar figures in their neighbourhoods. These social networks often contain clients, customers, employees, club members, followers.

**Figure 4: Participants of the 3rd Dutch LCW**



## Outcomes

The workshop effectively informed participants about the necessary steps to take in the event of a chemical-related incident, promoting risk awareness. Additionally, the workshop provided crucial clarity on role divisions among various governmental, public, and private organizations, elucidating the distinct responsibilities of various roles within organizations, businesses, and schools. Participants expressed a keen interest in helping build the LINKS Community by assuming ambassador roles for better future preparation. Furthermore, the workshop effectively introduced LINKS products, attracting the attention of individuals interested in collaborative ventures, such as Smart City initiatives and local schools.

The insights gathered emphasized the importance of collaborating with the local community and communication. Moreover, the workshop confirmed the ongoing interest in e-learning and the readiness of schools to adopt new technologies for improved child-targeted communication. The schools displayed interest in implementing the Feel Safe product in their classes in order to teach and prepare their students in the event of a chemical incident.

### 3.5 4<sup>th</sup> Dutch LCW (Industrial Hazards)

On the 21st of March 2023, communication experts from the Safety Region of South Limburg, in collaboration with members of SiTech Services (Chemelot), organized a LINKS Community workshop tailored for stakeholders within the Limbricht area, situated in the municipality of Sittard-Geleen. The venue of this workshop was the Castle Limbricht, in Limbricht. The workshop focused on Ambassadorship, risk awareness, the roles played by the community and governmental bodies, the current technologies in use, as well as the technologies sought after, and how LINKS could effectively address knowledge gaps.

#### **Objectives**

The workshop aimed to heighten risk awareness by discussing the potential hazards associated with the Chemelot site and ensuring that participants were well-versed in safety instructions. The LCW aimed to improve community building by emphasizing the roles played by ambassadors, providing a holistic understanding of the collective responsibilities.

The workshop served as a platform for introducing LINKS, fostering a deeper comprehension of LINKS' role within the local community and highlighting its potential contributions. By organizing workshops in the neighbourhoods and communities surrounding Chemelot, often with the locals themselves, we are visibly present and working together with the community. In short, by providing LCWs we hope to improve the risk awareness and get the community on board with assisting us in our risk communication strategy.

#### **Format**

The workshop commenced with presentations on Sitech, Chemelot, LINKS, and Samen Veilig, shedding light on their pre-incident and during-incident functions, providing a critical perspective on the safety measures in place and best practices to follow.

A retrospective look at past sessions and news videos facilitated a contextual understanding of the issues at hand. The workshop then delved into the identification of target groups, ensuring that the right messaging and strategies were tailored for maximum effectiveness.

Lastly, the concept of becoming an ambassador was introduced, providing participants with an opportunity to actively contribute to safety and community engagement.

#### **Participants**

We had approximately 14 attendees (8 male to 6 female) at the workshop. 8 were from the

organizers side.

Ultimately 6 participants showed up. These were representatives from schools, shops, healthcare institutions (dental care), and (sport/fishing) clubs.

The participants represented the following associations and organizations:

- Jagers te Paard, Graetheide
- HSV De Wiejert
- Scouting St. Salvius
- Basisschool de Lembergh
- Wijksteunpunt Hof van Eijnatten (PIW)
- Stichting Huurdersvereniging Limbricht

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: businesses, practitioners, policy/decision makers.
- Expertise: administration, communication, emergency response, civil protection.
- Relevance: Relevant stakeholder groups of the LINKS project. Utilise social media, have relevant social networks and communication strategies.

**Figure 5: Participants to the 4<sup>th</sup> Dutch LCW**





## Outcomes

The workshop was successful. Essential information on the best practices in the event of a chemical incident were effectively conveyed to the participants as was the importance of division of roles among various public and private organizations. Notably, risk awareness was increased among the attendees, further enhancing their preparedness.

The workshop served as a platform to communicate information about the LINKS products. Notably, the discussion revolved around Feel Safe, underlining its potential as an engaging and valuable tool for educating the younger generation about potential risks and safety measures. These achievements collectively contributed to the success of the workshop in enhancing community preparedness and risk awareness.

### 3.6 5<sup>th</sup> Dutch LCW (Industrial Hazards)

The LCW took place on March 30<sup>th</sup> at Café Benelux in Beek, addressing a range of pivotal subjects. These encompassed the concept of ambassadorship and its implications for the community, enhancing risk awareness, elucidating the roles played by the community and governmental entities, assessing current technological tools in use, identifying desired technologies, and exploring the potential of LINKS to bridge existing knowledge gaps.

#### Objectives

The workshop's primary objectives were shaped by an ongoing risk communication strategy aiming to reach different sectors, including hospitals, schools, and now businesses in the vicinity of Chemelot. This strategy was informed by the findings of LINKS questionnaires, interviews, and pertinent reports such as RIVM (2020), IFV (2019), and RIVM (2020). The overarching goals included enhancing risk awareness by discussing Chemelot's potential hazards and providing safety instructions, clarifying the roles of public and private organizations, and delineating citizen responsibilities in readiness for chemical incidents. Additionally, the workshop sought to share information about LINKS and related projects, underscoring how LINKS could contribute to the local community.

#### Format

The workshop began with presentations on VRZL, Chemelot, LINKS, and Samen Veilig. Then the workshop focused on crucial communication dynamics, covering the nuances of risk and crisis communication. Essential safety protocols for chemical incidents were elucidated, followed by a reflective session featuring insights from past IFV, RIVM, and RIVM dialogue sessions, supplemented with historical news videos. After the presentations, participants engaged in a discussion regarding the diverse target groups involved, comprehensively addressing how to respond when sirens sound,

including roles and communication protocols. The agenda concluded by exploring opportunities for mutual collaboration and inviting participants to become ambassadors for the cause.

## Participants

The event was organized by the business association Beek Bloeit. Henk Sipers is also a board member of Beek Bloeit. There were approximately 30 attendees (22 male to 8).

The participants represented the following associations and organizations:

- Slagerij Veugen
- Brasserie Rubens
- Cooijmans herenmode
- Eric Smeets Fotografie
- Slaaparchitect
- Molin Juwelier
- Molin Optiek
- Square Bodyfashion
- Spronken Orthopedie
- Beurskens Schoenmode
- Castelijn Mode
- Carwash Meijers-Beek
- Kamer8cht
- DIART Edelsmeden Juwelen

Beek Bloeit is an entrepreneurs group with more than 50 members, from different branches such as: design, fashion, banking, insurance from the municipality of Beek. Beek Bloeit functions as mediator for the government, businesses, law firms, etc.

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: businesses, practitioners, policy/decision makers.
- Expertise: banking, insurance, fashion, communication.
- Relevance: A relevant target group of the LINKS project are businesses.

**Figure 6: Participants to the 5<sup>th</sup> Dutch LCW**



## Outcomes

The workshop proved highly successful, achieving several key outcomes. Participants gained valuable insights into how to respond to chemical-related incidents, resulting in improved risk awareness. Moreover, the workshop effectively clarified the division of roles between various governmental, public, and private entities, illuminating the responsibilities of citizens, including those in roles such as shopkeepers and business owners. The presentation on LINKS and its associated products was well-received, and participants expressed their positive feedback. To further this success, follow-up meetings with interested parties are planned to determine the most effective ways to implement and leverage these products in support of their organizations.

### 3.7 6<sup>th</sup> Dutch LCW (Industrial Hazards)

The workshop was held on May 30<sup>th</sup>, 2023, and was hosted at Ekris BMW en MINI's showroom, situated among the Maastricht Aachen Airport's neighboring entities. The session revolved around several crucial topics, including enhancing risk awareness, examining the roles of both the community and governmental organizations, elucidating communication protocols between Chemelot and the Safety Region in the event of an incident, drawing comparisons between incidents at the airport and Chemelot, and addressing the contingency plan for the unlikely scenario of concurrent incidents at both locations.

#### Objectives

The objective of the LCW was to glean insights from direct experiences and engage in face-to-face dialogues with the participants. Through these interactions, the goal is to leverage discussions on past incidents, their challenges, and associated complexities. The participants' input will be invaluable in pinpointing existing issues and formulating effective problem-solving strategies.

