



eNOTICE

European Network Of CBRN Training Centres

D4.10 eNOTICE Recommendations for CBRN R&D and CBRN policies. Version 3

Authors and contributors:

Olga Vybornova, Jean-Luc Gala (UCL) – Leading author

Wolfgang Reich (JCBRND¹COE) – Contributor

Luc Calluy, Maaïke van de Vorst (VESTA) – Contributors

Gilles Dusserre (ARMINES) – Contributor

Maximilian Kiehl (SIC) - Contributor

Daniele Di Giovanni (UNITOV) – Contributor

External co-author eNOTICE network member – Col (ret.) Henry Günter Neumann

© Copyright 2020 – All Rights Reserved

This publication only reflects the view of the eNOTICE Consortium or selected participants thereof. Whilst the eNOTICE Consortium has taken steps to ensure that this information is accurate, it may be out of date or incomplete, therefore, neither the eNOTICE Consortium participants nor the European Community are liable for any use that may be made of the information contained herein.

This document is published in the interest of the exchange of information and it may be copied in whole or in part providing that this disclaimer is included in every reproduction or part thereof as some of the technologies and concepts predicted in this document may be subject to protection by patent, design right or other application for protection, and all the rights of the owners are reserved.

Dissemination level

PU	Public	X
PP	Project Private, restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

¹ In the project Grant Agreement the abbreviation for Centre of Excellence is spelled CoE, according to NATO terminology it has to spell COE. Therefore, in the main body of this document the abbreviation follows NATO rules.

Document Information

Grant Agreement n°	740521
Project Title	European Network of CBRN Training Centres
Project Acronym	eNOTICE
Project Coordinator	Université catholique de Louvain (UCL)
Document Responsible Partner	UCL
Document Number	D4.10
Document Title	eNOTICE Recommendations for CBRN R&D and CBRN policies. Version 2
Dissemination Level	Public
Contractual Date of Delivery	Month 36 (August 31, 2020)
Actual Date of Delivery	Month 39 (November 30, 2020)

Partners involved in the Document

N°	Participant organisation name (short name)	Check if involved
1	Université catholique de Louvain (UCL)	X
2	Campus Vesta APB (VESTA)	X
3	Fire and Rescue Service of Seine et Marne (SDIS77)	
4	Association pour la recherche et le développement des méthodes et processus industriels (ARMINES)	X
5	Fire Department Dortmund (FDDO)	
6	Safety innovation centre (SIC)	X
7	Joint CBRN Defence Centre of Excellence Vyškov (JCBRND COE)	X
8	Middle East Technical University (METU)	
9	University of Rome Tor Vergata and The Italian Joint NBC Defence School (UNITOV)	X
10	West Midlands Police, National CBRN centre (WMP)	
11	War Studies University, CBRN Defence Training Centre (WSU)	
12	Scientific and Research Centre for Fire Protection (CNBOP-PIB)	

Executive Summary

This document is Deliverable 4.10 (eNOTICE Recommendations for CBRN R&D and CBRN policies. Version 2) of eNOTICE, a European Horizon 2020 EC funded project, under the Grant Agreement n° 740521.

This document presents the detailed report on the policy meeting with representatives of training centers, EC DG HOME, DG ECHO, DG DEVCO, JRC, industry and research actors, that took place as online webinar on October 22, 2020. The results, major key points, conclusions and way forward considerations are summarised at the end of the document.

eNOTICE needs a solid roadmap for sustainability of the network. The 3rd Policy meeting was a major starting point for the discussion between the stakeholders on the expectations, needs of the network members, their vision of network activities after the end of the project, possibilities of other stakeholders to support the network from the policy and funding point of view.

The main conclusions and future works include the following points:

- The close collaboration and strong links with DG HOME's Community of Users as well as the Union Civil Protection Mechanism and rescEU of DG ECHO have been highlighted by the Commission as a sustainability path to pursue.
- It is important to not only pursue the NATO Civil-Military Cooperation, but also investigate establishing a robust civil-military cooperation within the EU itself.
- A specific requirement of TCs was articulated in order to develop minimum criteria for CBRN training, aiming at harmonisation of the training curriculum, standards and certification.
- The eNOTICE network of CBRN Training Centres can become a public-private partnership, where the non-profit TCs funded by national or regional authorities work together with private organisations (mainly industrial companies) as one of the sources of funding, to maximize the dialogue between technology suppliers and technology end users and pave the way of practitioners-validated technologies to the market. This is mainly true for civilian TCs, and the mechanism should be further explored for the military TCs. It is a must for eNOTICE to set up the clear concept of such public-private partnership, define the terms of reference and the conditions of industrial participation, so that there is only mutual benefit and never bring problems to training centers.

Table of Contents

Executive Summary	3
1 Objectives and scope.....	5
2 NETWORK SUSTAINABILITY INSIGHT.....	5
2.1 Prerequisites and current status	5
2.2 Report from the Third policy meeting on OCTOBER 22, 2020	8
2.3 Key discussion points and take home messages.....	9
2.4 Conclusions and way ahead.....	17
3 References:	19

1 OBJECTIVES AND SCOPE

This deliverable presents further findings and results of the work under the Task 4.3 Identification of opportunities to strengthen policies and recommendations for R&D – M3-M60: UCL (lead); VESTA, ARMINES, SIC, JCBRND COE, UNITOV. UCL leads, based on its experience in R&D and policy initiatives. VESTA, ARMINES, SIC, JCBRND COE and UNITOV contribute with their respective knowledge on civil and military CBRN defence policies and on needs for CBRN R&D.

