

# FINAL BROCHURE

PReparedness against CBRNE threats through cOMmon AApproaches  
between security praCTitioners and the VVulnerable civil society



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June 2023

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## INTRODUCTION

The EU-funded H2020 project PROACTIVE can help security practitioners make CBRNe crisis preparedness and response fair, accessible and inclusive. The project has been liaising with more than 100 practitioner organisations and more than 50 civil society organisations, including vulnerable groups. These stakeholders have been directly involved in a multitude of research and innovation activities. This strong engagement allowed PROACTIVE to co-create a crisis communication system for both practitioners and citizens, as well as pre-incident information materials for the general public. These tools have been tested in three field training exercises where members of the public interacted with first responders. These outputs, combined with an Aide Memoire on how to include civil society in training exercises, will hopefully allow CBRNe practitioners and policymakers to improve societal resilience.



*The PROACTIVE framework*

The main objective of PROACTIVE is to enhance preparedness against and response to a CBRNe incident through a better harmonisation of procedures between various categories of practitioners & a better articulation of the needs of vulnerable citizen groups.

## Who is considered vulnerable in CBRNe incidents?

The concept of vulnerability is often used to describe a characteristic which affects a person or group's "capacity to anticipate, cope with, resist, and recover from the impact" of a crisis or disaster<sup>1</sup>. This means that vulnerability is dependent on the specific situation and context.

CBRNe incidents present unique challenges for disaster management and crisis communication as they require specialised, often unfamiliar actions from both practitioners and the public (e.g., casualty decontamination processes). The circumstances surrounding a CBRNe incident may lead to temporary impairments, such as smoke leading to a temporary reduction of vision among those present. This is known as situational disability<sup>2</sup>.

Many people could be considered vulnerable to some degree in a CBRNe incident, **however there are groups we can anticipate who will need additional support from CBRNe practitioners.**

According to WHO (2011), around 15% of the world's population was estimated to live with some form of disability, a number which was predicted and certainly has increased due to a growth in the aging population and an increase in chronic diseases (e.g., diabetes, mental illness)<sup>3</sup>.

Therefore, persons with disabilities should be expected to make up part of the population of affected persons in the case of a CBRNe incident. However, simply having a disability does not necessarily make one vulnerable, as "an individual is not defined as vulnerable by the nature of their vulnerability, but by their personal circumstances at the time of the emergency<sup>4</sup>."

To help define and contextualise vulnerability, PROACTIVE used a flexible framework built on five essential function-based needs that should be met for all persons: Communication, Medical/health, maintaining functional Independence, Support, safety & self-determination, and Transportation, known as CMIST<sup>5</sup>.

Knowing this, practitioners can better prepare themselves and take the necessary steps to ensure the right support is in place for persons with vulnerabilities during CBRNe incident response.

1. Chen, J.; Wilkinson, D.; Richardson, R.; Waruszynski, B. (2009): Issues, considerations, and recommendations on emergency preparedness for vulnerable population groups. In: Radiat Prot Dosimetry. 134(3-4): p. 132-135. DOI: 10.1093/rpd/hcp083

2. Gjøsaeter, T., Radianti, J., & Chen, W. (2019). Understanding Situational Disabilities and Situational Awareness in Disasters. In Z. Franco, J. J. González, & J. H. Canós (Eds.), Proceedings of the 16th International Conference on Information Systems for Crisis Response And Management. Valencia, Spain: ISCRAM.

3. World Health Organization & World Bank. (2011). World report on disability 2011. World Health Organization.

4. ISO (International Organization for Standardization) (2018): ISO 22395. Security and resilience - Community resilience - Guidelines for supporting vulnerable persons in an emergency.

5. Kailes, J., Enders, A., (2007) Moving Beyond "Special Needs": A function-based framework for emergency management and planning. JDPS, 2007. 17: p. 230-237. DOI: 10.1177/10442073070170040601



## A Human-centred Approach

The project used **social science and humanities (SSH) methods**, such as surveys, workshops, interviews, focus groups and observational coding of behaviours. In addition, the project facilitated face to face interaction between CBRNe practitioners and citizens.

PROACTIVE first ran a tabletop exercise, where practitioners and civil society came together to learn about one another's expectations.

Then, together with the EU H2020 project eNOTICE and their training centre partners, PROACTIVE co-organised **three field training exercises**. What made these exercises unique is that the public at large, including vulnerable groups, took on the role

of volunteer victims instead of the usual practice of actors or off-duty first responders.

Practitioners and representatives of civil society worked together with the PROACTIVE Consortium through an iterative design process to **co-create several tools**:

- ▼ Core Recommendations,
- ▼ Pre-Incident Public Information Materials,
- ▼ Crisis Communication System,
- ▼ Aide Memoire for training exercises involving vulnerable groups, and
- ▼ Policy Making Toolkit.

PROACTIVE sought to bring together CBRNe practitioners and civil society, including representatives of vulnerable groups.



This was done by involving key stakeholders in the consortium and creating three advisory boards: one for practitioners, one for civil society and one for ethical experts.