An additional objective was to establish a robust stakeholder network, one that can serve as a valuable asset for facilitating communication with the Chemelot community and its surroundings. This network is envisaged as a conduit for seamless interaction, aiding in proactive communication before chemical incidents occur and potentially, in the future, even during such incidents.

#### Format

The LCW featured three key presentations dealing with disaster Management. The first presentation provided insights into the disaster response plan of Maastricht Aachen Airport, covering a range of scenarios, including plane crashes and infectious disease outbreaks. The presentation elaborated on the precautionary measures implemented by the Safety Region and their implications for local business owners operating within the affected region. The Dutch case team, on the other hand, focused their presentation on essential safety instructions to be followed during a chemical incident, emphasizing critical guidelines for public safety. The final presentation urged individuals to volunteer as citizen aid workers and offered an invitation to acquire skills in using automated external defibrillators (AEDs), underlining the importance of community involvement in emergency response efforts.

#### Participants

34 people attended from 15 different companies in and around the Maastricht Aachen Airport (25 male to 9 female). Amongst others employees of a hotel, of a car dealership and of an employment agency. Most of the participants were either managers or involved in corporate emergency management.

The participants represented the following associations and organizations:

- GR8 Hotels
- Boels Zanders Advocaten
- Royal Haskoning DHV
- Equans
- Yacht Maastricht
- DHL Servicepoint Maastricht
- Provide Managed Services
- Collins Aerospace
- Gemeente Beek
- Push Braces
- TITAN groep BV
- Cauberg Huygen BV
- Kreuze
- Opvang Oekraine
- Becs IT Services Zuid B.V.
- Open Line
- Venne Electronics
- Auréus Group
- Andi Smart Print Solutions
- Limbourg & Partners
- Ekris BMW Maastricht
- LWV / MAA Aviation Valley

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop:

- LINKS stakeholder groups: practitioners, policy/decision makers, businesses.
- Expertise: communication, social media technologies, emergency response, emergency management.
- Relevance: All participants are either decision makers or involved in emergency management. Therefore, they have a clear understanding of how SMCS and new technologies may be used in emergency management and how their use can be improved.

**Figure 7: Participants to the 6<sup>th</sup> Dutch LCW**



## Outcomes

The participants learned of the necessary actions to take in the event of a chemical incident, concurrently raising their awareness of potential risks. The LCW also offered a clear delineation of responsibilities among various governmental, public, and private organizations, highlighting the specific roles of individuals, including shopkeepers and business owners.

Moreover, the workshop provided valuable insights into LINKS and its range of products, offering a glimpse of their potential. While there were relatively few questions or feedback, the evident interest of the participants was notable. Their willingness to attend the workshop at the end of a workday and engage in meaningful discussions afterward underscored their genuine curiosity and concern for these crucial topics.

### 3.8 7<sup>th</sup> Dutch LCW (Industrial Hazards)

Held on June 12<sup>th</sup>, the LCW convened at the Van der Valk Hotel in Urmond, a multifaceted establishment encompassing a hotel, restaurant, and event center. This central location was well-suited for the businesses invited to the workshop, offering proximity to Chemelot. The workshop addressed a range of critical themes, including the expectations of businesses in the vicinity of Chemelot, strategies for enhancing risk communication among business owners with their staff and clientele, the concept of ambassadorship and its implications for businesses, risk awareness, the roles played by the community and governmental entities during incidents, an examination of existing and desired technologies, and a comprehensive look at LINKS and its potential to address knowledge gaps.

#### Objectives

The workshop aimed to achieve several objectives. Firstly, it focused on increasing risk awareness, which is a standard component of our workshops, by discussing the potential hazards associated with the Chemelot site and emphasizing the necessary safety measures. This same objective was pursued during our outdoor activity with shopkeepers. Secondly, the workshop aimed to clarify responsibilities. In the outdoor activity, we communicated the varying responsibilities of both public and private organizations in the event of a chemical incident, while also highlighting the roles that citizens, primarily shop owners in this case, need to fulfill in preparing for such incidents. Lastly, the workshop sought to share information about LINKS and associated projects, helping participants understand the role LINKS could play in the local community. In particular, the aim was to engage with shopkeepers and businesses to identify any previously overlooked issues that could be incorporated into the Including Citizens Handbook.

#### Format

The workshop began with presentations on VRZL, Chemelot, LINKS, and Samen Veilig to ensure a shared understanding. The topics of risk and crisis communication were explored, accompanied by the general safety instructions for chemical incidents. Engaging elements, including a flashback segment featuring IFV, RIVM, and RIVM dialogue sessions, along with historical news videos, added depth to the discussion. The session also delved into the various target groups involved, collectively creating a well-rounded and informative workshop.

#### Participants

The LCW for businesses had 28 attendees (20 male to 8 female). The workshop was aimed at businesses from the municipalities of Beek, Stein and Sittard-Geleen. The Dutch case team was

represented by 2 members from the VRZL (communications), 1 member from the VU and 1 member from Sitech.

Our speakers were Marcel Penders, a communication specialist from the VRZL and Jan Starmans, from the business unit of the fire brigade and working at Sitech security. Lieke Rijkx and Emmeline Roeloffs both communication specialists from the VU and VRZL respectively took notes during the workshop.

The participants represented the following associations and organizations:

- Geonius
- V.V. Urmondia
- Roms Holding B.V.
- Gemeente Stein
- Hiab Benelux
- Beton Boringen
- C&A (Makado Beek)
- Redactie Huis Urmond
- Tehava
- Hermetico
- Cuijpers Services B.V.
- Limpens Elsloo
- Apotheek voorzorg B.V.
- UTS Bernardt
- WG Moermans

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: businesses
- Expertise: business, communication, social media technologies, emergency response, civil protection.
- Relevance: Businesses are a relevant target group the project wishes to target.

**Figure 8: Participants to the 7<sup>th</sup> Dutch LCW**





## Outcomes

The workshop highlighted a significant deficiency in preparedness for chemical-related incidents, where businesses generally possess a basic understanding of safety protocols. However, complexities arise when situations demand actions beyond seeking shelter indoors. The issue of managing employees who may wish to leave the building, while not being forced to stay, adds another layer of challenge. To address these concerns, it was emphasized that proactive preparation, including risk clarification and clearly defined role assignments, can offer substantial assistance. Additionally, it was noted that communication platforms remain underutilized and could serve as vital tools for information dissemination both before and during an incident. Overall, the workshop successfully educated participants on how to respond to chemical incidents, enhanced risk awareness, clarified the roles of various stakeholders, and informed them about LINKS and its products, earning positive feedback.

### 3.9 8<sup>th</sup> Dutch LCW (Industrial Hazards)

This workshop deviated from the usual LCW format as it was organised as an outdoor activity in order to gain a deeper understanding of the preparedness level of stores when faced with an industrial disaster. The outdoor activity took place on July 24<sup>th</sup>, 2023, from 15:30 to 17:00 in the Lindenheuvel neighborhood, located in the municipality of Sittard-Geleen.

#### **objectives**

The objective of the outdoor activity was to enhance risk awareness among shop owners and managers, empowering them to disseminate this knowledge to their teams. This initiative encompassed several key goals: firstly, increasing risk awareness by discussing potential hazards at the Chemelot site and the corresponding safety measures, with a seamless integration into the outdoor activity; secondly, clarifying the responsibilities of both public and private organizations in the event of a chemical incident, while emphasizing the role of citizens, particularly shop owners, in disaster preparedness; and finally, sharing insights about LINKS and collaborative projects, elucidating LINKS' potential contribution to the local community, with a focus on integrating it into ongoing initiatives.

#### **Format**

During this workshop, 15 stores on the main square and the surrounding streets were visited. The Dutch team went over the expectations of the shop owners and discussed how the shop owners can improve their risk communication towards their staff and customers. The role of the community and governmental parties during incidents was discussed and the Dutch team explained what LINKS is and how LINKS might be applied in the field. Action plans and information sheets were handed out to facilitate knowledge sharing.

#### **Participants**

The workshop was attended by 23 participants, 14 of which were male and 9 were female. For the outdoor exercises the participants were split into teams. Each team had a communications member and a member from the fire brigade.

