

RiskPACC

INTEGRATING RISK PERCEPTION AND ACTION TO ENHANCE CIVIL PROTECTION-CITIZEN INTERACTION

AWARENESS WORKSHOP REPORT 1

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Main author(s)	Giacomo Bianchi (EOS)			
Contributor(s)	Anniés, Jeannette (USTUTT), Margret Azuma (UT), Panagiotis Michalis (ICCS), Linda Kroesbergen (CS), Deborah Hugon (STAM), Selby Knudsen (TRI), Evangelos Pitidis (UoW), Maureen Fordham (UCL)			
Internal reviewer(s)	Giovanni Vicentini (CPD), Maike Vollmer (FhG), Sascha Düerkop (FhG)			

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ABOUT RISKPACC

Increasingly complex and interconnected risks globally highlight the need to enhance individual and collective disaster resilience. While there are initiatives to encourage citizen participation in creating a resilient society, these are typically fragmented, do not reach the most vulnerable members of the communities, and can result in unclear responsibilities for building disaster resilience.

New technologies can also support preparedness and response to disasters, however, there is limited understanding on how to implement them effectively. Awareness of risks and levels of preparedness across Europe remain low, with gaps between the risk perceptions and actions of citizens and between the risk perceptions of citizens and Civil Protection Authorities (CPAs).

The RiskPACC project seeks to further understand and close this Risk Perception Action Gap (RPAG). Through its dedicated co-creation approach, RiskPACC will facilitate interaction between citizens and CPAs to jointly identify their needs and develop potential procedural and technical solutions to build enhanced disaster resilience. RiskPACC will provide an understanding of disaster resilience from the perspective of citizens and CPAs, identifying resilience building initiatives and good practices led by citizens (bottom-up) CPAs both and (top-down). Based on this understanding, RiskPACC will facilitate collaboration between citizens, CPAs, Civil Society Organisations, researchers and developers through its seven (7) case studies, to jointly design and prototype novel solutions.

The "RiskPack" toolbox/package of solutions will include a framework and methodology to understand and close the RPAG; a repository of international best practice; and tooled solutions based on new forms of digital and community-centred data and associated training guidance. RiskPACC consortium comprised of CPAs, NGOs, associated organisations, researchers and technical experts will facilitate knowledge sharing and peer-learning to close the RPAG and build disaster resilience.



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Executive Summary

This deliverable D8.7 is a report from the first RiskPACC awareness workshop. The event is to be considered not as a single occasion for meeting and sharing information, but as the first part of a series of four moments (including the final event) in which the Project partners, end users, academics, first responders and others, will have the opportunity to interact with each other on the main topics of RiskPACC.

The deliverable D8.7, is developed in the framework of Work Package 8, "Dissemination, Exploitation and Communication", which aims to maximise dissemination, communication, and exploitation activities for RiskPACC, including a range of awareness raising activities.

This document will give a general overview of the workshop, how it has been organised, which were the main guidelines that the Consortium wanted to follow and how the follow up of activities and actions will be implemented.

The 1st RiskPACC Awareness Workshop entitled *Citizens & Civil Protection Interaction: how to reduce the "Risk Perception Action Gap"* was thought, and organised, as a very first moment of exchange between the Project and the external participants. Indeed, the idea was (and is) to present and explain the RiskPACC main outputs, but at the same time to ensure a strong interaction and relation with citizens, end-users, researchers, academia, and industry outside of the consortium.





Glossary and Acronyms

ACRONYM	DEFINITION
DRS	Disaster Resilient Societies
RPAG	Risk Perception Action Gap
EOS	European Organisation for Security
FhG	Fraunhofer Gesellschaft zur Förderung der angewandten Forschung
	e.V.)
TRI	Trilateral Research
UoW	University of Warwick
UNIFI	Universitá degli Studi di Firenze
SMCS	Social media and crowdsourcing
PSCE	Public Safety Communication Europe
UCL	University College London
USTUTT	University of Stuttgart
Μ	Month
CPA	Civil Protection Authorities
SOTA	State-of-the-art
VGI	Volunteered geographic information
WP	Work Package
ICCS	Institute of Communication and Computer Systems
CS	Publicsonar
STAM	STAM srl
UT	University of Twente
AR	Augmented Reality
MRP	Dimos Rafinas-Pikermiou
IBZ	Service Public Federal Interieur
QR	Quick Response
ML	Machine Learning
ISAR	I.S.A.R. Germany Stiftung GGMBH
GDPR	General Data Protection Regulation
MAI	Maison des associations internationals
DRM	Disaster Risk Management
KI-COP	Knowledge and Innovation Community of Practice
DRPV	Diversity among disaster risk perception and vulnerability
DMP	Disaster management processes
DCT	Disaster community technologies
NGO	Non-governmental organization
KPI	Key Performance Indicator
UK	United Kingdom
SU	Security Union
EU	European Union
DX	Deliverable N°

TABLE 1: GLOSSARY AND ACRONYMS





1 INTRODUCTION

1.1 Overview and methodoogy

The first Awareness Workshop *Citizens & Civil Protection Interaction: how to reduce the "Risk Perception Action Gap*", is the first of a series of four events to share, disseminate and present the overall project findings to a large scale of end users, first responders, citizens and other relevant stakeholders. The workshop described and presented in this deliverable D8.7 had the role of presenting the results of the first 10 months of the project, and of collecting different feedback and inputs.

In the months preceding the event, the European Organisation for Security (EOS), which was responsible for the organisation of the workshop, and which is leading this deliverable D8.7, organized several meetings with the relevant project partners and speakers, and with all those who have played an active role to gather all the relevant information related to the first awareness workshop.

1.2 Structure of the deliverable

This deliverable includes the following chapters:

- Chapter 2 gives a general overview of the workshop, with all the useful information such as the structure, the main scopes and speakers of the event.
- Chapter 3 introduces the morning session of the workshop, presenting all the sessions and the relevant contributions of the five "sister projects" that attended the workshop. RiskPACC established a continuous liaison with five complementary EU projects (LINKS, ENGAGE, BuildERS, CORE and RESILOC). The scopes are to increase the visibility of our projects to a wider audience, share experiences and common practices through clustering activities.
- Chapter 4 is mainly focused on the working groups session: this session, planned in the afternoon of the event, has been the core part of the workshop, with all the participants involved in different discussions and brainstorming activities.



2 RISKPACC 1ST AWARENESS WORKSHOP: AN OVERVIEW

The first Awareness Workshop *Citizens & Civil Protection Interaction: how to reduce the "Risk Perception Action Gap"* took place on the 27th of June 2022 in Brussels. The "morning session", from 11.30 until 14.00 CEST was in a hybrid format (both online and in-person), while the "afternoon session", from 14.30 until 17.30 CEST, was dedicated only to those who attended in presence. The event is the first of a series of four: the second will be organised in Berlin in June 2023, the third one in Paris in December 2023. The Project will conclude its series of events in Brussels, with the organisation of the final event in July 2024.

2.1 Registration and Attendance

Thirty-two (32) persons participated In-person in the workshop, with twenty-five (25) attendees online, for a total of fifty-seven (57) participants.

The workshop registration process started two months before the event. EOS used the relevant website <u>https://ec.europa.eu/eusurvey/auth/login</u> and has prepared an invitation document to the workshop, the agenda of the event and a so-called welcome letter with all the useful information. The registration page was created in order to allow participants to register for the workshop and to consult the relevant information about the event.

Citizens & Civil Protection Interaction: Published how to reduce the "Risk Perception Action Gap" RiskPACC_Awareness_Workshop Published survey link https://ec.europa.eu/eusurvey/runner/RiskPACC Awareness Workshop Owner Giacomo Bianchi Unpublish Unset 💉 Starts on Ends on Unset Show pending changes Answers 58 Results Not published 💉

The registration form can be consulted in the annex 1.