**The PROACTIVE project is made up of consortium partners**

**8 Law Enforcement Agencies (LEAs)** with various profiles (national emergency service, specialised in CBRNe, national Police forces, defence, Police University)

**2 Practitioners** (railway operator, public health organisation)

1 research institute / academia

**3 SMEs** (solution providers with commercial involvement, SME specialised in ethics)

1 international railway association

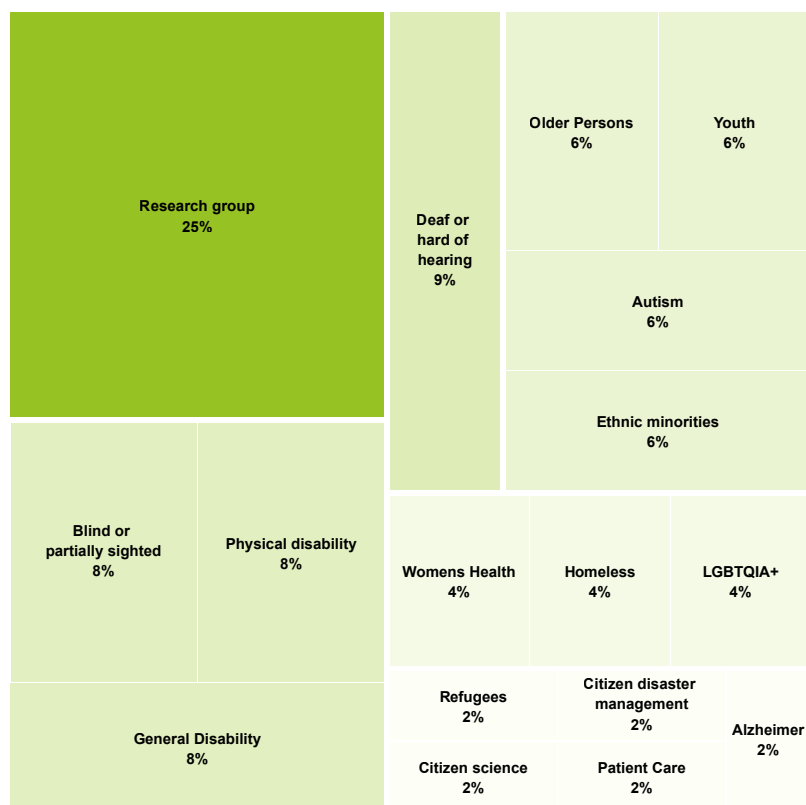
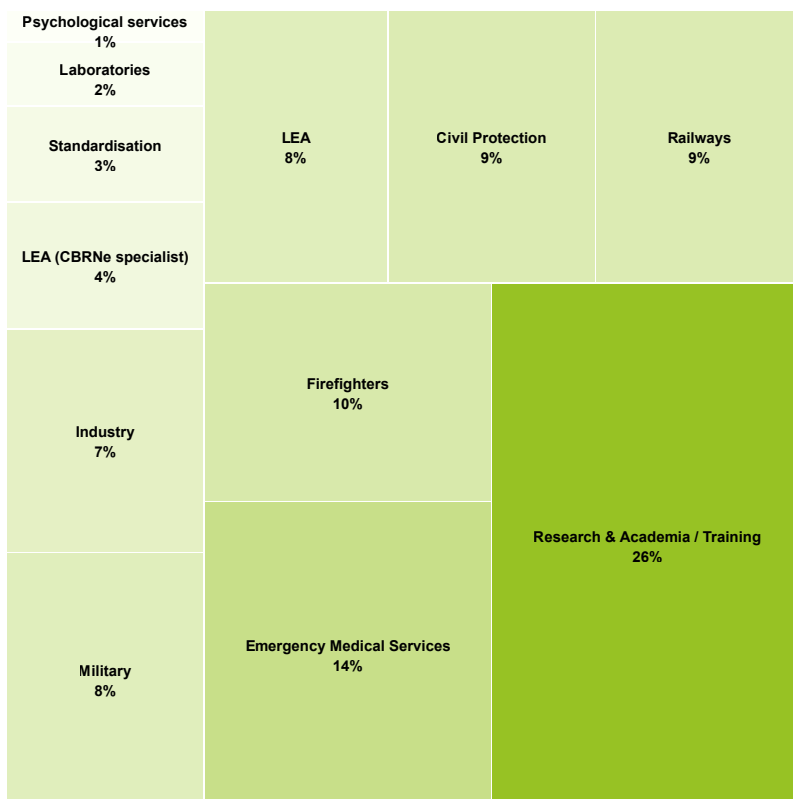
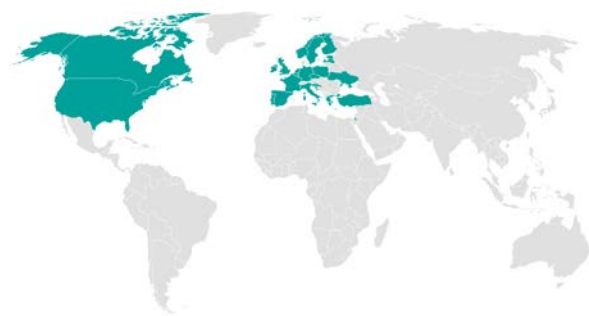


## The Practitioner Stakeholder Advisory Board (PSAB)

The PSAB represented an international panel of experts from different areas of knowledge and practice and with diverse levels of experience in emergency management or CBRNe response.

It also covered the key CBRNe practitioner categories.