The participants represented the following associations and organizations:

- Jumbo Limbrichterveld
- Kruidvat
- Bakkerij Mestrom
- Buurtcentrum Limbrichterveld

- Voordeelmarkt Sittard verfwinkel
- Stan's Hairstyling
- Kruidvat
- Kapsalon Hollywood
- Pjotr & Kaas
- Tabakspeciaalzaak Boree
- Pand 20
- Sluyter Tweewielers Geleen
- Leger des Heils Geleen
- Mix 33
- Brood en Banketbakkerij
- Café De Paesjsjtal
- Cafeteria Salina
- Vos & Nos mondzorg

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers.
- Expertise: communication, social media technologies, emergency response, civil protection.
- Relevance: All participants work in emergency response, disaster resilience, communication or emergency response and encounter SMCS in their daily work. Furthermore, they have to consider SMCS when making life saving strategic decisions and are experts in their fields.

The Dutch case team visited approximately 15 stores in the main market square of the Lindenheuvel, including hairdressers, popular chains like the Kruidvat and Jumbo and even a dentist and the Leger des Heils.

**Figure 9: Participants to the 8<sup>th</sup> Dutch LCW**



## Outcomes

The Dutch team successfully educated the shopkeepers about appropriate actions in the event of a chemical incident, shedding light on the clear division of roles among various governmental, public, and private entities, as well as the specific responsibilities incumbent upon individuals like shopkeepers and business owners. Furthermore, the LINKS project was introduced, providing insights into the available products and their potential utility. The positive feedback from the shopkeepers underscored the effectiveness of our workshop.

### 3.10 9<sup>th</sup> Dutch LCW (Industrial Hazards)

The 9<sup>th</sup> Dutch LCW took place on the 23<sup>rd</sup> of October 2023 at the Bie Brigittem a popular (food) café for locals and tourists alike, in Urmond (municipality Stein).

#### Objectives

The workshop had three primary objectives. The LCW aimed to heighten risk awareness by discussing potential hazards at the Chemelot site and informing participants about essential safety measures. Secondly, it sought to clarify responsibilities, delineating the distinct roles of public and private organizations during a chemical incident, while also emphasizing the responsibilities of citizens, particularly shop and company owners and employees, in preparing for such occurrences. Lastly, the workshop focused on sharing information about LINKS and related projects, elucidating the role of LINKS and how it could be beneficial for the local community. Furthermore, the LCW aimed to establish a stakeholder network, which in turn will be used for easier communication

with the surroundings of Chemelot. By gaining access to the communication channels of our stakeholders the hope is to better communicate before chemical incidents and possibly (in the future) also during chemical incidents.

### **Format**

Several workshops have been conducted for businesses and clubs, employing a consistent methodology and format. The workshop strategy is informed by the outcomes of LINKS questionnaires and interviews, alongside data from the RIVM report (2020), the IFV report (2019), and the RIVM (2020) surveys. Presentations are revised for each workshop, with adjustments made based on the specific target audience. Notably, for businesses, a decision was made to incorporate more pertinent visuals illustrating the impact of chemical incidents on businesses in the past. Examples encompass instances such as the notable confusion at the shopping mall Makado in the municipality of Beek and disruptions at local markets during incidents.

### **Participants**

The LCW had 17 attendees from 12 different businesses/clubs (15 male to 2 female). The workshop was aimed at businesses and clubs from the municipality of Stein. Amongst others the local soccer club, scouting and the brass band were present. There was also an attendee from elementary school.

Our speakers were Marcel Penders, a communication specialist from the VRZL and Jan Starmans, from the business unit of the fire brigade and working at Sitech security.

The participants represented the following associations and organizations:

- Steinerbos Belevenispark
- Jeu de Boules vereniging Urmond
- Stadssjötterie Sint Leendert (Schuttersvereniging).
- Fanfare St. Martinus (muziek vereniging)
- Graetheidecomité
- In Vriendschap Sterk IVS (Rooms Kahtolieke Voetbalvereniging)
- Scouting Urmond
- Jumbo
- EHBO BHV Vaessen
- Openbare basisschool de Maaskei (locatie Urmond)
- Wijkagent
- Gemeente Stein
- Judo Club Urmond
- Hypnotherapie (Hypnose zorg)

- Burger Urmond (ook gewerkt voor de gemeente)

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: local businesses
- Expertise: communication, social media technologies.
- Relevance: A key target group of the LINKS project are businesses, which this workshop targeted.

## Outcomes

Participants were informed about proper procedures in the event of a chemical-related incident, contributing to an enhanced awareness of potential risks. The workshop delineated the division of roles among governmental, public, and private organizations, shedding light on the specific responsibilities applicable to citizens, including shopkeepers, business owners, and sports club board members. Information about LINKS and its products was disseminated, eliciting positive feedback.

### 3.11 10<sup>th</sup> Dutch LCW (Industrial Hazards)

The 10<sup>th</sup> and final Dutch LCW took place between the 5<sup>th</sup> and the 22<sup>nd</sup> of October 2023. This LCW was conceptually different from previous ones as it was set up as pop-up store.

## Objectives

The 'safe living pop-up store' is designed to enhance safety awareness among individuals residing in the vicinity of Chemelot. Its purpose is to raise awareness about the risks and provide information on safety measures implemented on and around the Chemelot site. The initiative seeks to convey the safety measures undertaken by Chemelot and the South Limburg Safety Region, while also encouraging residents to take proactive steps for their own safety. The overarching objective is to foster self-reliance and co-reliance within the community concerning the aspect of 'living safely'. Anticipated outcomes include an improved risk awareness in the Chemelot surroundings, with collaborative efforts from various active Disaster Risk Management (DRM) groups in the area presenting a unified approach. The 'safety corner' accommodates representatives not only from Chemelot and the Safety Region but also includes personnel from the police, fire department, enforcement, Red Cross, an organization for elderly health, and a digital safety organization, creating a comprehensive resource hub.

## Format

There was no strict program. The Dutch case team actively tried to attract people to the booth and the visitors largely determined the course of the talks. Dissemination material such as "meter box cards" with instructions on what to do in the event of a chemical incident. Furthermore, "stay inside plans" were handed out that people could fill out themselves. People were invited to fill out a digital quiz that they could use to win an emergency radio. There was also a transparent box where people (anonymous) put questions in.

## Participants

Given the open format of this LCW as well as its long duration, approximately 2,500 to 3,000 people visited the pop-up store.

## Outcomes

The LCW was very successful at disseminating the results of the LINKS project. Approximately 2,500 to 3,000 individuals were informed about proper procedures in the event of a chemical-related incident, contributing to an enhanced awareness of potential risks. Meter cabinet cards and stay indoor plans were distributed extensively. The information collected will be utilized by Chemelot and the Safety Region in their subsequent communication efforts.

### 3.12 3<sup>rd</sup> Danish LCW (Flooding)

The 3<sup>rd</sup> Danish LCW took place on the 3<sup>rd</sup> of February 2023 in Copenhagen at the Greater Copenhagen fire department.

## Objectives

The purpose of the workshop was to present the LINKS project and its results, in particular the Resilience Wheel. The Resilience wheel guides the conversation so that we get into aspects that need to be influenced in order to strengthen the dialogue with citizens and other authorities. As well as what specific measures are needed organizationally and technically both in everyday life and in the event of incidents. The feedback will then be taken into consideration in order to further develop the product in order to allow other organizations to use it.

## Format

The workshop was scheduled for 2 hours. The first half hour was used to introduce LINKS and the method (resilience wheel). The wheel was printed on a "game board" so that the participants could sit around the game board and talk about the topics. See picture. The participants think it worked well with a physical game board they could speak from.

The dialogue between the participants quickly started and they agreed on several digital, technical and process improvements in the organization that could improve their work.

## Participants

There were six participants in total, with an equal gender split, comprising three operations managers, two project staff members from HBR, and one researcher from the University of Copenhagen. The selection of these participants was based on their pivotal roles within their respective organizations, involving daily responsibilities for engaging in dialogues with other authorities and citizens during crisis situations.

