

NEWSLETTER

H2020 INCLUDING PROJECT STATUS. THE ESSENTIAL ROLE OF TECHNOLOGY IN CBRNE EVENT MANAGEMENT

The last six months of our project have been polarized by two Joint Actions (JAs) carried out in Mikkeli (Finland) and Saclay (France). The scenario of the two JAs was selected following the indication from Task 3.1 of the project and devoted to evaluate how RN threats are evolving in the nuclear security domain. The main driver behind the scenario building process was the evidence that the transport of radiological materials by road has been steadily growing in recent years at the global level. Despite being strictly ruled by standardized procedures, transports on road are intrinsically exposed, among other risks, to the assaults from criminals who cannot be fully aware of the presence of hazardous materials. From that moment ahead, the transported radiological sources are out of regulatory control and hence all planned measures must be activated. Regardless of the scale of the emergency, in these scenarios, technologies are essential for source detection, identification, and recovery, for assessing if contamination of people and of the environment occurred, for bringing back the sources under regulatory control, and for restoring the pre-crisis conditions. The testbeds of Mikkeli and Saclay have offered ideal settings to test how new technologies can be integrated into well-established intervention plans approved at the national/regional/provincial level in Finland and France.

In the “Technical Corner” section of this newsletter is described a UAV system equipped with a radiometric measurement device and successfully deployed in Mikkeli in a source search mission.

SUMMARY OF THE INCLUDING RECENT ACHIEVEMENTS

- *Joint Action in Mikkeli (Finland)*
- *Joint Action in Saclay (France)*
- *Report on NATO and NATO-Associated RN Training Courses (ISCC);*
- *Publication of open access article on Journal of Applied Mathematics and Physics (ISCC)*
- *Intermediate Note “Evolution of RN threats” (IAI) released for public dissemination*
- *Calvarina Base, operated by SAFE, new testbed in the INCLUDING Federation;*
- *D2.6 “5th Report on Cluster Facilities and Resources Sharing” submitted to the EC*