100+ member organisations

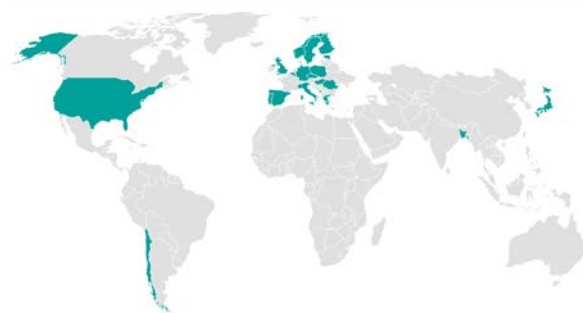


## The Civil Society Advisory Board (CSAB)

The CSAB covered civil society organisations (CSOs) representing a wide range of citizens of different ages, backgrounds and abilities.

This dedicated board helped PROACTIVE achieve the disability rights movement's motto "Nothing About Us, Without Us."

50+ member organisations



## The External Ethics Advisory Board (EEAB)

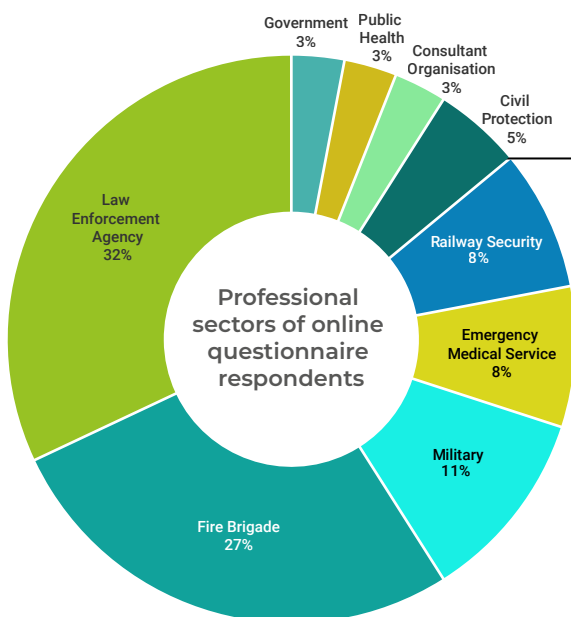
The EEAB was made up of several independent ethics experts.

# DESK RESEARCH ACTIVITIES

The main desk research activities consisted of:

## Literature Review

We reviewed 95 guidance documents - Standard Operating Procedures (SOPs) and policy papers - from 18 different countries and performed a systematic literature review of human factors which influence CBRNe preparedness and response, studying 41 academic papers.

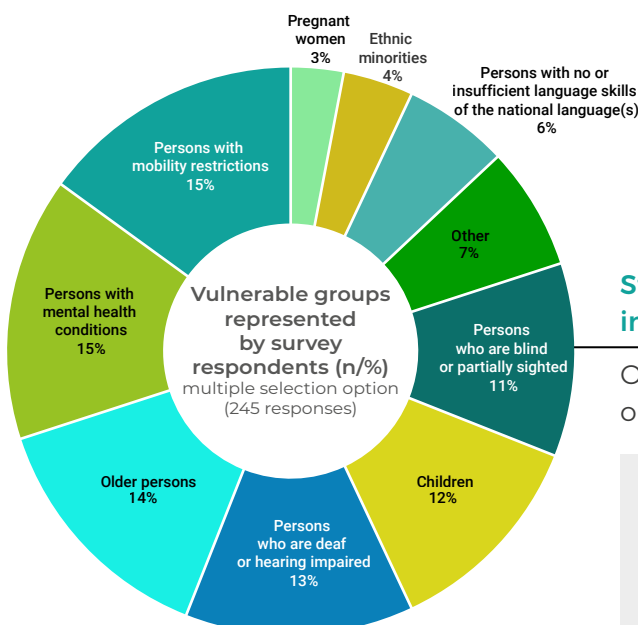


## Study of CBRNe and other relevant SOPs

Online Survey with 37 respondents and an Online Live Poll during a workshop designed to understand practitioners' views of said SOPs with 32 participants.

## Study of first responders gaps in dealing with citizens

Online questionnaire with 405 practitioners and interviews with 48 of them.



## Study of citizen expectations regarding CBRNe incidents

Online questionnaire with 91 civil society organisations.

The combined results from these research streams were used to create the PROACTIVE Core Recommendations

## PROACTIVE CORE RECOMMENDATIONS

### Recommendations for better SOPs

1. Ensure CBRNe SOPs and guidance documents are uniform in instruction and evidence-based regarding communication, likely public behaviour and how to enhance public compliance
2. Include the needs and expectations of civil society, and especially those of vulnerable groups, as well as plans on how to engage with such groups (e.g., relating to service animals or mobility aids), in CBRNe SOPs

### Recommendations for better cooperation

3. Ensure roles and responsibilities of all practitioners are clear both inter and intra organisationally
4. Develop systems of joint cooperation between practitioners
5. Increase cooperation between CSOs and practitioners involved in CBRNe

### Recommendations for better trainings, public awareness and public communication

6. CBRNe training should happen more often and should include CSOs and persons with vulnerabilities and their carers, and as such, could be designed to challenge the capabilities and capacities of first responders to manage diverse groups of people
7. Implement information campaigns and education to build CBRNe public knowledge to increase awareness and do so in an accessible way
8. Ensure communication about incidents is done in an inclusive and accessible manner

### Recommendations for the response phase

9. During the response phase, keep significant others together and actively involve caregivers in supporting vulnerable persons
10. Attach a photo to practitioner's Personal Protective Equipment (PPE) that shows themselves without protective gear in order to reduce fear levels in the affected population
11. Develop a brief medical triage checklist that may be used to expeditiously identify potential vulnerabilities among those affected by a CBRNe incident straight away



# PRE-INCIDENT PUBLIC INFORMATION MATERIALS

PROACTIVE aimed to help raise awareness about CBRNe threats within the general public. Effective public information materials are therefore a key component of the toolkit for civil society developed in the project.