The participants represented the following associations and organizations:

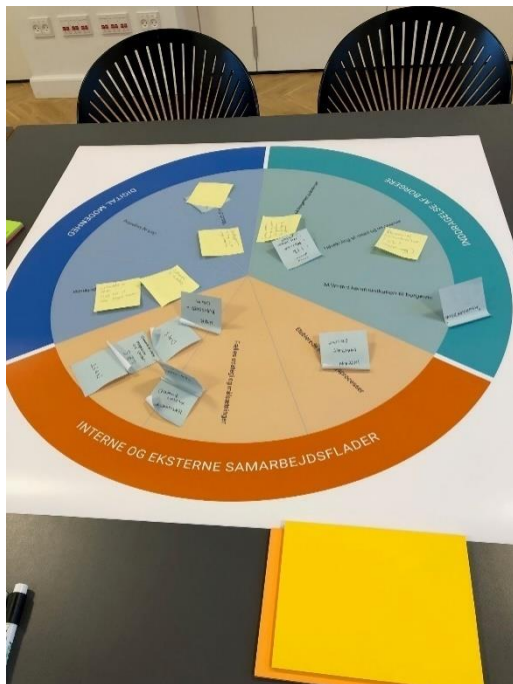
- HBR
- UCC

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers.
- Expertise: communication, emergency response, civil protection.
- Relevance: All participants work in communication and emergency response and encounter SMCS in their daily work. Furthermore, they have to consider SMCS when making life saving strategic decisions and are experts in their fields. Therefore, they have a clear understanding of the current use of SMCS in disaster response and how their use can be improved especially when it comes to communication with citizens.

### Figure 10: 3<sup>rd</sup> Danish LCW feedback





## Outcomes

The workshop showed that the resilience wheel is a good tool for operative organizations to get closer to the organizational and communicative processes that can be initiated to improve the use of social media and crowdsourcing (SMCS).

The LCW on the Resilience Wheel, led to valuable feedback for the development of the product and the utilization of social media and citizen engagement within the participants' organizations. In particular, the LCW successfully utilized the Resilience Wheel to identify the specific organizational and technical measures necessary for everyday operations and crisis management. The feedback gained will be utilised to improve the Resilience Wheel, in order to make it accessible for other organizations to utilize as well.

The participants were interested in testing the wheel on the entire department. They think the wheel was a good platform to reach all the way around problems by communicating with the citizens via social media and involving the citizens' knowledge and observations in crisis management.

### 3.13 4<sup>th</sup> Danish LCW (Flooding)

The LCW took place on the 20<sup>th</sup> of September 2023 in Copenhagen and was organised by the University College Copenhagen.

#### Objectives

The objective of the LCW was to test the Resilience wheel and disseminate the results of the LINKS project in general and those of the Danish deep dive study in particular.

#### Format

The workshop was scheduled for 3 1/2 hours also leaving time for networking across the organisations and participants. The first hour was used to introduce the findings from LINKS, including the Danish test of 'social listening' and in particular the LINKS product: The Resilience Wheel. The wheel was printed on a "game board" so that the participants could sit around the game board and talk about the topics.

There was a lively debate in all the groups, some finished a bit before the others. In the groups with representatives from different organisations, they clearly benefitted from learning about each other's practices.

#### Participants

The workshop was attended by 47 participants, 24 of which were males and 23 females.

The participants are from emergency and disaster management agencies (national, regional and local) both authorities, NGOs and private companies. They all hold a role in Danish crises management practice.

The participants represented the following associations and organizations:

- HBR
- UCC
- Region Hovedstadens Akutberedskab
- Fire and Rescue Service, Nordjylland
- BaneDanmark (Danish railroad)
- National Police
- Danish road directorate
- Energistyrelsens
- Roskilde Festival Experience
- Udlændingestyrelsen
- Order group
- Odense Kommune
- Danish Emergency Management Agency

- Danish Lutheran Church
- Folk og Sikkerhed
- Præhospitalt Center
- Greater Copenhagen Utility Company
- Danish Lutheran Church
- Herlev og Gentofte Hospital
- Beredskabsforbundet

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers.
- Expertise: communication, emergency response, civil protection.
- Relevance: All participants work in communication and emergency response and encounter SMCS in their daily work. Furthermore, they have to consider SMCS when making life saving strategic decisions and are experts in their fields. Therefore, they have a clear understanding of the current use of SMCS in disaster response and how their use can be improved especially when it comes to communication with citizens.

**Figure 11: 4<sup>th</sup> Danish LCW Participants**



## Outcomes

The workshop showed that the resilience wheel is a good tool for operative organizations to get closer to the organizational and communicative processes that can be initiated to improve the use of social media and crowdsourcing and in order to apply other media and channels in case of power failure or cyber attacks.

Participants found that the exercise's applicability extends to various scenarios, including preparations for planned events like festivals or sports events, dealing with severe weather forecasts such as storm surges, or conducting annual workshops to reassess organizational practices and identify areas for improvement. They valued the flexibility of using sticky notes and writing on the sheet for ease of collaboration, validating the Resilience Wheel. The participants suggested improving the exercise through using an external facilitator and designating a note-taker. The participants also suggested improving the explanations for certain characteristics, as their meanings weren't always clear. The follow-up dimension was highlighted as crucial, enabling the workshop outcomes to drive tangible changes within organizations. Participants also expressed the need for the ability to adjust characteristics on the wheel to match their specific organization's needs, as not all characteristics were universally applicable. Furthermore, there is a demand for a more comprehensive guideline on implementing the wheel and an editable version to tailor characteristics to their requirements. The feedback gathered was used to improve the Resilience Wheel and the LCC.

The workshop was also successful as the participants agreed to encourage their organizations to use the Resilience Wheel and LCC in future internal or inter-organizational exercises, appreciating the format and seeking access to the necessary materials.

### 3.14 5<sup>th</sup> Danish LCW (Flooding)

The 5<sup>th</sup> Danish LCW took place on the 9<sup>th</sup> of November 2023 at the Greater Copenhagen Utility, (HOFOR) offices. 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. The focus of the Workshop was on the Resilience Wheel.

#### Objectives

The aim of the workshop was to evaluate the Resilience Wheel and to disseminate the LINKS results to a significant Danish stakeholder within disaster management. The LCW also aimed at encouraging the stakeholder participating to apply the Resilience wheel in their own organisations.

#### Format

The workshop was scheduled for 2 hours, which was well suited since HOFOR had decided to have a main focus on two of the three drivers. An introduction to the LINKS project was followed by a presentation of the Resilience Wheel. The participants sat in two groups, with colleagues from other parts of the organisation, that they do not work closely together with on a daily basis.

As the case has been in previous workshops, the wheel was printed on a "game board" so that the participants could sit around the game board and talk about the topics.

The participants were all very engaged in the dialogue. It worked well with a facilitator to keep track of time and move the groups forward in order to have the time to talk of all the categories related first to the two chosen drivers, but some time was left to get through a couple of the categories in relation to the driver: 'Cooperation within and across organisations'.

## Participants

The workshop was attended by 14 participants evenly split across genders.

The participants were from HOFORs departments responsible for emergency management and communication.

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers.
- Expertise: communication, emergency response, disaster management.
- Relevance: All participants work in disaster management and encounter SMCS in their daily work. Furthermore, they have to consider SMCS when making life saving strategic decisions and are experts in their fields. Therefore, they have a clear understanding of the current use of SMCS in disaster response and how their use can be improved especially when it comes to communication with citizens.

## Outcomes

Both during the evaluation following from the workshop, and in follow-up correspondence, HOFOR has reported that the LCW was a valuable experience and that the Resilience Wheel is a valuable tool to assess their work regarding digital literacy, choice of communication channels and efforts to reach the citizens.

The participants from HOFOR validated The Resilience Wheel as useful, easy to apply and will be used to revise procedures. They did in addition state that scenario chosen for the workshop was not that important for the dialogue, but it was a good place to start. It was well suited for staff in the communication departments since it was focused on the tasks of communicating. They appreciated

that a facilitator oversaw the time and the program, and to solve matters that were unclear.

### 3.15 3<sup>rd</sup> German LCW (Terrorism)

The 3<sup>rd</sup> German LCW dealing with terrorism was organised by DHPol and took place on the 13<sup>th</sup> of June 2023 in Münster, Germany. The main focus of the workshop was the evaluation of the Resilience Wheel.

#### **Objectives**

The main objective of this workshop was to evaluate the effectiveness of the Resilience Wheel, a product developed within the LINKS project, and to consider its suitability for disaster management in Germany. Additionally, the workshop sought to investigate its potential for educational use. The LCW was well-aligned with the broader goals of the LINKS project, serving as a deliberate assessment of how our products, particularly the Resilience Wheel, could improve the capacities of emergency-response organizations in using Social Media Communication Systems (SMCS).