Having identified in D4.8 and D4.9 (produced by eNOTICE consortium two years ago and a year ago respectively) civil-military and international cooperation as one of the most important trends in CBRN defence policy, the recent findings at security stakeholders' meetings further proved this topic as a priority that needs to be further explored and developed. Policy Meeting 1 in 2018 provided general vision of the network with representatives of DG HOME, DG ECHO, DG DEVCO. Policy meeting 2 in 2019 confirmed the necessity of further development and deepening of civil-military cooperation. Policy Meeting 3 that took place virtually on October 22, 2020 opened the discussion and paved the way to the network sustainability - maintenance and successful functioning for many years after the end of the H2020 eNOTICE project funding in August 2022. The concept and activities of the network of CBRN training centres, testing and demonstration sites are in line with the EU CBRN Action Plan objectives, are strategic for Member States CBRN preparedness and development, and are interfacing CBRN themes of EC DGs – HOME, ECHO, DEVCO, JRC. The discussion at Policy Meeting 3 covered sustainability from all angles – from the point of view of training professionals from eNOTICE network training centres, EC DG HOME, ECHO, DEVCO representatives, industry, academia and current R&D projects and advisers – who provided their expectations, vision on possibilities and future network maintenance.

2 NETWORK SUSTAINABILITY INSIGHT

2.1 PREREQUISITES AND CURRENT STATUS

As the project is entering its final phase it is time to think about sustainability of the network of CBRN training centres beyond the official end of the project in August 2022. The 49 training centres that are current members of the network are all interested in maintaining it, to have the possibilities of joint activities and exchange of training practices between the network members. The high interest from EU policy makers also proves the necessity of this network for the benefit of the whole community.

As the ultimate goal of the eNOTICE project is strengthening national and cross-border capacity for CBRN incidents preparedness (incl. training) and response eNOTICE identifies opportunities to align policies and recommendations for national, European and international R&D. DG HOME's Community of Users for Secure, Safe and Resilient Societies, DG ECHO's Disaster management Training network and currently under development Knowledge Network,

DG DEVCO's CBRN Risk Mitigation Centre of Excellence Initiative and the JRC's Disaster Risk management Knowledge Centre. Without excluding any other network, these 5 networks will be invited to the eNOTICE activities as privileged partners. They will be invited to the JAs as observers and a side event will be dedicated to learn from the JAs, to inform each other on individual progress, to discuss opportunities, to align and mutually strengthen policies, to set priorities and identify opportunities for other activities with common or complementing objectives. A specific focus will be on more practitioners' needs-driven research. From these meetings, joint declarations with recommendations for CBRN policies in general and national and EC R&D programmes in particular will be elaborated. They will be proposed to all the eNOTICE consortium partners and network members for feedback and validation and proposed to the national authorities, REA and the DG's concerned.

eNOTICE is confirmed by many stakeholders as a strategically important project at National & European levels, and serves at NATO level as an example of NATO – EU cooperation:

- eNOTICE brings together highly-skilled professionals (i.e. first responders – firefighters, police, medical emergency teams, sampling teams, civil protection, security and defence experts); specialised categories of stakeholders (i.e. decision-makers; policy-makers)
- CBRN national platforms are involved (e.g. Belgian CBRN platform of the Federal Crisis Centre)
- Connection of the network with CBRN National Focal Points has been discussed with DG HOME, so that the National Focal Points of Member States become “postmen” to deliver messages of the network to the national authorities being the best smoothest interface.

Policy makers are certainly good clients of the network, and eNOTICE has already established very strong contacts with DG ECHO, DG DEVCO, DG HOME, JRC. eNOTICE is well integrated and plays a visible role in the **DG HOME**'s Community of Users for Secure, Safe and Resilient Societies by e.g. preparing and co-chairing CBRN related sessions during their meetings. In the future development of the CoU eNOTICE will take a strong positioning within future CoU experts group in which CBRN will be well represented. The eNOTICE network activities will be further deepened and relayed with CoU larger community activities.

eNOTICE has interest from and is linked to **DG DEVCO** – EU CBRN Risk Mitigation Centre of Excellence Initiative network. DG DEVCO is using the questionnaire for training centres developed by eNOTICE consortium partners, to approach training centres outside the EU. This collaboration is fixed in the eNOTICE Grant Agreement amendment from June 2018.

The **DG ECHO** rescEU mechanism is very relevant for eNOTICE network to collaborate with. One of the three rescEU priorities are CBRN capacities for decontamination, detection, surveillance and monitoring (not yet including the other CBRN areas such as CBRN Advise (the ability to provide assessment and guidance to decision makers and their staff), protection (of personnel, equipment and infrastructure), CBRN Defence of CBRN IEDs/EODs, medical CBRN Defence, etc.). Due the COVID-19 pandemic this work was slowed down because member participating states were overwhelmed fighting the pandemics, and also, it is almost impossible to have face-to-face meetings. The most implementing act on rescEU CBRN capacities will be issued and will come into force in early 2021. Both rescEU and eNOTICE are sort of systems of systems. They look intrinsically clearly connected from the perspectives of expertise. Some systems fail to integrate essential stand-alone assets, which causes very

significant wastes. A useful capability and added value about eNOTICE is that it can support innovations, so that innovations are tested, endorsed by practitioners which is very important in the CBRN sector. ENCIRCLE CBRN Cluster project studies showed that there is an overlap in CBRN purchases and other security areas, so it's important to validate innovations with end users.