**Development** of an initial version of pre-incident public information materials was based on:

- i. Findings from two systematic reviews (academic literature and guidance documents) and
- ii. Workshops with the PSAB & CSAB.

**Evaluation** of the developed material then took place through:

- ▼ Eight public focus groups (with 36 participants in total) in the UK and
- ▼ Two surveys (pre- and post- focus group)
  - Where 86% self-identified as being part of a vulnerable group.

**Co-creation** methods were then employed to further improve the materials in an iterative design process, leading to a total of seven iterations studied. These included:

- ▼ Regular feedback from the PROACTIVE consortium LEAs (through progress meetings) to obtain the practitioner perspective and ensure alignment with SOPs,
- ▼ A longitudinal survey,
- ▼ CSAB focus groups,
- ▼ Implementation in three PROACTIVE exercises, and
- ▼ Public focus groups in several European countries (France, Norway, Poland, Spain & Sweden).

**Final results** from the work conducted in developing these materials demonstrated there is a **positive view** of the PROACTIVE Pre-Incident Public Information Materials. They can **effectively influence knowledge, understanding and confidence in undertaking recommended behaviours** over the long term (for at least six months).

The final materials presented herein represents the evidence-based, stakeholder-led best practice version.



## Pre-Incident Public Information Materials for CBRNe Incidents

The information in this document outlines the steps you can take to protect yourself in the initial stages of an incident involving the release of a hazardous substance. Emergency responders refer to these as CBRNe incidents - where the letters stand for Chemical, Biological, Radiological, Nuclear, or explosive (CBRNe). The incident described in the following scenario is an example of this type of incident:

*Mid-morning, you and other passengers, are awaiting to board a train at a Railway Station when there is a loud noise from up the railway track followed by a cloud of gas which drifts onto the platform. The passengers show signs of irritation, such as coughing, breathing difficulties, and streaming eyes.*

In this example, a hazardous substance may have been released, and is causing symptoms in the passengers. The information on the following pages outlines steps you can take in this scenario.

### PLEASE NOTE!

The yellow splodges in the following images represent a hazardous substance and indicate danger. In reality, some harmful substances may not be visible.



If you think you have been exposed to a potentially harmful substance, whether you can see it or not, **move away from the hazard as soon as possible** to prevent any further contact with the substance. Get fresh air if possible – this can help with any symptoms you are experiencing.

While you should move away from the hazard, you should remain in the general area as emergency responders will soon arrive to help you. While you are waiting you should avoid doing the following things:

1

**Do not eat, drink, smoke or touch your face to avoid swallowing any potentially harmful substance.**



**Remove your outer clothing.** This will help to remove any harmful substances. Remember that not all harmful substances will be visible, so you should remove your outer clothing even if you think there isn't any substance on you. When removing your outer clothing **try to avoid pulling any clothes over your head**. If this is not possible, try to avoid clothing touching your face whilst removing over your head.

2

3

**If any of your skin has the potentially harmful substance on it, use a dry tissue or similar absorbent materials to either soak it up or brush it off.** This will help to remove the substance from your skin. If your skin is itchy or burning, then rinse the affected area continually with as much freshwater as possible.





**Avoid coming into contact with other people**, where possible, to prevent spreading any substance.

4

5

**Minimise contact with your surroundings.**  
Not all hazards are visible.

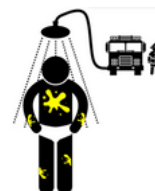


**When first responders or authorities arrive, make sure you listen to any instructions they give you.** Responders will also provide specialised assistance to vulnerable individuals.

6

7

Emergency responders or authorities may also ask you to **remove your clothing to your underwear and then wash yourself all over** in a shower system that they will set up.



**You should not put your old clothes back on after removing the substance from yourself.** Emergency responders will help to provide you with clean clothing.