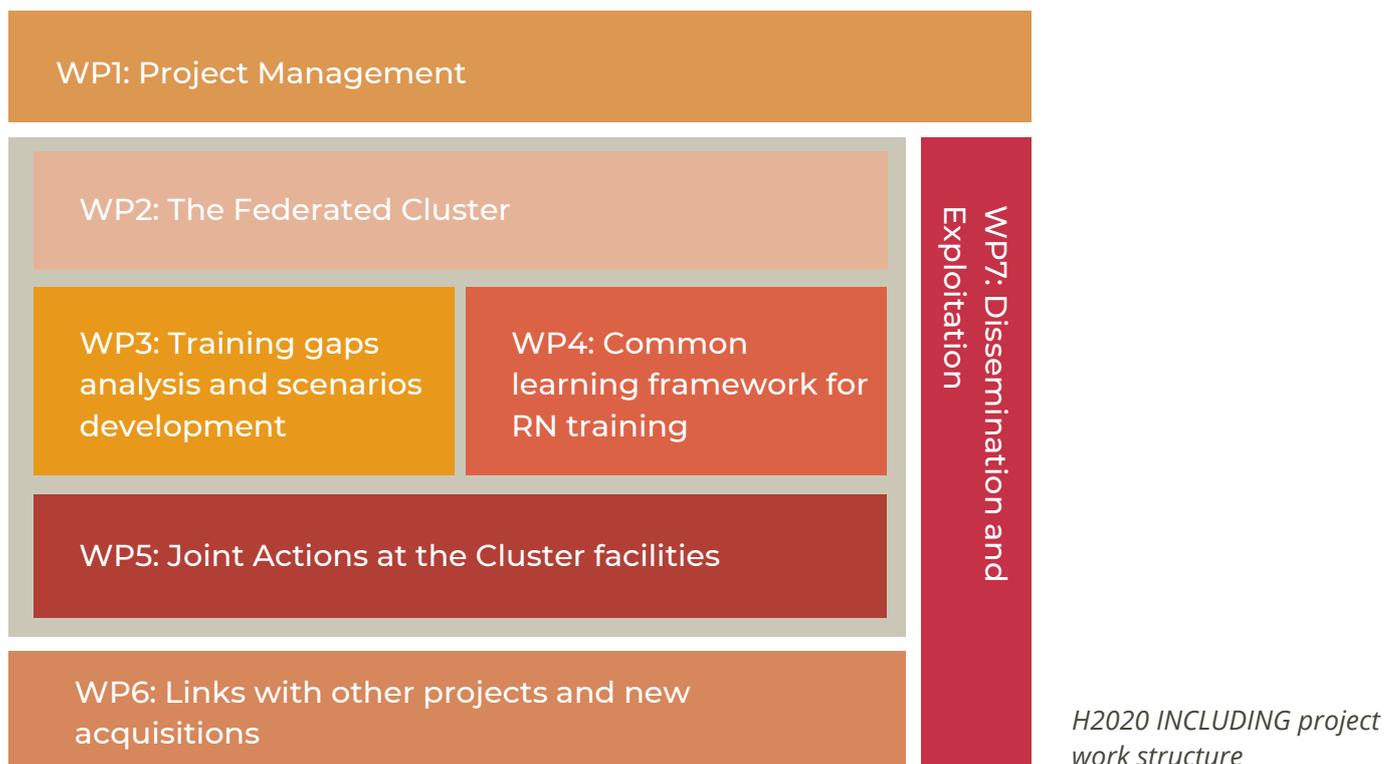


During this period ISCC (Internationa Security Competence Centre G.m.b.H.), as part of the activities of WP4 of INCLUDING, has released the final version of the document “NATO and NATO-Associated RN Training Courses: Overview” and published an open-access article on *Journal of Applied Mathematics and Physics* with the title “EU INCLUDING: Development of radiological and nuclear training learning objectives”.

INCLUDING is also proud to announce that our Federation of European testbeds for RN training and exercise activities is growing and with the recent adhesion of the Calvarina Base, a former NATO base in the province of Verona, North of Italy. Calvarina Base is now operated by SAFE (Security And Freedom for Europe) foundation, a private organization committed to sustain innovation in the CBRNe field.

Moreover, the project is moving forward with the organization of new events planned during 2022 and that are described in this newsletter.

A section of the newsletter is devoted to collaboration with other projects, a key activity for INCLUDING while this time the “Meet the Expert” section include an interview to Mr. Silmäri Jyri from South Savo Rescue Service.



H2020 INCLUDING project work structure



THE 2ND INCLUDING JOINT ACTION

A MULTI AGENCY EXERCISE CONDUCTED IN MIKKELI (FI) FROM 13TH TO 16TH SEPTEMBER 2021

The Karkialampi military base of Mikkeli (Fi) hosted on 15th September 2021 the second Joint Action of the INCLUDING project. It was a **Field Technical Exercise (FTX)** organized by the South Savo Fire Department (SSAV) in collaboration with Miksei Ltd and with an incident scenario caused by **four 137Cs orphan sources**. Various civilians were exposed accidentally to one of the radiation sources, while the remaining three were recovered in the nearby area after search missions. Several civil local authorities, the local hospital and military forces have been involved in the management of the crisis. The four sealed 137Cs sources were made available by the Finnish Radiation and Nuclear Safety Authority (STUK). **Thirty-five observers from 9 different countries** participated in physical presence. The preparatory activities before the FTX included a presentation of the exercise on 13th September and a final dry-run on 14th September 2021. On 16th September 2021, an evaluation session has been held in the conference room of the main hotel in Mikkeli. The Mikkeli FTX was designed to **activate the provincial/regional current capabilities to respond to a small-scale radiological incident** and identify areas for improvements in procedures and pave the way for the adoption of new technologies.