There are several more specific international stakeholders that can benefit from the eNOTICE network of CBRN training centres, testing and demonstration sites:

- eNOTICE pushes forward cooperation with **NATO**, civil-military cooperation in terms of interoperability, scalability of response, sharing expertise, sharing resources. Moreover, through the eNOTICE partner JCBRND COE, who is NATO Department Head (DH) for Weapons of Mass Destruction/CBRN Defence Education and Training Discipline (WMD/CBRND DH) a link with the already existing network of military CBRN Defence TC and the recently established European Union Military Training Group (EU MTG) is created. The JCBRND COE is now NATO DH and EU Discipline Leader (DL) for CBRN defence military training [3] in order to avoid duplication and enhance interoperability as the most European CBRN defence units are designated to NATO missions as well as to EU lead missions.
- The current Covid-19 pandemic crisis proved that disease is able to heavily and quickly impact societies, so we cannot easily split health and CBRN issues, they are tightly connected. For all health-related issues **WHO** is a major partner for the network. eNOTICE network is important for WHO as well, because the network can provide training in case of health crises that WHO deals with.

EU CBRN Action Plan [1] is directly linked to the eNOTICE network objectives:

- Objective 1: organisation of cross-border multidisciplinary training and exercises - eNOTICE
- Objective 2: strengthen EU CBRN preparedness / response – eNOTICE
- Objective 3: building Stronger Internal-External Links and engagement in CBRN security with key regional and international EU partners
- Objective 4: creation of EU CBRN security network - eNOTICE
- Objective 5: harnessing the benefits of EU security research - eNOTICE

Needs expressed by first responders from eNOTICE TCs themselves:

- They want to have Joint Activities (JA), share and exchange national expertise / SOP, training practices, be aware of new technologies
- Creating network based on common knowledge and friendship (human factors) where trust is key, we know what to share and what we cannot share – for security and safety of citizens
- Link with other networks of practitioners – FIRE-IN, INCLUDING, NO FEAR,
- Link with other clusters (e.g. ENCIRCLE) and CBRN R&D projects (e.g. TERRIFFIC) about technology developments

All network stakeholders benefit from its efficient functioning, so the need for sustainability, maintenance of the network activities and expanding thereof is already proven.

2.2 REPORT FROM THE THIRD POLICY MEETING ON OCTOBER 22, 2020

Context and objectives of the THIRD policy meeting

The third Policy Meeting took place on October 22 from 10.00 to 12.20 in the form of an online webinar. This Policy Meeting was aimed to set the starting point for discussion on the network sustainability with the network stakeholders - training centres, practitioners, research, industry representatives and policy makers.

Considering the variety of disciplines involved in managing CBRN risks, collaboration has always been quite challenging. CBRN TC can act as the 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.

It is obvious that relevant lessons learned from other EU CBRN projects can be included in this. To set up such a network that is both efficient and meets the needs of different security actors, several lines of action are being followed within the five-year timeframe of eNOTICE in order to develop a network that will be viable, attractive as well as **sustainable**.

Speakers and topics on the agenda

On Thursday, October 22, 2020 the 3rd eNOTICE Policy Meeting was held online from 10.00 to 12.20 using the WebEx communication tool. The Policy Meeting was initially scheduled to be held as eNOTICE session at the Future Forces Forum (FFF) on October 22, 2020 in Prague, Czech Republic. FFF is a highly recognized and widely endorsed international platform for defence and security information exchange and for promotion of the allied countries and their partners' objectives within national and global security, and the eNOTICE Policy Meeting was deemed relevant for this event and included in the programme. However, the FFF was cancelled due to the circumstances caused by Covid-19 pandemic travel restrictions, so the Policy Meeting was moved online. The discussion covered the eNOTICE network sustainability from all angles – from the point of view of training professionals from eNOTICE network training centres, EC DG HOME, ECHO, DEVCO representatives, industry, academia and current R&D projects and external senior advisors and comprised a valuable number of presentations from the consortium (2 presentations), from various the Commission (2 presentations), from Training Centres (2 governmental organisation and 1 private) and industry (1 presentation). The scheduled two hours for the meeting were extended by 20 minutes to give the floor for more exchanges, as it usually happens with motivated and dedicated participants gathered around the table. But the objective of the meeting was met – the eNOTICE consortium has got an excellent starting point for concrete elaboration of sustainability mechanism, having collected the vision of relevant stakeholders.