#### **Format**

The workshop adopted a presentation and discussion format. The LCW began with a brief introduction to the LINKS project, outlining its objectives and fundamental components. Then, the focus shifted to one of the project's products, the Resilience Wheel. Following the presentation on the Resilience Wheel, participants engaged in discussions regarding its applicability within the German law enforcement context, as well as its potential for educational purposes in law enforcement training. An integral part of the workshop revolved around involving the practitioners in a scenario-based exercise. In this exercise, they were prompted to visualize themselves addressing the complexities associated with responding to a multiple terrorist attack. The primary goal of this exercise was to assess the Resilience Wheel's practicality from the viewpoint of practitioners and its effectiveness as a preparatory resource for educational contexts. After the scenario exercise, a candid and thorough discussion unfolded, with participants delving into multiple aspects of the Resilience Wheel.

#### **Participants**

There were six participants in total, with an equal gender split, formed of practitioners and academics specialised in law, police law, and leadership for law enforcement.

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers.
- Expertise: communication, emergency response, civil protection.
- Relevance: All participants work in communication and emergency response and encounter SMCS in their daily work. Furthermore, they have to consider SMCS when making life saving strategic decisions and are experts in their fields. Therefore, they have a clear understanding of the current use of SMCS in disaster response and how their use can be improved especially when it comes to communication with citizens.

### Outcomes

The workshop can be deemed a success, as it effectively stimulated a substantive discussion among participants centered around the Resilience Wheel. A key insight gleaned from the workshop emphasizes the imperative of tailoring the Resilience Wheel to meet the specific requirements of practitioners who intend to utilize it. This customization entails not only the skilful translation of the Wheel but also careful consideration of its real-world applicability. Participants found the Resilience Wheel to be a valuable tool for organizational development.

However, several important observations emerged during the workshop. Firstly, there was a consensus that the term "wheel" might be somewhat misleading, as the visual representation appeared static, resembling a circle rather than a dynamic, manipulable wheel. This lack of intuitiveness presented a notable challenge. Furthermore, the static nature of the Wheel gave rise to concerns about its functionality, especially the need for clear definitions when transferring items from the outer ring to the inner ring. Ambiguities in terminology, such as "tailored," emphasized the importance of providing comprehensive explanations for each item to prevent misinterpretations. As a result, a recommendation surfaced to enhance the Wheel by incorporating detailed explanations for each item.

With regard to the Resilience Wheel's potential as an organizational evaluation tool, participants expressed the need for an accompanying questionnaire that could serve as a foundational framework to enhance its utility. In conclusion, the workshop was well-regarded for its insightful nature, fostering valuable interdisciplinary exchanges among participants. Moreover, the workshop's subject matter was deemed highly relevant, aligning with the professional responsibilities of the majority of attendees.

### 3.16 4<sup>th</sup> German LCW (Terrorism)

The German LCW took place on July 4, 2023, during the LINKS Annual Meeting held in Osnabrück, Germany. DHPol organized the workshop in collaboration with project partners from WP3.

#### Objectives

The main objective of this workshop was to evaluate the LINKS product: Including Citizens Handbook. The goal was to gather valuable insights into the needs of practitioners when using the handbook and to consider potential adjustments to better align it with those needs. Additionally, the workshop provided a platform for generating creative ideas and innovative inputs to enhance the promotion of LINKS products to a broader audience, including the development of captivating slogans to use for promotion (within the LCC and social media campaigns).

#### Format

The LCW was structured in a presentation format followed by group discussions. The workshop began with an introductory session providing external practitioners with an overview of the LINKS project, including its purpose, goals, partners, scenarios, and products. Following this, the focus shifted to the Including Citizens Handbook, delving into its components and detailing the workshop's objectives. Group discussions were held to collect valuable feedback on the Including Citizens Handbook.

#### Participants

Next to the consortium of the project, four external participants attended the workshop. 2 policemen from the Netherlands, one academic from Sweden and one policeman from Germany, with an academic background of international cooperation.

The participants are identified below according to which LINKS stakeholder groups they belong to, their expertise, and their relevance for the workshop.

- LINKS stakeholder groups: practitioners, policy/decision makers.
- Expertise: communication, emergency response, civil protection.
- Relevance: All participants work in communication and emergency response and encounter SMCS in their daily work. Furthermore, they have to consider SMCS when making life saving strategic decisions and are experts in their fields.

#### Outcomes



Three key segments of the handbook, namely accessibility, communication, and volunteering, were earmarked for comprehensive evaluation. These discussions took the form of posing critical questions while reviewing both visual elements, such as graphics and videos, as well as textual content. Aspects under consideration included the aesthetics of graphics, comprehensibility of concepts presented in videos, and the quantity and relevance of textual information. Additionally, deliberations revolved around identifying potential target groups and end-users for the handbook.

The outcomes of these discussions were systematically recorded by designated organizers within each group, with the intention of informing subsequent adjustments to the handbooks. The workshop was marked by vibrant and insightful dialogues on the products, and it served as a catalyst for creative ideation.

The workshop held significant relevance for external participants, particularly the segment focusing on volunteer engagement. The characterization of the Including Citizens Handbook as "simple" was underscored as a positive attribute, indicative of its user-friendly nature. The graphics produced were universally well-received, noted for their aesthetic appeal and positive visual impact. Nonetheless, participants acknowledged a potential challenge in articulating the handbook's concepts to certain organizations. Importantly, many of the challenges presented in the context of working with volunteers resonated with the experiences of the participants within their respective organizations.

## 4. LINKS ADVISORY COMMITTEE

The LINKS Advisory Committee (LAC) held a main role within the overarching LINKS Community structure. It was composed of invited professionals and experts who represented a wide range of stakeholder organizations aligning with the target groups identified in the LINKS project. The primary functions of the LAC were centered on providing guidance, insights, and validation for the project's developments and outcomes.

The core objective of the LAC was to convene and actively involve a diverse group of stakeholders, including representatives from associations within the project consortium. The overarching aim was to achieve validated and practical results. To accomplish this goal, the LAC conducts extensive discussions on the project's outputs, with a particular focus on their deep integration into the realm of public safety and security. Importantly, the LAC convenes at strategic junctures throughout the project's lifecycle to ensure that well-planned and beneficial results are generated.

The composition of the committee comprises advisors carefully selected from relevant organizations, collectively representing the majority of the target groups identified within the LINKS project. As of M39, four LINKS Advisory Committee (LAC) meetings have been conducted. The details of the first LAC meeting, held virtually in January 2021, are documented in deliverable D8.4 (First LINKS Community Workshops and LINKS Advisory Committee report). The second LAC meeting was covered in D8.5 (Second LINKS Community Workshops and LINKS Advisory Committee report). This document provides insights into the current composition of the LAC and highlights key outcomes.

### 4.1 Third LAC Meeting

The third LAC Meeting took place on the 13<sup>th</sup> of February 2023 as a virtual meeting on MS-TEAMS and organised by the partners of FEU, VU and SIC. The meeting built upon the results of a survey that had previously sent and focussed on the key issues raised. The objective of the meeting was assessing the second iteration of the LINKS Framework. This Framework has been integrated into the LINKS Community Center (LCC), and it incorporates valuable resources such as social media and crowdsourcing (SMCS) technologies and guidelines related to SMCS, which are pertinent to stakeholders engaged in disaster risk management. In particular, the primary aim of this meeting was to gather insights on the user-friendliness of the LCC, as well as feedback on the accessibility and design of the Framework and its associated elements within the LCC.

LINKS extended an invitation to the LAC members to partake in a discussion about the project's ongoing progress and to participate in the evaluation of the Framework. Additionally, the meeting served as an opportunity to introduce and obtain input on the final roadmap designed to assess the usability and impact of the Framework for the remainder of the project.