8

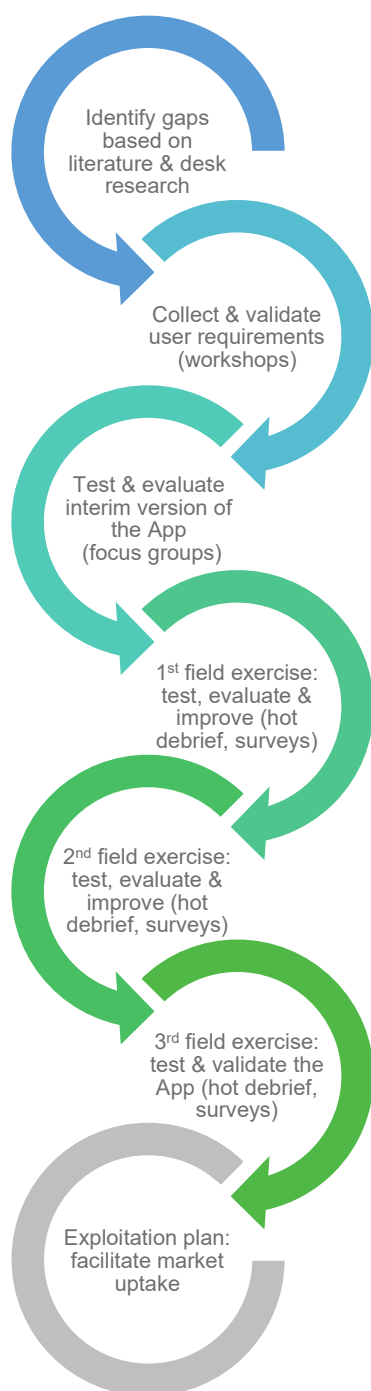
### To protect yourself in a CBRNe incident, remember to:

- Move away from the hazard as soon as possible
- Do not eat, drink, smoke or touch your face
- Remove your outer clothing, try to avoid pulling any clothes over your head
- Use a dry tissue or similar absorbent materials to either soak up or brush off the hazardous substance
- Continuously rinse your skin with water if you have symptoms of itching or burning
- Avoid coming into contact with other people
- Minimise contact with your surroundings
- Make sure you listen to instructions from emergency responders
- Remove your clothing to your underwear and then wash yourself all over in the shower system set up by emergency responders
- Do not put your old clothes back on after removing them

# PROACTIVE CRISIS COMMUNICATION SYSTEM

The PROACTIVE CBRNe Crisis Communication System is an innovative response tool which improves two-way communication between civil society and first responders. It also increases preparedness through its CBRNe Library.

## Iterative, Co-creation method



It is composed of three tools: the Web Collaborative Platform for LEAs, the Modular App for Practitioners, and the Mobile App for the public, available in both iOS and Android. All three tools are powered by the dedicated PROACTIVE CBRNe backend and are differentiated by access rights.

## Development

**Co-creation** through 3 workshops and 3 focus groups made certain the needs of the target end-users were met while ensuring sustainability.

In addition, PROACTIVE invited observers of the three field exercises to take on the role of witness to a CBRNe incident by using the Mobile App. After the exercise, a questionnaire was used to collect feedback.

An updated version of the app was created after each feedback loop, allowing for an **iterative design process**.

The seven principles of **Universal Design** were at the heart of development:

1. Equitable use,
2. Flexibility in use,
3. Simple and intuitive use,
4. Perceptible information,
5. Tolerance for error,
6. Low physical effort, and
7. Size and space for approach and use.

This, combined with the cocreation activities, allowed the PROACTIVE Crisis Communication System to ensure **Accessibility**. Some concrete examples include:

- ▼ User-friendly interface with large buttons,
- ▼ Availability in several languages,
- ▼ Compliance with text-to-speech readers thanks to the formatting of headings, lists, graphics and logos, sequences and hierarchies,
- ▼ Data minimization by design.

The back-end ensures the system's security, modularity, flexibility and compatibility with other communication systems and applications, such as existing tools used by practitioners, existing early warning systems, etc. This will greatly facilitate the tools' market uptake beyond PROACTIVE.

## Key Features

### Incident List

Available to all users, the incident list showcases past and ongoing incidents. It also displays them on a scrollable map.

### Report an Incident

Citizens who are registered users may use the app to report an incident to LEAs.

LEAs can monitor the information received, improving their situation awareness, and provide regular updates about ongoing incidents to citizens through notifications (both push and in-app).

### CBRNe Library

The CBRNe Library is a repository for preparedness information materials and is available to all users.

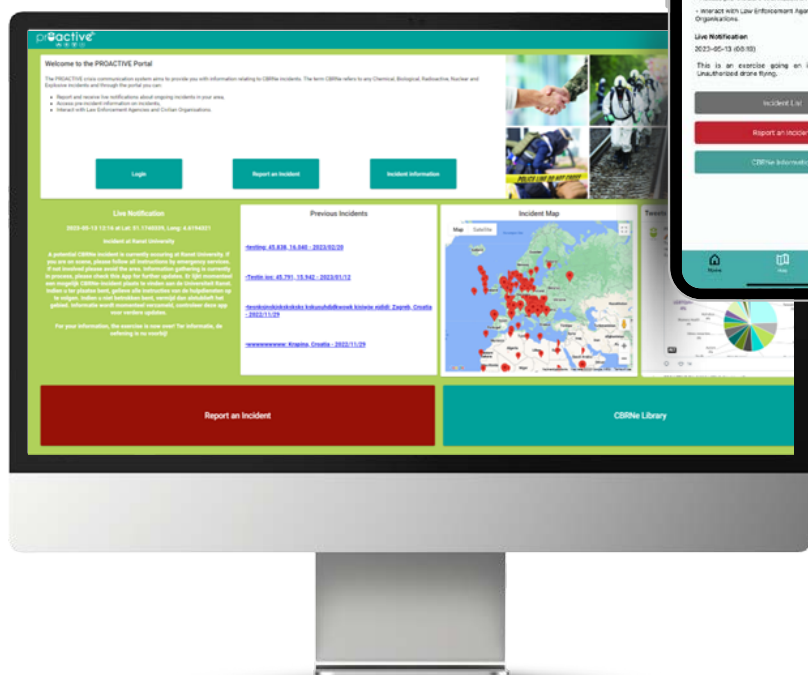
LEAs may use the Library to store confidential information shared only amongst other first responders.