2nd JOINT ACTION
13-16 September 2021, Mikkeli, Finland

THE 2ND INCLUDING JOINT ACTION

A MULTI AGENCY EXERCISE CONDUCTED IN MIKKELI (FI) FROM 13TH TO 16TH SEPTEMBER 2021

The exercise tested multiagency coordination mechanisms, identified requirements for scientific support and validated practices to share information during operational activities. It also assessed Mikkeli area Testbed to sustain the development of the INCLUDING Federation seen as a network of practitioners in the RN sector aimed at improving resources and knowledge sharing, adoption of best practices and interoperability at the EU level.

The experimental/technological dimension of the Mikkeli Joint Action has been a collaboration between ENEA, the National and Kapodistrian University of Athens, Fraunhofer IVI, STUK, Mirion and Environics.

The INCLUDING JA in Mikkeli raised the interest of the local media with headlines on regional newspapers and detailed TV reportages.

A short video on the event is available on the “Movies” section of the project website. The whole recording of the FTX may be requested from the project coordinator if useful for training purposes.



2nd JOINT ACTION
13-16 September 2021, Mikkeli, Finland



THE 3RD INCLUDING JOINT ACTION

A FIELD EXERCISE CONDUCTED IN SACLAY (FR) FROM 20TH TO 22ND OCTOBER 2021

The CEA (Commissariat à l'Energie Atomique et aux Energies Alternatives of France) centre of Saclay hosted on 21st October 2021 the third Joint Action of the INCLUDING project. The Saclay centre is located in the Essonne department, 20 kilometres from Paris. The center is the reference point for nuclear research in France and with eight operative nuclear installations. It is equipped with top-class infrastructure and equipment for prevention, response and mitigation to on-site RN emergencies. Training and exercises activities are regularly carried on and with updates to new technologies and procedures. The exercise consisted in showing the actions planned by CEA in case of **intervention in a radiological emergency of local scale**. The entities intervening in such a situation are the CEA Radiation Protection Service (SPRE), the CEA Safety Service (FLS) and the CEA Medical Service (SST). The Saclay Joint Action was conducted in Area 500 of the CEA centre. It is an area qualified for **exercises with the use of real radiological sources** that in the specific case of the INCLUDING JA were based on **^{137}Cs and $^{99\text{m}}\text{Tc}$ radionuclides**. There has been extensive use of devices and measurement systems developed in collaboration with the CEA Technological Research Department (CEA/DRT).



3rd JOINT ACTION
20-22 October 2021, Saclay, France

THE 3RD INCLUDING JOINT ACTION

A FIELD EXERCISE CONDUCTED IN SACLAY (FR) FROM 20TH TO 22ND OCTOBER 2021

In addition, it has been shown to participants also the use of innovative UGV and UAV technologies with radiation measurement capabilities and also in collaboration with the TERRIFIC H2020 project. The **40 participants, coming from 8 different Member States and the USA**, were introduced to the JA objectives on the afternoon of 20th October 2021. The exercise in Area 500 took place during the morning of 21st October 2021, while in the afternoon it has been presented to participants the mobile laboratory of IRSN (Institut de Radioprotection et de Sûreté Nucléaire) for internal contamination mass screening. The final evaluation session was held on the morning of 22nd October 2021 in the hall of the decommissioned nuclear reactor for research. Among the new technologies deployed in the Saclay JA, one that most attracted the interest of the participants has been the swarms of small drones equipped with radiometric detectors that accomplished a survey mission to map the radiation distribution on the ground.

A video report of the Saclay JA is available at the "Movies" section of the project website.



3rd JOINT ACTION
20-22 October 2021, Saclay, France

INCLUDING PROJECT NEXT EVENTS

2022 IS SET TO BE AN EXCITING YEAR FOR INCLUDING AND WITH DIFFERENT EVENTS PLANNED

On 23rd April 2022 INCLUDING will organize the “2nd Workshop on the Radiological and Nuclear Training Framework in the European Union”. The objective of the Workshop is to evaluate progress for improving collaboration and harmonization of training and exercise activities among Member States in the RN sector. The event will be held in an online modality and it will be the occasion to present the results of INCLUDING activities in this specific operative line of the project. The agenda and link for registration will be available soon on the project website.