Figure 12 Participants to the third LAC Meeting

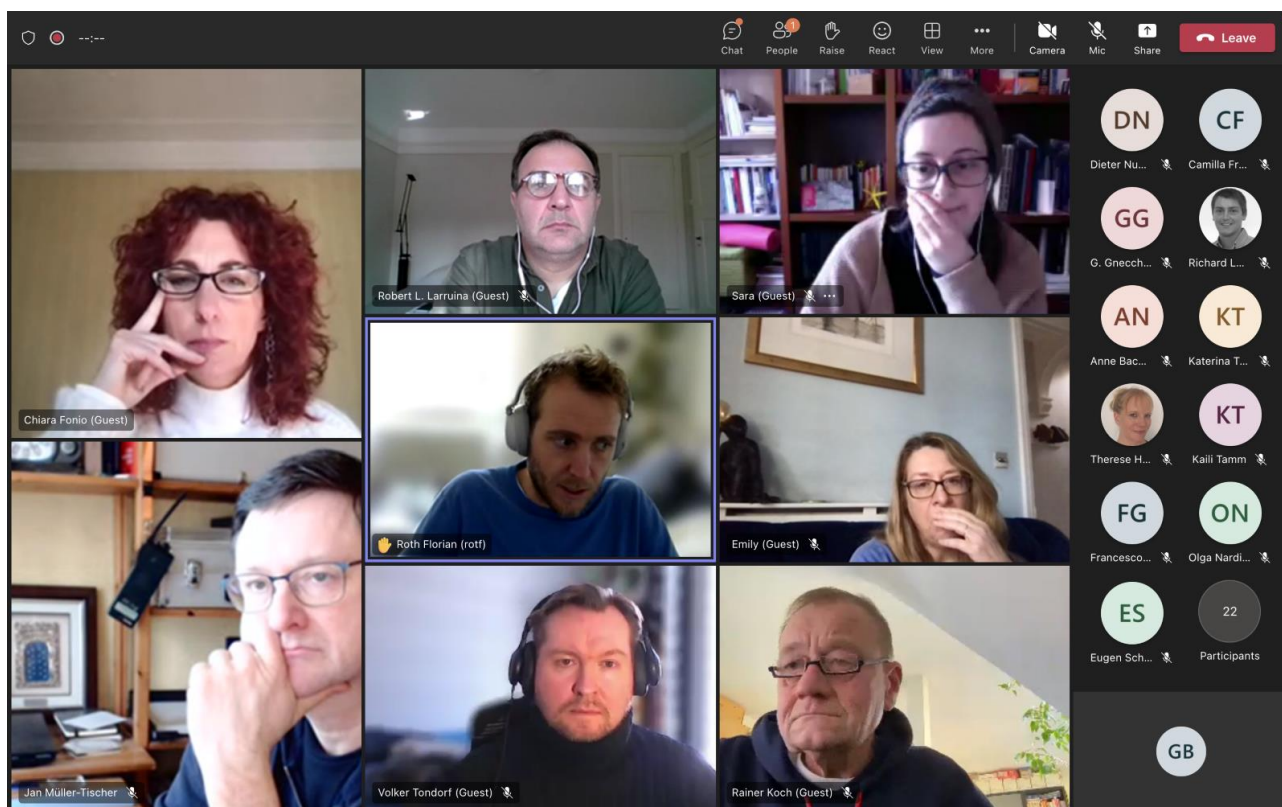


Table 6: Participants to the 3<sup>rd</sup> LAC Meeting

LIST OF LAC MEMBERS				
LAC	Rainer Koch		LAC	Stephen Hines
LAC	Gianmario Gnechchi		LAC	Kaili Tamm
LAC	Florian Roth		LAC	Emily Hough
LAC	Sara Bonati		LAC	Iraxte Gomez Susaeta
LAC	Volker Tondorf			
APOLOGIES FOR ABSENCE				
LAC	Rein Hof		LAC	Meinald T. Thielsch
LAC	Ulrich Cimolino		LAC	Hauke Speth
CONSORTIUM MEMBERS				
SIC	Richard Lüke	Therese Habig	Eugen Schmidt	
SCIT	Francesco Graziani			

FEU	Zoltán Hozbor	Gaspar Bizjak	Zoltan Hozbor
VU	Robert Larruina	Kees Boersma	
UCPH	Anne Bach Nielsen		
UNIFI	Camilla Froio	Olga Nardini	

The meeting was divided into three sessions. The first dealt with SMCS Libraries: the Technologies Library, the Use Cases Library, and the Guidelines Library. The second session examined the LCC and Feel Safe, whilst the third focused on the feedback of the participants. Nine LAC members and 13 consortium members attended the meeting. This LAC meeting was a valuable opportunity for the consortium to gain valuable feedback based on the issues raised as well as for the validation of the products, through the use of the Mentimeter platform.<sup>2</sup>

The LAC participants validated the LINKS results. They found the overall design of the SMCS Libraries to be clear and accessible, whilst suggesting the implementation of standardizes summary at the top of the results as well as a dark mode visualization option. They further suggested implementing improved figure descriptions for people with visual impairments in both the LCC and SMCS Libraries. The LAC members also suggested implementing more filtering options across all sections of the products and researching SMCS related conference proceedings, journals and practitioner websites in order to find helpful collections of relevant Use Cases that could be added to the Use Cases Library. The LAC participants also validated Feel Safe, as they found the product useful and approved of its child friendly design.

## 4.2 The Fourth LAC Meeting

The fourth LAC Meeting took place in Rotterdam on the 20-22 June 2023 alongside the Community of Practice (CoP) – the Advisory Committee of the ENGAGE project, embedded in a joint ENGAGE/LINKS workshop.<sup>3</sup> This was a valuable opportunity for the LINKS product owners to gain the feedback of an external expert audience who could give new insights into the development of the LINKS products. It was also a valuable opportunity to increase the LINKS community through engaging in synergies with the ENGAGE project and allow the LINKS and ENGAGE Advisory Board members to comment on the results of both projects. Nine members of the LAC, 12 LINKS

<sup>2</sup> <https://www.mentimeter.com/>

<sup>3</sup> <https://www.project-engage.eu/ki-cop/>

Consortium Members, and 34 members from the ENGAGE Consortium and Advisory Committee participated to the Meeting.

**Figure 13: Participants to the 4<sup>th</sup> LAC Meeting**

LIST OF LAC MEMBERS				
LAC	Florian Roth		LAC	Stephen Hines
LAC	Rainer Koch		LAC	Ulrich Cimolino
LAC	Gianmario Gneccchi		LAC	Anouk Ros
LAC	Franz Petter		LAC	Frederique Leunenber
LAC	Volker Tondorf			
CONSORTIUM MEMBERS				
VU	Robert Larruina	Kees Boersma	Lieke Rijkx ä	
CRes D	Abel Pinheiro			
SIC	Therese Habig	Richard Lücke		
EOS	Kristian Reeson			
VRZL	Emmeline Roeloffs			
FEU	Dieter Nuessler	Gasper Bizjak		
ST	Jan Starmanns	Chantal Hamers (Chemelot)		
ENGAGE				
34 participants from the ENGAGE consortium and the Engage Advisory board				

The workshop on the day 1 began with short presentations introducing the two projects. The presentations were followed by an exhibition which allowed participants to learn about and discuss results of LINKS and ENGAGE at different stands. The LCC with the embedded SMCS Libraries (Technologies, Guidelines and Use Cases) was presented by SIC and FEU, whilst the LINKS Framework was presented by VU. ENGAGE partners presented the results of their research on the perspective of the citizens regarding their involvement in disaster management activities. Then two breakout sessions were held which were attended by a pre-defined mix of equal numbers of experts from both projects and were repeated with changed attendees, allowing the projects to present and demonstrate key aspects of their projects. The LINKS sessions moderated by SIC and FEU started with a discussion about the benefits of integrating social media into operational disaster management from the viewpoint of a public safety answering point. After that detailed process for setting up a social media team within emergency services were discussed. The foundation of the elaborated process was a guideline specifically developed for this purpose within LINKS. The session continued with a hands-on session on the SMCS Technologies and Use Cases Libraries, providing

insights into their practical application in disaster situations. The workshop was accompanied by Mentimeter, which facilitated dynamic interaction between the audience and the presenters, enhancing engagement and allowing for real-time feedback and questions. ENGAGE partners presented the Knowledge platform with a collection of formal and informal solutions and also the Serious Game which has been developed in the project to improve communication between actors on a disaster site.

**Figure 14: Participants to the 4<sup>th</sup> LAC Meeting**



The second day of the LINK-ENGAGE workshop focused on the possible synergies and exploitation routes for both projects using the Mentimeter platform. The participants agreed that there is a clear overlap between the mindset, approach, as well as some of the topics, results, and challenges of the two projects, namely enhancing disaster resilience among society, creating a bridge between communities and authorities and communication in real time through social media. Suggestions for synergies and exploitation routes for the two projects included sharing results, connecting on social media, participating to each other's conferences and workshops, synchronizing the glossaries, linking each other's networks and contacts, and even merging the platforms and results of the two projects.