### News

The news section provides third party information about any ongoing CBRNe incident.

**Other features include:** an About section, LEA and Civil Society contacts, Help and FAQ, Privacy Policy, Other Apps, My Profile and Settings features.

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## PROACTIVE ETHICAL FRAMEWORK

PROACTIVE ensured that an ethical approach was applied in the involvement of the public at large, including vulnerable groups, in the exercises. The PROACTIVE Ethical Framework is based on a **Human Rights Approach to vulnerability**.

**Social Justice** principles were applied when identifying and recruiting volunteer role players, based on the CMIST framework.

**Privacy** needs, especially considering special categories of personal data when dealing with identifying vulnerable persons, were achieved by going beyond the strict application of the EU General Data Protection Regulation. In this regard, participants were informed their personal data would be protected and a robust data security strategy was planned and implemented.

**Dignity and Respect for Persons** were ensured through the Ethics Risk Assessment Template, welfare support was provided to all participants (transport, reception, food and breaks), combined with implementing health and safety risk assessments and briefings.

**Stewardship** involved sufficient insurance coverage, maintaining an accident book and ensuring strict ethical oversight of the exercises. This duty was performed by both the Project Ethics Officer and a member of the EEAB.

Furthermore, an explicit ethical dimension was added to the CMIST framework in the PROACTIVE Aide Memoire.



*C-MIST Framework<sup>5</sup>Image: [www.phe.gov](http://www.phe.gov)*

## JOINT PSAB-CSAB WORKSHOP AND TABLETOP EXERCISE

More than 40 participants from 15 different countries, representing LEAs, firefighters, medical responders, rail security experts, and vulnerable civil society organisations.

The scenario involved a CBRNe incident on a regional passenger train. Discussing the scenario together identified gaps between first responders' intended actions and vulnerable citizens' needs. A key concern was the decontamination of guide dogs.



## THREE FIELD TRAINING EXERCISES

Emergency exercises are essential to prepare for crisis or disaster, and especially for CBRNe incidents, as these require specialised response actions which may be unfamiliar to the public, including vulnerable groups.

Jointly with the EU funded H2020 project eNOTICE and their training centre partners, PROACTIVE co-organised three field training exercises over the course of the project, where the public at large were recruited as role play victim volunteers.

This is something that has rarely been done before.

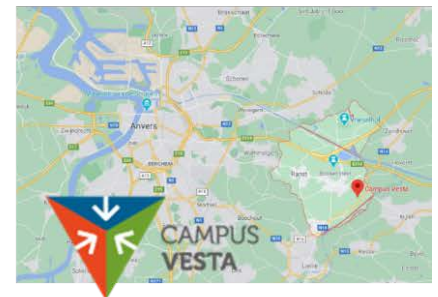
1. Dortmund, Germany (May 2022)



2. Rieti, Italy (Nov 2022)



3. Ranst, Belgium (May 2023)



By involving people with vulnerabilities in field training exercises, responders are provided with an opportunity to see how well their SOPs take into account the needs of vulnerable groups. It also provides an opportunity to deal with mistakes or failures in a safe environment, as part of the learning process, ensuring the needs of all citizens will be better met in a real-life CBRNe incident.

Role play volunteers also benefit by increasing their preparedness for CBRNe incidents, leading to an overall increase in societal resilience.

**PROACTIVE ensured that at least 15% of role play volunteers represented a vulnerable group.**

### PROACTIVE Strategic Objective for all three exercises

In partnership with eNOTICE, evaluate the effectiveness of responses to a CBRNe incident focusing on harmonisation of procedures and tools that support the needs of civil society, including those citizens that are vulnerable.

**PROACTIVE studied the interactions between CBRNe practitioners and members of civil society**



## First field training exercise: Dortmund

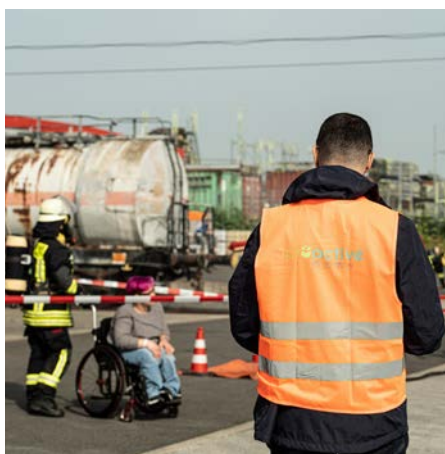
On 7 May 2022, the first PROACTIVE field exercise was hosted by the Dortmund Fire Department (FDDO) Training Centre in Dortmund, Germany. The scenario, which focused on the Specialist Operational Response of decontamination, simulated an unplanned chemical release from a railway freight train.

**20 volunteers**  
**50% vulnerable**

“Contaminated” smoke reaching a group of citizens who were waiting at a nearby station.



Overall, evaluators found the exercise improved the confidence and knowledge of the volunteers.



While responders were able to identify vulnerabilities, they were not able to effectively support and assist vulnerable individuals.

This reduced perceptions of responder legitimacy among the volunteers.