From 13 to 15 June 2022 the Centre for Energy Research of the Hungarian Academy of Sciences (MTA-EK) in Budapest will organize and host the 4th INCLUDING JA and the 3rd Annual Workshop. Both the events will be focused on open issues in a relevant topic for INCLUDING like the management of a radiological crime scene. Experts from all over Europe will be gathering together in Budapest to discuss current criticalities on the matter also in light of emerging scenarios. The JA will be the possibility to test procedures, innovative technologies and to enhance knowledge of participants on radiological crime scene management. As in the tradition of INCLUDING, the JA will be followed by a plenary meeting where stakeholders will meet each other for evaluation and to raise consensus on the matter.

The Nuclear Security Department (NSD) of MTA EK

NDS covers research and practical application in the field of nuclear security and nuclear safeguards, as well as professional support for domestic and international organizations and companies. The research, method development and technical service tasks are carried out in several closely cooperating groups: non-destructive (gamma spectrometry and neutron measurement), destructive (mass spectrometry), dosimetry, instrument development, detection and mobile expert support team, and a detector testing laboratory. One of the main activities of the NSD is to participate in combating illicit trafficking of nuclear materials and nuclear terrorism (misuse of radioactive materials). NSD is carrying out scientific support activities related to the nuclear safeguards based on decades of relationships with the Paks Nuclear Power Plant, the Hungarian Atomic Energy Authority and the International Atomic Energy Agency.



*Nuclear Security Department MTA EK
source: MTA EK*

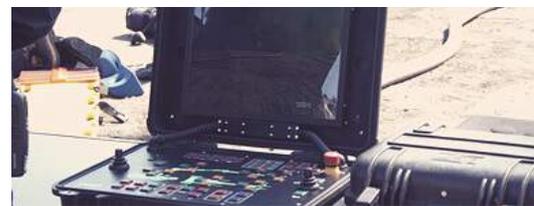
COMING SOON

INCLUDING PROJECT NEXT EVENTS

2022 IS SET TO BE AN EXCITING YEAR FOR INCLUDING AND WITH DIFFERENT EVENTS PLANNED

In September 2022 the ENEA Centre in Bologna (Italy) will organize the 5th JA of INCLUDING. An interactive Table Top Exercise that has been repeatedly postponed from the project's beginning in consequence of the current pandemic. The scenario is a nuclear security event in an urban area. The participants will also have the possibility to have hands-on training with innovative tools from technology providers in the sector. The specific scope and objective of the Bologna JA are the same as described in previous newsletters of INCLUDING.

For more information and updates stay tuned with the INCLUDING website and Twitter channel or write to including.project@enea.it



RN Training

A common learning framework for RN training



Crisis Management

Efficient and cost effective sharing and pooling of facilities and resources



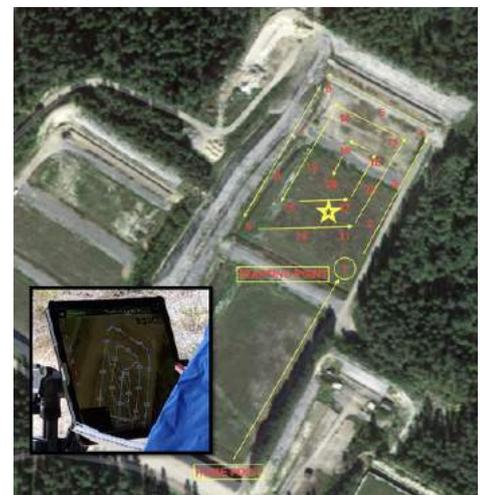
Cluster of RN Stakeholders

Open for the whole RN community

TECHNICAL CORNER: UNMANNED AERIAL VEHICLES

UNMANNED AERIAL VEHICLES (UAV) EQUIPPED WITH RADIOMETRIC SENSORS ARE BECOMING MORE AND MORE INTEGRATED IN FIRST RESPONDERS CAPABILITIES.