The LAC Meeting was a success as it resulted in a lot of validation and feedback for the LINKS results. In particular the participants approved of the simple yet clear design of the LCC and SMCS Libraries. They also suggested improving the Use Cases Library by adding more information on how useful a technology was in a specific case. Furthermore, the event was a valuable opportunity to synergize

and collaborate with the ENGAGE given the similarities between the two projects. As a result of the LAC Meeting both projects now link to each other's platforms.

### 4.3 The Final LAC Activity

The final LAC activity in the LINKS project was the attendance of LAC Members to the final LINKS conference on October 16<sup>th</sup> -18<sup>th</sup> 2023. During the event LAC members had a chance to learn about the final versions of the LINKS solutions embedded in the LCC, in particular the "Including Citizens Handbook" and the "Feel Safe" website were presented. They could express their views and provide valuable feedback in these dedicated sessions.

**Table 7: LAC participation to the final LINKS Conference**

LIST OF LAC MEMBERS				
LAC	Franz Petter		LAC	Stephen Hines
LAC	Ulrich Cimolino		LAC	
APOLOGIES FOR ABSENCE				
LAC	Iratxe Gomez Susaeta		LAC	Kaili Tamm
LAC	Florian Roth		LAC	Rainer Koch
LAC	Iratxe Gomez Susaeta		LAC	Kaili Tamm
LAC	Adam Widera		LAC	Volker Tondorf
CONSORTIUM MEMBERS				
SIC	Richard Lüke			
FEU	Zoltán Hozbor	Gaspar Bizjak		

After the presentation, the discussion about first responders sparked. Stephen Hines (LAC) has pointed out that we can only manage first responders if we really understand who they are. As we might have different perspective on the European level, when it comes to First Responders, it was established that the same terminology was being used to describe different responders. The terms 'First Responder', 'Lay Responder' and 'Spontaneous Responder' are used in many documents and plans, often with interchangeable of unclear definitions. Through specific filters in the LCC and SMCS Libraries, users are able to receive structured and tailored results, but it would be necessary to look to standardise the nomenclature, when it comes to first responders, hopefully avoiding confusion. Understanding and identifying who the first responders really are, and what roles they

fulfil will help incident commanders manage the scene, can hopefully reduce the risk of harm to, or by responders.

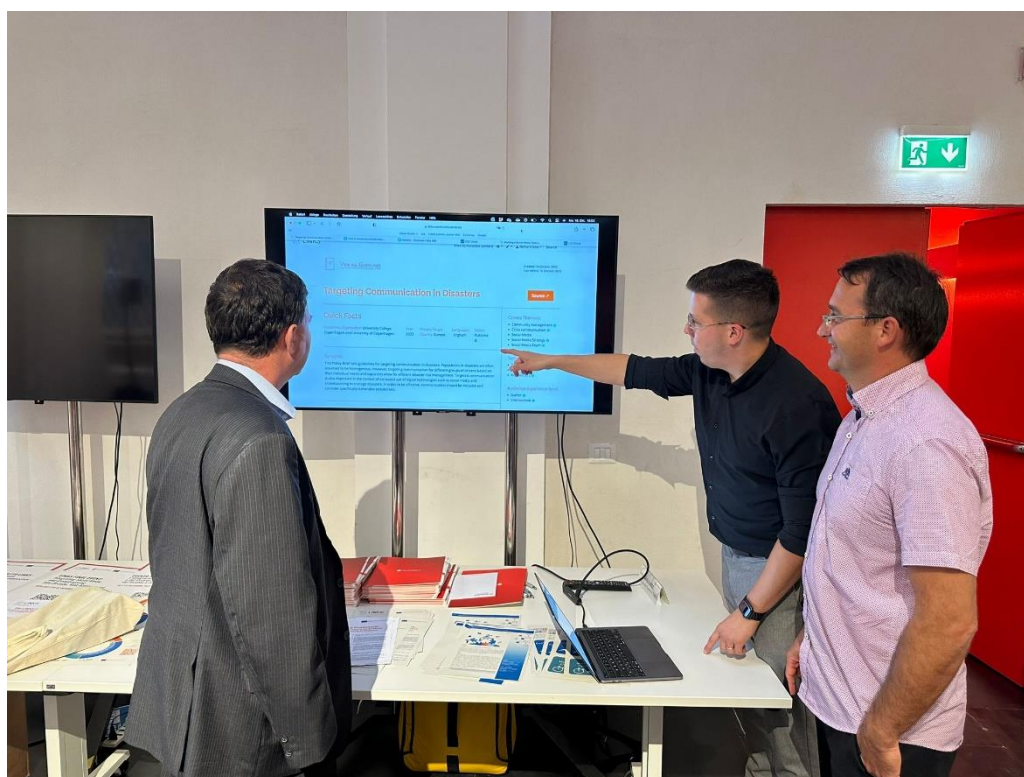
LAC members appreciated that with the approach used in the LCC, where scenarios, phases of emergencies, use cases and technologies were covered, first responders in general (no matter the nomenclature) can find relevant and hand-picked data how to start with strengthening the link between their service and society. They also considered the integrated search functions and carefully selected filters as a crucial setting when it comes to retrieve useful information.

The LAC's conclusion was that the project goal that the LCC should become a mandatory stop for first responders that want to implement Social Media into their organisation could become reality on short notice, especially if it will be maintained and taken forward in future projects.

LAC members were asked to promote LCC in their organisation, service, associations, with the appropriate knowhow and knowledge they got during the whole duration of their involvement in the project and especially during the last event in Rome, where products on the LCC were fully operational.

The meeting was concluded with expression of gratitude for the participants have taken the time to prepare and attend the meeting.

**Figure 15: Participants to the final LAC activity**





## 4.4 Elaboration on the overall outcomes of the LCWs and LACs

The LINKS Community Workshops (LCWs) proved to be largely successful. Participants not only found these workshops valuable but also appreciated the opportunities for networking and collaboration with fellow practitioners. They gained insights into the LINKS project and contributed useful feedback for refining the LINKS Framework and associated products. Consequently, the LCWs effectively fulfilled their primary objectives:

- Facilitating improved information and knowledge exchange among local case stakeholders, as well as fostering connections with relevant stakeholders and experts within the broader LINKS Community.
- Gathering essential data to inform the assessments of the LINKS knowledge domains and the ongoing development of the LINKS Framework.
- Disseminating project advancements and outcomes to a wider audience.

Between M30 and M42, the LCWs and LAC Meetings provided practitioners with a platform to network, share insights, understand the LINKS project, and contribute to LINKS product improvement. As a result, the LCWs and LAC Meetings directly influenced the development of LINKS products:

**The LCC** benefitted from the LAC Meetings which focused on assessing the second iteration of the LINKS Framework as the main objective. As the Framework has been integrated into the LINKS Community Center (LCC), and it incorporates valuable resources such as social media and crowdsourcing (SMCS) technologies and guidelines related to SMCS, which are pertinent to stakeholders engaged in disaster risk management. In particular, feedback was gathered on the user-friendliness of the LCC, as well as on the accessibility and design of the Framework and its associated elements within the LCC.

**The SMCS Libraries** benefitted from the third and fourth LAC Meetings which involved a hands-on session on the SMCS Technologies and Use Cases Libraries, providing insights into their practical application in disaster situations.

**Feel Safe** benefitted from the LACs and Italian and Dutch LCWs, as the majority of the participants invited held some practitioner or decision-making power in educational contexts. As such they were the perfect audience to be targeted as a user and contributor to the product, given their ability to decide to implement Feel Safe as an educational tool to prepare and educate their students on the best practices during a disaster.

**Including Citizens Handbook** benefitted from the Italian earthquake LCW and German Terrorism LCW as the participants gave a lot of valuable feedback on the graphics, which were universally well-received, noted for their aesthetic appeal and positive visual impact. Nonetheless, participants acknowledged a potential challenge in articulating the handbook's concepts to certain organizations. Importantly, many of the challenges presented in the context of working with

volunteers resonated with the experiences of the participants within their respective organizations.