FIGURE 1: WORKSHOP REGISTRATION

In the invitation letter, the participants could find all the useful information of the workshop: what type of format (hybrid), the date, the start and end time, the address of the venue and a brief description of the project.

The welcome letter, on the other hand, was circulated by EOS in order to provide a detailed description of the event and useful information to reach the venue.

A copy of invitation and welcome letters can be found in the annexes 2 and 3.





As mentioned in the project grant agreement, the KPIs concerning the workshop can be evaluated as follows:

Dissemination KPIs	Poor	Good	Excellent	
Number of Participants	Less than 40	Between 40 and 60	More than 60	
TABLE 2: WORKSHOP'S KPIS				

With the participation of 57 people, the first awareness workshop reached the level of "good" performance and approaching the "excellent" one.¹

The participants belonged to different categories such as industry, developers, end-users, first responders, research, national & international institutions (see Figure 2). They include amongst other members of the RiskPACC consortium, RiskPACC Project Officer, Advisory Board members and representatives of Horizon 2020 sister projects (DRS01).



FIGURE 2: PARTICIPANTS' BACKGROUND

Another aspect of the audience is that many countries have been represented. The figure number 3 gives an overview of the attendees' countries of origin.

¹ RiskPACC Grant Agreement, page 38





FIGURE 3: RISKPACC 1ST AWARENESS WORKSHOP PARTICIPANTS' COUNTRIES OF ORIGIN

During the implementation phase of the workshop, starting from April 2022, it was decided what kind of audience the event should have. After the project partners and other collaborators of the project, the invitation was extended to the members of the sister projects, to the members of the Advisory Board, and to all the participants who might have been interested in the topics of RiskPACC.

The "Maison des associations internationals" (MAI) is the venue that has been selected for hosting the workshop. It is a unique meeting and networking place for international organizations in Brussels thanks to the various equipment and rooms intended for meetings and conferences of various types and kinds.

In the next table it is possible to see the composition of the audience, both on-line and in person.



FIGURE 4: INTERNAL AND EXTERNAL PARTICIPATION

For further details regarding the attendees, please refer to the Annex 4 and 5 which list the participants. For GDPR Compliance, the name and surname of the participants have been hidden.

2.2 Scope of the Workshop

In the framework of the understanding and narrow down the Risk Perception Action Gap (RPAG) and in order to collect feedback, inputs and to share knowledge and expertise on the RiskPACC-related topics, a series of four events, three Awareness workshops and a final one,





was foreseen. Indeed, during these events, the overall project findings were and will be shared, and most importantly communicated and disseminated to a large scale of external relevant stakeholders. Thanks to the workshops, the main outputs of the project will be presented, and it will be possible to ensure a strong interaction with different actors, such as: industry, citizens, end-users, solutions providers and others outside the consortium.

The purpose of the first workshop " *Citizens & Civil Protection Interaction: how to reduce the "Risk Perception Action Gap"* was to be, first of all, a crucial moment to present the first results of the project, after 10 months of activity, and therefore to have been able to be seen as a good opportunity of discussion about the RiskPACC contents and purposes. Furthermore, its purpose was to start creating a base of followers and usual participants who can: share and disseminate the contents of the project and be able to follow RiskPACC in all its developments and changes.

The workshop, as the following ones will too, serves to present results of an analysis of current practices and key aspects of the Risk Perception Action Gap, as well as approaches (new technologies included) to narrow down these gaps.

2.3 Structure of the Workshop

The first awareness workshop was organized to give to the audience a general overview of the project, the first results and achievements. Therefore, after a shorter introduction of the objectives of the event conducted by the European Organisation for Security, it was decided to have a morning session with an overview of the project, session led by the RiskPACC coordinator, and then continue with the sessions "*Civil protection perspectives of risk and disaster resilience: Initial findings from the RiskPACC project*" and "*Engaging citizens to expand understandings of risks and enhance urban resilience: Initial findings from the case studies of RiskPACC*".

These two sessions have been presented and conducted by the respectively leaders of the work package 1 and work package 2.

The morning session closed with a subsection dedicated to sister projects. Within the DRS 01 cluster, five projects started collaborating with each other in order to strengthen their research and objectives and to disseminate their respective outputs and results.

The five projects are:

- i. LINKS "Strengthening links between technologies and society for European disaster resilience"²
- ii. ENGAGE³ "Engage Society for Risk Awareness and Resilience"
- iii. BUILDERS "Building resilience in Europe"⁴
- iv. RESILOC "Resilient Europe and Societies by Innovating Local Communities"⁵
- v. CORE "sCience & human factOr for Resilient society"⁶

The division of the sessions considered the needs of the project and the participants. Many participants did not know the project in detail. The participants were therefore able to take

² <u>https://links-project.eu/project/</u>

³ https://www.project-engage.eu/

⁴ <u>https://buildersproject.eu/</u>

⁵ https://www.resilocproject.eu/

⁶ https://www.euproject-core.eu/





advantage of a general introduction to the project, followed by the results obtained in the first ten months in the morning.

If the morning session wanted to give an overview and a presentation of the results and the achievements of the project, the afternoon session wanted to involve the in-person participants with two working group sessions.

"Challenges in two-way communication to close the RPAG", led by WP4 leader, and "How can technological tools help mitigate the RPAG?", led by WP3 leader, gave to the participants the opportunity to share, discuss and provide feedback and inputs regarding the RiskPACC topic related. The two working groups sessions, lasting 1 hour and 15 minutes each, saw an audience divided into small subgroups formed by 4 or 5 people each, and the results, as can be seen in chapter 4, became the subject of discussion and dialogue, one of the objectives of the workshop.

For the complete agenda of the event, please refer to Annex 6.





3 THE MORNING SESSION

3.1 Project general overview, WP1 and WP2 results and achievements

The morning session started at 11:30 h CEST, with the usual "welcome and remarks" slot, and has been conducted by EOS, the organiser of the event.

The session lasted until 14:00 h CEST, giving the opportunity and possibility to present the main results achieved by RiskPACC and the interconnections with the other projects that are under the same cluster (DRS-01).

The first part of the morning session saw the presentation of RiskPACC in three different slots. The first, with the coordinator of the project, the second with the leader of work package 1, while the third with the leader of work package 2.

The Work package 1, "Understanding good practices and challenges in Civil Protection policy and practice", ended at M8, April 2022, had the following objectives to achieve:

- Review the state-of-the-art of disaster resilience and risk perception concepts and methodologies in research, practice, and policy, and investigate how these have evolved.
- Establish an appropriate working definition of disaster resilience and risk perception.
- Analyse the identified approaches and good practices through surveys and local dialogue focus groups with CPA's.
- Clearly define gaps between current practice and state-of-the-art (SOTA) and develop a roadmap of key actions to advance SOTA and provide recommendations for the RiskPACC framework.⁷

The work package 2, "*Engaging citizens to expand understandings of risks, vulnerabilities and data collection opportunities*", as for the 1, ended in April 2022. Its actual scope, as it is possible to get from the title, is the citizens engagement. Among the others, the main objectives that it has achieve are:

- Review the current state-of-the-art (SOTA) of the role of community engagement and community data generation in disaster resilience research, practice and policy and investigate how these have evolved.
- Establish how different forms of VGI (notably social media) provide a key method by which the RPAG may be reduced, and more effective, localized, democratic and equitable practice established.
- Analyse the identified approaches and good practices through local focus groups with citizens in case study areas (and build a community of users for the rest of the project).
- Combine international best practice with local experiences and define gaps between current practice and SOTA and develop a roadmap of key actions to advance SOTA.⁸

3.1.1 <u>RISKPACC GENERAL OVERVIEW</u>

The RiskPACC project Coordinator, after the welcome and remarks, took the floor to give a general description of the project. The presentation moved from the more general aspects of the project, such as the description of the project, the case studies and the planned efforts, to more specific aspects such as the objectives and outcomes of RiskPACC.