3rd Policy Meeting agenda:

- 10.00 – 10.05: **Opening and welcome** by Olga Vybornova (UCL)

- 10.05 – 10.20: **Nicolas Raulin** (SDIS77, France) – SDIS77 response to Covid-19 and new training procedures
- 10.20 – 10.25: **Philippe Quevauviller** (DG HOME) - Introduction to the discussion on network sustainability
- 10.25 – 10.40: **Jean-Luc Gala** (UCL) – eNOTICE network sustainability vision from the consortium
- 10.40 – 10.55: **Antonella Cavallo** (DG ECHO) – CBRN rescEU: priority areas, challenges and opportunities
- 10.55 – 11.10: **Ladislava Navratilova** (Population Protection Institute, Czech Republic), eNOTICE network member TC – Population Protection Institute - training activities for safer world
- 11.10 – 11.25: **Friederike Strebl** (Seibersdorf Labor GmbH, Austria), eNOTICE network member TC - Seibersdorf Academy - RN training facilities and capabilities
- 11.25 – 11.30: **Tamás Berek** (National University of Public Service, Faculty of Military Science and Officer Training, Hungary), eNOTICE network member TC
- 11.30 – 11.45: **Sergey Babichenko** (LDI Innovation, Estonia) - Dialogue with industry – practical example and results of industrial participation in exercises
- 11.45 – 11.55: **Discussion**
- 11.55 – 12.00: **Conclusions and meeting close**

2.3 KEY DISCUSSION POINTS AND TAKE HOME MESSAGES

1. The EC cannot assure regular permanent funding, so eNOTICE needs to reflect upon what could be envisaged as a kind of services with support of the Commission. Of course, it will be always possible for projects to apply to future Horizon Europe calls, initiatives and capacity building in security in ISF, or ECHO or civil protection mechanisms, sustainability can be pursued in this respect too, but without any guarantee that it will succeed. Having a sustainability mechanism in place before the end of the project is crucial, we cannot lose the engagement we have put into the project and EU tax money. Having heard about “system integration” from DG ECHO representative, an idea has arisen to transform eNOTICE project into another level, even another forum, and bring together several CBRN-related projects that also come to an end and have produced interesting results, to maximize the outcomes and consolidate communities. Such an integrated project can be funded in a framework of a new platform like the EU CBRN Action Plan [1]. The possibility of using e.g. ISF [2] for helping the sustainability of the project should be examined. However, ISF programme does not have as much resources available as, say, H2020. Moreover, ISF targets several priorities like protection of public spaces, esp. focused on place of worship or counter-terrorism, but CBRN is not its top priority. And then since we indeed hear often that CBRN is not the top priority for funding, the idea to bundle the CBRN related projects that look at CBRN from different angles – research, science, industry, training - the one master project can step in and enhance visibility of CBRN instead of smaller projects.

2. If we speak about a service that can be provided in a sustainable way, provide a possibility to get subscriptions from different stakeholders, look at different types of stakeholders and get engaged with practitioners that are networking, practitioners that recognize this service as very useful for training purposes. If it can be demonstrated that international CBRN exercises can be developed through this type of networking, this will certainly attract subscribers, and scientific community as well, because training is very often embedded in research projects.
3. It is also clear that development of new tools, e.g. CBRN detection tools or early warning tools and all other tools and technologies developed by researchers, need validation. The eNOTICE network provides this type of validation that can be used by research projects.
4. The Commission cannot make an obligation for future CBRN projects to pass through the network, but the Commission may give a very strong incentive to do so, because all these are EU-funded projects.
5. It is very interesting for exercises regularly carried out by DG ECHO, by NATO who is also a potential client.
6. And obviously industry. Industry is also interested in the network for validation of tools and pushing technologies to the market via international validation. It is very positive in terms of background.
7. Another strong argument is one more type of stakeholders – the standardisation community, because if you speak about development of standards and pre-normative research, co-normative research – they need also to pass through validation, and we would like to see practitioners more involved in validation of standards prior to formal standardisation.
8. In the new Horizon Europe programme Training is cited as a priority at almost every page, so it's directly relevant for eNOTICE. And Horizon Europe targets first responders, both already known types of first responders (such as fire brigades, police; medical teams, civil protection, military experts), and also a broader range of professionals (such as border protection, customs, goods and transportation, Interpol, legal experts, etc.) – their needs should be taken into account as well, even though they are not directly related to eNOTICE
9. Training centres will keep organising scenario-based joint activities - they are the perfect visibility window for new technologies. At the same time, it's necessary to distinguish between TCs training at the operation, tactical level, whereas strategic level is not trained in TCs. eNOTICE can contribute by setting up a list of objectives for the training both at the strategic and the operational levels.
10. The technologies can be proposed at different levels of maturity by technological developers (i.e. industries / SMEs / RTO / Academic Research Centres).