“They tried their best and when I came to the tent, a blind person, but they didn’t know how to deal with it.”

– Quote from the volunteer focus group





## Second field training exercise: Rieti

Hosted by the NBC Defence School and University of Rome Tor Vergata, the exercise scenario involved a chlorine leak near a passenger train. It included Initial Emergency Response (evacuation of the train carriage), securing the warm zone, and deployment of a Specialist Operational Response (decontamination).



Overall, evaluators identified some clear strengths related to the way in which the exercise was both administered and received by volunteers.

**30 volunteers**  
**50% vulnerable**

However, there were also lessons to be learned around best practice for engaging with both members of vulnerable groups and ensuring high quality communication with casualties.



Volunteers demonstrated a great attitude in terms of their willingness to learn more about CBRNe hazards.



Volunteers stated their interest in collaborating with and supporting the work of specialised responders so as to minimise the impact on the community as a result of the incident. Furthermore, the practitioners greatly benefited from the opportunity to train with the public at large.



### Third field training exercise: Ranst

Organised by Campus Vesta, the exercise scenario involved malicious actors placing a biological agent into a cake that was eaten during a university reception, whereby those same malicious actors appeared and threw an unknown chemical powder on the attendees. This multi-agency exercise response involved the Belgian Emergency Response capacity teams. The exercise was focused on both initial (triage) and specialist (decontamination) operational response.



The exercise was an opportunity to examine whether the pre-incident public information had any effect on volunteers' attitudes and behaviour. Half of the volunteers received the materials, whereas the other half did not.

Evaluators from the project observed some volunteers following the protective actions that would reduce the adverse effects of the hazards, such as improvised decontamination and removal of outer layers of clothing.

**55 volunteers**  
**60% vulnerable**



First responders sought to identify and support those with additional functional needs and vulnerabilities.



Insights were captured in a children's focus group, where they spoke about their experiences interacting with first responders and whether they felt their voices had been heard.





# AIDE MEMOIRE FOR TRAINING EXERCISES INVOLVING VULNERABLE GROUPS

Including vulnerable groups in CBRNe training exercises requires an identification of their needs and how to enable them to take on this key role. **This is a very challenging process but has high benefits.** PROACTIVE did just that during the three field exercises.

Based on lessons learned from this experience, we developed an Aide Memoire for training exercises involving vulnerable groups. It is intended as a high-level guide for exercise planners to ensure the needs of European citizens are met, especially those who may be vulnerable.

The Aide Memoire should help exercise planners prepare for diverse citizen participation in their exercise and training activities.



## Communication (and understanding)

### Planning Stage

- Age
- Communication aids
- CSO consultation
- Culture
- Extended recruitment times
- Guidance and information (multiple formats and channels)
- Multiple media
- Nationality
- Neurological issues
- Noise
- Non-verbal communication
- PPE interference with communication
- Sign language
- Signage

### Exercise Day

- Remember **STROKE**:
  - Speak (or sign or gesture) clearly and simply
  - Take your time
  - Remember that they are People
  - Observe their body language
  - Know them and their preferences
  - Encourage and assure them
- Successful communication needs all steps of the communication loop to work, a break or failure anywhere can cause a breakdown in communication

## Medical and Health Needs

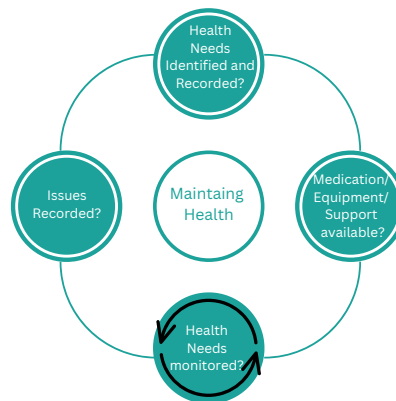
### Planning Stage

- Allergies and sensitivities
- Atmosphere
- Capacity to consent
- Consent forms
- Duration and time of day
- Emergency code words
- Enhanced every-day needs
- First aid (maybe specialist)
- Health monitoring and recording
- Information and guidance
- Medicines
- Welfare



## Medical and Health Needs

### Exercise Day



## Independence and Inclusion

### Planning Stage

- Accessibility of site
- Accidental discrimination
- Age and age related impairments
- CSO consultation
- Culture, religion, sexual orientation
- Degraded personal senses
- Physiognomic suitability
- Scope agreement
- Security of support equipment and devices
- Suitable reception areas
- Support equipment and animals

### Exercise Day

- One size, does not fit all
- Tell people what you need to achieve
- Let them tell you how to help them
- Follow their guidance – they know what works for them better than you do
- Work with them and ask them to help you

## Safety, Support & Safeguarding

### Planning Stage

- Briefing and de-briefing arrangements
- Carers kept with volunteers
- Code of conduct
- Equipment Safe
- First Aid / Ambulance
- Informed Consent
- Property Security
- Risk Assessments specific to Vulnerabilities
- Safeguarding Arrangements
- Safeguarding Training

### Exercise Day

- **Safety** – ensure volunteer's continued safety throughout the exercise
- **Safeguard** – ensure that vulnerable volunteers are safeguarded throughout the exercise
- **Autonomy** – encourage volunteers to do what is required of them rather than trying to compel them
- **Competence** – give guidance and direction so that volunteers can understand and feel in charge of and safe in their own actions and responses
- **Humanity** – show compassion and understanding and connect with volunteers as humans