One of the most interesting tools used in the Mikkeli JA has been a UAV with a radiation system of measurement onboard and deployed for a radiological source search mission. The deployed system was the E-DRAD from ENEA composed of a commercial drone, DJI Inspire 228, equipped onboard with a Geiger Muller (GM) detector which can record radioactive decays with energies in the range 70 keV- 2 MeV. The GM has a length of 111mm and a radius of 11mm, the operating voltage is 350V, saturates a 30000cps. The GM counter is located inside a box made with a 3D printer that hosts also a Raspberry OS for the control and transmission of the data to the ground station through a radio channel at 868MHz. Data acquisition can be manual or automatic. In manual mode the operator decides when to acquire the data that are real-time transmitted. In automatic mode, data are acquired every 12s but stored on the Raspberry and not transmitted. Data acquired can be real-time visualized on a GIS map to produce georeferenced radiation maps. The drone can also operate in automatic flight mode. The UAV was deployed in a source search mission in the open-air area of the Karkialampi shooting range. The ENEA team decide to adopt a snail-like flight plan for the search. The drone remained for the 20s in a fixed position at a height of 10m in each one of the 20 points indicated on the map. Data acquired were real-time processed and isocurves of measured radiation intensity were identified and search refined in the middle of the one with the highest value. Finally, the identified source location, in GPS coordinate, was communicated to the Incident Commander who sent the operator of STUK to recover the source. The drone has been effective in accomplishing its task and within the time limits imposed by batteries lifetime and the snail-like path search has proven effective for rapid identification of the orphan source.



MEET THE EXPERT: JYRI SILMÄRI

Jyri Silmari is the rescue chief at SSAV and boasts extensive experience in taking part in EU projects as a partner and advisor. He has been working in fire services for over 40 years, as a fire officer, sub-officer, platoon chief, fire chief, and chief executive office of fire services. For most of his career, about 30 years, as a chief officer. In the chief's role, his area has been safety and security. As a training officer, he worked on field technical exercises with the police, armed forces, and hospital. He has been the coordinator of the INCLUDING Joint Action in Mikkeli.



Could you explain briefly the nature and extent of the South Savo Rescue Service (SSAV) activities?

SSAV has been a partner of different kinds of projects national and EU since 2004, mostly we have organised FTXes (field training exercises) and taken part in workshops in these projects. I have been a coordinator and leader in SSAV projects.

Last year, as a member of the project INCLUDING, you were responsible for the organisation of the Field Technical Exercise (FTX) where many agencies put in place a coordinated response to a R/N incident scenario caused by the stolen and missing of four Caesium-137 sources. What did the exercise show?

FTX Mikkeli was a Joint Action exercise for fire services, military, hospital and volunteers, our main focus was to get a real-time picture of the act and help decision-makers to get a real-time view and share it with authorities who took part in the FTX.

The Fire Service aim was to use the latest technology, detectors, drones and use the latest CBRN Monitoring System Software solutions like EnviScreen Operix 2020 and Mirion AccuRad PRD systems.

What were the strengths and what were the weaknesses?

In the FTX is possible to make observations and collect quantitative data during the exercise. Conducting a hot-debrief immediately following the exercise and with the participants and collecting qualitative data from the participants and analysis of data from EEG and identify strengths and areas for improvements.

Weaknesses for our side is to aggregate findings for training and everyday work.

MEET THE EXPERT: JYRI SILMÄRI

What value the INCLUDING project brings to the operations of the SSAV? How do you think INCLUDING can help in building nuclear security?

Our value is to get more familiar with the themes of the project INCLUDING. We start pre-training firefighters about a year before FTX because organising exercise is quite a big undertaking, and every person must be trained. After that, we start discussions with partners to take part in FTX. The best value is co-operation with organisations and sharing knowledge, getting familiar with Joint Action partners as organisations and persons, and getting used to the newest technology. Nuclear security will be much better in our organisation and partners and also in national security because we will share all information we get in this kind of project.