The most relevant exposition for technologies in eNOTICE – is to target the most mature ones - these high TRLs exactly match eNOTICE offer and capability

- a. TRL 8-9: Technologies ready for the market: Those having already a qualified commercial product to promote commercially through assessment / use / exposition during the Joint Activity
- b. A bit lower TRL 7-8: Prototype demonstration in an operational environment
- c. Big quality jump from TRL 6:

Lower TRLs can be also interesting, but rather for workshop discussions – to present and discuss ideas, concepts, realisation plans at workshops with practitioners - because they are not mature enough to be tested in the field:

- TRL 5-6: Technological integration of component, breadboard, system/subsystem that withstands validation in a relevant (simulated) environment
- TRL lower than 4: Not relevant – only “ideas” or “laboratory results” could be discussed during a workshop

Those technologies can be proposed to a broad audience

- Highly skilled professionals (i.e. *first responders*)
- Specialised categories of stakeholders (i.e. *decision-makers; policymakers*)

11. Proposed mechanism of network sustainability:

The mechanism of the network sustainability should be simple and transparent to all members. It is already clear that the EU Network of civil and military Training Centres is strategic to the EC and EU Member States. A logical way forward would be if Member States **take over the whole structure of the network: the core of the network are Training Centres that are “non-private sector”, but those acting on behalf of national or regional authorities appointed and financed by each Member State.** Note here that several training centres of the network are actually private companies, however they all act on behalf of the authorities and train first responders according to the agreement with the authorities. eNOTICE does not have purely commercial training centres in the network now – such organisations are welcome to join at a later stage when the network sustainability and funding mechanism becomes well defined and established, and then they can join the network against the defined fee.

Training centres are already funded by their Member States or regions. eNOTICE project exists thanks to Member States, so MSs must push this network further, recognize the strategic value of the project, of the network created by it. One of the possible mechanisms here is to agree with Member States to have an executive board to govern the network, that shall be renewed every three years, with the CEO rotating every three years, and an Advisory board with representatives of a number of Member States. Practically the desired pushing forward and support to the network from the MSs means financial sustainability by means of funding of the rotating executive board, the CEO. This is now a preliminary idea that will be further explored in discussions with Member States, including the Security Advisory Group (SAG) comprised of national CBRN Focal Points, with mediation of the EC. For now, TCs join the network on the voluntary basis being approached by eNOTICE consortium and interested in the

networking. At a later stage another mechanism could be introduced in parallel - network membership could be regulated by supporting MSs.

The plan is to maintain the network structure running at low cost, but support for training centres will be needed to maintain joint activities - exercises with participation of peer training centres and other interested stakeholders, which requires budget for events hosting, meeting rooms, catering, in some cases payments for guests travelling and accommodation.

The proposed mechanism will be offered for agreement between MSs with mediation of the EC and information of the National Focal Points. If the agreement is achieved, the eNOTICE consortium can be optimistic to believe that both MSs and the EC recognize the high strategic value of the network for very low money.

Possibility of support by EC on a case-by-case basis remains an option: in case of a specific crisis needing specific quick training using the capabilities and premises of the network member training centres. Such needs often occur within crisis response mechanism of DG ECHO, and eNOTICE network is the training facilities provider.

No Fee for membership in the network is foreseen for Training Centres, because they are either already financed by state mechanism, or they act on behalf of authorities, and are financially autonomous. In any case, training centres should not pay fees for participation in the network activities and exercises.

But where money can come for the Executive board and CEO, and other needs – that is **from private sector**. These are **specific fees for industries / SMEs / RTO joining the network**, because they have interest in

- showing the technology to practitioners
- get an added value because they will get assessment for their technologies and tools by highly trained professionals
- it will allow them to develop relevant technologies fully meeting the needs of end users and thus help to avoid developing tools that are not interesting for anyone - so they will save money, they will save time, save resources. It is worthy to pay a fee for membership in the network and have access to training centres and exercises.

Industries and researchers will be invited to join exercises depending on the scenario – not every scenario fits all the technologies, this is to be discussed case-by-case. **Link between participation fee - and – TRL levels of technology maturity will be established.**

An **extra funding** can also be **from scientific and operational studies with academic research centres**:

As a sustainable network we still have all the right to be involved in EU projects with academic research centres – Horizon Europe, Europe Defence Funds (with military TC in the network we fit perfectly). And of course, we can benefit from national projects (single or aggregated MS), where we would have bilateral or multilateral partnerships, as it happens all the time in military projects and in national civilian partners – extra partners can join and this is an added value for the project.

In this respect a challenge and concerns were expressed by the meeting participants. It is not a secret that initiatives of the European Commission are not always automatically taken up by all Member States for action. So, it will probably take lots of effort to justify and convince Member

States to contribute to the EU network funding, and the Commission support for it will be necessary. The funding contribution by industrial and academic partners must be carefully calculated and economically justified, along with clear transparency criteria for membership and contributions against a fee - to be convincing as a regular source of funding. No problems are expected for bilateral agreements between a Training Centre and a company if there is a long-term proven built trust and mutual interest in the particular provider's technologies. However, it might be more difficult with funding of the network Executive Board and the CEO, where strict compliance rules must be developed and applied.

Interoperability is very important, there are currently fragmented and asymmetric CBRN arrangements across the EU. Having the pool of TCs who talk to each other, compare procedures, hold joint exercises can help a lot to advance on this topic.

Knowledge transfer is tricky. It can be:

Distributed - None of involved actors knows everything about all processes.