⁷ RiskPACC Grant Agreement, page 11

⁸ RiskPACC Grant Agreement, page 15







FIGURE 5: RISKPACC GENERAL OVERVIEW

In RiskPACC there are seven different case studies, that are addressing natural hazards, human-made hazards such as terrorism, and pandemics. The seven case studies have a variety of focal risks that they are planning and preparing for. It is through the case studies that the different RiskPACC solutions are designed and developed, ensuring a practical relevance from the outset.⁹ The seven case studies, with the relative hazard setting are described in the table below.

N°	Location	Hazard Settings
1	Attica, Greece	Wildfires and Flood Events
2	Brussels, Belgium	Multi-Hazard including terrorism
3	Olomouc Region and Moravian-Silesian Region	CBRN Hazard
4	Eilat, Israel	Earthquakes
5	Municipality of Padova	Multi-Hazard
6	Lancashire Constabulary, UK	Multi-Hazard, including flooding and terrorism
7	Global	Pandemics
	T	

TABLE 3: RISKPACC CASE STUDIES

The presentation highlighted the most important aspects and contents of RiskPACC, underlining the importance of the cooperation between citizens and civil protection authorities.

First of all, the Risk Perception Action Gap (RPAG) has been explained, pointing out which are the elements and factors which constitute it as:

- Misalignment between the risk perception of citizens and their subsequent actions
- Risk perceptions of CPAs and citizens differ
- Misalignment between citizens' response and what CPAs expect citizen action should be
- Misalignment between CPAs' response and what citizens expect CPAs should do

⁹ https://www.riskpacc.eu/case-studies/







Risk Perception-Action Gap (RPAG)

- Misalignment between the risk perception of citizens and their subsequent actions
- Risk perceptions of CPAs and citizens differ
- Misalignment between citizens' response and what CPAs expect citizen action should be
- Misalignment between CPAs' response and what citizens expect CPAs should do



FIGURE 6: THE RISK PERCEPTION ACTION GAP

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101019707

After the RPAG, the RiskPACC approach has been presented, with a particular focus on the "two-way communication" and the co-creation approach in order to facilitate between citizens and CPAs that is showed in the figure here below.



RiskPACC – Approach



- Two-way communication
- Co-creation approach to facilitate interaction between citizens and CPAs,
 - > jointly identify needs
 - jointly develop procedural and technical solutions
 - to build enhanced disaster resilience

FIGURE 7: RISKPACC APPROACH: TWO WAY COMMUNICATION

The end of the presentation saw the explanation of the "Risk Pack", the main result of the project, that it includes:

- A framework and methodology to understand and close the RPAG.
- A repository of international best practices.
- Tooled solutions based on new forms of digital and community-centred data and associated training guidance.







This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101019707

£...):

FIGURE 8: THE RISK PACK

3.1.2 WORK PACKAGE 1 RESULTS AND ACHIEVEMENTS

Results from WP1 were presented by Selby Knudsen of Trilateral Research, who is the WP lead. The presentation was broken down into three parts to address the three tasks in the package.



FIGURE 9: WORK PACKAGE 1 PRESENTATION

The presentation began with an overview of the WP, including the objectives and the tasks involved. Task 1.1 was then introduced, and the results were discussed. This task aimed at determining the current scope of disaster resilience and risk perception research and defining those terms for the project. As such, the presentation focused on the output of the task, the





definitions, and gave three key take aways from the desk-based research. Figures 10 and 11 below highlight the key findings from Task 1.1 and the definitions of terms that will be used in RiskPACC going forward.



Key
FindingDisaster resilience is a contested concept, with a variety of definitions. This lack
of consensus in definitions has led to challenges in the operationalization of
resilience.Key
FindingUnderstanding risk perception among CPAs, and how that differs from
community risk perception, and trying to align the two are important to
bridging the RPAG. Current top-down techniques may not be sufficient, and a
more participatory approach may be needed.



This project has received funding from the European Union's Horizon 2020

The presentation then moved to Task 1.2 and 1.3, which highlighted the first empirical research that was completed for the project. Information was provided on to the methodology of the interviews and creating the question guide, and then results were discussed.

Results for Task 1.2 included the views of different civil protection authorities at the local, regional, and national level as to their risk communication strategies, risk perception among CPAs and citizens, and challenges of current activities. These results were all summarized and expanded upon during the presentation. Key findings from the report were also presented.





Finally, the gaps in current practices were presented and discussed. This section highlighted the results from Task 1.3, the **gap analysis and roadmap** going forward. Finally, some results from the workshops run in WP3 that related to the gaps that were discussed were also presented.

Overall, the presentation summarized the goals of the WP, the results that have been achieved, and how they feed into other work packages. Following the presentation there was a lively discussion on the work presented so far. This included suggestions on different wording for some of the material presented, as well as discussion of sample sizes.

3.1.3 WORK PACKAGE 2: RESULTS AND ACHIEVEMENTS

WP2, along with WP1 are the two first Work Packages of the project, run from Month 1 (September 2021) until Month 8 (April 2022) and thus have been already concluded. The major objective of WP2 (along with WP1) was to establish a solid theoretical foundation upon which the rest of the project will be conceptually relied.

In this context, research in WP2 started with a thorough literature review on existing definitions, approaches and concepts surrounding community resilience, community risk perception and the potential of citizen generated data, and specifically VGI, to enhance community and disaster resilience (D.2.1). The most significant outputs of this work have been the working definitions of key concepts such as **community resilience and community risk perception** adopted for the entire project and clearly presented in D2.1.

Later, the work in WP2 continued with empirical research on existing understandings of community resilience across six the project case studies, along with a documenting of practices and methods undertaken by individual citizens and community groups to capture their risk perception and contribute to disaster risk management. The results of this empirical analysis were presented in the form of a SWOT analysis and were further discussed in D2.2. In Deliverable D2.2 "Community Consultation Report to identify how community resilience and risk perception operates in local settings" an analysis of Strengths Weaknesses Opportunities and Threats (SWOT Analysis) took place, attempting to document and present a better understanding of community practices across the case study areas in terms of their understandings on community resilience concept, community need in terms of disaster risk management as well as methods that are currently utilised to enhance and support disaster and community resilience. D2.2, which has been methodologically based on semi-structured interviews carried across the case studies, identified the activities that are currently being undertaken by citizen groups in the case study areas to better understand how communities are conceptualising, practicing and developing resilience as well as technologies that can assist in citizen group activities.

WP2 was concluded with D2.3, where a series of gaps (n=18) in the current SOTA regarding community resilience from a citizen perspective have been identified and highlighted appropriately, as it is possible to see from the Table 4. Such gaps highlight that in there are significant considerations that need to be taken into account in order to allow citizen voices to be adequately heard and depicted in newly-created datasets, as well as an improvement in communication between CPAs and community groups to avoid misalignment of risk perception and actions, in order to ultimately bridge the RPAG. The Report concludes with a detailed presentation of a Roadmap in the to address the identified gaps in SOTA through the outcomes and outputs of RiskPACC. The required actions that need to take place are mapped in relation to the respective gaps in SOTA and the prospective outcomes and they aspire to address.