## Transport, Movement and Mobility

### Planning Stage

- Allow extra time
- Chaperones
- Nominated transport manager / co-ordinator
- Overnight accommodation
- Post decontamination clothing
- Public transport timetables
- Signs
- Site accessibility (ramps, slopes, surface)
- Specialised transport
- Sturdy footwear
- Suitable parking
- Suitable transport

### Exercise Day

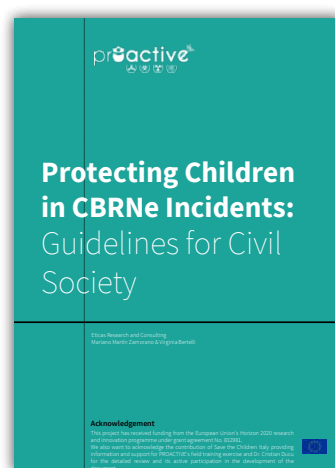
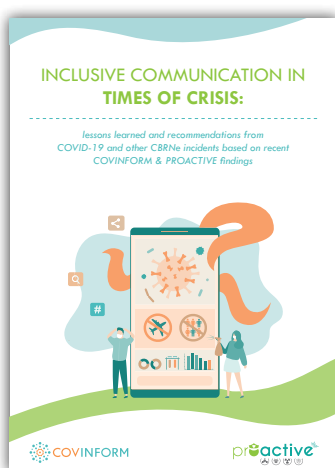
- Transport on time (Delays, accidents, crashes etc.)
- Routes clearly signed
- Routes obstruction and traffic free
- Lifts and aids in working order
- Surfaces suitable/Good grip

# POLICY MAKING TOOLKIT

The policy making toolkit is composed of one white paper, two policy briefs and one guideline for Civil Society Organizations. Altogether, they comprise targeted protocols for each stakeholder. Moreover:

1. Joint publication with the EU-funded project COVINFORM highlights what is lacking in good crisis communication and how this can be improved
2. The CBRNe toolkit for policy makers brief provides evidence-based guidance on including the needs of vulnerable citizens before, during and after a CBRNe event
3. The Protecting Children in CBRNe Incident brief addresses the management of children in such incidents and provides critical recommendations for civil society organisations working with minors to promote their safety in these situations
4. Improving interaction between First Responders and Civil Society in CBRNe Incidents brief provides an assemblage of recommendations and best practices for policy makers so they can facilitate the interaction between first responders and civil society organisations before, during and after a CBRNe event.

Furthermore, PROACTIVE published recommendations for the management of the PROACTIVE Crisis Communication System.



## WORKSHOP ON STANDARDISATION POTENTIAL

The aim of the workshop, held in March 2023, was to identify which PROACTIVE outputs might have good standardisation potential as part of the post-project exploitation strategy.

A group of experts from international, European, and national standardisation bodies who are members of the PSAB standardisation subgroup, as well as representatives of EU-funded projects PEERS & STRATEGY, were invited to review the core PROACTIVE recommendations and help identify which elements have a standardisation potential.

Experts at the workshop found the results of the project bring to light current gaps and could be further carried on in various standardisation technical committees such as the: ISO TC292 WG3 Emergency Management, ISO TC292 WG5 Community Resilience, CEN TC391 Societal Resilience. Some recommendations also have close ties with existing standards, such as the ISO 22395 – Guidelines for supporting vulnerable persons in an emergency.

## LOOKING FORWARD

The PROACTIVE research and innovation results along with the project's actionable resources will help end-users take the project's impact beyond the life of the project. For example, the PROACTIVE Stakeholder Engagement Model can be used by other projects and is likely to facilitate the uptake by end users of crisis communication systems.

Moreover, the Aide memoire can help any training centre or exercise planner organise more inclusive training exercises, while the public information materials can help create public awareness on CBRNe in society and – as an open resource – can be further adapted by any organisation or government.

The PROACTIVE results will also allow the project coordinator (UIC) to further study the cooperation between critical infrastructure operators and authorities and to further apply the PROACTIVE recommendations on CBRNe risks and threats to passenger rail and metro sectors. For example, PROACTIVE already helped to inform strategies to better prepare railway stakeholders against CBRNe threats through better cooperation with security practitioners. These principles are already being applied in other EU-funded projects coordinated by UIC.



## CONCLUSION

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Over a period of 52 months and with a budget of 4.97 M€, 15 consortium partners came together with 100+ practitioner organisations and 50+ civil society organisations to co-create useful, easy-to-use tools for CBRNe preparedness and response. These tools are the PROACTIVE:

- ▼ Core Recommendations,
- ▼ Pre-Incident Public Information Materials,
- ▼ Crisis Communication System,
- ▼ Aide Memoire for training exercises involving vulnerable groups, and
- ▼ Policy Making Toolkit.

By including the public at large as volunteer role play victims in field training exercises, PROACTIVE brought people into the heart of CBRNe incident preparedness. This enabled vulnerable groups to directly voice their own needs while providing CBRNe practitioners with an opportunity to test their SOPs and learn in a safe environment. Civil society involvement, whether through the CSAB or as volunteers, has helped increase societal resilience.

Thanks to the hard work of all involved, the PROACTIVE project has increased practitioner effectiveness in managing large, diverse groups of people in a CBRNe environment.





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