**Resilience Wheel** benefitted from the Danish and German (Terrorism) LCWs, where the participants used the Wheel to identify the specific organizational and technical measures necessary for everyday operations and crisis management. The feedback gained will be utilised to improve the Resilience Wheel, in order to make it accessible for other organizations to utilize as well. Furthermore, the workshops showed that the resilience wheel is a good tool for operative organizations to get closer to the organizational and communicative processes that can be initiated to improve the use of social media and crowdsourcing and in order to apply other media and channels in case of power failure or cyber-attacks. The Participants also expressed the need for an accompanying questionnaire that could serve as a foundational framework to enhance the utility of the Resilience Wheel.

## 5. THE LINKS COMMUNITY OBJECTIVES

The primary aim of the LINKS Community was to establish a diverse mechanism for information exchange and feedback within the project. It served as a means to understand stakeholders' needs and experiences and incorporate their valuable input into research efforts to improve the links results such as the LCC, Framework and products. Moreover, it allowed stakeholders the opportunity to contribute actively to the development and sustainability of the LINKS project. The LINKS Community Workshops and LINKS Advisory Committee Meetings were of great importance in targeting stakeholders and gaining their feedback for the improvement and validation of the LINKS framework and products. Without these occasions to interact with stakeholders it would not have been possible to build a community and develop the products to the current degree.

The general objectives for the LINKS Community were the following:

**Sharing Knowledge and Good Practices:** Utilize the LINKS Community as a platform to facilitate and foster the exchange of information, knowledge, and best practices concerning the use of social media and crowdsourcing (SMCS) for disaster resilience. This objective aimed to establish the LINKS Community as a valuable resource for the disaster management community.

- LINKS met this by organizing 26 LINKS Community Workshops and 4 LINKS Advisory Committee Meetings throughout the duration of the project. The LCWs and LACs were of great use in sharing the knowledge and best practices collected for the development of the LINKS products and Framework. The project also met this objective by attending conferences such as EENA and attending roundtables and other event in order to disseminate the results of the project. Furthermore, the case activities resulted in tailor made approaches for the various countries and stakeholders in an effort to ensure their active participation in the project. For example, in the Italian case where a lack of interest was displayed by practitioners in using SMCS technologies given a lack of clear guidelines, the objective of the Handbook and Feel Safe were to provide resources specifically designed for practitioners to use in the whole disaster cycle to demonstrate the potential and advantages of using technologies in hazardous contexts. Please see D6.6 *Final report on the LINKS Framework application in a broader context* for more information.

**Connecting with Relevant Communities:** Forge connections with other relevant communities and networks at the EU-level and beyond. By doing so, the LINKS Consortium aimed to ensure that the knowledge and scientific evidence produced in LINKS are utilized by external stakeholders, ultimately contributing to the enhancement of resilience in local communities.

- LINKS met this by ensuring that relevant stakeholders participated to the LINKS Community Workshops and by testing and validating the LINKS products during the workshops. As a result, stakeholder learned of the benefits the products could bring and the gaps they could fill, building their interest in using the results once they were

ready. The project also embarked on a Social Media Campaign as well as surveys in order to recruit users and evaluators for the LCC and Framework. Throughout the project, LINKS was also able to connect with around 150 external networks at the national as well as EU level. Furthermore, in the later stages of the project, LINKS was particularly engaged with projects belonging to the same DRS-01 cluster – now identified as the Societal Resilience Cluster (SRC) and steered by the Resilience Advisors Network (CMINE). LINKS was a key partner steering activities in the cluster, such as the policy working group. Please see *D6.5 Second LINKS case and broader context report*, *D7.8 Final Report about the relation to other networks* and *D9.6 Final report on the development and distribution of dissemination material and on the execution of the LINKS Framework Sustainability strategy* for more information.

**Empowering Stakeholders:** The aim was to provide participants with a firsthand insight into the project's developments and offer them the opportunity to contribute to the research findings. The objective was to empower stakeholders by incorporating the project's developments and findings into their practice, enabling them to enhance their work or that of their organizations.

- LINKS met this by ensuring the usability and accessibility of its results in LCC/Framework. The LCC and Framework were updated in order to ensure that they were developed with user-friendliness in mind. Given that the LCC functions as the primary platform for rendering LINKS products accessible, it was crucial to guarantee that the presentation of these products within the LCC was in harmony with their intended purpose. As such, it was of great importance to ensure that the LCC offers a good entry point for the end users unfamiliar with them. and WP6 and WP9 on use/exploitation of results in orgs of community members. Please see *D7.6 Final Report about the online community Management and quality assurance* and *D9.6* for more information.

**Enduring Impact:** Ensure the LINKS Community continues to thrive even beyond the research project's duration. The objective is to maintain the LINKS Community as a valuable tool for different stakeholders dealing with, or affected by, SMCS in disasters, extending its usefulness beyond the project's lifetime.

- LINKS met this by improving its sustainability by employing a sustainability and exploitation strategy aimed at ensuring that interested stakeholder would continue to use the products. For example, The LCC will continue to be maintained and will host of the LINKS Framework and results. Feel Safe will continue to be disseminated in an effort to ensure even more schools and DRM organizations begin to use the product. After the end of the project, the SMCS Libraries will continue to be updated and will be brought into the Horizon Europe DRS research project SYNERGIES, which will start in December 2023. The Resilience Wheel will continue to be disseminated and implemented in Denmark, as UCPH and UCC alongside the early adaptors of the Resilience Wheel who are now ambassadors of the wheel, will continue to encourage

and inspire their partner organizations in using the product. Furthermore, DHPol has adopted the Resilience Wheel for the German Police Education and will continue with the implementation when the LINKS project has ended. Please see D9.6 for more information.

Furthermore, specific objectives 1,3, and 4 of the project were linked to the LINKS Community. Namely, Sustainable advanced learning on SMCS in disasters; Govern the diversity of SMCS in disasters; Bring multidisciplinary SMCS stakeholders together.

Overall, the specific objectives were met. The project was able to promote the sustainable advanced learning and consolidate the diverse knowledge on SMCS in disaster, through the development and uptake of LINKS Framework. The knowledge in the Framework was not only shared but acted upon, as displayed by the stakeholders stemming, from the various target groups within the community that have expressed interest and or already used the results of the project. The different target groups chosen by the projects were also able to help govern the diversity of SMCS in disasters by providing their valuable feedback in LCWs and LAC Meetings, thereby ensuring that their diverse viewpoints and needs are taken into consideration by the products and Frameworks. The Community database has been expanded to 225 contacts, of which 25% at least are practitioners, 20% policy and decision makers, 20% local communities, 10% businesses, 10% developers, 5% Civil Society, 5% feedbackers, and 5% disseminators. The LCWs and LACs also played a major role in bringing multidisciplinary SMCS stakeholders together. Whilst the majority of the workshops focused on practitioners and policy and decision makers as the main target groups, for their invaluable inputs in the development and validation of the products, the other target groups: researchers, local businesses, local communities, developers, and media were all engaged in workshops and other events and activities in order to address any gaps and needs that might have been overlooked.

## 6. CONCLUSION

The current deliverable, D8.6, serves as a comprehensive report detailing and expanding upon the key outcomes of the LINKS Community Workshops (LCW) and LINKS Advisory Committee (LAC) meetings held during the period spanning M30 to M42.

This document began by reintroducing the LINKS Community, reiterating its purpose and the objectives underlying its engagement through LCWs and LACs. It proceeded to delve into the LCW Roadmap, emphasizing how the LCWs are increasingly oriented towards product development.

The following section provided a thorough account of the various LCWs conducted in the four case countries, elucidating their outcomes. These LCWs played a multifaceted role, not only fostering local networks and identifying primary needs but also implementing information garnered from other research activities. They served to sharpen the project's focus, aiming for solutions that effectively address the requirements of local stakeholders. Furthermore, these LCWs facilitated discussions among practitioners regarding the utilization and implementation of social media and crowdsourcing (SMCS) in disaster risk management, offering valuable feedback and validation to enhance and refine the project's products.

This deliverable also presented the principal findings from the Third and Fourth LAC meetings, which occurred respectively in February and June 2023. These meetings allowed LINKS project partners to gather pertinent external feedback concerning the LINKS Framework and improving the LINKS products, particularly the SMCS Libraries.

The feedback and connection gained through the LCWs and LAC will continue to be integrated into the LINKS project to ensure the maximal impact of LINKS Community Workshops and LINKS Advisory Committee Meetings. Interested stakeholders may still join the community through registering on the LCC through the following link: <https://links.communitycenter.eu/index.php/Welcome!>

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