Contested - Knowledge as a source of power: resistance to changes by some actors can undermine the knowledge

Ambiguous - Erroneous assumption of shared understanding (not using the same language, not having the same understanding of terminology, concepts, context).

eNOTICE network could set up a model serving as a basis for further development, to help on the above issues and push the way forward for:

- a. Knowledge transfer – eNOTICE has all the capability to help with the work DG ECHO has been doing during the last months
- b. Innovation – faster answers
- c. Addressing complex questions as a System of Systems
- d. Relationships – keeping connecting people, establish partnerships
- e. Knowledge Network of Union Civil Protection Mechanism (DG ECHO) https://ec.europa.eu/echo/what/civilprotection/knowledge-network_en - a planned network of DG ECHO, it is going to be relevant for practitioners, for policy makers, for emergency management. CBRN has been identified as a priority area. It will be a great potential for eNOTICE to collaborate with the Knowledge Network as soon as it becomes in place and fully operational.

12. Cooperation with EU is very welcomed by the network member training centres. The added value from the network is seen in the following aspects:

- Network providing a platform for communication, networking with peer CBRN training centres and EU stakeholders and exchange of training practices, procedures, experts, knowledge, sharing experience about new developments on European, to some extent NATO, and international level related to CBRN training.
- Enhance visibility of services in European Member States and outside the EU to get new customers
- Network should help to plan and coordinate different types of trainings between various actors
- Get access to information about other European CBRN training centres

- Efficiently conduct trainings
- Coordinate efforts and match training schedules - all organisations should interconnect their activities and work together (e.g. there have been bad examples when Interpol, OPCW, EU conducted similar trainings in the same region in the same time - unpardonable mistake to be avoided by all means!) It is worthy to note that this point has been mentioned many times at the EU projects level - efforts, calendars of events, schedules need to be shared, consolidated and unfortunate overlaps of important events should be avoided
- The network should promote integration of new and improved training methods (e.g. serious gaming; scenario-based trainings (very important for practitioners!) etc.) in existing training schemes
- It is desirable to involve stakeholders to improve / harmonize existing training schemes and better understand customer needs. Interest to collect and understand the needs of customers' outside each Member State
- To continue and update the mapping of competences of CBRN training centres to foster cooperation.
- To provide a comprehensive view on existing and emerging CBRN technologies, because the variety of technologies, e.g. detection equipment, and variety of providers is huge, and practitioners and training professionals need a specific knowledge to navigate in this variety, choose the best ones for their purposes, probably based on the knowledge and experience from other training centres.

13. Standardisation and harmonisation of training

Harmonisation (and probably in some future perspective standardisation) of CBRN training across the EU is considered by many stakeholders one of the driving engines of the network sustainability. One training centre expressed the wish for the network to set minimum criteria for “acknowledged” (certified) CBRN training, to get training harmonized within Europe. DG DEVCO’s EU CBRN Risk Mitigation CoE Initiate together with JRC plans to extend their support to eNOTICE in the next coming years, focusing on training harmonisation, under the lead of DG HOME Security Research. The idea is to use the eNOTICE network and training capacities to provide services and support to partners world-wide, thus also reflecting the external dimension of EU CBRN Risk Mitigation CoE Initiate. It has started, but as this direction looks promising, it should be reinforced, and the concrete realisation is now under discussion between DG DEVCO and DG HOME, knowing that eNOTICE network is an important component.

However, some training centres underline that harmonisation has to be carefully handled, and this topic was brought up many times within OPCW-organised trainings. Because on one hand **non-binding guidelines** how to conduct a certain course are important, but on the other hand training centres should have **their own freedom** to conduct a course according to their rules and their availability of having necessary equipment, expertise of trainers, profiles of trainees, etc. Professionals can attend training courses in many countries in Europe, Asia, Africa, and America. Every training centre has its own procedures and equipment. Every training event is different, and it is usually very inspiring and fruitful to experience different styles of training – so that the best and most optimal practices can be chosen for a particular training centre in a

particular Member State. Thus, speaking about harmonisation of training, it probably makes sense to have **guidelines on the trainings curriculum** that can be followed by training centres, but equipment, responding procedures in a particular region etc. might be different - depending on rules and legislation of each country. Such peculiarities can be kept as a source of useful differences as a good way how training courses should be driven to work. **A common curriculum** would be good and is welcomed by many TCs (though not for all, especially military TCs are in question here). It would ensure that core skills and core equipment across MSs are at such a level that eventually would turn into interoperability. The network is encouraged to work in this direction with strong support from the members.

There are plenty of procedures and SOPs in place. One of the functions of eNOTICE network could be to consolidate and systematize these procedures and propose all what are available to the training centres, so that they pick up those which are most appropriate for their customers to train.

The discussion of sustainability can be based on some previous examples of networks – positive or negative examples that serve as the basis for lessons learnt and allow to think of possible obstacles in advance to avoid them. On the military side there is the International Commanders and Commandants Conference (ICCC) that started in 2005 in Germany and is running until now. ICCC is a platform that brings together NATO and non-NATO military experts on CBRN Defence, where non-NATO Members are full participants. It can be considered as a complementary platform to eNOTICE network. Not to lose the dynamics, that might be feared with CBRN training centres and Member States contributions, an efficient mechanism must be put in place where contributions and knowledge exchanges take place regularly and actively. The network activities related to surveys of innovations, needs, gaps and research priorities must be fed from R&D and industry, in particular from H2020 ENCIRCLE CBRN Cluster dynamic catalogue of technologies, that can be migrated to eNOTICE to be further explored by practitioners. Such concrete information would encourage greater interest and buy in from Member States, and provide a regular workflow for eNOTICE in terms of active knowledge exchanges and stimulating innovations.