Gap group	Gap group details	Sp	pecific Gaps in SOTA	Relevant RiskPACC Tasks
	Gaps related to	1.	Contested terminology	3.5; 4.2; 7.2
	ineffective	2.	Tokenism	3.5; 7.2
Gaps between Theory and	operationalisation of conceptual ideas and theoretical understandings the ground	3.	Mainstreaming risk perception	3.3; 3.4; 3.5; 3.6;4.3; 4.4; 7.2; 8.3; 8.4
practice		4.	Lack of collective future vision	3.3; 3.4; 4.3;6.2; 7.2
	Gaps predominantly	5.	Responsibility without power	4.3; 4.4; 7.2
	related to	6.	Building trust ties	3.1; 3.3; 3.4; 3.6; 7.2
Governance	governance traditions, cultures,	7.	Top-down meets bottom-up	3.1; 3.5; 4.3; 6.1; 7.2; 8.4
gaps	and structures as well as communication challenges	8.	Lack of existing communication channels	3.3; 3.4; 3.6; 4.3; 6.1; 7.2
	Gaps related to the lack of a link between aspirational top- down visions of disaster risk management bottom-up community- focused realities	9.	Lack of community engagement	3.3; 3.4; 3.5; 3.6; 4.4; 6.3; 7.2
		10.	. Amplification of risk	3.5; 4.2; 6.1; 7.2
Operational and implementation gaps		11.	. Risk perception and behaviour	3.1; 3.5; 3.6; 5.2b; 6.2; 7.2
		12.	Inadequate attention on prevention activities	4.2; 5.1; 5.2a; 5.2b; 7.2; 8.3
		13.	Need for better information for the civil society	3.1; 4.4; 5.3; 6.1; 6.3; 7.2; 8.3
	Gaps related to the generation,	14.	. Lack of contextual sensitivity	3.6; 4.2; 5.1; 5.2a; 5.2b; 7.1; 7.2; 8.4
		15.	Digital divide and lack of inclusiveness	5.2a; 5.2b; 5.3; 7.1; 7.2
Data and technology	usage of data and	16.	Fragmented utilisation of VGI	5.1; 5.2a; 5.2b; 7.1; 7.2
related gaps	technologies for disaster risk management	17.	Inadequate inclusion in the designing of VGI solutions	5.1; 5.2a; 5.2b; 5.3; 7.1; 7.2
		18.	Lack of updating for VGI tools	5.1; 5.2b; 6.2; 7.1; 7.2

TABLE 4: KEY GAPS AND GAP GROUPS IN RISK PERCEPTION AND ACTION FROM A COMMUNITY RESILIENCE PERSPECTIVE







FIGURE 12: ROADMAP OF ACTIONS TO TACKLE THE KEY GAPS IN RISK PERCEPTION AND ACTION

The collective output from WP2 has been a detailed and expanded citizen-generated data understanding on risk and vulnerability; critical consciousness about environmental risks, enhanced local capabilities and a better understanding of citizen-led practices regarding risk management, and local development at the community, and neighbourhood levels. This will not only feed into the RPAG framework, which will be developed in WP4 of this project, but also in the tool development and field validation phases that will follow in WPs 4 and 5. Future project activities are very ambitious and require determination and coordination by all RiskPACC stakeholders.

Work package 2, along with the work package 1, concludes the first phase of the RiskPACC. This phase's key objective has been the establishing of the scientific foundations upon which future Work Packages and Deliverables will construct the RiskPACC solutions, framework, and methodology for enhancing disaster and community resilience and bridging the RPAG.

The final stage of WP2, which concludes this Work Package, is a gap analysis and progressive roadmap of key actions that will feed into the work of all subsequent Work Packages. The collective output from WP2 is aspired to be a detailed and expanded citizen-generated data understanding on risk and vulnerability; critical consciousness about environmental risks, enhanced local capabilities and a better understanding of citizen-led practices regarding risk management, and local development at the community, and neighbourhood levels.

3.2 Sister Projects' session

RiskPACC established a continuous liaison with five complementary EU projects (LINKS, ENGAGE, BuildERS, CORE and RESILOC), funded under the same topic SU-DRS01-2018-2019-2020. Clustering activities among the projects is helping them communicate their results, increase their visibility to a wider audience and share experiences and common practices

During the organization phase of the workshop, the choice to include a session dedicated to related projects was inevitable.

The session dedicated to sister projects aimed at:

- \circ $\$ having a different perspective and approach to the same problem
- o strengthen relationships and synergies with our partners





- finding a common path
- o having sister projects exponents during the working groups in the afternoon session
- o working on next conferences and/or workshops together

For the reasons listed above, a one-hour session was organized in order to give the sister project speakers the opportunity not only to present their project in a general way, but above all to underline the common points with RiskPACC.

3.2.1 LINKS - ENGAGING CITIZENS THROUGH SMCS IN DRM

LINKS "Strengthening links between technologies and society for European disaster resilience" is a comprehensive study on disaster governance in Europe. The overall aim of the LINKS project is to strengthen links between technologies and society for improved European disaster resilience, by producing sustainable advanced learning on the use of social media and crowdsourcing (SMCS) in disasters. In recent years, social media and crowdsourcing (SMCS) have been integrated into crisis management for improved information gathering and collaboration across European communities. The effectiveness of SMCS on European disaster resilience, however, remains unclear owing to the diversity among disaster risk perception and vulnerability (DRPV), disaster management processes (DMP) and disaster community technologies (DCT) across Europe today.¹⁰

From this point of departure, LINKS sets out to achieve four core objectives:

- Produce sustainable advanced learning on SMCS in disasters
- Achieve a consolidated understanding of SMCS in disasters
- o Govern the diversity of SMCS in disasters
- o Bring multidisciplinary SMCS stakeholders together

The work package 2 "Assessment of Disaster Risk Perception and Vulnerability", and the work package 8 "LINKS Community Workshops" leaders presented the project during the workshop.

After a brief overview, they focused on the relevant aspects of the project, such as the main vision, the methodologies and the results. LINKS, indeed, is developing methods, tools and guidelines (LINKS Framework), informed through interactions with relevant stakeholders (LINKS Community) online (LINKS Community Center) and in person (LINKS Community Workshops).

They presented the 5 case studies across Europe (represented in the figure 13) and the results obtained in the first 24 months of the project.

¹⁰ https://www.riskpacc.eu/related-projects/







FIGURE 13: LINKS CASE STUDIES

3.2.2 <u>CORE - How to enhance trust and acceptance?</u>

CORE (sCience & human factOr for Resilient sociEty) is a multi-disciplinary consortium established to understand how to define common metrics with respect to the different natural and man-made disaster scenarios, and how to measure, control and mitigate the impact on the populations, particularly on vulnerable groups: disabled, elderly, poor, as well as women and children.

It contributes to Horizon 2020's focus on secure societies where citizens are facing increasingly threatening situations. Recent natural and manmade disasters have shown gaps in the level of preparedness of European society for disasters, highlighting the importance of increasing risk awareness, which ensures a direct positive impact on citizen and organisational resilience among people and decision-makers in Europe. CORE will identify and use best practice and knowledge/learning from certain countries, such as Japan which experienced high levels of seismic, volcanic and tsunami risks but where risk awareness is high. It will provide optimized actions and solutions to help restructure and rebuild socio-economic structures after a disaster, across and outside Europe (Israel, India & Japan), where it will have access, through the end-users, to the relevant base of knowledge. CORE will lead to more efficient and effective policies, governance structures and broad awareness and collaboration among citizens, as well as between citizens and rescue agencies. Best practice and best procedures will be identified and reported to policymakers, end-users and disseminated to all stakeholders and NGOs.