During the CBRN event, local firefighters are likely to be first in the scene acting on their own for at least a short time before specific resources arrive. They have to be trained, resourceful and committed to doing the best they can to prevent the event from claiming more casualties. In your opinion, what value the INCLUDING Federation can bring to their activities?

In Finland, fire services have the first responders at the scene. Those first responders are also specialized firefighters with specific resources. After "FTX Mikkelin" there is a better-trained organisation and resources practiced in big and long-lasting scenarios, also, we are more familiar with our partners and authorities.

You are retiring this year, is there anything you've learned in your career that you would like to share?

We must be active to get invitations to projects like INCLUDING, you will get and share latest information and possibilities to your everyday work. And you, of course, will get many good friends.

Is there any advice you would give to your colleagues about projects like INCLUDING?

INCLUDING is very well lead and excellent project, be active.



LINKS WITH OTHER PROJECTS: eNOTICE

Dr. Olga Vybornova is PhD, Senior researcher at the Centre for Applied Molecular Technologies, Université Catholique de Louvain (UCL-CTMA), Belgium. She is responsible for coordination and management of H2020 SEC-21-GM-2016-2017 project eNOTICE – European Network of CBRN Training Centers. Her main activities and research interests are in the field of decision-making support systems, innovation management practices, dialogue between practitioners and technology suppliers, support for security end-users, information communication technology for crisis management and security applications.



Few words about the eNOTICE project. What are the synergies activated between INCLUDING & eNOTICE

The European Network Of CBRN Training Centers, eNOTICE, is a Horizon 2020 Secure Societies project funded under the H2020-SEC-2016-2017-1 call. eNOTICE started in September 2017 and will end in August 2023. The project aims to build a dynamic, functional and sustainable pan-European network of CBRN training centres, testing and demonstration sites strengthening capacity building in training and users-driven innovation and research, based on well-identified needs.

eNOTICE has established a web-based information and communication platform to provide, share and disseminate information during and after the project for two purposes. Firstly, to make the eNOTICE network visible and attractive to CBRN-training centres and external stakeholders. Secondly, to provide access to CBRN-training centres capacities according to a “capacity label”. In building the community CBRN training centers, eNOTICE approaches the training centres with a comprehensive questionnaire to identify, roster and map EU CBRN training centres, testing and demonstration sites with the purpose to categorise the centers according to their training capacity, capability and infrastructure. Once these features are mapped, the training centre is included in the catalogue, there are 49 training centres in the Catalogue now <https://www.h2020-enotice.eu/static/catalogue.html>.

LINKS WITH OTHER PROJECTS: eNOTICE

In order to optimise resources, eNOTICE has also set up an operational transactional network for optimising investments by pooling and sharing resources, expertise, and effective practices, by organising joint activities between the eNOTICE network members and external partners, and by liaising with other networks of CBRN stakeholders. We take a very practical practitioner-centered approach in the network, and the networking itself we do by means of organizing multiple Joint Activities – field exercises, table tops, simulations and serious games hosted by the consortium training centres.

We invite other CBRN R&D projects to join us as active players or observers, and all interested stakeholders to come and see what the training centre has to offer and to discuss, exchange opinions and establish collaboration.

We organize multidisciplinary exercises, and sometimes cross-border exercises, and we pay lots of attention to civil-military cooperation in the project. CBRN Training Centres act as perfect operational intermediary between all civilian and military CBRN actors, EU relevant bodies and policy-makers, and thus serve as the best cradle for expansion of a CBRN network of professionals in the frame of strengthened civil-military cooperation. INCLUDING, an H2020 Secure Societies-funded project, building a cluster for Radiological and Nuclear (RN) Emergencies took the eNOTICE approach of joint activities as model for its joint actions. As part of its activities, INCLUDING reaches out to radiological training centres. In an effort to streamline their activities and to reduce the burden on the training centres, eNOTICE and INCLUDING decided to contact training centres together through one comprehensive questionnaire developed by eNOTICE training centres, where a section with INCLUDING questions is added. Radiological training centres joining eNOTICE network, can decide if they also want to be part of INCLUDING.