Another example of a successful networking initiative is DG HOME's Community of Users, that was created a few years ago and has proven a functional network with stable interest from participants. It is aimed to have a strong governance mechanism from 2021 onwards, it is becoming highly visible at high level in DG HOME, so there will be a strong support to develop it with very concrete objectives regarding state-of-the-art, support to projects, synergies building and so on. Expert groups will be developed which will be quite visible also at the European parliament level. It is something that is still in development, but it has a potential in exchanges including in CBRN area. CoU events and meetings are not to replace any kind of projects and scientific events because this is a complementary initiative to ensure that participants help to gather and collect information from different events – project meetings, conferences, workshops. A red line should be established keeping this dialogue alive and ongoing. The risk of not having any discussions for a few years will not happen, if there is a very strong dialogue platform established via the CoU.

14. Point of view of the industry

An Estonian SME participating in the Policy meeting and having a long experience of collaboration with some member of the network, expressed its interest of joining the network as an industrial partner. For them, the added value is in:

- Gathering the end-user needs and gaps for the applications
- Coordinating the development specification with the experts
- Introducing new tools to the practitioners and have these tools recommended to end users
- Having access to exercises at training centres for the testing of the new tools
- Receiving feedback from practitioners for further tools improvement
- Validation of the new tools. It's not easy to go to the CBRN market without strong support of technology validated in solid training centres, tested in operational activities; and not easy without sharing this information decision makers who can assist in providing these news tools to the operational practitioners.

The conclusion is that they are very interested to support such kind of network. Economical part of it is not very complicated. SMEs are ready to pay some fees to have access to training exercises, to the practitioners in a way like training centres provide. Amount of such fee can be negotiated between network members and industrial partners. The amount can depend on the size of the company, on the maturity of the product. It shall be explored further on, and it is an effective way to the market for industries, for SMEs – this is the final goal of their activity – to make new products, to bring them to the market and to make these innovations working.

15. View of training centres on the collaboration with industry

Training centres usually test new equipment often. The most suitable tools are used for trainings. So new technology is a crucial part of trainings. Sometimes first responders who train in a certain TC bring their own equipment because they want to be trained for their everyday work. If the equipment is provided by technology suppliers, then it's important to keep in mind that during the international trainings with participants from different parts of the world (such as OPCW trainings, for instance), technologies for them have to be easy to use and to understand, not too complicated. Usual TC mono-national trainees can test technologies too, of course. If TCs have paying customers who fund the tests of their equipment with practitioners – it can be an interesting opportunity.

Thus, it is well possible for training centres to accept external industrial partners for trainings, however only **under certain conditions**.

The concern is that by involving industry TCs expose tactics, SOPs, and some of the skills that should not be out in the public domain. Keeping that in mind, it is possible to set up a number of training events that would limit the exposure that the industry would get, by setting up some clear **terms of reference** - what industrial participants can see, what they can report back home, what products can be used from them showcasing to TCs. It is necessary for the industrial players to understand that although end-users have access to all the operational information and procedures, but they are by no means decision-makers, they do not decide what technologies to buy and what not, and feedback would be purely to improve the technology, so that authorities decide if this or that tools can be purchased or not.

2.4 CONCLUSIONS AND WAY AHEAD

The discussion at the third Policy Meeting of eNOTICE confirmed some previous findings (cf D4.8 and D4.9), opened new questions and proposed new solutions to the challenges of building, further developing and maintaining a successful network of CBRN TC.

For the network directions of activity:

- The close collaboration and strong links with DG HOME’s Community of Users as well as the Union Civil Protection Mechanism and rescEU of DG ECHO have been highlighted by the Commission as a sustainability path to pursue. RescEU is designed as a Safety Net to increase European Preparedness on the European level (resources financed by the EU and coordinated by the ERCC); it has got three priority areas, of which one is “CBRN Capabilities”. From the perspective of rescEU, CBRN Capabilities comprise Decontamination on one hand, and Detection, Surveillance and Monitoring on the other hand. The support of knowledge transfer across the EU by eNOTICE has been also highlighted and proposed to go forward with the knowledge transfer, with innovation and addressing complex questions as a System of Systems in order to respond to the various challenges in the field of CBRN. This way forward looks a very solid view of support provided by the Commission as clear statement to sustain eNOTICE network and to link it up with other EU activities.
- One more aspect that must be considered in the eNOTICE future activities: the 2017 CBRN Action Plan [1] clearly expresses the necessity to coordinate and to cooperate with the military. From the Commission perspective, this requires a more visible integration and participation of the European Defence Agency, as well as the EU Military Staff and its subordinated organisations (not that many). It is important to not only pursue the NATO Civil-Military Cooperation, but also investigate establishing a **robust civil-military cooperation within the EU** itself. The military has got a profound expertise and knowledge in all domains of CBRN, be it concept, capabilities, training, and many others to be linked, explore. eNOTICE should actively address the military part of the Commission as well as of the MS to seek solidarity and cooperation with the CBRN experts and decision makers. Dealing with CBRN must cover all aspects of CBRN (including medical aspects, infrastructure protection, etc.), not only the traditional obvious ones (such as detection, decontamination, etc.).
- A specific requirement of TCs was articulated in order to develop minimum criteria for CBRN training, aiming at **harmonisation of the training curriculum, standards and certification**. eNOTICE should be able to support the organizations, which are responsible for planning preparing and conducting the training. It should be noted here that the network will never force TCs to take up any procedures. Procedures and training everywhere are very different, depending on a particular organization, on training needs of trainees in that particular organisation in a particular country, region and context. The eNOTICE network is expected to ensure practical communication between training centres, exchange of