CORE will devote great attention to education in schools, making the young generation a sort of "prevention sentinels".¹¹

The representative of CORE took the floor in the session entitled "*How to enhance trust and acceptance? The CORE's approach*". The project in brief and objectives were presented, such as methodology and the test cases. CORE methodology has indeed 5 building blocks and 7 test cases.

The building blocks are:

1) Safety culture

¹¹ <u>https://www.riskpacc.eu/related-projects/</u>





- 2) Social media support and threats to safety culture and community resilience
- 3) Disaster scenarios, human behaviour and disaster community identity as resilience factor
- 4) Cascading effects
- 5) Governance

While the test cases, correlated to different case studies are listed in the figure here below.

Disaster scenario	Investigated past events	
Earthquake	L'Aquila (Italy), 2009	
Terrorist attack	Manchester (UK), 2017	
Industrial accident	Venkatapuram (India), 2020	
Flash Flood	Aude Region (France), 2018	
Tsunami	Tohoku (Japan), 2011	
Wild fire	Jerusalem wildfire, 2021	
COVID-19	In Europe and outside	

FIGURE 14: CORE TEST CASES

The presentation ended with the explanation of the CORE's "Transdisciplinary approach" formed by the following features:

- i) Elaboration of a crisis modelling framework
- ii) Definition and testing suitable indicators
- iii) Testing within citizens and communities



FIGURE 15: CORE TRANSDISCIPLINARY APPROACH

3.2.3 **RESILOC - THE RISK PERCEPTION IN LOCAL RESILIENCE ASSESSMENTS**

The overall goal of RESILOC is to identify new strategies for improving on the processes of preparedness of local communities against any kind of hazards, either planned or unplanned.

The project aims at bringing together the validity and experience of local communities and the strategies and commitment of national and supra-national actors to achieve a tangible impact on the way resilience is understood and increased in local communities. Therefore, a holistic framework of studies, methods and software instruments will be developed, that combines the





physical with the less tangible aspects associated with human behavior that applies at the community scale.¹²

The RESILOC coordinator presented the project and the communities that are part of it.



FIGURE 16: THE RESILOC COMMUNITIES

In RESILOC there are four different communities: Gorizia and Catania in Italy, Tetovo in Bulgaria and West Achia in Greece. The main features were presented, and the different methods of approach according to the community in question.

Furthermore, during the session entitled "*The role of risk perception and behaviour in local resilience assessments*", the coordinator underlined the similarities and common points with RiskPACC.



FIGURE 17: RESILOC AND RISKPACC

As in the figure above, the main common points between the two projects have been underlined, such as: community engagement, social connectedness, trust in authority, place attachment community competence, adaptive behaviour and risk awareness.

¹² <u>https://www.riskpacc.eu/related-projects/</u>





3.2.4 BUILDERS - SOCIAL CAPITAL, INFORMATION SOURCES AND RISK AWARENESS

Funded by the European Union's H2020 research and innovation programme, BuildERS works on increasing the societal resilience and social capital of European communities and citizens. It will do this by genuinely co-designing processes and tools with citizens, first-responder organisations and technology tools developers. The project will incorporate an inclusive and interactive research and analysis process, where the results are not derived 'top-down' but through a 'bottom-top' dynamic interaction.¹³

The objectives of the project are:

- Providing an understanding of how the most vulnerable people exposed to risks and threats understand risks.
- Prepare for and behave individually and collectively in crisis.
- Creating knowledge to empower and activate first-responders, policy makers, administrators, public and private service providers and citizens.
- Analysing and providing insights on how new technologies and media could improve disaster resilience of societies.
- Providing policy recommendations to the relevant stakeholders to maximize the usability and reliability of social media in disasters and recovery processes.

The fourth presentation, this time online, was conducted by a member of the BUILDERS consortium. BUILDERS is an ended project, started more than three years ago. The representative remarked how the project, throughout its duration, touched upon the themes of risk awareness, social capital and preparedness.



FIGURE 18: BUILDERS RISK AWARENESS

These three are to be considered the three fundamental pillars on which the research of the project was built. Starting from these three pillars, BUILDERS focused on the analysis of: i) who is to be considered "vulnerable" ii) understanding why some subjects are more vulnerable than others iii) innovating and recommending how to increase capacities of preparedness.

3.2.5 ENGAGE AND ITS POSSIBLE INTERACTIONS WITH RISKPACC

ENGAGE is an EU-funded project, started in July 2020, whose mission is to provide novel knowledge, impactful solutions and emergency response guidelines for exploiting Europe's

¹³ https://www.riskpacc.eu/related-projects/



societal resilience. Solutions will aim at bridging the gap between formal and informal approaches to risk and emergency management, increasing the ability of communities to adapt before, during and after disaster.

The actual global scenario is increasingly exposing the human society to higher hazards, requiring that all individuals specifically and the civil society at large, acquire the ability to rapidly respond to natural disaster and to man-made risks. Risk awareness is indeed a strong priority for modern societies and social resilience is necessary to enhance successful responses to unexpected emergencies.

In the actual strategies there is a gap between the formal effort of public authorities to protect citizens from harm and the voluntary support provided by citizens during emergencies. Starting from this awareness ENGAGE addresses the whole society and tries to bridge the different ways of intervention to make communities more skilled in responding to disasters jointly and therefore more resilient. The project will analyze past natural emergencies, terrorist attacks, and man-made disasters to understand how citizens supported formal intervention practices during emergencies under specific contextual conditions.

Together with real practitioners from their Knowledge and Innovation Community of Practice (KI-CoP), ENGAGE proposes emergency response strategies to bring the population closer to rescuers and authorities, bridging the gap between formal and informal guidelines in specific contexts.

A representative of ENGAGE presented the last sister project of the day. He underlined once again that ENGAGE started in July 2020, whose mission is to provide novel knowledge, impactful solutions and emergency response guidelines for exploiting Europe's societal resilience.



FIGURE 19: ENGAGE'S CYCLE OF WORK

ENGAGE, indeed, is working on solutions that will aim at bridging the gap between formal and informal approaches to risk and emergency management, increasing the ability of communities to adapt before, during and after disaster.





In detail, the presentation saw the ENGAGE work cycle, and the planned exercises and gave initial feedback, collected during past research, to RiskPACC.





4 THE AFTERNOON SESSION

The afternoon session lasted from 14.30 CEST to 17.30 CEST, and two different working groups sessions involved the workshop in-person participants. The first, "Challenges in two-way communication to close the RPAG", moderated by the WP4 leader, while the second, "How can technological tools help mitigate the RPAG?", led by the WP3 responsible. The two sessions, lasting one hour and 15 minutes each, were organized with the aim of exploring participants' ideas, experiences, and knowledge regarding specific topics.

4.1 Session I: Challenges in two-way communication to close the RPAG

The first working group session was titled, "Challenges in two-way communication to close the RPAG". The aim of the session was to explore ideas and experiences which related to the parts of the RiskPACC Draft Framework which focused on understanding the social context, relationship building and co-creation processes. Workshop participants were divided into three mixed groups which each addressed one of three challenges. Participants were asked to firstly discuss and consider the extent to which this challenge is important and secondly to discuss how to do it. Some participants also noted which of the various points they listed were the most important points to prioritise. The three challenges are presented below with the brief guidance provided to help participants focus and then some of the key points they identified.



FIGURE 20: WORKING GROUP 1 SESSION

4.1.1 UNDERSTANDING SOCIAL CONTEXT

The social context (demographics, available resources) provides insight into the diverse needs and capacities of the communities that CPAs serve. This means (in theory) emergency plans and responses, local engagement and resilience building can all be better tailored to need



(one size does not fit all). Please ensure the discussion focuses on social groups (gender, race/ethnicity, age, social class/education, migration status, etc). Are there data protection or political sensitivity issues? Are there any *technical* solutions we can use?