Which is the added value of the collaboration with INCLUDING for Your project?

INCLUDING unites RN actors, which is very interesting for eNOTICE too. When we have common goals, e.g. when we address CBRN training, it makes all sense to approach same RN training centres together, not separately, in order to maximize the chance of interest and positive response from training centres. A few eNOTICE consortium and larger network RN training centres joined the INCLUDING federation.

LINKS WITH OTHER PROJECTS: eNOTICE

Would you like to tell us something about the future activities and events in your project?

eNOTICE continues to pursue its goals and objectives, we are happy that the granted extension of the project allows us to implement all the plans, all the Joint Activities foreseen in the project, that had to be postponed because of the pandemic crisis. The following Joint Activities and events are planned in 2022 – 2023:

- Multidisciplinary Field Exercise (together with the PROACTIVE project) hosted by Fire Department of Dortmund, May 6-7, 2022, Dortmund, Germany
- Multidisciplinary Field Exercise (together with MELODY project) and a Policy Meeting, organised by Campus Vesta, May 21, 2022, Ranst, Belgium
- Multidisciplinary Field Exercise (together with the PROACTIVE project) and Annual workshop organised by the University of Rome Tor Vergata and The Italian Joint NBC Defence School, October 2022, Rieti, Italy
- Table top exercise, organised by War Studies University, March 2023, Warsaw, Poland
- Final eNOTICE Multidisciplinary Field Exercise (together with the PROACTIVE project) organised by Campus Vesta and Université catholique de Louvain, May 2023, Ranst, Belgium
- eNOTICE Final conference organised by Université catholique de Louvain, June 2023, Brussels, Belgium

The main ultimate goal of the eNOTICE project is to make the network of CBRN training centres sustainable, functional after the end of the project. For this purpose the project partners collect and carefully analyze opinions of all network stakeholders, trying to understand their expectations, requirements, needs and possibilities in building the network. The previous policy meetings were dedicated to the discussion with policy makers, with training centres - both civilian and military, with practitioners. The results have been reassuring, the interest and motivation of all actors regarding participation in the network is inspiring, so the project knows that the chosen direction is correct. The network will be sustainable only if all actors get what they need, and nobody's interests are compromised. The challenges are numerous, and step-by-step in every study, in every discussion, we are revealing the issues, the concerns and the ways to resolve them. We have to be very precise in the analysis of requirements, conclusions and corresponding actions, in order to develop a solid operational mechanism of sustainability.



LINKS WITH OTHER PROJECTS: eNOTICE

INCLUDING POINT OF VIEW:

INCLUDING (2020-2025) started cooperating from the very beginning of the project with eNOTICE (2017-2023) which represents one of the first Pan European Networks of practitioners and the most important in the CBRN field after ENCIRCLE. Thanks to eNOTICE's Network of CBRN training centers, actively shared with INCLUDING, the task of mapping training facilities for Radionuclear threats was greatly facilitated. Sharing of resources and results is in line with EU Commission requirements and indications. Projects for the future include the study of sustainability of Training Center Networks.

PROJECT AT A GLANCE:

<i>Acronym</i>	e-NOTICE	
<i>Project Name</i>	European Network Of CBRN Training CEnters	
<i>Project Duration</i>	1 Sep 2017 - 31 Aug 2023	
<i>Website</i>	https://www.h2020-enotice.eu/	
<i>Point of Contact</i>	olga.vybornova@uclouvain.be	
<i>Social media</i>	https://twitter.com/H2020_eNOTICE https://www.facebook.com/H2020eNOTICE	





LINKS WITH OTHER PROJECTS: PROACTIVE

Laura Petersen (MSc) is a Senior Security Research Advisor at the International Union of Railways. She undertakes research in crisis management, crisis and risk communication, accessibility, and resilience. Her work in the PROACTIVE project focuses on co-creation with vulnerable groups.