experience, exchange of practices. Eventually, when we speak about cross-border training and a TC wants to engage in cross-border exercises, this TC is interested to see what the neighbours are doing and how, and up to the TC if it wants to take up something from neighbour's practice, this is a usual exchange. The network can collectively come up with a recommended curriculum, with no expectation to enforce it to every TC. The goal would be to align the efforts, to inform all member TCs on available possibilities, on the existing training courses conducted by all member TCs and encourage professional exchanges.

To us, **the power of this network is in complementary expertise between training centres** within the same country or between different countries in the EU. Communication and exchange, by means of joint exercises, joint events where everybody can arrive and see what a training centre is doing with their own eyes, and establish partnerships directly if interested, e.g. exchange of trainees or trainers – this is the strategy of the network.

- DG HOME strongly recommends eNOTICE to produce a position paper about the potential support of eNOTICE to different types of "communities", such as policy and decision makers, practitioners, industry, scientific and research, standardisation bodies. Such a paper will help in making the potentials more visible both internally within the Commission and externally to possible subscribers – to clearly understand the benefits and potentials of the network.

For the network sustainability mechanism and collaboration with industry:

- eNOTICE network needs to pursue both the possible institutional support (via calls for projects) and the service-oriented approach (via fees paid by private organisations-network members). The eNOTICE network of CBRN Training Centres can become a **public-private partnership**, where the non-profit TCs funded by national or regional authorities work together with private organisations (mainly industrial companies) as one of the sources of funding, to maximize the dialogue between technology suppliers and technology end users and pave the way of practitioners-validated technologies to the market. This is mainly true for civilian TCs, and the mechanism should be further explored for the military TCs.
- The attitude of many TCs, especially military TCs to industrial participation is rather careful. The main concern is allowing external parties access to the SOPs that shall not go out in the public domain. At the same time, the added value of industrial participation is recognized for the possibility to test and validate the tools and equipment developed by industry to make sure that these technologies exactly meet the needs of the practitioners, and for the network funding opportunities. Thus, it is a must for eNOTICE to set up the **clear concept of such public-private partnership, define the terms of reference and the conditions of industrial participation**, so that there is only mutual benefit and never trouble for any side. The conditions might be different from one training centre to another, and these conditions must be respected. SOPs and training procedures, as well as comfortable exchanges between training professionals without worrying about sensitive information leaks or intellectual property rights (IPR), are in the centre of priority. One of the possible solutions is defining by a TC what exercises they can open to industrial participation, and what they prefer to keep closed, so that industrial suppliers cannot

participate in any exercise or training course in a TC, but only in those which are agreed in advance and prepared for the external private partners involvement. That would allow to avoid exposing tactics, SOPs and skills, because TCs will decide themselves what to show and what not, and to what extent they want to be open to allow sufficient information to the industries to develop the technologies correctly, which will facilitate launching of the new products to the market by the technology providers.

- Globally speaking, the user-supplier collaboration presumes **co-design, co-development of innovations**. Collaborative process between users and suppliers works both ways, new innovations that are recognized to provide better capabilities and fill the gaps, may need practitioners to change their SOPs. Innovation is not only about technological gaps. **Innovations are seen not as a technical fix, but as a socio-technical improvement of "a" current system, not just in a technological sense**. Once a capability gap is known, the needs are defined, awareness of a certain possible solution is necessary, which seems to be interesting for practitioners who want to know and to try novel solutions in their field conditions to make sure the proposed solutions fit. From the supplier's side it mainly refers to a certain "perceived demand" in practitioner realities.
- In order to approach the Member States and address the topic of support to the network sustainability, it is essential for eNOTICE be convincing and practical in the vision, to conduct a **thorough cost-benefit analysis**, estimation on the annual costs of the network functioning, set up the clear transparent criteria according to which the amount of membership fees for commercial partners will be established. This significant preparation must be done during year 2021 to be fully ready with the sustainability mechanism in place before the end of the project in August 2022. To ensure this, a campaign plan is to be developed: who will inform what organization when and with what arguments to achieve affirmation, that eNOTICE will survive. For the future organization, a detailed structure (how many personnel, what functions, how organized, where located, at what costs) must be developed to address our requirements to the commission and the MS. The compliance rules must be addressed and discussed among the members of the consortium and beyond.

3 REFERENCES:

1. Action Plan to enhance preparedness against chemical, biological, radiological and nuclear security risks, 18.10.2017. COM (2017) 610 final. Available at https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20171018_action_plan_to_enhance_preparedness_against_chemical_biological_radiological_and_nuclear_security_risks_en.pdf
2. CBRN Newsletter, Edition 4, November 2020 // DG HOME Unit D.2 Counter-terrorism
3. Council of the European Union, European Union Military Committee, CEUMC 58/20, 10 February 2020