Responses listed on flipchart paper:

Importance of the topic was accepted and then participants listed the following for particular attention:

- Migrant communities and vaccination risk perception
- Understanding of vulnerability
- Rural/urban divide more about capability to act than about risk perception
- Misunderstandings between CPA-Migrant community
- Key point: The right narrative for the right social group needs to be communicated in the right language, at the right time and in the right way
- An example came from Australia which had trained resettled refugees as volunteers

 Using community leaders
- The importance of learning from past accidents and informal solutions
- The group compared two contrasting situations: Syrian refugees in 2015 vs Ukrainian refugees now:
 - The situation now was not perceived as a threat
 - A 'malfunctioning system narrative 2015', versus
 - 'Help and a functioning system now'
 - Lessons must be learned.

4.1.2 BUILDING PRODUCTIVE RELATIONSHIPS

Much of the research literature on collaborative governance (something we are seeking to develop in RiskPACC) stress the importance of relationship building (between CPAs and citizens AND between different citizen groups (social capital)). This group should discuss how they see this helping close the RPAG (or not, if they disagree) and what are some good ways to do this.

Responses listed on flipchart paper:

- How important is this? In general, this is very important
- Also necessary between CPAs themselves (an example was given of Greece)

 And especially in the response phase
- The group noted that the municipality is not authorized to act during an event
- Also necessary is relationship building between municipality, fire services and volunteers
- Key point: Building trust is important!
- Building relationships with citizens is also important and to involve spontaneous volunteers (i.e. not organized groups) in advance
- Volunteers should be prepared in order to communicate to CPAs
- Citizens are the first ones to respond, so it is very important to build relationships between CPAs and citizens
- It is also necessary to build trust towards spontaneous volunteers

How?

- Key point: Trainings of CPAs together with citizens
- Key point: Bring community groups into the conversation
 - o e.g. internet, social media
 - by CPAs and others
 - o especially before an event and/or afterwards





- They suggested to create a group that collates (organizes) different community groups open question: who would lead this?
- Bring risk perception/communication into schools

4.1.3 <u>CO-CREATION/CO-DESIGN PROCESSES</u>

First of all, what do the group understand co-creation/co-design to mean? Many research teams include the terms co-creation and co-design but not all really involve citizens and others from the start of their planning. What are the key issues to be aware of, particularly in the context of sharing or aligning different risk perceptions and building community resilience?

Responses listed on flipchart paper:

- The group underlined that co = together
- Time: should be continuous
- A question to address is who do we involve?
 - But what if we haven't started with co-creation? Suggestion: then use it for critical feedback
- Ask the groups themselves who will represent them
- Ownership = ownership by a community over process
 - Co-creation is a way to do this
- Community representation
- Maybe more workshops is one way?
- Monthly follow ups with workshop members
- Levels of co-creation: co-creation is also about involving case studies and end users

The Plenary discussion allowed for cross-group interactions, but the general take away message was to reiterate how important all these factors were and the need to give more consideration of how best to deal with them.

4.2 Session II: How can technological tools help mitigate the RPAG?"

The second working group session was titled, "How can technological tools help mitigate the RPAG?". The second working group session was designed to build up on the first working group session. In the first session, the participants would already have discussed the RPAG and two-way communication. In the second session, it was planned to direct the ideas from the first session to the mitigation of the RPAG with technological tools. This prospect was directly inspired by the co-creational workshops conducted in the case study areas in the frame of WP3.



FIGURE 21: A MOMENT DURING THE WORKING GROUP SESSION 2





The session was organised by EOS and USTUTT, moderated by USTUTT, and facilitated by ICCS, CS, STAM, UT and USTUTT. To implement one possibility of co-creation workshop methodologies, each facilitator presented the latest version of their storyboard user stories. The user stories could either be about technological tools, or conceptual (for exhaustive information, see deliverable D3.4, pp. 42-44). Discussion and outcomes of the user story walkthroughs are presented in the following subchapters.

4.2.1 ICCS USER STORY

ICCS aims to develop an Augmented Reality (AR) mobile application for natural and anthropogenic hazard assessment, which aims to enhance prevention, preparedness, and response to evolving risks. In terms of prevention, the AR mobile app aims to support training and citizens awareness raising for an upcoming hazard. Preparedness level of end-users is enhanced by the timely notification and effective communication for an upcoming hazard which is foreseen to take place through the app. In addition, during the response phase of a disaster management cycle, ICCS tool aims to enhance bilateral communication between citizens and CPAs end-users, via the exchange of media files (images captured and relevant text, if desired) and the functionality of disseminating (public) safety collection points, as well as communication among end-users via photos and/or text exchange through the app. AR was selected in order to provide gamification features for training and education purposes since adequately trained end-users are better prepared and are expected to respond effectively during natural disasters. There will also be the possibility to verify acquired knowledge of the user of the application through the use of tests and quizzes.





During the awareness workshop the group of participants that was led by ICCS consisted of MRP, Eilat and IBZ project partners. The group focused on a user story focused on a hazardous situation (i.e. chemical accident) that evolved in an urban region. Prior to the event, the story involved a citizen of the area who downloaded the app and conducted the training for a specific event that is likely to occur in the greater area. Some time prior to the occurrence of a hazard, when relevant and once available, or during its first stages, the CPAs can send an alert through the app to inform the citizens about an impending hazard or its onset. Moreover, some citizens who happened to be close to the starting point(s) of the hazard and captured a photo they can upload these photos and relevant text, if they want, to share it with the other end-users. By this way, the CPAs can be early informed about dangerous locations. Finally, thanks to the navigation features of the application, the CPAs were able to navigate the citizens to safety collection points, away from dangerous zones. Innovation in the ICCS tool lies in the advanced training capabilities that will be offered by the mobile application, in the timely notification in case of an impending hazard, which is not a current practice in all case studies, as well as in the service of direct communication between citizens and CPAs during a disaster.





The aforementioned user story was presented to the group and was followed by an open discussion with regards to the proposed functionalities during the preparedness and responses phases of a disastrous event. The main discussion points are summarized as follows:

- The proposed structured levelled training with QR codes will be a useful and engaging element for participating citizens and was supported by group participants.
- CPAs need to have a more secure option for logging in into the proposed tool due to their sensitive role in notifying and distributing critical information to the community. Potentially this could be accommodated with pre-defined log-in account which can be distributed to CPAs from participating case studies.
- It was also discussed that volunteers/citizens need also to have a secure way to login and to be limited to case study inhabitants, so as to avoid false and malicious acts (e.g. a citizen providing false information by mistake or to mislead CPAs and other citizens). However, the argument was that in the case of malicious acts citizens can choose other existing social media platforms. The proposed tool will also provide the functionality of a CPA to assess and validate the incoming information before this is becoming publicly available.
- Issued warnings of the tool should be accompanied by vibration and noise characteristics in order to highlight to the potential user the presence of an occurring risk.
- CPAs need to have the role of the moderator and enhanced rights compared to citizens (e.g. they need to have the option to delete users in case they have repeatedly provided false information).
- The customisation of a tool to the case study needs is useful but this might not accommodate the use of the same functionalities/characteristics of the tool to other case studies. Further consideration needs to be taken in order to ensure that tools are customised to the case study needs but at the same time they can be re-used in other RiskPACC case studies.

4.2.2 <u>CS User Story</u>

Crowdsense, a project partner, discussed the User Story as used for the Lancashire case, one of the case studies, with the workshop participants, a group of both external representatives, delegates from other Horizon research projects and RiskPACC team members.



CONTEXT Shooting Heidelberg University (Jan 2022)



I am a police officer in Germany monitoring for civil unrest and public safety.