Few words about the PROACTIVE project.

PROACTIVE (PReparedness against CBRNE threats through cOMmon Approaches between security praCTitioners and the Vulnerable civil society) can help security practitioners make CBRNe crisis preparedness and response fair, accessible and inclusive. Liaising with the civil society, including vulnerable groups, PROACTIVE is co-creating a crisis communication system for both practitioners and citizens as well as pre-incident information materials. These outputs, combined with recommendations on how to include civil society in training exercises, will allow CBRNe practitioners and policymakers to improve societal resilience.

What are the synergies activated between INCLUDING & PROACTIVE?

PROACTIVE has had the honor of attending two INCLUDING Joint Actions. The first one in Athens, Greece where PROACTIVE presented our project during the workshop and the second one in Saclay, France. This allowed for PROACTIVE to have a better understanding of the R&N part of the CBRNe alphabet soup. Synergies with INCLUDING help us to see if our project outputs are applicable for R&N, since as of now, the PROACTIVE project field exercises are expected to use scenarios based on B & C threats.

Which is the added value of the collaboration with INCLUDING for Your project?

Attending these two field exercises provided PROACTIVE with valuable insights into organizing field exercises, including the importance of a good exercise narrator and providing observers with shelter from the elements (whether that be a heat wave in Greece or a storm in France!).

Being able to draw on each project's network of CBRNe practitioners is also very helpful for ensuring that both projects' outputs meet end-user expectations.



LINKS WITH OTHER PROJECTS: PROACTIVE

Would you like to tell us something about the future activities and events in your project?

PROACTIVE is still hoping to host a physical workshop in Lancaster, the UK in April 2022, location TBD. We also look forward to our three upcoming field exercises, taking place in Dortmund, Germany in Spring 2022, Rieti, Italy in Fall 2022, and Ranst, Belgium in Spring 2023. We are always happy to invite new members to join our advisory boards and attend our events, so don't hesitate to reach out!

INCLUDING POINT OF VIEW:

The collaboration with PROACTIVE is extremely stimulant. INCLUDING partners come from the industrial, military, research and academia worlds and there is no representation of lay or civil society, in line with the project's scopes. However, this part of society is actively involved in RN threats and resilience. PROACTIVE represents the complementary partner on this aspect of the INCLUDING project. Future work will involve "proactive" participation in each other's activities.

PROJECT AT A GLANCE:

<i>Acronym</i>	PROACTIVE	
<i>Project Name</i>	PReparedness against CBRNE threats through cOmmon Approaches between security praCTitioners and the Vulnerable civil society	
<i>Project Duration</i>	1 May 2019 - 31 August 2023	
<i>Website</i>	https://proactive-h2020.eu/	
<i>Point of Contact</i>	petersen@uic.org (Laura Petersen, Dissemination Manager) havarneanu@uic.org (Grigore Havarneanu, Project Manager)	
<i>Social media</i>	https://twitter.com/PROACTIVE_EU https://www.linkedin.com/company/proactive-eu	



INCLUDING

INNOVATIVE CLUSTER
FOR RADIOLOGICAL AND NUCLEAR EMERGENCIES



JOIN INCLUDING COMMUNITY

If you need more information about the project or would like to participate in the INCLUDING events and demonstrations activities, please don't hesitate to contact us!

Please, stay tuned on our project website and Twitter channel for updates and registration procedures for the INCLUDING events!



2nd Workshop on the Radiological and Nuclear Training Framework in the European Union (online) - 13/04/2022



4th Joint Action and the 3rd Annual Workshop, Budapest, Hungary - 13-15/06/2022

INCLUDING: INNOVATIVE CLUSTER FOR RADIOLOGICAL AND NUCLEAR EMERGENCIES

Horizon 2020, Topic SU-GM01-2018-2019-2020: Pan-European clusters of practitioners and other actors in the field of Security - Innovation clusters from around Europe managing demonstration sites, testing workbenches, and training facilities.