On Jan 25, my team became aware of a shooting incident at the university of Heidelber, Germany. Very little information is known and the attack is still ongoing.

l decide to check if some important information can be found online.



FIGURE 23: CS USER STORY - CONTEXT





The summary of the User Story is here below.

As a member of Lancashire Police, the aim is to create situation awareness and detecting early warnings for issues related to floodings.

- The member would like to understand how the population is reacting and preparing.
- During an incident, the member would like to monitor the situation in real time and understand potential impact on critical infrastructure and local population.
- The member would like to monitor the post-incident management of the situation.

Then, it has been decided to check what important information can be found online.

The solutions that were presented are:

- Information Collection: Using a wizard, to quickly build a custom case for collecting publicly available information from different sources including social media (such as Twitter) but also semi-private sources such as messaging apps, and other local sources. With an interest in new information (real-time) but also any prior insights, which may have indicated a potential incident.
- Geo-location & Topic Monitoring: Have a pre-incident setup up to monitor social media information around an area (e.g, Lancashire) and topics of interest (floods, storm, safety, mobility, damage, emergency services, extreme weather, etc.). To enable distraction of key signals from publicly available information and cutting through noise, so informed decision can be taken quicker.
- Population Sentiment & First Signals: Tooling to monitor what the population sentiment is and how it evolves; with real time information on geographic basis; and automatic analysis of pictures and text, to collect the first signals of damage.
- Incident Management: Using Dashboard and information sharing tooling during the incident to monitor the impact on different areas; to keep the rest of the team and other emergency services on top of important information
- Post-Mortem: Information gathering and report to quickly consolidate all the information collected over the past days



FIGURE 24: CS USER STORY - INFORMATION COLLECTION





During the 1st Awareness workshop, participants shared questions, experiences, opportunities and concerns in an open conversation. With most important insights:

- The challenges of data overload and disinformation were recognized by the participants.
- The concern of privacy was discussed and agreed of its importance of including measures in the designs.
- The Case studies can assess social media use by vulnerable groups, but also their surrounding (e.g. family, caregivers and social workers, community representatives)
- Take a more holistic view of the "two-way" approach. With multiple technologies interacting or complementing next to each other. (thus not one tool 'covering' all aspects of "two ways".)

4.2.3 STAM USER STORY

The STAM user story aims to describe the user's experience while using the developed solution by contextualizing it in scenarios that might take place in use cases and with the associated potentially occurred dangers. The main actor is Jonathan, a volunteer of the local CPA acting in Eilat.

At the first, the story describes actions that are carried out in everyday life (not in an emergency situation): following a demonstration of the use of the web-based community platform, Jonathan decides to register and save the web address in his laptop and in the browser on his smartphone. During registration, he provides information about his status (CPA, volunteer or citizen), where he lives, and some information about his health. With his approval, he is automatically placed in community groups with people similar to each other (e.g. CPA volunteer group, group of citizens living in the south-east of Eilat).

Suddenly, an earthquake of magnitude 7 with an epicenter 10 km from Eilat occurs: significant damage occurs in the city and numerous deaths and injuries are reported.

Once he realizes the danger, Jonathan enters within the community platform and creates a post describing what is happening. The post is received immediately to the local CPA who can approve the content by adding some key information and tagging certain categories of users who should preferably receive an alert once the post is online. Considering the danger, the post and its alert will be addressed to all users. In addition, users will be able to exchange private messages with the CPA account, which will be able to offer them the information they need.

Thanks to the messaging system implemented in the platform, CPA will be able to send messages to selected categories of users with common characteristics such as volunteers, people living in the same area, etc.

Following the presentation of the user story, feedbacks have been collected and the main problems highlighted are related to data processing (privacy issue) and information storage. STAM will present solutions in the coming months.

4.2.4 UT USER STORY

UT presented its second user story about the use of tasked remote mapping by remote geospatial experts in a post-disaster wildfire situation. The feedback received and questions asked were central to UT's position of the need to consider operational-related strategies while creating VGI solutions. Issues regarding data quality, sustained altruism of remote volunteers





to perform mapping activities in the mid to long-term, the use of ML and other automated methods to perform more cognitively challenging results and ways to achieve unambiguous instructions.



FIGURE 25: UT USER STORY - CONTEXT

A few suggestions were given for the use of remotely sourced expert VGI, including (i) combined use of ML and human creation efforts in achieving optimal results, (ii) use of methods to fact check the volunteers' cognitive ability to participate in mapping activities, (iii) initiation of clear commitment to strengthen volunteers' motivation and (iv) a review process by a chosen sterling committee as some form of quality control.



FIGURE 26: UT USER STORY - RISK COMMUNICATION

Further discussions resulted in a few research questions. The usefulness of a sterling committee of experts, in practice, was questioned because past project experience suggests that with adequate training, volunteers with less than adequate skillsets can conduct the same activities with equal accuracy compared to expert volunteers. Secondly, the question of how VGI mapping operations can be strategic concerning disaster stage so that the data generated is useful for disaster management and reduction operations.

4.2.5 USTUTT USER STORY

For the merely conceptual user story, the merged user story on nudging on contact tracking applications has been presented (see deliverable D3.5, pp. 32-33). This has been the same





storyboard that has been used in the case study workshop facilitated by ISAR, FhG and USTUTT (see deliverable D3.5, pp. 51-56). The main reason why the user story has been kept the same, is to ensure that the scientific treatment stays consistent. It has been of interest to further investigate the nudging approach (see deliverable D3.4, pp. 43-44).

Three people took part in this sub-group of the 2nd working group session. The discussions dealt with end users' responses to nudging on contact tracking applications, *i.e.*, notifications reminding end users to get vaccinated against the Covid-19 virus. Apart from the remarks already reported by the previous workshop group in D3.5, some other interesting points regarding resources came up. Participants of the 1st Awareness Workshop posed questions on who would invest in a technological conversion of the nudges, *i.e.*, notifications, on the contact tracking apps. Such forms of investment would not only be monetary, but instead also be a question of human resources, technological feasibility, and know-how in the fields of health and social sciences, privacy, and ethics.



FIGURE 27: USTUTT USER STORY - CERTIFICATE

A full transcript of the qualitative data has not been ready before the present deliverable is submitted. However, the researchers plan to analyse the material and disseminate the results of both the nudging session of the case study workshop, as well as from the 1st Awareness Workshop, in scientific papers.







END



This pr

With a non-binding educational message of the Corona-Warn-App, as well as a counselling or educational talk, which is also non-binding, the vaccination rate increased a bit. Some, like John, reported that this offer helped them especially when they had doubts about the vaccination.

Misinformation could also be counteracted and a lockdown could be prevented as the number of infections decreased. Through the nudging that is applied here, the willingness to be vaccinated is increased.

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FIGURE 28: USTUTT USER STORY - END





5 CONCLUSION

The first Awareness Workshop, as already explained in this deliverable, was intended as a first event of a series of workshops that will be developed in the coming months.

The function and aims of this workshop were to:

- Present the first RiskPACC results and outputs
- Get an initial feedback from external stakeholders (among which end-users and first responders) and other experts from the field
- Build an audience base that can grow in number over the course of the project
- Address issues with an impact on RiskPACC that can be developed in the course of the upcoming workshops
- Familiarize the external audience with the principles and research of RiskPACC

The discussions during the workshop and the activities carried out by the invited stakeholders provided meaningful insights needed for the future developments of the RiskPACC project. Especially, the working groups sessions of the afternoon, both linked to each other, proved how the workshop was efficient in engaging academics, end users, first responders, but also representatives from general industry, international institutions, and civil protection authorities.

The first session "Challenges in two-way communication to close the RPAG", as well as the second one, obtained very positive results regarding the involvement of the quality of the inputs and feedback received. For the first challenge presented, "understanding the social context", the lesson learned was that the right narrative for the right social group needs to be communicated in the right language, at the right time and in the right way. In particular, the importance of learning from past accidents and informal solutions emerged very clearly.

Regarding the second challenge "Building productive relationships", however, the lesson learned turned to the importance of building trust, especially between CPAs and citizens but also among the citizens themselves. The importance of how building trust has also emerged, and therefore organise trainings of citizens together with civil protection authorities and bringing community groups into the conversation through social media channels, internet, and before or after an event.

Co-creation and co-design processes, the third challenge discussed during the session, have been approached in a total particular way than the previous two, and they opened a different kind of discussion. In fact, the first aspect that was discussed concerned the meaning of the terms and the real involvement of citizens. The working group organized for this challenge had a univocal vision of the subject, reiterating that it means together, and how important these processes were and the need to give more consideration of how best to deal with them.

The second working groups session "How can technological tools help mitigate the RPAG?", closely linked to the previous one, saw a positive response from the participants. It was





possible to notice how they brought the experience of the first working group session. The planned objective was to direct the ideas from the first session to the mitigation of the RPAG with technological tools, and it was achieved as shown in the various user stories presented in chapter 4.

From the morning session, it was possible to learn how important the collaboration between different projects is. Presentations of similar but not identical topics, and the different way of approach and visions has brought certain benefits to RiskPACC. These differences will be important during the project and will be fundamental in the next events to see the results obtained and the achievements reached.

The workshop managed to achieve all the objectives set and will have a crucial role in the organization of the second (planned in Berlin in M22). Although some aspects can be improved, such as exceeding the threshold of 60 participants, the event, given the interactions, questions and discussions that arose, can be considered as successful.

6 ANNEXES

6.1 Annex 1 – The RiskPACC 1st Awareness Workshop: Registration Form



Registration Form.pdf

6.2 Annex 2 – The RiskPACC 1st Awareness Workshop: Invitation Letter



RiskPACC Invitation Letter.pdf

6.3 Annex 3 – The RiskPACC 1st Awareness Workshop – Welcome Letter



RiskPACC Welcome letter.pdf

6.4 Annex 4 – List of in-person attendees

N°	Participant	Organisation	Country
1	XXX ¹⁴	Fraunhofer INT	Germany
2	XXX	Fraunhofer INT	Germany
3	XXX	Fraunhofer Institute	Germany
4	XXX	University of Stuttgart	Germany
5	XXX	University of Stuttgart - Institute of Engineering Geodesy (IIGS)	Germany
6	XXX	REA	Belgium
7	XXX	European Organisation for Security (EOS)	Belgium
8	XXX	European Organisation for Security (EOS)	Belgium
9	XXX	European Organisation for Security (EOS)	Belgium
10	XXX	National Crisis Centre - IBZ	Belgium
11	XXX	Public Safety Communication Europe (PSCE)	Belgium
12	XXX	Public Safety Communication Europe (PSCE)	Belgium

¹⁴ For GDPR compliance participants' details (name and surname) have to be hidden





13	XXX	University College London	United Kingdom
14	XXX	Trilateral Research	United Kingdom
15	XXX	Center for Security Studies, ETH Zurich	Switzerland
16	XXX	CY Cergy Paris University	France
17	XXX	EFUS	France
18	XXX	STAM	Italy
19	XXX	STAM	Italy
20	XXX	Deep Blue	Italy
21	XXX	Municipality of Padova	Italy
22	XXX	Municipality of Padova	Italy
23	XXX	PublicSonar	The Netherlands
24	XXX	University of Twente/ ITC	The Netherlands
25	XXX	University of Twente	The Netherlands
26	XXX	Magen David Adom in Israel	Israel
27	XXX	Magen David Adom in Israel	Israel
28	XXX	Municipality of Eilat	Israel
29	XXX	Municipality of Rafina-Pikermi	Greece
30	XXX	Municipality of Rafina-Pikermi	Greece
31	XXX	Institute of Communication and Computer Systems (ICCS)	Greece
32	XXX	Institute of Communication and Computer Systems (ICCS)	Greece

6.5 Annex 5 – List of online attendees

N°	Participant	Organisation	Country
1	XXX ¹⁵	University of Potsdam	Germany
2	XXX	ISAR Germany	Germany
3	XXX	HWR Berlin	Germany
4	XXX	Institut der Feuerwehr Nordrhein-Westfalen	Germany
5	XXX	Federation of European Fire Officers (FEU)	Germany
6	XXX	Municipality of Rafina-Pikermi	Greece
7	XXX	Municipality of Rafina-Pikermi	Greece
8	XXX	Municipality of Rafina-Pikermi	Greece
9	XXX	National Technical University of Athens	Greece
10	XXX	ICCS	Greece
11	XXX	EPLFM	France
12	XXX	DMI Associates	France
13	XXX	Universidade Federal do Rio de Janeiro	Brazil
14	XXX	ISDEFE	Brazil
15	XXX	Università di Firenze	Italy
16	XXX	Crowdsense B.V.	The Netherlands
17	XXX	Sciensano	Belgium
18	XXX	SWISSAID	Switzerland
19	XXX	Kobe University	Japan
20	XXX	The Czech Association of Fire Officers	Czech Republic
21	XXX	International Centre for Defence and Security (ICDS)	Estonia
22	XXX	Institute of Transport Economics	Norway
23	XXX	University of Warwick	United Kingdom
24	XXX	Massey University	New Zealand
25	XXX	IDEAS Science Ltd.	Hungary

¹⁵ For GDPR compliance participants' details (name and surname) have to be hidden





6.6 Annex 6 - The RiskPACC 1st Awareness Workshop: Agenda

Time CET	Description	Presenter
11.30 - 11.35	Welcome and Remarks	XXX ¹⁶ , EOS
11.35 - 11.45	RiskPACC Overview	XXX, FhG
11.45 - 12.15	Civil protection perspectives of risk and disaster resilience: Initial findings from the RiskPACC project	XXX, TRI
12.15 - 12.45	Engaging citizens to expand understandings of risks and enhance urban resilience: Initial findings from the case studies of RiskPACC	XXX, UoW
12.45 - 13.00	Coffee Break	
13.00 - 13.15	Engaging Citizens through SMCS in Disaster Risk Management	XXX (EOS), XXX (UNIFI) – H2020 LINKS
13.15 - 13.25	How to enhance trust and acceptance? The CORE's approach	XXX (PSCE) – H2020 CORE
13.25 - 13.35	The role of risk perception and behaviour in local resilience assessments	XXX (FhG) – H2020 RESILOC
13.35 - 13.40	Social capital, information sources and risk awareness among socially marginalized groups in Europe: Examining factors influencing protective measures during the COVID- 19 pandemic	XXX – H2020 BUILDERS
13.40 - 13.50	ENGAGE and its possible interactions with RiskPACC	XXX (DeepBlue) – H2020 ENGAGE
13.50 - 14.00	Morning conclusion	
14.00 - 14.30	Lunch	
14.30 - 15.45	1 st Working Group Session – "Challenges in two-way communication to close the RPAG"	XXX, UCL
15.45 - 16.00	Coffee Break	
16.00 - 17.15	2 nd Working Group Session - <i>"How can technological tools help mitigate the RPAG?"</i>	XXX, USTUTT
17.15 - 17.30	Workshop Conclusions	XXX, FhG

¹⁶ For GDPR compliance participants' details (name and surname) have to be hidden



The RiskPACC Consortium



FIGURE 29: THE RISKPACC CONSORTIUM